

# EUROPEAN STUDIES

Teachers' series

13

EUROPEAN  
STUDIES

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# The associated countries and their development

*European Studies No. 5, 1969 explained the significance of the European Community to the 18 Associates and to other states with which the Community has signed agreements. The aspects of the Rome Treaty dealing with association, the first Convention, and the two Yaoundé conventions were described, as well as the other agreements. Tables showed the evolution of Community trade with these and other developing countries, and the contribution and allocation of Community aid. This text is a continuation of the earlier one and seeks to outline some of the geographical and economic problems, particularly those of industrialisation, of the countries associated under the Yaoundé Convention. While agriculture is basic to the economy of almost all these countries, it is commonly thought that well conceived industrial development provides the best way to more rapid economic advance. Moreover, the moment is opportune, since on July 1, 1971 the Community abolished import duties on developing countries' exports of manufactured and semi-manufactured goods and on some processed agricultural products, up to quota levels which are expected to double imports of these goods from developing countries.*

The 18 Yaoundé Associates, once dependent territories in Africa of France, Belgium or the United Kingdom (British Somaliland), or Trusteeships of those countries and of Italy, all lie within the tropics, as do the three Commonwealth countries of the East African Community, associated with the European Community under the Arusha Agreement. As such, they belong to the tropical world, a realm within which modern development has usually been slower than in temperate lands, and in which the best means of development are less obvious or understood, and where success is more elusive. Winter never comes to the tropics so that interruptions to plant growth are not caused by seasonally low temperatures. Rainfall and related ground water supplies are far greater limiting factors on agriculture and livestock herding.

Outside the rather restricted area of the equatorial climate (approximately 8°N-8°S) rainfall is highly seasonal. Even within the rather narrow equatorial zone it is often inadequate, notably in southern Togo and Dahomey, in Tanzania and Kenya. Beyond the equatorial zone are the monsoonal and tropical climate zones, where rainfall is highly seasonal and where, as latitude increases rainfall diminishes sharply and the rainy season shortens. Even in the equatorial climate, but even more so in the tropical areas, rainfall is highly variable. It varies from year to year, not just in total amount (which is not a very informative figure) but in the nature of its incidence throughout the year.

Agriculture in the tropics is thus hazardous climatically, for the right moment to sow is rarely obvious. Several sowings may be necessary by peoples who can ill afford the seed, and there are similar problems over the harvest. Constantly high temperatures encourage a proliferation of pests from viruses, bacteria and fungi, to insects, birds and

rodents. Moreover, tropical soils are poorer and more fragile than those of temperate regions and need to be cultivated with great care. In particular, laterite and lateritic soils causing widespread infertility present acute problems to tropical agriculture. Natural vegetation in Africa has not provided many useful plants to the cultivator, except for the oil palm and a few others, and for some trees of commercial value.

Lastly, in this outline of some of the major physical problems of the tropics a unique affliction of Africa must be mentioned, the tsetse fly. Looking somewhat like the European house fly, the tsetse occurs only on the African mainland, between 14°N and 14°S, where there is sufficient woodland or forest to provide the shade it needs. Riverine or swamp vegetation will extend its realm into otherwise dry areas, and there are many species of tsetse (*Glossina* spp.), whose habitats or areas differ somewhat, though they all may carry the killing trypanosomes. These cause sleeping sickness in man, no longer a serious menace thanks to a number of effective drugs. But as the carrier of the dreaded nagana disease, the tsetse fly brings death quickly to cattle and horses. The economic and environmental significance of the tsetse lies in the fact that the large and most useful breeds of cattle must be kept out of the tsetse areas, which are the areas which would otherwise be most suitable for cattle because of their greater rainfall and feeding potential. Meanwhile, cattle are kept in the driest zones, and so must move frequently to find even the barest nourishment and water, and to escape the tsetse which advances with the rain and the new season's foliage.

Yet the problems of the tropics are by no means purely physical; they are also human. Furthermore they are not purely African, but they are, in general, more acute in that

| Full Associate           | Estimate of Population 1969 (Thousands) | Annual Rate of Increase 1963-1969 Per cent | Area in sq. km | Density per sq. km 1969 | Gross Domestic Product \$ per capita <sup>a</sup> | Gross Domestic Product Per cent by sector |           |          |
|--------------------------|---|--|----------------|-------------------------|---|---|-----------|----------|
|                          |   |  |                |                         |   | Primary                                   | Secondary | Tertiary |
| Burundi                  | 3,475                                   | 2.0  | 27,834         | 125                     | 43  | 74.5                                      | 5.9       | 19.4     |
| Cameroon                 | 5,680                                   | 2.1  | 475,442        | 12                      | 136   | 46.5                                      | 14.1      | 39.4     |
| Central African Republic | 1,518                                   | 2.5  | 622,984        | 2                       | 103   | 51.0                                      | 19.2      | 29.8     |
| Chad                     | 3,510                                   | 1.5  | 1,284,000      | 3                       | 59  | 60.7                                      | 9.2       | 30.1     |
| Congo (B)                | 880                                     | 1.3  | 342,000        | 3                       | 115   | 31.4                                      | 27.4      | 41.2     |
| Congo (K)                | 17,100                                  | 2.2  | 2,345,409      | 7                       | 61  | 36.2                                      | 36.1      | 27.7     |
| Dahomey                  | 2,640                                   | 2.9  | 112,622        | 23                      | 68  | 54.2                                      | 13.6      | 32.2     |
| Gabon                    | 485                                     | 1.0  | 267,667        | 2                       | 384   | 29.8                                      | 35.1      | 35.1     |
| Ivory Coast              | 4,195                                   | 2.3  | 322,463        | 13                      | 237   | 43.8                                      | 16.4      | 39.8     |
| Madagascar               | 6,643                                   | n. a.                                      | 587,041        | 11                      | 104   | 49.2                                      | 14.7      | 36.1     |
| Mali                     | 4,881                                   | 1.9  | 1,240,000      | 4                       | 60  | 57.7                                      | 13.4      | 28.9     |
| Mauritania               | 1,140                                   | 2.0  | 1,030,700      | 1                       | 115   | 42.7                                      | 47.2      | 10.1     |
| Niger                    | 3,909                                   | 2.7  | 1,267,000      | 3                       | 75  | 66.2                                      | 12.0      | 21.8     |
| Rwanda                   | 3,500                                   | 3.0  | 26,338         | 133                     | 43  | 74.7                                      | 5.9       | 19.4     |
| Senegal                  | 3,780                                   | 2.2  | 196,192        | 19                      | 163   | 34.3                                      | 16.0      | 49.7     |
| Somalia                  | 2,730                                   | 2.7  | 637,657        | 4                       | n. a.   | n. a.                                     | n. a.     | n. a.    |
| Togo                     | 1,815                                   | 2.5  | 56,000         | 32                      | 76  | 56.8                                      | 8.9       | 34.3     |
| Upper Volta              | 5,278                                   | 2.1  | 274,200        | 19                      | 52  | 62.4                                      | 11.4      | 16.2     |

<sup>a</sup> Compare Britain \$1,451 and the EEC \$1,592 (1968).

continent. The far greater densities of population in the valleys of Monsoon Asia than in Tropical Africa, though partly explicable in terms of physical geography, are more the result of different social, political and economic systems and attitudes. These have encouraged and enabled greater mastery of the perhaps less difficult Asian environment. Again, continuing the comparison with other regions of the tropics, whilst the Caribbean has been quite intensively developed (in part by peoples of African descent), Amazonia remains even more intractable than most African areas.

Tropical Africa remains, in general, a thinly peopled area, where the impact of man on the environment is not yet intensive, except in a very few areas. Outside the educated and the town dwellers, most Africans are still largely local subsistence farmers, growing cash crops only where the infrastructure for marketing and export exists (Fig. 1), where wants have been stimulated and taxes impinge. Otherwise, fallow farming, communal land ownership and the extended family are severe restrictions upon initiative, and prevail in a situation where the physical environment demands much energy to tame it. Islam, powerful in West and East Africa, is also commonly thought to be an obstacle to progress, more in its institutional consequences, such as attitudes to women, western education, technology, land and the law, rather than in its original dogma.

There is a multitude of African languages, with indigenous *lingua franca* limited to Swahili in coastal East Africa and to Hausa in the eastern interior of West Africa. The "tribe", which may or may not coincide with racial, linguistic or other groups, is still the first loyalty to the vast majority, even to most élites in their moments of strife and stress. National loyalty was born in anti-colonialism, the celebration of independence, and the pursuit of economic development; it competes acutely with tribal and regional loyalties.

Meanwhile, the population of the fully Associated Countries is low, but growing quite rapidly in certain cases, as the table below shows. For most, their demographic problems are a low or very low total population, a very low per capita income (among the lowest in the world), with the consequence of very small local markets, the more so as they are poorly provided with the basic transport media, marketing, education and information. And, whilst colonial rule has provided them with the outline framework, institutions and infrastructure of the modern state, it has left them separated by different official languages, trading zones and numerous currencies, many being inconvertible.

## The need for industrial development

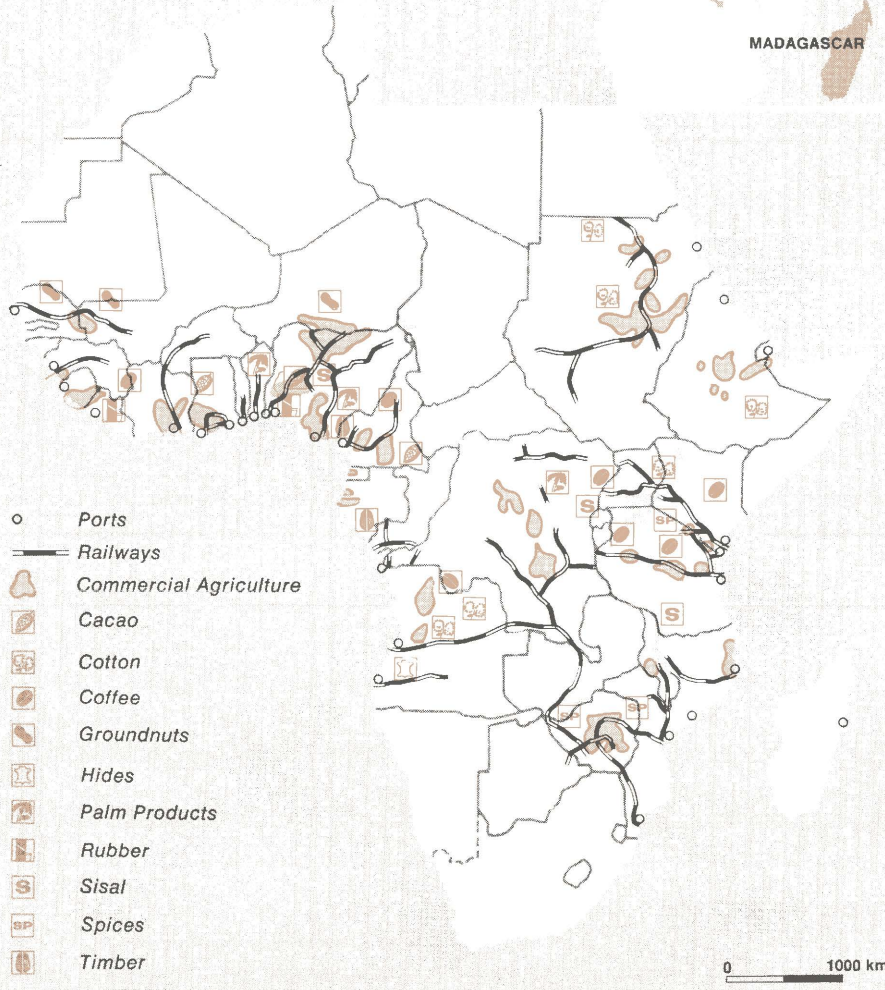
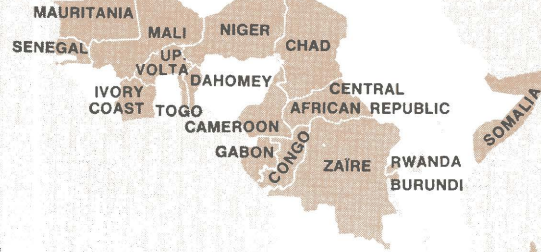
A major debate between economists concerned about under-developed countries has been whether to concentrate very scarce resources for development in agriculture, or whether to concentrate on industry. The latter tends to be favoured as likely to bring quicker returns, because it can operate with fewer institutional and social restraints. It is urged by almost all African leaders for this reason, as a symbol of modernisation and advance, and because they often regard agricultural reform as more or less hopeless, certainly in the short run.

Yet the antithesis is a false one, because industry (without assuming the development of an export market) will not find an adequate market unless the national population, which currently obtains most of its income from farming, can increase its income sufficiently to buy industry's goods. So in varying proportions, according to the special circumstances of each country (area, population, resources, infrastructure etc.), there must be both improvement of agricultural production, processing and marketing, and the development of industry. In some cases, these can be combined, e.g. in the improvement of cotton cultivation and the development of textile and clothing manufacture, or in sugar cultivation, refining and manufacture. Both these provide substitutes for imports, and so should be net savers of foreign exchange, though it should be remembered that foreign exchange will be needed to build the factories, provide the equipment and pay for foreign technical assistance, unless aid is forthcoming. Even then, the finished product, protected by tariffs from foreign competition, will very likely be more costly and of a poorer quality than imports.

Manufacturing industries are sought as a means of diversifying economies, and this they have done. However, each industry must be economically justified at its establishment, and remain so during its continued existence. This criterion, rarely if ever applied with vigour, is the only one for economic health; it was certainly the way the industrial countries achieved their success. Other aims, relating to the establishment of new industry, such as providing employment for school leavers and teaching new skills, are better left to the implementation rather than selection stage.

