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Speech by Liam Connellan, Director General, Confederation of Irish Industry, on "Technology and Enterprise Development" at National Council for Educational Awards Conference, Town Hall, Tralee, on Thursday, 11th April 1985 at 6.30p.m.

Third Level Employment/Demand and Supply

Demand

Various studies have indicated that proportionately, Ireland has only one third the number of engineers and technologists compared to countries such as Japan, France and the United States. Technical graduates are required, not only in manufacturing firms and technical service companies, but throughout all sectors of the economy. There are very few organisations which do not have direct or indirect involvement with technology. Engineering graduates can be as important to financial institutions, and public policy organisations and departments as to the manufacturing firms. It is essential that a technological ethos permeates our whole society.

An indication of the demand for technologists in the economy is given by an analysis of executive vacancies which is conducted quarterly by Management Selection Limited. This indicates that of 3,600 executive vacancies advertised in the national newspapers over the last year, 35% were for production and engineering staff, and a further 17% for data processing staff. A recent CBI survey in Britain showed that over 30% of manufacturing firms in the office machinery, electrical industrial goods, and electronics industries had their growth constrained by shortages of skilled staff.

A recent report by the U.S. Department of Labour forecasting the fastest growing occupations between 1982 and 1995, listed seven technical occupations in the top ten out of a total of 400.

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In 1983, for the first time, industry was the largest employer of the new male graduates qualifying from our universities. It was the fifth largest employer of female graduates. Industry recruited approximately 400 graduates, an increase of 23% on the previous year. It recruited a similar number of other third level award holders.

The greatest demand by industry was for graduates having engineering qualifications, followed by science and commerce. These three groups accounted for 94% of all new graduate recruitment by industry.

In 1983, the demand from industry for new engineering graduates increased by 46% to 233. The demand for science graduates increased by 10% and the demand for commerce graduates fell slightly. Two thirds of all the new engineering graduates and one third of new science graduates entering employment in Ireland in 1983 were recruited by industry. Of those recruited by industry, in turn, two thirds were taken on by the fast growing engineering, electronics and chemical sectors.

Supply

The supply of engineering graduates has increased by about 10% per annum over the last three years. The total recruitment of engineering graduates in Ireland increased by 18% in 1983 despite a fall in public sector recruitment, I recognise that some new engineering graduates, particularly civil engineers, are unemployed. I would have to question the emphasis given to civil and construction engineering, rather than electronics, electrical and mechanical engineering in the Regional Technical Colleges. Supply must be related to forecast need on a medium term basis.

The demand for engineering graduates is likely to rise more rapidly in the years between now and the end of the decade. It is a matter of concern that current plans envisage engineering graduate output rising at only 10% per annum. I would strongly recommend that plans should be drawn up to increase the intake of first year engineering undergraduates by 20% per annum over the next five years, and that the position be reviewed annually.

A similar distribution of engineering sub-disciplines should be adopted for degree and sub-degree courses. It does not make sense that there should be such a wide difference in the emphasis given to the different engineering disciplines in universities and regional technical colleges.

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For example, in 1983 although only 22% of engineering graduates qualified in civil engineering they had much greater difficulty finding employment than those in other engineering disciplines.

The position was much worse at sub-degree level where about 40% of the 80 approved engineering courses were in civil and construction studies. It is not surprising that the overall unemployment rate of persons having sub-degree awards was correspondingly higher.

There has been a very satisfactory response from secondary schools to the increased demand for engineering and science qualifications. The number of students taking honours mathematics in the Leaving Certificate has doubled since 1980, and there has also been a significant increase in the numbers studying physics and chemistry. The foundation has therefore been laid for increasing the throughput of engineering and science graduates.

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