

Address by Liam Connellan, Director General, Confederation of Irish Industry, to the 6th Conference of the Irish Manufacturing Committee, on Advanced Manufacturing Technology, at Dublin City University, on Thursday, 31st August 1989

TECHNOLOGY IMPROVES COMPETITIVENESS AND CREATES MORE JOBS

Structural Changes in Europe, and Ireland

The recently published report "Employment in Europe 1989" shows that there has been a marked structural change in the European economy in recent decades. In the 1960s and early 1970s a 4.5% growth in annual economic output was necessary in order to maintain the level of employment. In the 1980s productivity per employee in the EC, Japan and the United States dropped to between 2% and 3%. Achievement of a growth rate in excess of those figures now leads to an increase in total employment.

This trend may seem surprising in the light of the massive advances in technology which have occurred over the last fifteen years which were reflected in sharp increases in the productivity of the manufacturing sector. However, they conceal major changes in the structure of European employment. Since 1970 employment in agriculture fell from 23% to 8% of total employment; employment in industry from 40% to 33%, while employment in services increased from 37% to 60%.

Ireland has experienced similar changes to those in the European economy generally. However, the proportion of total employment accounted for by industry in Ireland has been much more stable than in the rest of Europe falling from 28% in 1970 to 26% in 1988. Furthermore, it is now increasing. Industry is the main contributor to growth in Ireland's national output and to increased employment throughout the economy. Strong growth in manufacturing industry, which accounts for one-third of our total economic output, has made a substantial contribution to increased employment in the country.

The multiplier effect of each manufacturing job is increasing. Technological change and greater recourse to sub-contracting have resulted in each industrial job being associated with five jobs elsewhere in the economy compared with only four jobs at the beginning of the decade. The relationship between total economic output and total employment in the economy has remained stable. The change in the manufacturing multiplier reflects a reallocation of employment within the economy and changes in business practice, particularly in the area of sub-contracting.

The structure of manufacturing industry in Ireland is also continuing to change. New technology industries (such as electrical, electronics, chemicals and pharmaceuticals) increased output by an average of 15% per annum over the period from 1973 to 1988; the food, drink and tobacco sector increased output by an average of 3% per annum; and the traditional industrial

sectors suffered a decline in output of 2% per annum until 1987 but reported a significant increase in output last year. Ireland is unusual within Europe in having half its total manufacturing output accounted for by the fast-growing new technology sectors, and this should result in a continuation of a more rapid growth in industrial output than in the rest of Europe. New technology has enabled Irish industry to improve its competitiveness, expand exports and output and achieve a better employment performance over the last 20 years than any other European country.

Incentives for Industry

Every European country seeks to expand output and employment by creating favourable conditions for industry. The basic requirements are competitive inflation and interest rates, sound economic management which gives confidence to investors; and the provision of a high quality educational training in business and technology and an efficient physical infrastructure comprising transport, telecommunications, and energy.

To supplement these basic requirements many Community member states offer incentives to accelerate industrial growth. Differential corporate taxes represent one of the most important incentives. This year's survey by the OECD on the Irish economy pointed out that the effective corporate tax rate for corporations comprising the total manufacturing and services sectors in Spain is 4.5%; in Ireland 6.0%; in Germany 9.3%; Denmark 10.3%. Britain is unusual within the EC in having an effective corporate tax rate of 30%.

Another approach is to offer specific grants and other incentives. The OECD report points out that the member states of the European Community spends an average 3% of economic output on Government aid to industry. Highly developed countries such as Italy and Luxembourg spend more proportionately on industrial incentives than Ireland.

I must however emphasise that Irish industry places a much higher level of importance on the existence of competitive conditions for industrial operation than on Government grants.

Application of Technology

Implementation of new technology requires the employment of a high proportion of well-qualified technologists. More than one-third of the total staff of many firms in the new technology sectors of the economy have third level qualifications. But technological advances are relevant for all sectors of industry. The availability of qualified staff enables firms to exploit the potential of patents, and of licensing opportunities, to carry out product and process development, and to interact productively with research institutes and universities.

Irish industry favours the switching of industrial incentives from fixed assets to marketing and technology. There is currently evidence of a sharp increase in the demand for engineering staff in Irish industry. Advertised vacancies for engineers in the second quarter of this year were 57% higher than the previous year. Furthermore, unemployment among graduates

who qualified from some of our universities in 1988 at 2% was the lowest for more than a decade.

It is vital for the continued development of the Irish economy that there should be a sustained increase in the number of technical and business graduates qualifying each year. Demand for these graduates at home and abroad is now rising faster than the supply from our universities.

Finally, new technologies, products and processes, have transformed entire sectors of economic activity, creating new industries and new jobs. Advanced technologies are evolving so rapidly that it is estimated that two-thirds of the technologies that will be in use in the year 2000 are not yet available. International co-operation in the area of new technology has improved in the last few years. This has been characterised by world-wide computerised communications networks and international governments/private sectors/industry programmes such as EUREKA, ESPRIT and RACE.

The Confederation welcomes the initiative by Government in launching the National Advanced Manufacturing Programme aimed at raising the awareness of advanced manufacturing technology in all sectors of industry. Emphasis is being placed on computer-aided design, computer-aided manufacture, computer-numerical control, robotics, flexible manufacturing systems, and computer integrated manufacture.

Industry must ensure that technological progress in the laboratory is efficiently translated into technical progress and production leading to improved competitiveness, expansion of industrial output and increased employment. The challenge in all our countries is to create conditions which will enable firms to improve competitiveness. Barriers to new technology must be overcome by effective management so that Irish firms can prosper and grow in the Single European Market.

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