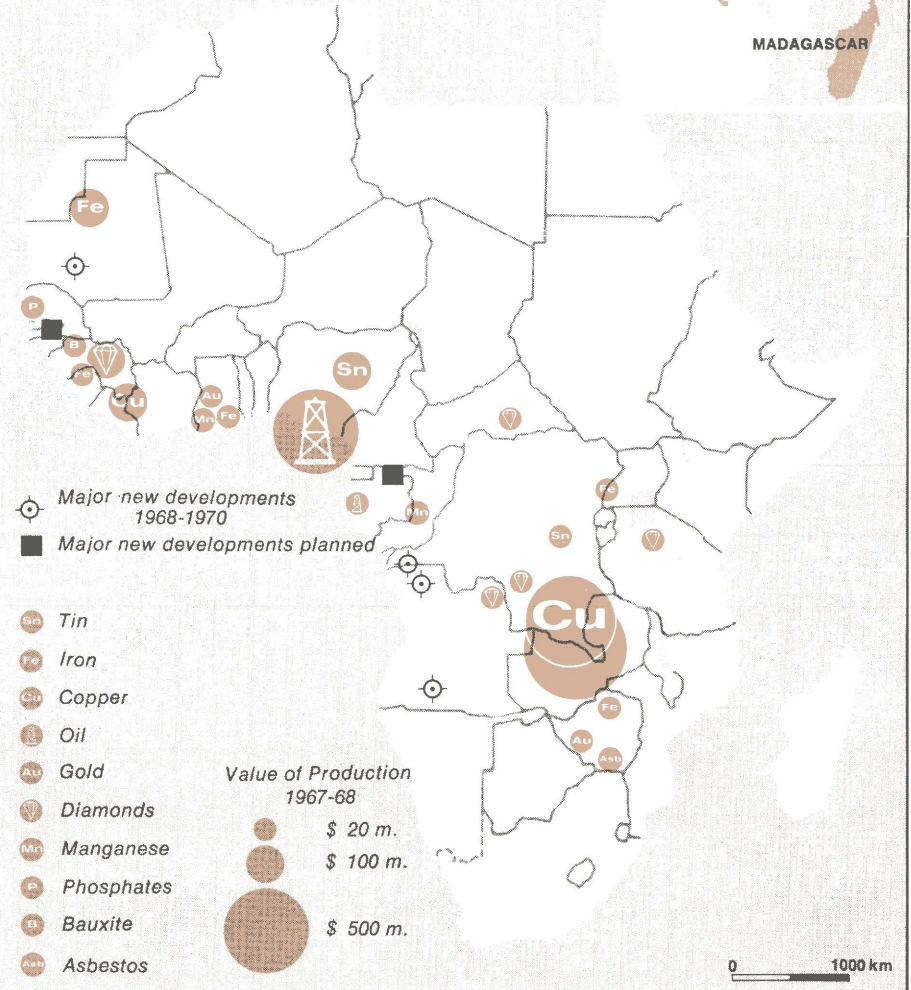
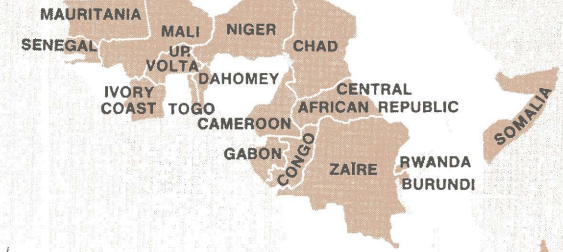
# 1. COMMERCIAL AGRICULTURE

AFRICAN ASSOCIATED STATES OF THE E.E.C



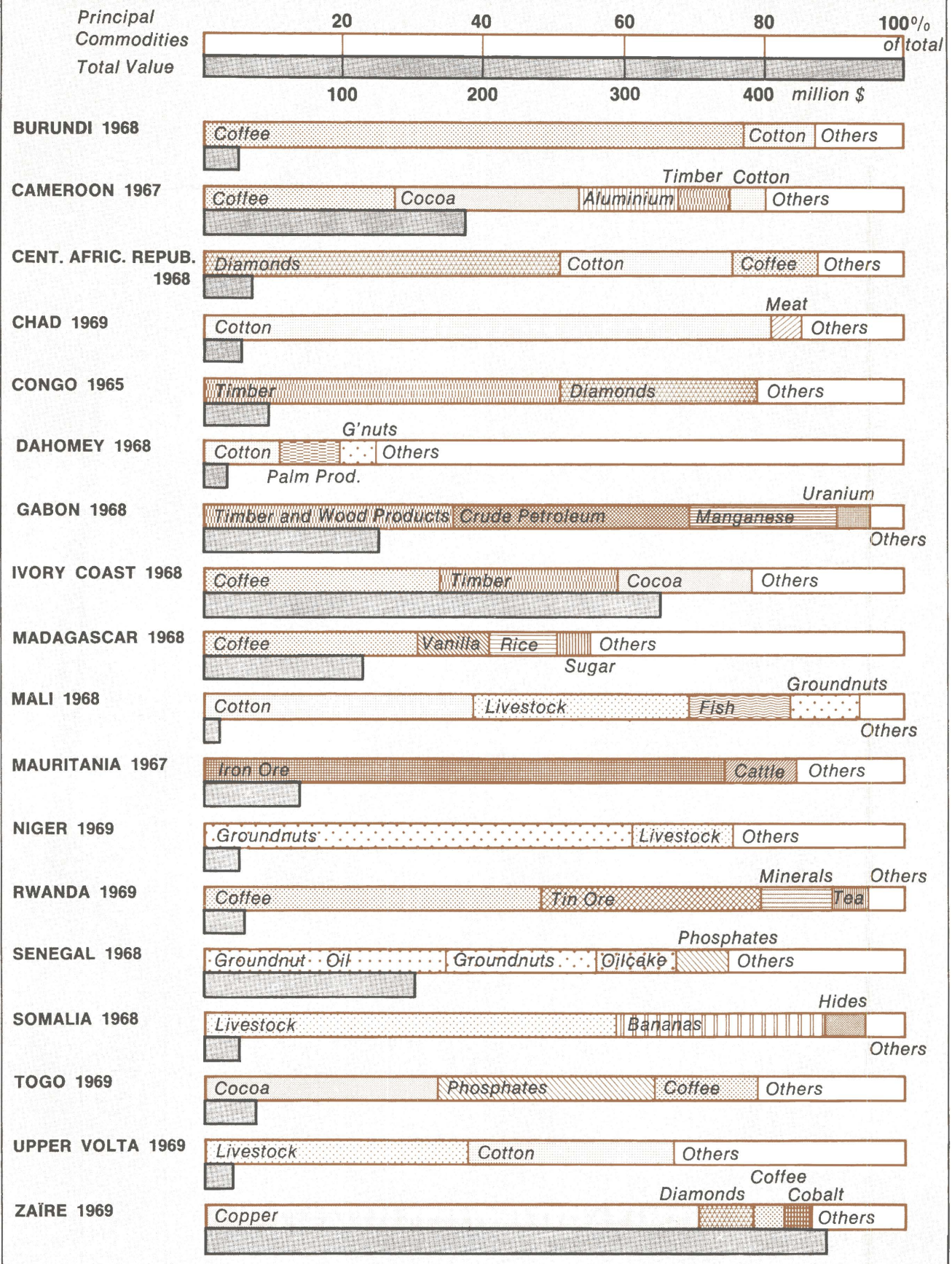
# 2. MINERAL DEVELOPMENT

AFRICAN ASSOCIATED STATES OF THE E.E.C



After O'CONNOR

### 3. PRINCIPAL EXPORTS OF AFRICAN ASSOCIATED STATES



Source : Based on Statistics in Europa Yearbook : « Africa - South of the Sahara 1971 »

## Problems of industrial development

In theory, land is plentiful but in fact most industries are located in ports (e.g. Dakar and Abidjan), often very near to the quays because of the use of imports, and so give rise to congestion. For this, and to encourage more balanced national and regional development, the location of industries in some of the smaller (but not small) towns is being increasingly advocated, as well as the encouragement there and in the large towns of some smaller industries. Industrial estates are often promoted by national or provincial authorities, and could most effectively be helped, where appropriate, by Community loans or grants.

Elsewhere, before an industry (or a mine) can be established the whole environment must often be modified. The bush must be cleared and drained, power, water and housing provided, as well as medical and social facilities. Raw materials are normally very important, despite their declining relative significance in older industrialised countries (Fig. 2). There are commonly problems of irregular, variable or interrupted supplies of raw materials (e.g. of fruit for canning, timber for processing), whilst electrical power is often interrupted, causing great problems to industries such as metal refining or soluble coffee manufacture. Perhaps the most fundamental long-term problem is that, whilst most new industries in the African Associated Countries must perforce be the fairly simple processing ones, world markets are increasingly requiring more "sophisticated" products. Consequently, if world markets are being sought (and they are the only ones that are large), then cocoa-producing countries like the Ivory Coast should produce a cocoa liqueur rather than chocolate, the timber producers such as Congo (B) and Gabon should produce unusual furniture or at least furniture in unusual woods. (Fig. 3). Likewise, African soap producers should develop and use local essential oils, such as jasmine. Mali already cans tamarind and guava juices and awaits an overseas market. Of all raw materials, the oil and natural gas of Nigeria, possibly soon to be an Associate, should stimulate broad range of widely distributed chemical industries.

Labour problems have diminished as countries have developed generally and industrially, but managers and skilled workers are still few. Here is a field in which the Community helps with training in Europe and in Africa, but in which it could and should do much more. It could also help with training for better machine maintenance, improvement of technical education, and help to improve the quality and relevance of all education. In the French-speaking countries this is still overwhelmingly France and French-oriented.

The most obvious field for Community help is in the technical and financial aspects of industry. Indigenous capital resources are small, and what is available commonly goes into land, private building, road transport and family celebrations, rather than into industrial enterprises. Consequently, the state almost inevitably must act as "capital-organiser"; it is the agent through which capital is obtained, and from which it is also in some degree provided. In varying ways it either wholly runs industrial enterprises (as in socialist states like Mali, Tanzania and Congo [B]), or by participation in mixed companies (part-state and part-private enterprise) in many countries. Almost all countries have always had certain state-run enterprises, such as railways, since early colonial times.

The second Yaoundé Convention of 1969, in force until 1975, stresses industrialisation for its inherent importance, and as part of a diversification policy in ex-French Africa where guaranteed prices and quota arrangements for certain agricultural produce had to end. African industries and contractors are given a 10-15 per cent preference over European firms when certain development contracts in the

Associates are awarded. The European Development Fund and the European Investment Bank have been provided with increased funds, and encouraged to make industrial loans or grants, whilst the Bank has been specifically encouraged to invest in African firms. The Fund may use local banks as their agents in helping small and medium-scale industrial projects. More industrial experts will be provided, and financial help will be given with trade fairs and similar promotional enterprises of the Associated.

On July 1, 1971, the Community, within substantial quota limits, abolished import duties on manufactured and semi-manufactured articles coming from all developing countries, in line with the proposals of the United Nations Conference on Trade and Development (UNCTAD) held in New Delhi in 1968. The abolition of these import duties may ultimately widen the market for simple textiles, refined minerals and most processed agricultural produce. Nevertheless, the immediate benefit will accrue to the more developed industries of Latin America and Asia. However, the Community certainly still offers the easiest international market for the Yaoundé Associates.

Trade between EEC and associated African States

| Country                         | Imports from EEC per cent | Exports to EEC per cent |
|---------------------------------|---------------------------|-------------------------|
| Burundi                         | n. a.                     | n. a.                   |
| Cameroon (1968)                 | 71                        | 70                      |
| Central African Republic (1968) | 77                        | 45                      |
| Chad (1968)                     | 64                        | 76                      |
| Congo-Brazzaville (1968)        | 76                        | 64                      |
| Congo-Kinshasa (1967)           | 55                        | 58                      |
| Dahomey (1967)                  | 77                        | 61                      |
| Gabon (1968)                    | 74                        | 49                      |
| Ivory Coast (1967)              | 72                        | 65                      |
| Madagascar (1968)               | 76                        | 40                      |
| Mali (1968)                     | 38                        | 28                      |
| Mauritania (1968)               | 59                        | 62                      |
| Niger (1967)                    | 60                        | 70                      |
| Rwanda (1968)                   | 37                        | 28                      |
| Senegal (1968)                  | 71                        | 76                      |
| Somalia (1967)                  | 34                        | 36                      |
| Togo (1968)                     | 50                        | 82                      |
| Upper Volta (1968)              | 56                        | 19                      |

Source: "Africa South of the Sahara" (Europa Year Book, 1971).

As so many African countries have small total populations, and all its peoples are poor, it is often argued that countries should establish joint industries. Many such proposals have been made, most notably by the United Nations Economic Commission for Africa at Addis Ababa, which has investigated the prospects *inter alia* in iron and steel, cement, chemicals and textiles. Such proposals have foundered on the economic nationalism of countries which want their own factories, and so have tended to fund the same industries, e.g. cement. Prospective partners who are even weaker and poorer would lose revenue from import duties, and probably pay more for the new and probably inferior product from its stronger partner. The poorer partner would lose an employment outlet, a prospect no politician dare accept. Such were the complaints up to 1960 when Dakar in Senegal had most of the industry of French West Africa. More recently, there have been the similar complaints of Tanzania and Uganda against Kenya. In some cases it may be possible to establish part of the manufacture in one country and part in another, but this is rarely economically possible or geographically realistic. The Community should nevertheless help and encourage, where appropriate and agreed, the establishment of joint industries in its Associates. This might also include joint

oil and gas pipelines, and oil refineries. And now that such a coastal state as Sierra Leone, with but 2,5 million people, has a mini-refinery, there would seem as much a case for an international inland refinery in e.g. Fort Lamy, fed by pipeline-conveyed crude oil from Nigeria or Gabon.

## The character of industrial development

Industries in the Yaoundé Associates, as in other underdeveloped countries, may be classified in many ways. One is to look at their national aims, of which there are four.

