Talk by Liam Connellan, Director General, Confederation of Irish Industry at Institution of Engineers of Ireland and Engineering Graduates Association meeting held on Thursday, 9th April 1987 at 8.00p.m.

THE ROLE OF IRISH ENGINEERING IN PROMOTING ECONOMIC RECOVERY AND DEVELOPMENT

In my contribution I shall focus on the role of engineering in stimulating economic development through the expansion of industry.

The Specialisation of Industry

Ireland supplies only 1% of European demand for industrial products. The main reason for the gap in economic development between Ireland and Denmark is that in proportion to our population the size of the industrial sector in Ireland is only half that in Denmark.

However, in particular sectors of industry, our contribution to output is much greater than 1%. For example, Ireland supplies 5% of Europe's milk; 7% of Europe's beef, and 5% of Europe's computers.

Our industrial sector is much more developed than it was a decade ago. For the first time in our history, five Irish public companies are ranked in the top 500 in Europe. A number of other Irish companies would probably also qualify for this list if they were publicly quoted. The number of Irish companies ranked in the top 500 in

Europe compares favourably with the performance of other small European countries. Let us take a few examples. Jefferson Smurfit is the largest packaging organisation in the world; Waterford Glass is the largest crystal glass and china firm in the world; GAP is the world market leader in aircraft leasing, and is expected to own a fleet as large as the present British Airways fleet within three years. An Irish company is the largest meat firm in Europe; an Irish firm is the largest domestic electric appliance manufacturer in these islands. Ireland has also the largest European manufacturer of industrial diamonds, one of the largest bauxite processing plants in Europe and, of course, one of the largest breweries.

In line with the evolution of a single European market, Irish industry is concentrating on a range of specialised products for the total market. These products are being manufactured in Ireland on a European scale.

All of these developments combine to demonstrate the rapid internationalisation and growing strength of the Irish business sector. I estimate that there are now well over 100 Irish companies with operations overseas.

Structural Change

Since 1958 industrial output has expanded by over 5%

per annum. Over the last two years this growth rate has slackened to about 3% but is now showing signs of rapid recovery. I believe that Ireland has the potential to expand industrial output by 7% per annum over the next decade. However, the achievement of a faster industrial growth target will require that the highest priority is given to stimulating innovation, technology, and marketing.

There are cogent reasons why Ireland has the potential to achieve a faster growth in manufacturing output over the next decade than it did over the last decade. The structure of industry has changed dramatically in recent years. Manufacturing industry can be subdivided into three broad categories :

1. New technology firms generally comprising firms in electrical, electronics, chemicals, and pharmaceuticals;

2. The food, drink and tobacco sector based on agricultural products; and

3. The traditional sectors comprising industries such as textiles, clothing, footwear, furniture, packaging, and building materials.

Since 1973 the growth performance of these sectors has varied widely. New technology sectors have expanded output by 15% per annum, the food, drink and tobacco sector by 3% per annum, and the traditional sectors have suffered a decline in output of 2% per annum.

The strong growth of new technology firms has been influenced heavily by the introduction of new firms from abroad. There are now hundreds of electronics and pharmaceutical firms throughout the country.

Role of Engineering

Engineers are playing a very active role in the development of industry. Each year industry employs over 1,000 new graduates and other third level award holders. More than half of these have engineering qualifications. It is worth noting that most of these young engineering graduates and technicians are employed in the fast growing electrical/electronics, chemicals and pharmaceuticals sectors where they contribute to product and process development, research, design and manufacturing engineering. Whereas these modern fast growing sectors of industry represent less than one-third of manufacturing employment, they account for more than two-thirds of the recruitment of new graduates in technology.

However, the application of modern technology is

also relevant to the more traditional industrial sectors. Advanced technology is currently being adopted by the clothing industry to offset competition from newly industrialised countries which have very low labour costs. It can halt the decline of traditional industrial sectors and put them back once more on a growth path. At present these traditional sectors of industry which represent about two-thirds of manufacturing employment account for only one-third of new graduate recruitment.

The introduction of the STEP programme, which pays 50% of the recruitment cost for the first year of a newly graduated scientist or technologist for companies which have less than 6 graduates, is a welcome step in overcoming this deficiency and ensuring that young technologists are given the opportunity to contribute to industrial development. Last year 120 new graduates were recruited by industry under this scheme.

Export Marketing

The contribution of engineers to economic development must also take into account also be influenced by the rapid diversification of trade away from the United Kingdom towards Continental EEC countries. When Ireland joined the European Community in 1973, the United Kingdom accounted for 55% of our total exports and Continental EEC countries for 21%. Last year we exported significantly

more to Continental EEC countries (38%) than to the the United Kingdom (34%). This diversification has occurred because of the rapid growth in exports to the Continent. Despite the fall in their share of our total exports, the volume of Irish exports to the United Kingdom in 1985 was much higher than in 1983. This pattern will continue because 83% of the purchasing power of the European Community is in Continental EEC countries and Ireland accounts for only a fraction of 1% of this huge market.

However, closer trading with the Continent requires that Irish engineers must be able to communicate with their industrial customers and suppliers throughout Europe. A much greater emphasis must be placed on obtaining fluency, particularly in the main Continental languages such as German and French.

Conclusion

Ireland's economic recovery depends on achieving a greater penetration of Continental EEC markets through market research, and the design, and development of new products. Irish engineers have demonstrated that they are making a major contribution to the development of the "hi-tech" industries. I believe that they can make a similar contribution towards the expansion of the longer-established traditional sectors.

I conclude by quoting a comment made by Jonathan Swift over 250 years ago when he said that "whosoever could make two ears of corn or two blades of grass to grow upon a spot of ground where only one grew before would deserve better of mankind and do more essential service to his country than the whole race of politicians put together". That is not to denigrate the politicians but rather to emphasise the importance of doubling output. Ireland currently produces only 1% of European industrial output. If we could double this to 2%, and, therefore, double the size of our industrial base, we would have no unemployment problems and would enjoy much higher living standards. The challenge for Irish engineers is to make this happen in the very near future.

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