

# A Method of Evaluating Company Employment Policies Based on National Preferences.

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IN the course of preparing a cost/benefit analysis of Irish Shipping Ltd., it was necessary to attempt an evaluation of the employment policy pursued by the company. This paper describes the method employed in making the evaluation and the results obtained.

## *The Employment Policy of Irish Shipping Ltd. (I.S.L.)*

I.S.L. was established in 1941 by the State in order to provide strategic shipping services to the economy at a time when shipping was not available to neutral countries. This strategic objective has remained the primary function of I.S.L. but has not, in recent years at least, hindered the company in developing the commercial potential of its fleet. I.S.L. trades mainly in international tramp markets where competition is intense and where rates fluctuate widely in response to political and economic developments. It is essential in such circumstances to keep unit costs as low as possible in order to be able to quote competitive rates.

In one respect at least I.S.L. has adopted a policy which results in higher unit costs than the majority of their competitors. I.S.L. employs Irish crews for its ships rather than Lascar, Indian or Chinese crews such as their competitors employ. Now an Irish seaman produces a higher average product than a foreign seaman, roughly twice as large, but an Irish crewman is paid almost four times as much as a foreign crewman. This means that the cost of crewing a ship with Irish ratings is about double the cost of crewing the same ship with foreign ratings.<sup>1</sup> Hence unit labour costs to I.S.L. are roughly double those to firms employing foreign crews. I.S.L.'s policy is dictated largely by a desire to contribute to the provision of job opportunities for Irish people and so to help alleviate the unemployment problem in Ireland. However, the company has never attempted to evaluate this policy

1. On a standard 15,000 ton ship, 22 Irish ratings as against 45 Indian ratings would be required but the total wage cost for Indian ratings would be £34 per day as against £63 per day for Irish ratings. (1967 figures).

in cost/benefit terms and was unaware of whether net costs or net benefits to the community resulted.

#### *A Method of Evaluating the Employment Policy*

The method employed to attempt the evaluation of this policy involved comparing the net product of Irish crews when employed by Irish Shipping with the effective net product which would obtain if Irish Shipping employed foreign crews and the displaced Irish crews were employed in their most remunerative alternative employment. Net product here is defined in the national income accounting sense as the value added to the domestic national income by a firm. Hence the net product of Irish Shipping when Irish crews are employed is simply the sum of total wages paid and profits. The net product with which we are concerned in the alternative situation where foreign crews are employed and the displaced Irish crews are re-employed in their next most remunerative employments is more complicated. What we are attempting to measure here is the net product of Irish Shipping in this alternative situation, which is profits alone, plus the net product associated with the displaced crews in alternative employments. Strictly speaking there are two net products involved in this latter concept but it is simpler and quite valid to add these together and deal with them as a single net product.

In calculating net product it is reasonable to assume that, if foreign crews were employed by I.S.L., all of the ratings wage bill would be expended abroad and therefore that such payments may be regarded as foreign exchange payments. This is in effect a wage payment made to externally located labour. The question then arises as to whether such payments should be valued at the official exchange rate or at some shadow exchange rate. It has been persuasively argued that the official foreign exchange rate tends to overvalue the Irish pound and that foreign exchange should be evaluated at a premium rate.<sup>2</sup> It is argued that there are government policies which in effect tend to devalue the Irish pound. Examples of such policies are export profit tax exemption, agricultural subsidies etc. For the purposes of cost benefit analysis it is necessary to adjust the official foreign exchange rate by some premium which will reflect the true social marginal value of foreign exchange.

It is convenient to develop a method for evaluating the employment policy of I.S.L. by using algebraic notation. Hence let:

$w$  = the total annual wage bill of foreign crews;

$W$  = the annual domestic wage bill of Irish crews;

$t$  = aggregate annual domestic transfer earnings of Irish crews;

$x$  = the premium rate on foreign exchange;

$P$  = annual operating profit associated with the employment of Irish crews;

2. M. O'Donoghue. "A Cost/Benefit Evaluation of Irish Airlines." Read before the Statistical and Social Inquiry Society on 16th May, 1969.

$N_1$  = annual net product when Irish crews are employed;  
 $N_f$  = annual net product when foreign crews are employed.

Now the net product of Irish Shipping when Irish ratings are employed is:  $N_1 = W + P$ . The effective value added to domestic national income when foreign ratings are employed is:  $N_f = t + P + [W - w(1+x)]$ .<sup>3</sup> The difference between these,  $N_f - N_1 = t - w(1+x)$ . This will be positive when  $t > w(1+x)$ , and the employment policy of Irish Shipping will impose net costs on the economy. If, however,  $t < w(1+x)$ ,  $N_f - N_1 < 0$ , and the employment policy of I.S.L. would yield net benefits to the economy.

In the overall study of I.S.L. the evaluation of the employment policy did not arise in isolation. It might be argued that the employment policy pursued by I.S.L. is integral to the strategic function of the company in which case it would be appropriate to add  $t - w(1+x)$  to any indirect benefits flowing from the strategic role of the company. However, the purpose of this paper is to describe a method of evaluation and we may therefore ignore broader issues of this kind.