### (a) *The local processing of local raw materials before export*

This was an early and often essential function to make export possible, most notably of copper from the Congo (K) where even rich copper ores contain only 4-8 per cent copper and are located far inland. Hence waste must be largely eliminated by local refining. Likewise, groundnut oil is increasingly extracted locally, fruit is canned or otherwise preserved, timber is sawn and further processed or peeled for veneer and plywood, and cocoa beans converted to "couverture", "neats", cocoa butter and even chocolate. Many of these represent stages of industrial processing, from the essential removal of waste to carrying out in the production area some of the final processing. More of "the value added" accrues to the Associate, the industry is not limited by the usually small size of the home market because it is producing for export, and national revenue gains. Yet the scope is limited, unless such industries can either compete against established processors or develop such new products as suggested earlier.

### (b) *The local processing of local raw materials for the home market*

These are the import-substitution industries, such as the cement factory near Dakar in Senegal, cotton textile and clothing mills, soap works and soluble coffee plant (Abidjan, Ivory Coast) and the like. Their products should improve as purchasing power increases, but all too often their goods are more costly, of poorer quality and less varied than the imports which would otherwise come in. Import duties are also lost to the state, although precious foreign exchange is saved.

### (c) *The local processing of some local raw materials and some imports for the home market, with the hope of eventually finding all or most raw materials locally*

These are semi-import substitution industries and are typical of the many cigarette factories, shoe, sack, soft-drink and bulk-beer producers. The same criteria apply

as in the previous category, with frequent disappointments over local supplies.

### (d) *The local processing or assembly of imported goods for the home market*

Such are the flour mills of Dakar, Abidjan or Fort Lamy, and car and truck assembly plants at Abidjan. They are the import counterpart to the first group. Again, some of the value added by labour accrues to the African country, but in this case the industry is very much limited by the size of the home market, as are all the last three categories. That small market may also prefer the imported article if it or something similar is still imported or can be obtained by smuggling. The potential for further import or partial import substitution industries is small in those countries which have most industries, i.e. Senegal, Ivory Coast, Congo (K), Arusha-associated Kenya, and in the as yet unassociated Ghana and Nigeria (unratified association of 1966). There is still some scope for them in Cameroon, Uganda, Tanzania and Madagascar. Prospects are not good in the other countries with small populations and little industry.

There is manifestly a need to develop specialist products but these demand education, managerial skills and enterprise which are rare in the underdeveloped countries. The best hope lies, perhaps, in the further development of hydro-electric power, oil and natural gas supplies, and their progressive distribution by grid and pipeline. This should make existing industries more competitive, be the bases for the initial production of fertilizers, pesticides and plastics, and the later production of caustic soda and ammonia. Small inland and international oil refineries have also been mentioned. The necessary infrastructure would be costly and beyond the resources of the Associates or, probably, of the companies. Here is something worthy of consideration by the United Nations, the Community, the oil companies operating in the Associates, and those countries. For, with cheaper electrical energy, oil and natural gas, a real industrial take-off might occur.

## Further reading

A. F. EWING, *Industry in Africa* (London, 1968)

Peter KILBY, *Industrialization in an open economy 1945-1966* (London, 1969)

D. J. VILJOEN, "Problems of Large Scale Industry in Africa", in E. A. G. Robinson (Ed.), *Economic development for Africa South of the Sahara* (London, 1964)

Nicholas G. PLESSZ, *Problems and Prospects of Economic Integration in West Africa* (Montreal, 1968).

# Europe's peripheral regions

*Whatever a region's aspirations, realism dictates that not all locations are of equivalent economic attraction. Over Western Europe the benefits of economic expansion and prosperity have thus not been evenly spread. Least favoured are the predominantly rural, outlying or peripheral regions which until recently have remained geographically isolated and economically neglected. The problems of one peripheral region, Brittany, have already been analysed (European Studies No. 12) and future studies will focus on those of Scotland and the Mezzogiorno. The present article takes an overall view of the historical imbalance between core and periphery and examines the problems and prospects of some of Europe's outlying regions.*

## Core v. periphery

The balance of both population and wealth in Europe is tipping more and more towards the centre and away from the periphery. In face of this process of economic centralisation, it is feared that the existing disparities between favoured and less-favoured regions will be accentuated. Today, the fundamental geographical reality in the regional economic organisation of Western Europe is the dominance of a closely inter-linked urban-industrial core region or "junction zone" extending in a great arc across the continent between Manchester, Paris, the Ruhr and Milan. This economic heartland, although relatively small, contains about half the population of the area encompassing by the member states of the EEG and EFTA but accounts for more than two-thirds of its total production.

Remote from this mainstream of social and economic life are a number of poorly developed, rural peripheral regions which for the most part occupy the maritime littoral of Western Europe. But far from being just isolated European outposts, territorially these designated "development" zones may cover major parts of their respective national areas (Fig. 1). The lower level of activity and income at the periphery of Western Europe can to a certain extent be accounted for by natural factors such as difficult terrain, poor soils, unfavourable climate and the like. More often, however, many of these outlying regions are handicapped by the mere fact of geographic distance from their own national centres of population. This problem of geographical isolation is above all emphasised by the configuration of Europe, itself a "peninsula of peninsulas" each extending from the main body of the continent far outward into adjacent seas. In turn, remoteness and difficulty of access have opposed the intrusion of outside influences and historically served to preserve distinctive regional cultures as in the Celtic fringe of Atlantic Europe. Inevitably, this reinforces the sense of physical separateness already felt in many peripheral regions.

## National v. regional scale

Levels of economic development tend to be lowest in the regions furthest removed from the core areas which emerged as the main European centres of urban and industrial activity. Applied on a national scale, such a generalization

poses an immediate paradox. Ranked according to per capita income in 1968, the countries of the northern periphery, Sweden (\$3,230), Denmark (\$2,540) and Norway (\$2,360) achieve respectively first, third and fifth positions whilst the southern peninsula countries of the Mediterranean, Greece (\$860), Spain (\$770) and Portugal (\$550) occupy the three lowest positions<sup>1</sup>. Within Scandinavia, Finland (\$1,710), doubly peripheral both geographically and politically, proves the exception. Italy (\$1,390), similarly exceptional amongst the Mediterranean countries, nevertheless is only marginally better placed overall, a low ranking largely attributable to the weight of inherited problems of the retarded Mezzogiorno.

This observed division of European countries on the basis of per capita income closely reflects levels of social and economic development. Its relevance to the problem of peripheral regions relates not only to a more real appreciation of the scale of regional poverty within different countries, but also to the capacity for effective regional action which is dependent upon the level of national resources. In the poorer countries of Southern Europe, regional disparities are much wider: large regions show per capita incomes less than two-thirds of their respective national averages. For example in Italy in 1966, the regional per capita index (Italy=100) of 66 for the South contrasted with 140 for the North-West. By comparison, deviations from the mean were much less in Norway, with indices averaging around 85 for the problem northern provinces to 120 for the Oslo region. Differences in this respect between richer and poorer countries are even more pronounced than apparent at first sight. Most of the poorest rural regions in North-West Europe are very sparsely populated whilst large parts of those in Southern Europe are on the contrary densely populated. The previously cited examples of Norway and Italy clearly underline the contrast. North Norway has an average population density of 4 per sq. km. Covering 35 per cent of Norway's land area, the region accounts for only 12 per cent of the national population (totalling nearly 4 million) and contributes some 9 per cent of the national income. Southern Italy on the other hand, with an average population density of 170 per sq. km., covers 40 per cent of Italy's land area, accounts for 38 per cent of the total population (over 54 million) but contributes only 25 per cent of the national income.

<sup>1</sup> Per capita income in US Dollars for other West European countries in 1968 as follows: Switzerland 2,790; France 2,530; Iceland 2,240; West Germany 2,200; Belgium 2,160; Luxembourg 2,130; Netherlands 1,960; UK 1,850; Austria 1,550; Ireland 1,070. Cf. USA 4,380.



## Problems and prospects

The general problems of dominantly rural peripheral regions have been referred to in a previous article ("Regional Problems in Britain and the EEC," *European Studies No. 9*). Long condemned as the materially worse-off regions, their problems can be comprehensively defined as poverty by comparison with more fortunate areas; poverty through lack of opportunity often stemming in the past simply from a lack of resources; but above all poverty exacerbated by the high agricultural dependence of regional economies retarded by out-dated structures. Traditionally, the only solution has been emigration, often on a massive scale and accompanied inevitably by further deterioration in the social and economic infrastructure.

A growing awareness and concern since the War for the plight of these peripheral regions has led to the development of various state regional policies designed to galvanise new life into such problem areas (see "Regional Policy in the European Community", *European Studies No. 10*). More recently at a supra-national level, active discussion<sup>2</sup> has focused on how to enable geographically remote regions to participate fully in the advantages deriving not only from national but the larger European market in order to promote effective inter-regional economic unity. State intervention in each case is aimed at creating social parity in standards of living and in the long term establishing a viable basis for economic growth. Problems, both in nature and scale, vary from region to region as do the options available for future development. The following case studies on the problems and prospects of three peripheral regions illustrate such contrasts.

### North-Norway

Physical geography imposes isolation upon much of Norway. Scattered settlement, long distances coupled with unfavourable climatic and topographic conditions give rise to special regional problems. North Norway, comprising the three provinces of Nordland, Troms and Finnmark, lies almost wholly to the north of the Arctic circle (Fig. 2). But, for the warming Gulf Stream along its coast, the region would suffer even harsher extremes of climate normally found so far north. This long relatively narrow strip of land, dominated by high mountains and plateaux, broken in turn by deep fiords, forms a distinctive part of the problem Scandinavian north stretching across three states and known as Nordkalotten.

The geographical concentration of population and economic activity into the metropolitan south-east of Norway, focusing on the Oslo agglomeration which alone accounts for nearly 20 per cent of the country's population, has been the most persistent trend in modern times. Remote from this core area, and greatly handicapped by hitherto poorly developed communication links, the dispersed communities of the north remain overdependent upon primary industries undergoing radical transformation or in decline. Most of the region's population reside in coastal or fiord districts, with about 40 per cent actually living on islands. Regional population growth is largely restricted to the twelve North Norwegian towns and their environs, accounting today for almost half the population. Tromsø, with a population of 36,340 in 1968, is the largest regional centre. Away from these few urban centres, typical agricultural and fishing areas have experienced declining populations. As a result of the inevitable drift to the towns, particularly to the south, North Norway is the only region which shows a migration deficit with all other regions. Despite remaining a net exporter of population losing some two or three thousand per annum, the region's relatively

<sup>2</sup> Council of Europe Symposium on Peripheral European Regions, Brest 7-10th May, 1970. Resolutions ("Brest Declaration") taken up at special sessions of the Council of Europe European Conference of Ministers responsible for regional Planning, Bonn 9-11th September 1970.

high birth rate has nevertheless enabled an overall rate of population growth almost equal to that achieved nationally. Between 1960-1970, the North's population increased by 6.9 per cent compared with 7.9 per cent for the country as a whole. Such rates, however, are in complete contrast with the exceptional growth of over 37 per cent registered by the province of Akershus which encircles Oslo.






The North was for long regarded as an area offering no possibilities for development beyond those associated with the fishing industry. Until relatively late during the present century little capital was invested in this part of Norway which, in turn, prejudiced the region's potential for future development. During the first half of the twentieth century, the main basis for limited economic growth has been the exploitation of natural resources, timber, fish, ores and to an increasing extent hydro-electric power used largely in the production of metals. These natural resources, mostly found in remote areas, provide the livelihood of small, scattered communities established around processing plants, but where the demand for labour must decrease with progressive modernisation. Equally, economic viability depends upon adequate local and regional infrastructures provided only at disproportionately high costs in sparsely settled areas.

The final stages of World War II brought a major setback to the North when large parts of the region were totally laid waste causing a massive exodus of population. The period of comprehensive reconstruction and settlement between 1945-1950 focused new attention on the region's socio-economic problems and led to the establishment of a special *North Norway Regional Development Programme, 1951-1961*. Problems of unemployment (with only 9 per cent of the national work-force, the region nonetheless in 1955 had 38 per cent of the country's unemployed workers, a figure still at 24 per cent in 1965), depopulation, and inadequate services were tackled by stimulating regional potential where it existed. This growth centre policy was supported by measures to assist residual populations in problem areas and transfer grants to encourage labour mobility in an attempt to promote better regional balance.

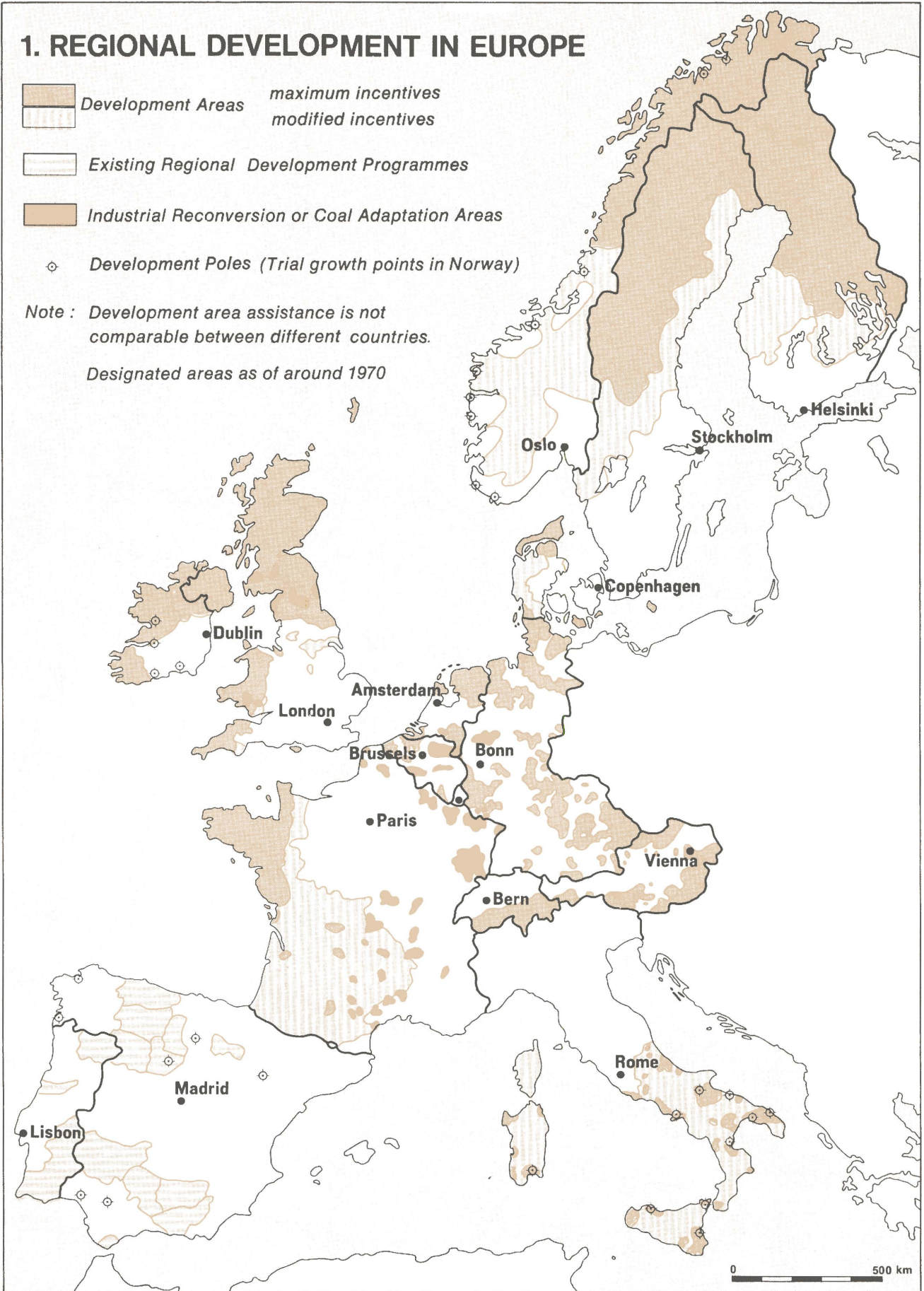
The change to more capital intensive forms of production hand in hand with the development of new industries has brought marked economic progress. Nowhere is this better illustrated than in the radical re-organisation of the fishing industry. Almost half the country's fishermen are from North Norway, although the total number in the region decreased from 41,000 in 1958 to 25,000 in 1965. Specialisation has brought larger deep sea fishing vessels, increased total catches, and major developments in the processing sector. The establishment of such key firms as A/S Findus during the late fifties brought large scale investment in freezing plants. The region now accounts for 80 per cent of Norway's total production of fish fillets. With over-fishing already a problem in coastal waters, the region naturally views with concern the implications of a future fisheries policy as a result of EEC membership.

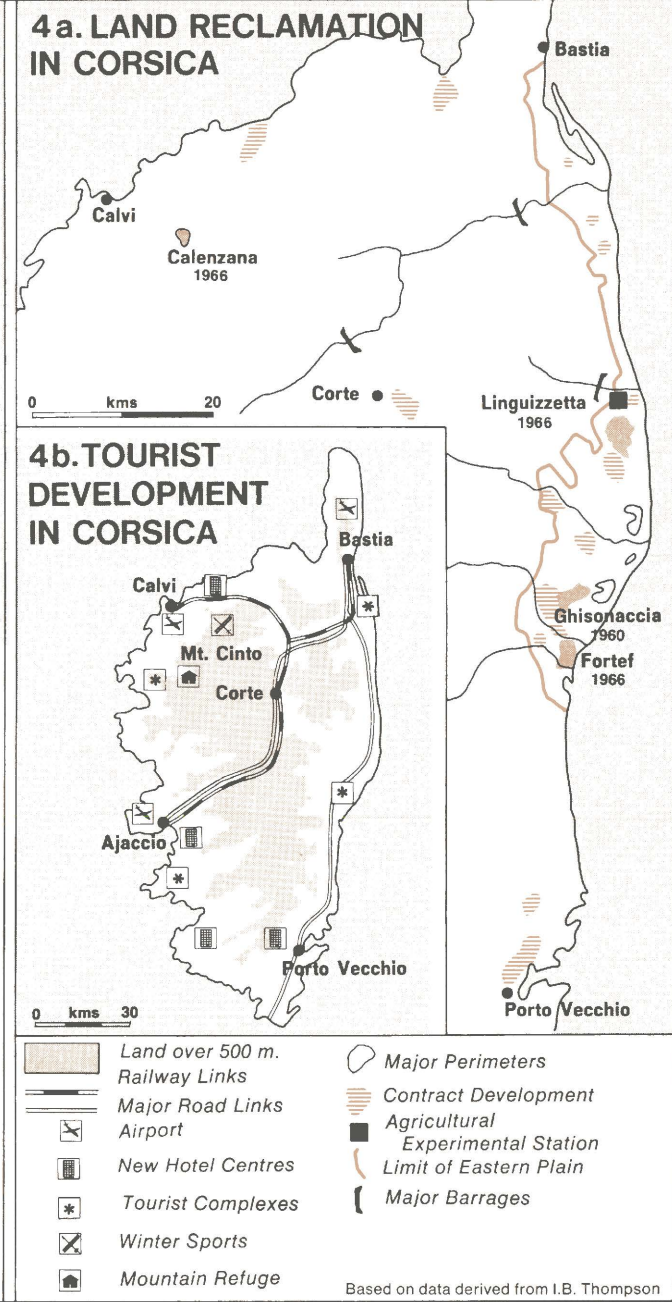
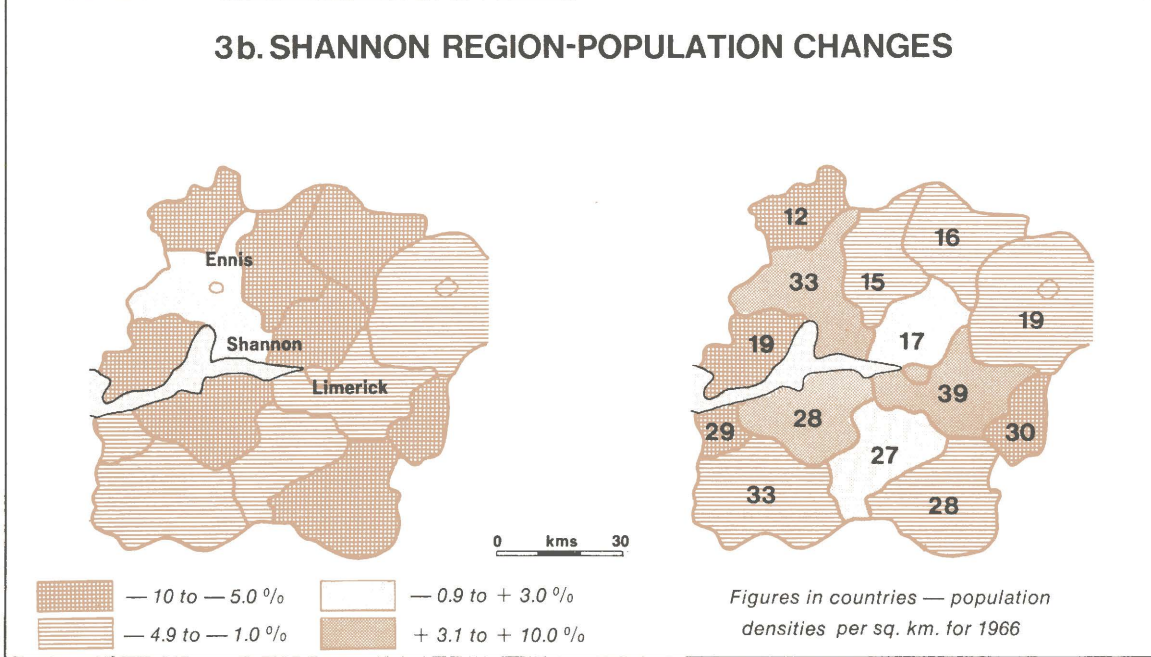
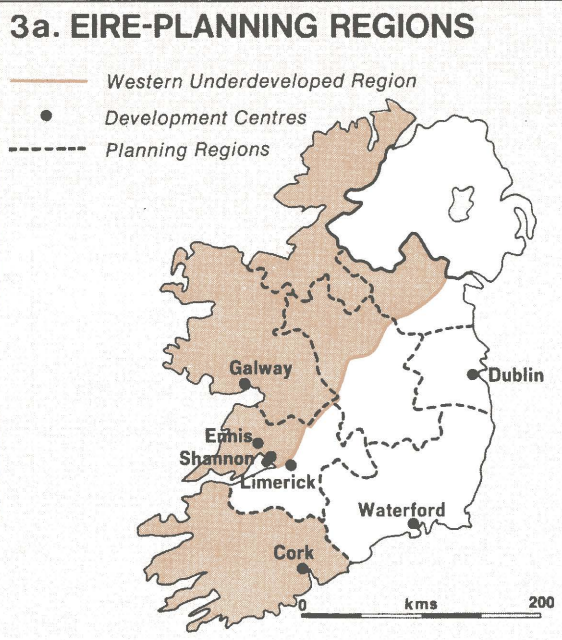
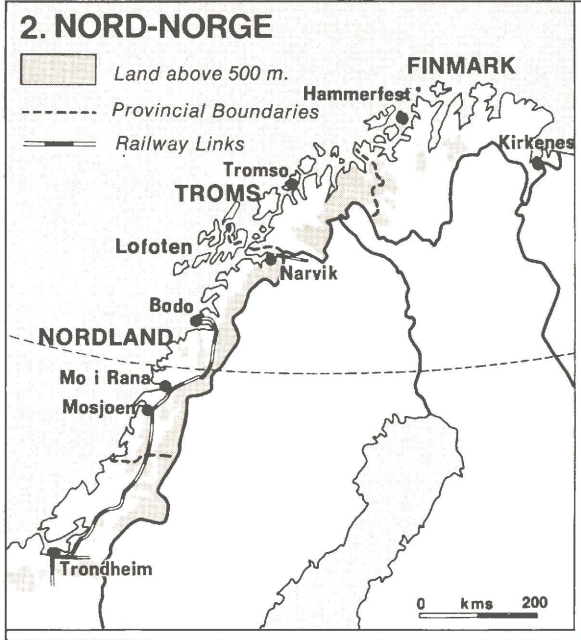
In view of the close relation in Norway between regional and national economic policy, the original programme for the North ended in 1961 and was merged with the new *Regional Development Fund*, benefiting all problem areas but with the three northern provinces still enjoying special tax privileges. Although both production and income remain somewhat lower than in the rest of the country, there can be no doubt of the North's considerable achievements over the last twenty years. Between 1950 and 1966, the region's share of the gross national product rose from 2.1 to 7 per cent. Over the same period, the region's employed population grew by 13 per cent with 2.8 per cent for the country as a whole. The rapid development of the region's hydro-electric power potential (only 34 per cent utilised by 1965) has been a decisive factor in the growth of industry the gross value of which rose seven-fold between 1950-1966. The rural electrification programme from supplying only 43 per cent of the population in 1947 is now virtually complete.

# 1. REGIONAL DEVELOPMENT IN EUROPE

-  Development Areas *maximum incentives*
-  *modified incentives*
-  Existing Regional Development Programmes
-  Industrial Reconversion or Coal Adaptation Areas
-  Development Poles (*Trials growth points in Norway*)

Note : Development area assistance is not comparable between different countries.  
Designated areas as of around 1970





Tourism ("land of the midnight sun") provides a new ingredient in the growth of the regional economy and has benefitted considerably from improved communications and accommodation provision. Further encouragement for the future comes from the setting up of an *Inter-Nordic Advisory Commission* in 1968, to investigate the possibilities of joint development projects across the whole of Nordkalotten. In the same year the decision to establish a regional university at Tromsø has greatly contributed to this new psychological climate which is breaking down the centuries-old isolation of North Norwegian society.

## Western Eire

Poverty has for long appeared endemic to Ireland. Escape from this despairing background meant emigration, which took place on such a massive scale that today the country is left with barely half the population maximum reached 130 years ago. Now the most pressing regional problem is the very maintenance of a viable population in Western Eire, which has not shared fully in the economic recovery experienced in eastern parts of the country, particularly of course around Dublin. Combining both the problems of geographical isolation and economic marginality, this designated "underdeveloped" western region comprises 12 out of the 26 counties of the Republic (Fig. 3) but over one third of the country's population and as such its retarded development constitutes a considerable drag upon the whole Irish economy.

The marked reduction in net emigration loss since 1961 (16,000 p.a. during 1961-1966 as against 40,000 p.a. between 1951-1961) explains the welcome upward trend in total population, but nevertheless masks the continuation of earlier problems. Deteriorating demographic structures consequent upon age/sex selective migration still threaten many communities in the West with stagnation and decay. Furthermore, the lack of any worthwhile urban development in this region coupled with persistent decline in population leaves local purchasing power at a minimal level. The ratio of urban to rural population in the West is approximately 1 to 5 in contrast to 1.5 to 1 in the East. Already during the last 40 years, Dublin's growth has increased its share of the country's population from 14 per cent to over 25 per cent.

Agriculture is still the most important single industry in Ireland, accounting with forestry and fishing for some 27 per cent of the labour force. In parts of the western region to proportion so employed remains well over 50 per cent. Relatively poor soil resources, small and fragmented farms (in 1961 nearly half the farms in the West were under 30 acres), and lack of co-operative organisation characterise a farm economy which remains largely subsistence orientated. The major obstacle to change arises from the high age structure of the farm population. A recent sample survey of the western region showed nearly 60 per cent of full-time farmers to be over 50 years of age, 30 per cent of whom with no successors. In order to encourage movement off the land and accelerate necessary rationalisation of farm structures, the 1965 *Land Act* provides a retirement scheme for old and incapacitated farmers. However, undue dependence of the western economy on agriculture clearly underscores the urgency of this problem. Survival of the western region is dependent not only upon the development of a thriving agricultural industry but also on the emergence of non-agricultural activities in sufficient numbers to compensate for the prospective decline in the agricultural population.

The *Underdeveloped Areas Act 1952* marked a reversal of the earlier post-independence industrial policy of isolationism and protection. Specific areas were now favoured (later extended to the present western region in 1961) by grants to aid establishment of new industry. With the home market exhausted, particular encouragement was given to industries orientated towards export and more

significantly still to foreign participation. In recent years, the latter has represented up to 80 per cent of all investment in newly established manufacturing concerns.