#### *An Evaluation of the Employment Policy of I.S.L.*

In order to evaluate the employment policy of I.S.L. it is necessary to calculate a value for  $w$ , the total annual wage bill for foreign ratings, and estimate values for  $x$ , the foreign exchange premium, and  $t$ , the aggregate annual domestic transfer earnings of Irish ratings. For simplicity the values of  $w$  and  $t$  are expressed as fractions of  $W$ .  $w$  is easy to evaluate on 1967 figures, the only ones available. The annual aggregate wage bill for foreign ratings is  $34/63W = 0.54W$ .<sup>4</sup> The value of  $x$ , the foreign exchange premium rate is taken as 4 per cent the result estimated by Dr. O'Donoghue.<sup>5</sup> Hence  $w(1+x) = 0.54W(1.04) = 0.56W$ .

The evaluation of  $t$ , the aggregate annual domestic transfer earnings of Irish ratings, is difficult and necessarily somewhat arbitrary. It is necessary to attempt to discover what alternative domestic employment prospects exist for the men presently employed by I.S.L. as ratings, and what total wage bill might accrue to this group in such alternative employments. In the case of a fully employed economy this evaluation would present few difficulties since it could be assumed that the aggregate domestic transfer earnings of any group of employees would be only slightly less than their current total earnings. However, in Ireland full employment of labour does not obtain and it is likely as a result that a proportion of ratings displaced from I.S.L. would be unable to find alternative employment in Ireland and would either emigrate or remain unemployed. Clearly the extent to which there are good or bad alternative employment prospects for these workers depends on the state of the labour markets in which they might be expected to

3. Is the difference between the total annual wage bills of foreign and Irish crews, and in the alternative situation the profits of ISL would be increased by that amount.

4. See note 1.

5. *Op. cit.*

seek alternative employment. In order to attempt estimates of transfer earnings then it is necessary to consider the structure of the labour group concerned. The list set out below provides a breakdown of the ratings in the labour force according to their occupation.

Deck Ratings	120
Engine Ratings	36
Cabin Ratings	64
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Total	220
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Of these three occupational groups cabin ratings, who are trained in catering skills, probably have the best alternative prospects of employment within the domestic economy. The prospects of these workers being re-employed in the hotel and catering industry would be generally quite good. However, some such ratings will no doubt be attached to a seagoing life and be disinclined to accept shore-based employment. The relatively high rate of labour turnover in such employments, where seamen acquire some skill in a seagoing job and then obtain shore-based employment, would indicate that the proportion in this category is not large. It is therefore assumed that 10 per cent of cabin ratings would not accept shore-based employment; and would therefore seek alternative employment with foreign deep-sea shipping lines. Of the remaining 90 per cent, three estimates are made of their likely alternative employment prospects. The high estimate must be that all would find alternative domestic employment; a middle estimate that three quarters would find such employment and a low estimate that half would find such employment. These estimates are of course rather arbitrary but reflect a range of possibilities for a group whose alternative employment prospects are generally quite good.

Engine ratings possess certain skills and experience which are in demand in shore based employments and consequently the alternative employment prospects of this group are also quite good. Allowing for 10 per cent who would not accept shore based employment it may be assumed that the prospects of this group finding alternative domestic employment are similar to those for cabin ratings.

Deck ratings generally do not possess any skills which are in demand in shore based employments and their prospects of finding alternative employment are consequently poor. It is likely then that a substantial proportion of displaced deck ratings would emigrate in order to seek alternative employment and that a number would remain unemployed in Ireland. These generally poor employment prospects may be reflected in three estimates of the numbers likely to find alternative domestic employment. The high estimate is a half; middle, one quarter; and low, none.

These estimates may be drawn together in order to indicate the overall position in regard to alternative employment for ratings employed by I.S.L. The overall high

estimate is 150 (68 per cent); the middle estimate is 97 (44 per cent); and the low estimate is 45 (22 per cent). If it is now assumed that these workers can be expected to earn wages in their alternative employments similar to those earned in the employment of I.S.L. we may simply divide the total wage bill,  $W$ , in proportion to the re-employment estimates in order to arrive at estimates of aggregate annual domestic transfer earnings. Thus the three values for  $t$  are  $0.68 W$ ;  $0.44 W$ ; and  $0.22 W$ .

It was estimated that  $w(1+x) = 0.56 W$  and this means that for the high estimate of transfer earnings,  $0.68 W$ ,  $t > w(1+x)$  and for the middle and low estimates of transfer earnings,  $0.44 W$  and  $0.22 W$ ,  $t < w(1+x)$ . Hence for the high estimate of transfer earnings the employment policy of Irish Shipping will impose net costs of  $0.12 W$  (£35,000 per annum) on the economy; for the middle estimate will yield net benefits of  $0.12 W$  (£35,000 per annum) to the economy; and for the low estimate will yield net benefits of  $0.34 W$  (£99,000 per annum) to the economy.

This result is inconclusive because of the necessity for making a wide range of estimates of transfer earnings. This need arose because the estimates were based on rather arbitrary assumptions and a wide margin of error was allowed for. It would of course be possible in a more detailed and thorough study to estimate transfer earnings more rigorously than in this paper and consequently the range of estimates could be narrowed considerably. However, if the estimates made above are of the rough order of magnitude of actual transfer earnings, then it is clear that neither large net costs nor large net benefits are likely to be associated with the employment policy pursued by I.S.L. One might, tentatively, go further and suggest that the presumption must be that net benefits rather than net costs will flow from that policy since two of the three estimates of transfer earnings indicated net benefits.