Against a background where nearly half the population is dispersed outside towns of over 1,500 inhabitants, industrialisation poses more than the usual problems. Paradoxically in a land with a labour surplus, where unemployment remains high despite the fact that one quarter of each generation has to emigrate for lack of employment opportunities, it is not always easy to find one place with sufficient workers for industrial development. Hence the prolonged debate over the choice of a spread policy or growth centre policy. The launching of the *Small Industries Programme* in 1969 is a measure of the government's faith in the modernisation of many existing small industries scattered throughout local towns in the West. Even so, recently commissioned advisory reports have urged concentration on a number of growth centres (Fig. 3a), a policy to some extent anticipated in the Mid-West (Limerick) planning region by the development around Shannon Airport.

Amongst the first regional plans to be published, the Mid-West Region (265,000 population in 1966), comprising the counties of Clare, Limerick and the North Riding of Tipperary, focuses naturally on the proposed growth triangle of Limerick-Ennis-Shannon. The Shannon Estuary cuts deeply into the heart of this sparsely populated peripheral region, which at first sight appears as a surprising location for the country's third biggest concentration of industry outside Dublin and Cork, and largely developed over the last ten years. Shannon Industrial Estate provides an important example of industrial development based on air transportation. In the mid-fifties Shannon Airport was being overflowed by new long-haul trans-Atlantic jets and seemed threatened by closure. Modern developments all stem from the *Customs-Free Airport Act 1947* which established Shannon as the first customs free airport in the world. The *Shannon Free Airport Development Authority* was created in 1957 to promote use of the airport for warehousing/freight handling services, an industrial estate and tourism. The first step was the completion of a new jet runway in 1960.

Special grants and incentives were offered to new factories, including exemption from corporation tax on all export profits until 1983. In 1966, the industrial estate adjoining a small new town employed nearly 4,000 workers in some 30 firms, which in that year produced 30 per cent of Eire's manufactured exports. The wide variety of products naturally have a high value to weight ratio readily adaptable to air transport. Electronics equipment constitutes the most important single group. With the majority of workers commuting in from the surrounding region, industrial development at Shannon (and more recently at Ennis and Limerick) has already contributed strongly to stabilising population trends (Fig. 3b).

## Corsica

"Miseria" is how they describe poverty in Corsica. The word conveys an immediate sense of the profound malaise rooted in the recent history of this island society. Seen in the context of the northern and western periphery of Europe, the acute poverty still evident in parts of the Mediterranean is scarcely comparable. Here are to be found regions with the most impoverished housing conditions, the highest rates of infantile mortality and disease, and the most archaic economic structures in Europe.

Corsica's essential physical traits, its insularity, predominantly mountainous terrain and mediterranean climate, provide a distinctive geographical background. Against the latter, consideration of the island's resource base is best understood by reference to a threefold regional division. The discontinuous, alluvial littoral zone offers the best potential for intensive agriculture but on the eastern side of the island, in particular, has been virtually unexploited

until recently. The neglect of Corsica's greatest unused land resource relates both to the island's troubled past and to the problems of what was a difficult physical environment. Open to attack from maritime marauders as well as scourged by malaria, the coastal plain was abandoned for the secure and healthy hill-tops and mountain slopes inland. This intermediate "coteaux" region of dissected hill land between 100 and 500 metres still remains the most densely populated rural zone, but is now pervaded by dereliction and decay. The collapse of traditional agriculture at the beginning of the century provoked depopulation, massive land abandonment and the invasion of dense "maquis". Most of the island's interior, however, is dominated by a high crystalline massif of forested and rugged mountains rising to well over 2,000 metres and penetrated by deep gorges. It is the rivers fed by this mountainous core which now provide an indispensable resource for the development of a new agriculture: water to irrigate the coastal plains.

Agricultural resources have been irrationally exploited. Obviously this must partly reflect the limited technical abilities of traditional agriculturalists faced with problems such as the reclamation of the coastal plain, involving seasonally both drainage and irrigation. The degeneration of agriculture, developed as it was in the "coteaux" zone, attained catastrophic proportions. The area under cultivation has decreased from some 40 per cent at the end of the last century to 3 per cent today. During the same period, the island lost well over half its rural population and now depends for the majority of its food supplies on imports. The rigid application of inheritance laws meant the continued persistence of fragmented structures, as a result of which 80 per cent of holdings in 1963 were under 5 hectares. Equally inevitable has been the scale of demographic decline. Although censuses are notoriously unreliable in Corsica, the total population today is at least 100,000 less than the maximum of 280,000 reached around 1890. The influx of repatriates after 1962 brought a slight improvement but mainly focused on the few towns, with over three-quarters of the island's communes still experiencing decline.

The Corsican regional plan, published in 1957, is based on a reappraisal of the island's resources. Corsica totally lacks industrial resources and the factors of insularity and a limited internal market have long combined to retard economic growth. Against these deficiencies can be listed the real potential of extending the area of productive land through irrigation, a climate which permits a wide crop range and continuous thermal growing season, numerous sites for the generation of HEP and a wealth of tourist resources. Accordingly two development companies were immediately set up to co-ordinate and implement the plan's priority objectives affecting the rehabilitation of agriculture, clearly a long term programme, and the expansion of tourism, already potentially the backbone of the island's economy.

Since 1957, the activities of *SOMIVAC* (*Société pour la mise en valeur de la Corse*) have already brought dramatic changes to the agrarian landscape of the eastern coastal plain, which includes a potentially cultivable area of 40,000 hectares. The immediate objectives in this region following initial basic research into agricultural potential were the reclamation of 20,000 hectares of land and the construction of an irrigation network for new farms. By 1966, the "maquis" cover of three main perimeters had been cleared and, together with a fourth small perimeter on the north-west side of the island, 100 new farms created on over 4,000 hectares of reclaimed land (Fig. 4a). In order to make greater progress, *SOMIVAC* extended its activities to include the development under contract of local, decaying farms, many of which were located close to existing perimeters. New roads and buildings, irrigation and drainage works were undertaken on acceptance of conditions relating to the choice of crops and farming methods.

Such achievements have not been without problems. Three-quarters of the new farms so far established are in the

hands of repatriates from Algeria, already experienced in irrigation techniques and commercial agriculture in North Africa. In effect, the high level of investment demanded has virtually excluded Corsicans from the new highly capitalised, plantation style farms, a situation which has aroused the hostility of local farmers. In addition, the newcomers have opted for widespread planting of vines—because of quicker return—contrary to *SOMIVAC*'S selection of citrus fruits as the principal specialisation on irrigated lands. Vine monoculture undoubtedly entail risks, but so also to an extent do the uncertain commercial outlets for citrus fruits and vegetables in competition with mainland producers. The solution must await the future development of agricultural processing industries on the island itself.

*SETCO* (*Société pour l'équipement touristique de la Corse*) is in the process of creating a number of holiday villages and tourist complexes. A first chain of high quality hotels has been completed around Corsica's coast (Fig. 4b). In the two years before 1957, the annual number of tourists to Corsica increased from 67,000 to 110,000. Ten years later the annual total had reached over 300,000. Improved links with the mainland by new car ferries and more frequent air services have facilitated this rapid expansion. However, the island's internal communications network remains completely inadequate and presents a major obstacle to opening up the interior. Here the success of projects like the creation of a regional park and the establishment of a winter sports centre will depend on progress in providing better road links. Perhaps greater concern for the islands future should be attached to the fact that much development is in the hands of outside interests and will not help capital formation within Corsica itself. While severe problems will continue to exist, at least the decline of the last hundred years which had appeared irreversible has been halted and a period of reconstruction begun.

## Perspectives

The great restructuring of European society triggered off by the industrial revolution conferred insuperable advantages upon certain favoured regions which have so far prevented any major shifts away from these established centres of population and activity. The divergent histories of three regions geographically distanced from their national growth areas have been briefly studied. In each case, with some variation, a trilogy of basic problems faced the region: persistent out-migration and depopulation, related in turn to over-dependence on a retarded agricultural economy and to a low level of urban-industrial development. Far from merely accepting the consequences of such regional distortions, spontaneous and planned efforts have begun to a lesser or greater extent to revitalise these peripheral regions.

Inevitably, regional differences and opportunities imply varied solutions, but everywhere the need for improved communications affording both easier access to the region and more effective integration within it has appeared of primary importance. In this respect, the expansion of tourism as a potential lever of the economy of a hitherto remote region is, apart from the more obvious resources, clearly dependent upon efficient transport links.

## Further reading

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- S. BARZANTI, *The Underdeveloped Areas within the Common Market*, Oxford U.P., 1968.
- I. B. THOMPSON *Modern France—A Social and Economic Geography*, Butterworth, 1970.

# The oil industry in the European Community and the United Kingdom

*Oil is one of the most vital requirements of a modern economy. Oil and its derivatives have a wide range of uses and applications. Demands for energy are met in part by oil, whilst it also maintains the transport system and supplies much of the need for plastics, chemicals and artificial fibres. In 1969 about two tons of petroleum were consumed in the Community and the United Kingdom for each inhabitant. The demand is not only large but also it is growing at a rate of about 8 to 10 per cent per annum.*

*To meet this demand, a complex network of supply areas, transportation, refining and distribution has been evolved. The operation and maintenance of these networks is a large undertaking and not surprisingly, is in the hands of some of the largest international companies in the world. However, the oil industry is not without its problems and the two gravest threats it faces are, in the long term, exhaustion of the world's oil reserves, and in the short term, the pollution and despoilation of the environment by oil products.*

## Growth of demand

The demand for oil in the economies of the Common Market countries and the United Kingdom has been continually expanding since the war. The increase has been spectacular at times, and has consistently been greater than predicted. Expansion of oil consumption has also been even faster than economic growth. The patterns of consumption show the ways in which oil has become a major industry, both by winning new markets for oil products and by the expansion of existing markets.

In 1955—i.e. when the European economies had returned to normal, following their war-time dislocation—, crude oil consumption in the European Community of the Six stood at 70 million tons. The United Kingdom, at this time, was consuming a further 28 million tons. Demand grew steadily during the late 1950s, at an average rate of between 12 and 15 per cent annually, both in the Community and in Britain. The period between 1960 and 1965 saw a massive upsurge of demand within the Common Market, with oil consumption more than doubling to reach a level of 243.7 million tons in 1965. Britain, by contrast, did not experience such a buoyant demand and consumption grew at a rate of only 45 per cent during the same period to reach 66.1 million tons. The later 1960s have seen a further sustained growth of demand at around 8 to 10 per cent annually. In 1969 the Community's crude oil consumption was 372.3 million tons and that of the United Kingdom 93.7 million tons, which was greater than that of the six Community countries in 1955.

Demand for oil is expected to rise still further. Indeed, future problems are not in finding markets for oil but in finding enough reserves to meet predicted demands. Although within the decade 1960-1969 the Common Market's oil consumption had risen by the spectacular figure of 210 per cent, more oil is likely to be used in the next decade than in the last ninety years.

Three events have largely caused the expansion of oil consumption since the war. First, the period in general has been one of prosperity and a high level of economic activity. In these circumstances, it is hardly surprising that the demand for such a basic requirement as oil has increased apace.

Secondly, oil has found a great variety of new uses in the economy in the post-war period. These have focused upon oil as a raw material, rather than the older uses as a fuel. Thus the supply of feedstocks to the petro-chemical industry has become an important function of oil. Oil is now a raw material of products as diverse as synthetic rubber, artificial fabrics, plastics and fertilizers. Within the Community, petro-chemical consumption alone has risen threefold between 1958 and 1968. As fuel, oil has also found greatly expanded uses. Convenience and cleanliness in handling and operation have helped to make its use as a domestic heating agent widespread. Developments in technology have permitted oil to replace coal in blast furnaces in pig-iron manufacture.

Thirdly, in its traditional field as a fuel, oil has also experienced rapidly increasing demand. The large rise in the number of private cars has seen an enormous growth of demand for petrol, and the expansion of commercial aviation has provided a growing market. The decline of railways as the prime transport medium has seen an increased demand for diesel fuels for heavy road vehicles. On the railways themselves, oil has been in demand following the almost total demise of the steam locomotive.

Much of the growth of demand for oil has come from a substitution of oil for coal. This has occurred in a variety of fields, but especially in the production of secondary sources of energy. Oil has been replacing coal as the chief fuel in electricity power-stations, both in the Common Market countries and in Britain. The reasons for the success of oil in competition with coal are several. Oil is relatively richer as a fuel (1 ton of oil is the thermal equivalent of about 1.34 tons of coal). Oil is cleaner, more convenient and more easily stored. Above all, for many years, the price of oil in Europe fell relative to that of other fuels, owing especially to economies of scale in transport (new large-capacity pipelines and giant tankers). With coal becoming increasingly more costly to mine, oil had little trouble in becoming such a strong competitor.

The impact of oil's competitive edge is best seen in its dominating share of primary energy consumption. Within the Community, oil accounted for 61.7 per cent of the primary energy used in 1969, and coal and solid fuels for only 29 per cent. In the United Kingdom the competitive position of oil has been tempered by the imposition of an

excise duty of 1 p. per gallon. This duty has been intended to give a degree of protection to coal. The share of oil in the energy economy, 47 per cent, is the lowest in western Europe, and coal has retained a share of 48.5 per cent of primary energy consumption.

Recent substantial rises in crude-oil costs, however, and the relative insecurity of oil supplies, as the oil-producing countries organised themselves into a producers' association (OPEC) have turned attention to some extent back to coal.

## Oil consumption

The present pattern of oil consumption is the result of two decades of technological advance, in which a variety of new uses have been found. Oil is not one single commodity; the refinery process produces many oil derivatives suitable for marketing. Although most of the oil consumed is in only three forms, the sectors in which it is finally used are many, and testify to the role of oil at the heart of a modern economy.

Oil refining is basically a process whereby crude oil is split into a variety of liquids and gases, ranging from the heavier products such as bitumen and pitch to the lighter spirits such as aviation fuels and petroleum gas. Crude oil is heated and at different temperatures differing vapours are given off, collected and then condensed. Although all crude oil will yield this full range of products, oil from various fields gives slightly differing quantities of each derivative. The maintenance of a balanced demand for all of these products has long been a problem. At the present time, less than 1 per cent of the crude oil input is lost or discarded as waste in refining.

Three types of oil product account for 86 per cent of refined petroleum production. The largest of the three is fuel oil, which is used as a fuel in boilers for heating and generating electricity. Diesel oil and motor gasoline show how the supply of fuels for the internal combustion engine is such a vital function for the industry. Aviation fuels are a small part of refined oil consumption. Naphthas were, until recently, usually waste products from oil refineries, but the oil gasification process of producing town-gas, using naphthas as a raw material, is cheaper than the gasification of coal. In Britain, within a decade of its introduction, it accounted for nearly 71 per cent of all gas production.

Oil has come to be the chief element in the primary energy supply of the European Community, and the energy sector is the largest consumer of oil and products, accounting for 28.1 per cent of oil consumption in 1970. Industry and transport also each consume about the same amount of oil. Although not a large user of oil, the petro-chemical industry accounts for about 9 per cent of final consumption. The pattern of demand in the United Kingdom is largely the same as in the Common Market.

## The structure of the industry

Two features stand out about the structure of the oil industry. The first is the vast size of the companies—some of the largest in the world—and the second is the high degree of vertical integration commonly found. The typical company is active at all levels of the industry from exploration and production through transportation and refining to final marketing of petroleum products. Within this large-scale industry, seven companies, commonly called the "majors" stand pre-eminent. Together, the majors

produce nearly 80 per cent of the non-Communist world's crude oil and control almost 70 per cent of the refinery capacity. All are active in western Europe, and all but two are American based.

### Relative size of US and European oil firms Assets: (\$ million 1965)

|  |        |
|--|--------|
| Standard Oil of New Jersey: (US)           | 13,073 |
| Texaco: (US)                               | 5,343  |
| Gulf Oil: (US)                             | 5,211  |
| Royal Dutch Shell: (Netherlands/UK)        | 12,107 |
| British Petroleum (UK)                     | 3,856  |
| ENI: (Italy)                               | 2,451  |
| Petrofina: (Belgium)                       | 1,030  |
| Compagnie Française des Pétroles: (France) | 764    |

Source: C. LAYTON, *Trans-Atlantic Investment*.

The largest company is Standard Oil of New Jersey, whose products are better known by the name of Esso. This was the largest part of Rockefeller's Standard Oil empire after it was split up to avoid anti-trust legislation in the early years of the century. The other four American companies each only achieve about a half Esso's crude oil production, but are roughly equal in size among themselves. These are Texas Oil (Texaco), Gulf Oil, Standard Oil of California whose petrol, Chevron, is a relative newcomer to Europe, and Standard Oil of New York (Mobiloil).

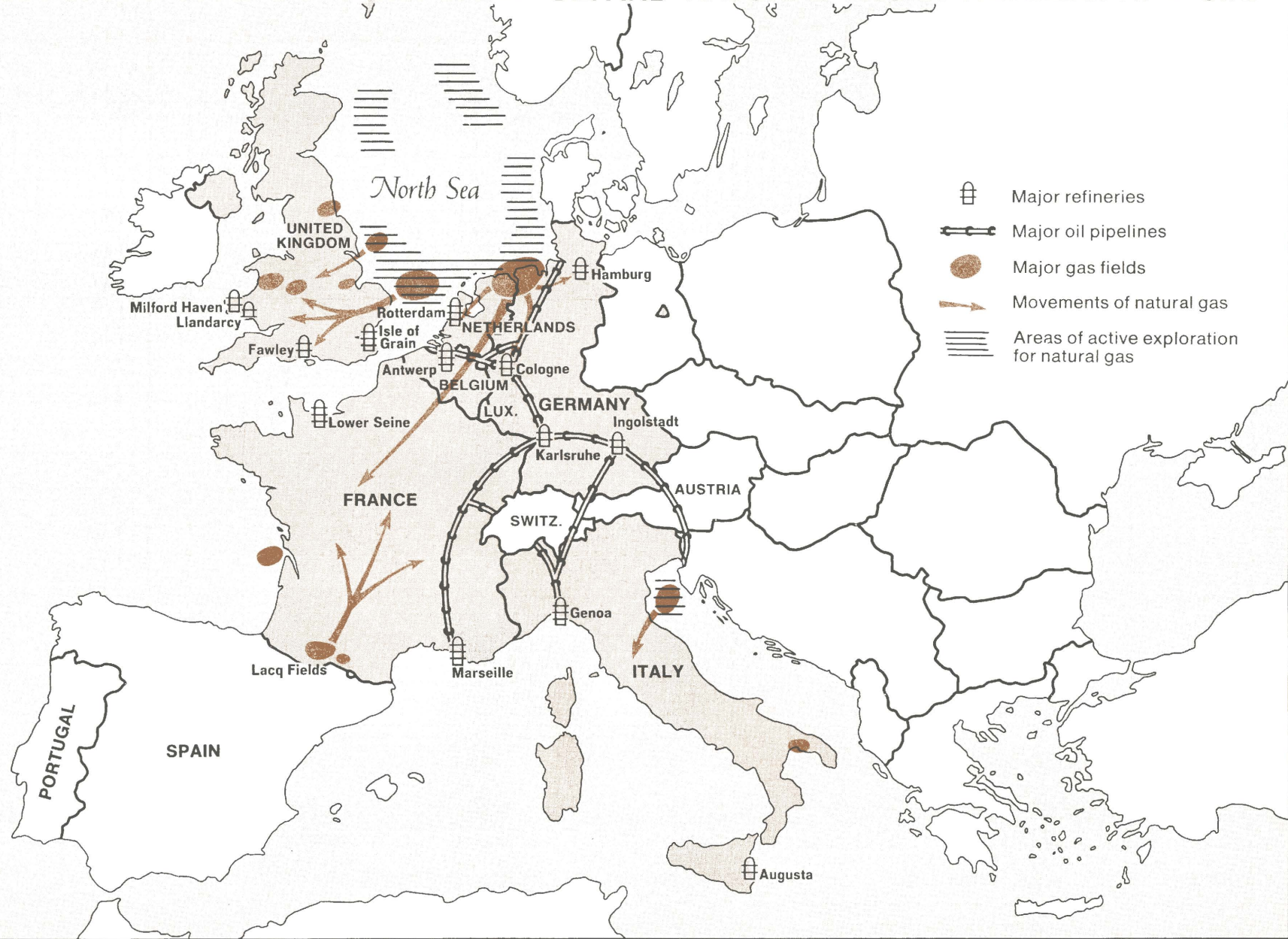
The second largest company is the Anglo-Dutch Royal Dutch/Shell group, which is only slightly smaller than Esso. Its ownership is in fact split roughly 60:40 between the Dutch company, Royal Dutch, and the British company, Shell Transport and Trading. The Dutch company has substantial American (30 per cent), French (16 per cent) and Swiss (17 per cent) equity holdings in it as well as Dutch (30 per cent). In the United Kingdom, it has had since 1932 a working and marketing union with the third largest company, BP. However the association is being gradually severed and both BP and Shell will compete in the British market as they already do throughout the rest of the world. BP is unique among the majors in having a sizeable proportion of government capital; the British government has had a shareholding since 1913. The present holding is 49 per cent, but the company's operations are free from direct state intervention.

A challenge to the operations of the majors in Europe has come from two quarters. First, the state oil companies of France and Italy have provided strong opposition. In France the *Compagnie Française des Pétroles (CFP)* has secured a good share of the market, and its Total petrol is also to be found in other countries. Under the earlier enterprising leadership of Enrico Mattei, the Italian *Ente Nazionale Idrocarburi (ENI)* made its brand name of Agip something of a European legend. Second, spurred on by American import restrictions on foreign crude oil, the smaller United States companies have been vigorously invading the European market. Companies such as Continental (Conco and Jet), faced with considerable non-American sources of crude oil, have been forced to fight fiercely with cut-price tactics for alternative outlets, especially in Europe.

## The supply of oil

The provision of oil to meet the large demand in western Europe is only a part of the world oil industry. Western Europe is, however, a special case, as it possesses virtually no oil resources of its own. Oil is consequently an important element in the import trade of Western European countries: over 96 per cent of total supplies are imported. Transport

# MAIN SOURCES AND DISTRIBUTION OF OIL AND NATURAL GAS IN THE E.E.C. AND U.K.





of these quantities of oil is a considerable problem. Refining of crude oil and distribution to consumers completes the chain of supply.

## Sources of oil

Only 3.7 per cent of the Community's oil needs are met from indigenous sources and only a minuscule amount of the United Kingdom's. Within the Community, West Germany is the major oil producer, with a production of 7.9 million tons in 1969. France, the Netherlands and Italy together supplied a further 6 million tons.

In the mid-1960s, exploration for oil and natural gas began in the North Sea basin. Although the discoveries of natural gas have been to date the more impressive, considerable quantities of oil have been discovered. Early in 1970 a major find of oil was made just inside the

Gulf is reflected in the large quantities of oil bought by Britain from Kuwait in particular.

North Africa is a more recent oil-producing area. Part of its importance to Europe lies in the fact that it is some 2,000 miles closer than most of the Middle East sources and transport costs are proportionally reduced. Former colonial ties account for the 28.6 per cent share of French imports coming from Algeria. Exploitation of oil-fields in Libya early in the 1960s, has seen Europe develop a marked dependence on this source. France, with nearly one fifth of its imports coming from Libya, is the least dependent on this oil, but West Germany has come to rely on over 45 per cent of its imports from this single source.

Limited amounts of oil are drawn from Latin America, because of traditional American dominance in this area and higher transport costs. West Africa, and in particular Nigeria, has begun to supply more oil to Europe. The small quantity of oil, some 14.6 million tons, supplied to the Six by the Soviet Union is of political rather than

*Sources of imported oil in the European Community and the UK  
(percentage of total oil imports)*

| Source              | Belgium     | France      | West Germany | Italy       | Netherlands | EEC         | UK          |
|---------------------|-------------|-------------|--------------|-------------|-------------|-------------|-------------|
| Venezuela           | 9.0         | 2.7         | 4.3          | 2.4         | 1.8         | 3.4         | 6.1         |
| USSR                | —           | 2.1         | 3.9          | 9.1         | —           | 4.1         | —           |
| Algeria             | 5.9         | 28.6        | 9.5          | 1.9         | 0.2         | 4.1         | —           |
| Libya               | 20.3        | 17.3        | 45.2         | 27.9        | 23.2        | 28.4        | 23.2        |
| West Africa         | 2.5         | 3.5         | 2.0          | —           | 7.9         | 2.7         | 5.9         |
| Kuwait              | 13.3        | 9.1         | 3.3          | 17.2        | 20.3        | 11.9        | 28.3        |
| Saudi Arabia        | 17.2        | 5.4         | 13.4         | 13.4        | 12.3        | 11.6        | 14.9        |
| Iran                | 22.4        | 4.3         | 6.6          | 3.3         | 15.0        | 7.5         | 8.5         |
| Iraq                | 5.7         | 17.2        | 2.6          | 18.0        | 11.9        | 12.1        | 4.1         |
| Qatar               | 1.9         | 2.2         | 0.4          | 2.6         | 1.5         | 1.7         | 3.4         |
| Other M. East       | 1.5         | 6.8         | 7.2          | 4.3         | 4.7         | 5.4         | 3.9         |
| Others              | 0.2         | 0.8         | 1.4          | —           | 1.4         | 0.7         | 0.5         |
| <b>OPEC members</b> | <b>82.7</b> | <b>87.0</b> | <b>85.3</b>  | <b>86.6</b> | <b>86.1</b> | <b>87.0</b> | <b>89.6</b> |

*Source:* Oil Statistics OECD, 1969, Paris.  
*N.B.* Percentage do not total to 100 because of rounding.

Norwegian sector of the North Sea. This field, Ekofisk, is estimated to hold reserves of 140 million tons, which makes it one of the largest single oil deposits in the world. Transport of this crude oil to markets remains a problem, with the technological difficulties of deep-water pipelines adding to those of cost. However, it is estimated that North Sea oil will be competitive with oil from other sources. Events during the winter of 1970-1971 have shown how precarious and potentially costly oil from the Middle East may become in future. The value of the North Sea as an alternative supply of oil is at present unfortunately limited, and will probably not be able to meet more than 13 per cent of Britain's demand in the mid-1970s.

In 1969 the European Community imported some 358 million tons of crude oil, and the United Kingdom a further 91.2 million tons. Although there are some variations between individual members of the Community and Britain, the general pattern of oil imports is the same. The bulk of the imported oil comes from the Middle East and North Africa. The complete picture is seen in the following table:

The Middle East supplied almost exactly half of the Community's oil and some 63 per cent of that imported by the United Kingdom. Within the Community, the major Middle Eastern producers were of roughly equal importance as suppliers, but the former British presence in the Persian

economic interest. Most of this oil is directed to West Germany and Italy.

The situation in which Europe has little oil but a large demand, and the oil-producing states themselves have little demand, inevitably has led to a conflict of interests. Europe, not unnaturally, has sought cheap sources of oil, whereas countries such as Kuwait and Libya rely almost totally on oil as a source of revenue. During the 1950s, a string of new oil discoveries undermined the potential bargaining position of individual oil-producing states in their negotiations with the oil companies. In 1960 the *Organisation of Petroleum Exporting Countries (OPEC)* was formed to try to redress the balance. The present members of OPEC are Algeria, Abu Dhabi, Indonesia, Iran, Iraq, Kuwait, Libya, Saudi Arabia and Venezuela.

Not until a new revolutionary regime in Libya, in tough negotiations with the oil companies, succeeded in winning a further share of 30 cents per barrel of oil produced, did OPEC make much headway. A world fuel shortage in 1970-1971, prevailing high costs of shipping, and the closure of the Syria-Persian Gulf pipeline combined to weaken the position of the oil companies. In February 1971, flushed by the Libyan success, the Persian Gulf members of OPEC won from the oil companies an increased level of taxation and a further share of 25 cents

per barrel in the revenues from oil production. Further demands have been made, and the power that the OPEC countries have in their command of 80 per cent or so of the world's oil production, has been finally turned to financial advantage. The impact of such demands may be seen in that an increase of 25 cents per barrel adds about £75 million to the cost of Britain's oil.

## Transportation

Transportation of oil is of great importance, although only composing about 9 per cent of the total cost to the consumer. Through a variety of developments, the costs of oil transportation have fallen relative to other costs. First, the greater use of pipelines has lowered the costs of oil transport, and secondly, both in pipelines and in ocean-going tankers, economies of scale have been achieved.

Pipelines have been developed to bring oil from interior oil-fields to the coast for shipment. A more recent development has been the use of pipelines to bring crude oil to refineries considerable distances away from the European coast-line. Although more expensive than tankers, pipelines do offer marked savings in cost over other transport media, and it is estimated that they are ten times cheaper than rail transport.

The larger pipelines become, the cheaper they are to operate, provided the pipe is full to capacity. The cost of transmitting oil through a 15 cm diameter pipeline, for instance, is twice that of using 20 cm pipe and four times that of a 30 cm pipe. Similarly, economies of scale can be reaped by increasing the size of oil tankers. In 1970 the costs of transporting oil from the Persian Gulf to the United Kingdom can be gauged from the following table, where minimum charter rates of tankers of different sizes are set out.

*Charter rates for tankers on the Persian Gulf-UK run. 1970*

| Size of vessel | Cost per ton of oil |
|----------------|---------------------|
| 50,000 tons    | \$ 4.91             |
| 90,000 tons    | \$ 3.43             |
| 170,000 tons   | \$ 2.54             |
| 250,000 tons   | \$ 2.26             |

*Source: Financial Times, 4 November 1970.*

The prevailing size of tankers has risen. Such economies that the super-tankers can make have almost nullified the effects of the closure of the Suez Canal since 1967. In 1960 the average size of an oil tanker was around 50,000 tons, but by 1969, the average size of new tankers was well in excess of 120,000 tons.

## Refineries

The post-war period has seen two major changes in the location of oil refineries. At the end of the war much of the world's refining capacity lay on or close to the oil-fields. Since then a combination of political, strategic and economic factors has caused a large expansion of refinery capacity in Europe. The second major change has followed in the 1960s within the European market. There has been a move towards inland locations for refineries, still closer to market centres.

Government incentives spurred the building of Europe's first post-war refineries, but economic factors were already making such market locations attractive. Continued expansion of demand for a wide range of oil products

followed an immediate fuel shortage. Post-war exploration proved oil-fields in a number of new areas, but most of the new refinery capacity was located in Europe. This enabled the supply of crude oil to the refineries to be switched from one source to another without lengthy cross-hauls of oil from one field to a refinery on another. The increasing economies of scale in tanker operation also provided a major stimulus to European refinery construction. Crude oil could be more cheaply transported in larger tankers but the same volume of oil when refined would need several tankers, each of smaller size, to convey the various products separately.

To these powerful economic arguments were added strategic and political ones. Nationalisation of the Abadan refinery in Iran in 1952 showed how precarious assets in producing nations could be. Events following the Suez crisis of 1956 and the Six-Day War of 1967 have also emphasised the vulnerability of oil supplies to disruption. To safeguard against the instability which characterises some of the producing countries, the oil companies have tended to favour market locations for refineries.

The sites of the earliest post-war refineries, such as Fawley in the United Kingdom and Marseille in France, were coastal in location. The increasing size of tankers rapidly reduced the number of potential refinery sites and caused problems at existing centres. In the United Kingdom, Milford Haven was chosen as the site for three refineries because of its deep water, whilst it also served as a terminal for the existing refinery at Llandarcy (Swansea) to which it was linked by pipeline. Southampton Water was dredged to give Fawley deeper water facilities, and Fos has been developed as a deep-water terminal for Marseille. Rotterdam's Europort has been built specifically to accommodate super-tankers. Such has now become the size of tankers, that the deep water of Bantry Bay in S.W. Ireland, has been used as a trans-shipment point for vessels upwards of 200,000 tons to off-load crude oil into smaller tankers for distribution to existing refineries.

Economies of scale in the use of pipelines for the movement of crude oil, have also influenced the location of refineries. Within Europe the use of crude oil pipelines has enabled refineries to be set up at inland markets, e.g. Ingolstadt in southern Germany. It is linked to terminals both at Genoa and at Trieste by pipelines, and can currently receive up to 21 million tons of crude oil per year.

In 1969 the European Community, with a capacity of 481.8 million tons and the United Kingdom with a further 109.3 million tons had just under a quarter of the world's refinery capacity. The largest share within the Community was that of Italy, with 164.4 million tons, whilst both West Germany and France were roughly equal with Britain. The distribution of the major refinery centres and crude oil pipelines is seen on the map.

Distribution of refined petroleum products is still largely by road and rail tanker. However, the good network of canals in the Community permits much oil to be moved by barge. Britain, being an island, has a large proportion of its oil distributed by small coastal tanker to depots, and thence by road and rail. Oil-product pipelines are becoming more numerous, but need a large demand to be truly competitive. Thus petro-chemical works, such as Severnside in Britain, and airports are sometimes linked to refineries by product pipelines.

*Note: Throughout, oil tonnages quoted have been in metric and not English tons.*

## Further reading :

- P. R. ODELL, *Oil and World Power*, (London, 1970).
- G. MANNERS, *The Geography of Energy*, (London, 1971).
- B. TAGENDHAT, *Oil, the Biggest Business*, (London, 1968).

# The electoral systems of the countries of the European Community and Britain

*All the present member countries of the European Community are governed by systems of parliamentary democracy based on regular elections in which each individual citizen has the right to take part. Each country, however, has its own electoral system—and all of them differ, not only from each other, but also from the system in use in Britain. Each system has its own particular advantages and disadvantages: the aim of this article is briefly to review the major characteristics of each of these systems.*

## United Kingdom

The British are not used to discussing their electoral system. It is so much an accepted part of political life that few people seem aware of the results it can produce under some circumstances. It leads to an over-representation of the large parties at the expense of the small ones, and it is unquestionably unfair on the Liberals, the Scottish and Welsh Nationalists, and the Communists. But while nearly everyone agrees that the system is unfair, there is a strong resistance to any change for fear that if it is made easier for small parties to flourish, the stability of government in Britain might be endangered. Yet this is not necessarily true. While it would not be correct to say that there is no connection between stability and the number of parties that exist in a country, there is certainly no necessary connection. Several multi-party political systems have enjoyed great stability in the last thirty years, for example all the Scandinavian countries, the Netherlands, etc. The key to stability in a country is not the number of parties, but the nature of the divisions in society. One has to ask whether the difference of opinion between the principal groups in the country are as deep and bitter as they are, say, in Belgium, or whether there is basic agreement about the important things as in Britain? In Britain there may seem to be great differences between the Conservative and Labour Parties, but if lists are drawn up of all the important things on which the two parties agree and of those on which they are in fundamental disagreement, the second list will be much shorter. If one considers their behaviour in office, the differences are smaller still. The result of all this is that while a particular election result may drastically change the lives of a few, this will not be the case for most people.

What are the undemocratic consequences of the British electoral system which are so easily shrugged off? What are the advantages which many feel make up for them?

In the first place we elect our members in single-member constituencies by what is usually called the "First Past the Post" system. The candidate who receives the largest single total of the votes is declared elected even if the votes of his opponents, when added together come to more than he, the leading candidate, has received. The result in Cheadle at the last election admirably illustrates this point:

|                                |        |
|--------------------------------|--------|
| T. Normanton (Conservative)    | 39,728 |
| Dr. M. P. Winstanley (Liberal) | 37,974 |
| R. Stott (Labour)              | 8,062  |
| Conservative majority          | 1,754  |

Mr. Normanton won the seat even though he received only 46.3 per cent of the votes cast. His "majority" of 1,754 only represents his lead over the Liberal candidate. If we make the assumption that most Labour voters would rather be represented by a Liberal than a Conservative, it could be argued that the electoral system has thwarted the wishes of the majority of voters in this constituency. Supporters of the system reply that what the Labour voters have lost on the swings in Cheadle they have gained on the roundabouts in, for example, Cardiganshire where the result was a victory for them on a much smaller minority vote (33.4 per cent). All six Liberal M.P.'s in the present Parliament won their seats on minority votes, but these six "roundabouts" come nowhere near to making up for the Liberal losses on the swings. While it is not a complete lottery, a considerable element of chance shows in the results over the country as a whole. Only twice this century (in 1900 and 1931) has the party forming the Government had the backing of over 50 per cent of the electorate.<sup>1</sup> Indeed in 1951, the Conservatives won the election with both fewer votes and a smaller percentage share than Labour:

|                              |                             |
|------------------------------|-----------------------------|
| Conservatives and Associates | 13,724,418 (48.04 per cent) |
| Labour and Cooperative Party | 13,948,385 (48.73 per cent) |

Furthermore, the Labour lost office even though its vote had increased on the 1950 election both in numerical and percentage terms.

It is difficult to see in what sense a system which allows this kind of result can be said to be democratic, but in fairness it should be said that the party winning most seats nearly always has more votes than the next strongest party.

Notwithstanding all these shortcomings, the factor which convinces most people that the system should be maintained is that while it is difficult for new parties to get in, it is not difficult to get the sitting Government out. A compar-

<sup>1</sup> In 1935, the supporters of the National Government obtained 53.7 per cent of the vote. They were however, strictly speaking, a coalition.

tively small swing of votes against one party has such an exaggerated effect on the number of seats that when a Government is in office, it is continually aware of a real threat from the voters. This gives the electorate some guarantee that British Governments will not go against the wishes of the electorate too much and for too long.

None of the member states of the European Community has so far adopted an electoral system similar to that of Britain. The divisions of opinion in these countries are so great that the fruits of office have to be shared more widely than in Britain. Germany's Christian Democrats would have liked to introduce such a system, but never had a Parliamentary majority big enough to push it through. France has been the country that has come nearest in recent years to polarising political forces into government and opposition on the British model and this was a most important cause of the revolt of 1968. But even the French, most of whom have been concerned since 1958 to bring about a polarisation of political forces have not gone as far as the British electoral system.

## France

In France, for elections both to the National Assembly and to the Presidency, a system known as the Second Ballot is used. On polling day voters go to the polling booth and vote for the candidate of their choice in single-member constituencies exactly as they do in Britain. However, when the count takes place at the end of the day, the election is only finished, if the leading candidate has secured an absolute majority of the votes cast (i.e. more than all his opponents put together). If he has not, then a second election takes place a week later (two weeks in a Presidential election) in which the winner only needs a relative majority to win. In elections for the National Assembly, a complicated series of bargains takes place between the parties about who is going to withdraw in which constituency in return for reciprocal favours elsewhere. Only candidates polling less than 10 per cent of the vote are actually required by law to drop out at the second ballot, but usually enough withdrawals do take place for political reasons for the issue to be greatly simplified at the second ballot. In a Presidential election the law requires that there shall only be two names on the ballot paper at the Second Ballot—the two leading candidates on the first round have the right to remain on if they wish. In the election at which Georges Pompidou became President the figures in both ballots appear on insert 1 (a).

It can be seen from these figures that the Communist candidate Jacques Duclos, narrowly failed to scrape into second place on the first ballot. Had he done so, the second ballot would have been a straight run-off between the Gaullists and the Communists. While the second-ballot system mitigates the worst effects of the British system on small parties, it nevertheless has anomalies of its own. For example, while Monsieur Pompidou won very comfortably on the second ballot, his winning vote represented only 37.5 per cent of all the registered voters. The system also provides no guarantee that there will be a close connection between the votes cast for a party and the seats won in the National Assembly.

## West Germany

There have been two strong influences operating in Germany during the twentieth century in relation to the electoral system. For much of this century Germany had

a deeply divided society and accordingly followed the general Continental tradition of proportional representation in her electoral system. During the period of the Weimar Republic (i.e. between the end of World War I and Hitler's accession to power in 1933), the electoral system permitted a large number of splinter parties. They were able to combine for various negative purposes to obstruct or dismiss a government, but were unable to provide together a positive alternative. The post-war Constitution (called the Basic Law) shows all the signs of these pre-war lessons having been learnt, both by the Germans themselves and by the allies who influenced the countries' post-war development.

The electoral system which has emerged is an ingenious compromise known as the "Double Vote". It secures the best of both worlds in preserving a form of proportional representation (PR) in accordance with the country's tradition, while obviating some of the disadvantages of PR. The system begins straightforwardly with the country being divided into 248 single-member constituencies of roughly equal size. In addition there are 11 constituencies in Berlin, which are not in the full sense part of the Federal Republic. The voter goes along to the polling booth where he is allowed to cast two votes. The first vote he casts for the candidate of his choice, as in Britain, and at the end of the day the winning candidate in each constituency needs only a relative majority. This situation discourages the German voter, like his British counterpart from "wasting" his vote on a small party and encourages people to make a choice, perhaps reluctantly, between the big parties. But the voter also has a second vote, which he casts for a party list (not necessarily for the same party to which the first individual candidate belonged). Candidates on the party list are chosen by the party organisations in the Länder (provinces) and not nationally. They can be on the list while also contesting an individual seat, but, if they win the latter, their names are removed from the party list. The main purpose of the party list is to assist those parties whose vote is too evenly spread to be successful in single-member districts, but it also serves to correct the imbalance between votes and seats which single-member districts usually produce. Over the whole country, another 248 seats (plus another eleven in Berlin) are now shared out on a proportional basis to the parties. If by any chance a party has done so well in the individual constituencies and so badly on the party list vote that it has won more seats for its overall share than the vote would justify, it nevertheless keeps these seats and if necessary the total number of seats is increased. Nobody who wins a seat by direct election in a single-member district can be made to give it up.

To qualify for any share of the second batch of 248 seats to be distributed, a party must either have won three seats outright in constituencies somewhere in the Federal Republic or must have polled at least 5 per cent of the vote, again in the whole Federal Republic.

The total votes cast for each party in each Land are now added up; parties can and usually do combine their lists for all the Länder. Seats are next distributed to the parties in proportion to the votes they have received by the D'Hondt method, and a provisional total for each Land is calculated. Before the final figure is reached, however, the number of seats won by each party by direct election in the constituencies is first subtracted from a party's total entitlement. The result of this subtraction tells a party how many seats it can fill from its party list.

Following the procedure just described, the last Bundestag election in 1969 produced, in an 86.8 per cent pool (Berlin seats not included), the results in figure 1(b).

It now remains to explain the mechanism of the D'Hondt method which is followed in allocating the second 248 seats. As the system is named after its Belgian founder and is now used in Belgium itself we can best explain it by moving on to that country.

## (a) France

### *First Ballot - June 1, 1969*

|                           |              |                   |
|---------------------------|--------------|-------------------|
| Registered voters         | 29,512,878   |                   |
| Abstentions               | 6,614,209    |                   |
| Went to the polls         | 22,898,669   |                   |
| Blank and spoiled ballots | 293,204      |                   |
| Valid votes cast          | 22,605,465   |                   |
|                           | <b>Votes</b> | <b>Percentage</b> |
| Georges Pompidou          | 10,050,804   | 44.46             |
| Alain Poher               | 5,268,414    | 23.31             |
| Jacques Duclos            | 4,811,037    | 21.28             |
| Gaston Deferre            | 1,133,241    | 5.01              |
| Michel Rocard             | 816,410      | 3.61              |
| Louis Ducatel             | 286,481      | 1.27              |
| Alain Krivine             | 239,078      | 1.06              |

### *Second Ballot - June 15, 1969*

|                           |              |                   |
|---------------------------|--------------|-------------------|
| Registered voters         | 29,488,640   |                   |
| Abstentions               | 9,181,627    |                   |
| Went to the polls         | 20,307,013   |                   |
| Blank and spoiled ballots | 1,303,917    |                   |
| Valid votes cast          | 19,003,096   |                   |
|                           | <b>Votes</b> | <b>Percentage</b> |
| Georges Pompidou          | 11,060,181   | 58.20             |
| Alain Poher               | 7,942,915    | 41.79             |

## (b) Germany

| Party   | Votes      | Percentage | Seats |
|---------|------------|------------|-------|
| CDU/CSU | 15,203,457 | 46.1       | 242   |
| SPD     | 14,074,455 | 42.7       | 224   |
| FDP     | 1,904,387  | 5.8        | 30    |
| NPD     | 1,422,105  | 4.3        | —     |
| Others  |            | 1.1        | —     |

## (c) Belgium

|                           | Votes Received<br>Per cent | Seats Won<br>Per cent |
|---------------------------|----------------------------|-----------------------|
| PSC (Catholic Party)      | 31.74                      | 32.53                 |
| PSB (Socialists)          | 27.99                      | 27.83                 |
| PLP (Liberals)            | 20.88                      | 22.16                 |
| Communists                | 3.30                       | 2.35                  |
| Volkunie (Flemish Party)  | 9.79                       | 9.43                  |
| FDF-RW (Walloon Alliance) | 5.90                       | 5.66                  |

## (d) The Netherlands

### *General Election of 1967*

| Party                     | Votes            | Percentage    |
|---------------------------|------------------|---------------|
| Catholic                  | 1,822,904        | 26.51         |
| Labour                    | 1,620,112        | 23.55         |
| Liberal                   | 738,202          | 10.73         |
| Anti-Revolutionary        | 681,060          | 9.93          |
| Christian Historical      | 560,032          | 8.14          |
| Farmers                   | 327,953          | 4.77          |
| Democrats '66             | 307,810          | 4.47          |
| Communist                 | 248,422          | 3.61          |
| Pacifist Socialist        | 197,206          | 2.87          |
| Calvinist Political Party | 138,069          | 2.01          |
| Calvinist Political Union | 59,156           | 0.86          |
| Twelve Others             | 177,207          | 2.55          |
| <b>Total</b>              | <b>6,878,133</b> | <b>100.00</b> |



## Belgium

In Belgium the system is designed to ensure that the seats won by a party in Parliament accurately correspond to the votes cast for that party in the country. This accuracy is not complete because the sharing-out of seats is done at the level of each of the nine provinces and not at national level. Accordingly, a minor party with voters scattered throughout the country may be at a disadvantage. However, this distortion of proportionality caused by the existence of electoral boundaries is really very slight, as can be seen from the results of the election to the House of Representatives in 1968: <sup>2</sup> (Fig. 1 (c)).

The arrondissement is the territorial basis of the electoral system and members of the House of Representatives are elected in multi-member constituencies. Each of these arrondissements receive lists of candidates from the different parties and each list contains the same number of

names on it as there are seats to be filled in the arrondissement. The parties are allowed to ally their lists in one arrondissement with those in another in the same province so as to use at provincial level the remaining votes not used at arrondissement level. This all sounds very complicated so let us confine ourselves to an explanation of how the D'Hondt method would work in its straightforward form in a constituency which was due to return 11 members<sup>3</sup>.

In this case the voter has a choice of four lists. If he agrees with the order in which the names have been placed on the list by the parties he records this fact in a box at the head of the list. If not he can express a preference for one candidate, but in practice most voters do not do this. When the poll closes the officer in charge of the count arranges the totals cast for each party in order of size. In proceeding now to allocate the 11 seats available, the totals for each list are successively divided by 1, 2, 3, 4, 5, 6, etc. When this formula is applied, the seats are awarded to the parties as the table below demonstrates:

|                     | List 1     | List 2      | List 3      | List 4 |
|---------------------|------------|-------------|-------------|--------|
| Electoral returns   | 54,000     | 40,000      | 21,000      | 9,800  |
| To be divided by: 1 | 54,000 1st | 40,000 2nd  | 21,000 4th  | 9,800  |
| 2                   | 27,000 3rd | 20,000 5th  | 10,500 10th | 4,900  |
| 3                   | 18,000 6th | 13,333 8th  | 7,000       | 3,266  |
| 4                   | 13,500 7th | 10,000 11th | 5,250       | 2,950  |
| 5                   | 10,800 9th | 8,000       | 4,200       | 1,960  |
| 6                   | 9,000      |             |             |        |

The last (i.e. the 11th) quotient, is the electoral divisor and can be used to check whether the seats have been correctly awarded. Each list receives as many seats as its electoral return contains the electoral divisor.

## The Netherlands

The marginal distortion of proportionality between votes and seats that we have noted in Belgium does not occur in the Netherlands. For elections to their Second Chamber the Dutch dispense with boundaries altogether and treat the whole country as one constituency. This results in the purest form of proportional representation which is conceivable in practice. The voter goes to the polling booth and votes for a list. These lists have been submitted in any or all of 18 electoral centres. Parties wishing to maximise their chances of winning the most seats hand in lists in all 18 centres and formally declare that these lists are in alliance. Small parties that are known in one locality only need to enter a list in their nearest centre. But whichever of these two latter procedures is followed, it does not alter the fact that for the purposes of the count the whole country is treated as one constituency and all the 150 members of the Second Chamber represent it. As in Belgium, voters are permitted to change one name in the order of the list presented to them, but in practice most voters do not avail themselves of this right.

When the poll closes, the procedure for the count is as follows: the total number of votes cast for all parties is divided by the number of seats to be filled (i.e. 150). (This is known as the Hare Method.) In the General Election of

1967 this total was 6,878,133. When this figure is divided by 150 it produces an electoral "quotient" of 45,854. This quotient is then divided into the total votes cast for each party and seats are distributed according to the number of times this quotient is contained in each party's total. In 1967 the parties taking part in the election scored the totals shown in Figure 1(d).

It is obviously unlikely that this quotient will divide into any party's total exactly, i.e. without remainder; furthermore, if there are remainders of votes there must, by definition, be remainders of seats (8 in 1967). The question now arises how are these remaining seats to be distributed? One way would be to reward parties according to whichever had the highest remainder; this is not favoured because it leaves too much to chance. A fairer procedure is the one followed in the Netherlands, whereby remaining seats are allocated on the basis of the "highest average". The procedure sounds complicated but is really very simple. The total votes cast for each party are first divided by the number of seats that have been allocated to it so far. The results of these division sums will show one party to have the highest average votes per seat. This party now receives the first of the 8 remaining seats. When this has been done, of course, this party's average will drop. The next seat is given to the party which now has the highest average of votes per seat; this process is repeated until all the remaining seats have been filled. In 1967 election the 8 remaining seats were distributed between the parties as follows:

|          |   |                    |   |
|----------|---|--------------------|---|
| Catholic | 3 | Anti-Revolutionary | 1 |
| Labour   | 2 | Democrats'66       | 1 |
| Liberal  | 1 |                    |   |

<sup>2</sup> For a breakdown of figures at provincial level see Robert SENELLE, *The Political, Economic and Social Structures of Belgium*. (Memo from Belgium Nos. 122-123-124 available from the Belgian Embassy, London, p. 49.)

<sup>3</sup> The figures in this example are taken from the last mentioned work by Robert Senelle on p. 51. Senelle also gives on pp. 51 and 52 an explanation of the detailed procedures for the allocation of seats to list alliances.

This brought final party strengths in the Second Chamber to the totals below:

| Party  | Seats     |
|--|-----------|
| Catholic Peoples Party (KVP)                             | 42        |
| Labour Party (Socialists) (PVDA)                         | 37        |
| Peoples Party for Freedom and Democracy (Liberals) (VVD) | 17        |
| Anti-Revolutionary Party (ARP)                           | 15        |
| Christian Historical Union (CHU)                         | 12        |
| Democracy '66  | 7         |
| Agrarian Party   | 7         |
| Communist Party (CPN)                                    | 5         |
| Pacifist Socialist Party (PSP)                           | 4         |
| Calvinist Political Party (SGP)                          | 3         |
| Calvinist Political Union (GPV)                          | 1         |
|  | <hr/> 150 |

There can be no questioning the fairness of the Dutch electoral system but of course this is not the only consideration. Small, newly formed parties can easily enter the contest and sometimes with one or two seats. Of the 23 parties which fought the 1967 election, 11 secured representation in the Second Chamber. In the 1971 election just held, 29 parties entered lists and 14 secured representation. Many of these parties are little more than pressure groups using elections as another channel of influence. Even though there is a deposit system for discouraging parties with little support, it is still difficult to keep the numbers down. The all-time record was in 1933 when 54 parties entered lists. However, notwithstanding the multiplicity of parties, the Netherlands is generally considered to be a stable country. Whenever a cabinet is forced to resign for some reason, the ensuing crisis does not have the same disruptive effect on the country's domestic and international life that was frequently the case in Fourth-Republic France.

## Luxembourg

Although smaller than the Netherlands, Luxembourg has not followed her in treating the whole country as one constituency in the electoral system. The country has a single-chamber legislature containing only 56 seats. These are divided into four constituencies—Central 18, South 23, North 9 and East 6. It is not necessary for the parties to enter lists in all constituencies, although in 1968 all five of them in fact did so. The voter is allowed to cast as many votes as there are seats to be filled in his constituency, he can spread these over more than one party list and can also give up to two votes to any one candidate. When the count begins seats are allocated in each constituency and there is no carrying over of remainders from one constituency to the next. Proportionality over the whole country is thus not secured. The procedure followed at the count is nearly the same within a Luxembourg constituency as it is in the Netherlands over the whole country. The only variation is that instead of obtaining the "quotient" by dividing the number of votes cast by the number of seats to be filled, the formula is

$$\frac{\text{Total votes cast}}{\text{Seats to be filled}} + 1.$$

However, thereafter the procedure is identical, with remaining seats being allocated according to the principle of the "highest average".

## Italy

The electoral system used for the Italian lower house (Chamber of Deputies) is especially interesting because it attempts to get the best of both worlds between the methods used in the Netherlands and Luxembourg. While the country is divided into multi-member constituencies, this does not have the distorting effect on proportionality one would imagine because the remainders of votes are placed in a national "pool" and a further proportional distribution is made. While the voter is confronted with a party list, he is allowed to express individual preference for five names and can also strike out the names of any candidates to whom he is personally opposed. In practice few voters take advantage of either of these facilities.

Italy arrives at its electoral "quotient" in each constituency by dividing the total votes cast for all parties by the number of seats to be filled plus two. After making an initial distribution of seats by then dividing this quotient into each party's total, the remainders of both votes and seats are transferred to a national "pool". At this stage only those parties which have won at least one seat in a constituency and 300,000 votes in the whole country are eligible for any of the remaining seats. For this distribution the straightforward Hare Method is used for arriving at the "quotient" for the national "pool" i.e.

$$\frac{\text{Total votes carried over}}{\text{Remaining seats to be filled}}$$

Any seats still not allocated after this second share out has taken place are distributed on the basis of the highest remainder.

## Conclusions

There has only been space in this article to cover the broad essentials of these seven electoral systems. There are further interesting differences in the minor details and sometimes a different system is used for the upper house of the legislature in the same country. But however fascinating the mechanisms themselves may be, the actual choice of a particular electoral system is itself a political act. No country chooses a particular method without a careful eye on the likely consequences. In taking up their positions at the time of the initial choice of system the parties are naturally keenly aware of how they themselves will be affected.

Moreover, it is a mistake to expect too much from an electoral system in the shaping of a country's political life. Electoral systems can help to "nudge" the political waves in one direction or another, but they cannot create or indeed stem a flood tide.

## Further reading

- Enid LAKEMAN, *How Democracies Vote: a study of majority and proportional electoral systems* (Faber, 1970).  
 W. J. M. MACKENZIE, *Free Elections* (George Allen & Unwin, 1958).  
 The Institute of Electoral Research, *Parliaments and Electoral Systems: a world hand-book* (Scorpion Press, 1962).  
 Wolfgang BIRKE, *European Elections by Direct Suffrage* (A. W. Sythoff, Leyden, 1961), European Aspects Series C, No. 5.





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