

ASPECTS OF THE IMPACT OF MAJOR EMPLOYMENT LOSS
THE CASE OF THE SINGER COMPANY, CLYDEBANK*

1. Introduction

The Singer Company recently announced proposals for the future development of its Clydebank plant which would have resulted in 2,850 job losses over the four-year period to 1982. In the event the Company was persuaded to adopt a modified version of an alternative strategy proposed by the Singer unions and the job losses are now expected to be 2,350 over the four years.

This paper traces out in some detail the main economic consequences of job losses on this scale, notably for the Clydebank Local Economy, but also more generally for the Strathclyde Region and the UK economy. The particular concern of the paper is to explore the implications for impact assessment of some important characteristics of local labour markets and this is done within the context of the types and numbers of Singer job losses and the pattern of those losses. Although a case study, it is hoped the analysis will be of more general applicability for the costing of major employment losses.

The paper is divided into six sections. Section 2 below provides background data both on the Company and on the local economy. Section 3 examines some aspects of the direct effects of job losses at Singers and Section 4 looks at indirect effects. The actual assessment of the impact of the Singer job losses on the economy is presented in Section 5 and the paper is completed with some brief conclusions.

2. The Local Setting

i. Company Background and Proposals

As late as 1960 Singers employed 17,000 at Clydebank. Shrinking markets due to foreign competition notably from far eastern countries coupled to a neglect of its sewing operations whilst Singer diversified into other fields had seen this workforce whittled down to 5,100 when Singer announced their retrenchment plans in mid 1978. Currently (March 1979) employment at the plant is nearer 4,500.

* The author is employed as an Economist by Strathclyde Regional Council, Physical Planning Department. This paper takes up some of the themes of a report (1) prepared by the author in the course of his work. He would like to acknowledge the assistance of two colleagues, Ms. Linda Newell and Mr. Stephen Mason in the preparation of that report and of Dr. M.A. Greig under whose general supervision that report was prepared. However, all views expressed in this paper are those of the author alone and do not necessarily reflect those of the Strathclyde Regional Council.

3. Aspects of the Direct Effects of Job Losses at Singers

i. Job Losses and Incremental Unemployment

The great majority of the 2,350 job losses planned at Singers will take place by attrition, not redundancy. Thus there will be no sudden surge of registered unemployed. Rather, the job market will become tighter, search time increase and through time the number of persons unemployed at any given moment, increase. The significant point here is that, through time, as a shake down through the whole labour pool takes place, the characteristics of the incrementally unemployed will increasingly come to resemble those of the 'average' unemployed. (This same shake-down will also occur when there are redundancies but will probably take longer to work through). Therefore, where there are already severe unemployment problems, as in the Singer area, and the effects of job losses can be expected to be long lasting, it is more appropriate to assess impact using average, not marginal, characteristics of the unemployed.

However, job losses at Singers will still not result in a direct one-to-one increase in actual unemployment either in the local area or further afield because of the existence of labour scarcities in the economy and the directly related phenomenon of labour migration.

Numerous studies both national and local (for Scotland see e.g. (2) and (3)) have established that even at times of substantial general labour surplus, shortages of specific types of labour exist in the economy. During upswings of the economy these shortages become more general. Hunter's Study (2) of this phenomenon is particularly apposite to the Singer job losses as Hunter studied the West Central Scotland labour market and paid particular attention to the engineering sectors. Hunter found evidence of both labour scarcity - on a fairly wide, if job specific, scale - and the possibilities for 'dynamic recruitment' - the removal of a labour scarcity constriction resulting in a more general expansion of employment opportunities.

Thus to the extent that Singers is presently absorbing scarce labour, a reduction in this company's requirements will enable other companies to fill vacancies previously held open for the lack of suitable applicants. No net increment to unemployment results from such cases and there is the possibility of dynamic recruitment in recipient firms. One of the most important mechanisms for effecting this labour transfer is (particularly in a depressed area like Clydebank) migration. The majority of migrants moving for employment reasons are assured of a job at their destination and in the majority of cases where a job is advertised outside the local area the employer is experiencing difficulty recruiting suitable labour locally. Some migration will merely result in substitution employment - in-migrants displace local labour - but this is not the dominant effect.

It is estimated that the net effect of these factors in the Singer case is that only between 85-93% of job losses will result in incremental unemployment. The derivation of this range is given in Appendix 1 but it should be noted that it is very much an order of magnitude estimate.

Singers operates in two main spheres at Clydebank: Industrial machines and Consumer machines. Needles associated with the Industrial Products (IP) and the Consumer Products (CP) are also manufactured. On the IP side Singer has become totally non-competitive on its main model. On the CP side the company still makes profits although its market position is presently being eroded. The company is highly vertically integrated at Clydebank.

Overall, 75% of the workforce are male - 3,800 out of 5,100 in mid 1978. Before retrenchment 2,000 were employed on Industrial Products (IP); 2,900 on Consumer Products; and 200 on IP and CP Needles. However, in 1977 only £10m of the £37m turnover was contributed by IP products.

The majority of the Singer labour force is semi-skilled - 70% in late 1977. The remainder skilled (over 9%) or clerical/managerial (20%). Average earnings across the plant were £82.18 p.w. in late October, 1978.

Total (CP + IP) orders placed on Strathclyde vendors by Singers in 1977/78 amounted to some £1,600,000, principally Oil, Consumable Tools, Steel, Protective Clothing and Electrical and Production parts. GB orders were approximately £10m. Upwards of 80% of output is exported and Singers have no significant domestic competitors on either the IP or CP side.

The Company strategy proposed cessation of all IP and Needle production and a revamping of CP production which would result in job losses in this division partly as a result of productivity increases and partly through reducing Clydebank's vertical integration through outside sourcing. The alternative strategy accepted the CP proposals but suggested maintenance of a reduced IP line and needle products. Under both strategies most of the required job losses will take place through attrition - non-filling of vacancies - and only a small part via redundancies.

ii. The Local Economy

The local economy within which the Singer Plant lies is neatly contained by the Clydebank Employment Exchange Area (EEA). This EEA takes in Clydebank Town and the western edges of Drumchapel, Yoker and Partick. Currently some 25,000 employees in employment work in the area but employment opportunities are on a downward trend which shows no sign of abating. Since 1971, some 6,000 job opportunities (net) have been lost, virtually all in manufacturing and all by male employment. Correspondingly, the male unemployment rate has risen rapidly relative to the Strathclyde Region average and currently exceeds it, standing at 12.5% in December, 1978 compared to the Regional rate of 10.2% and the GB 6.5%. Female unemployment was, at 7.6%, also slightly above the Regional average (7.2%) and overall 3,100 persons were registered as unemployed in Clydebank EEA in December - a rate of 10.6%.

Despite its rapid decline manufacturing still accounted for 55% of all jobs in Clydebank in mid 1976 - 30% in Scotland as a whole - and the Singer Company for 20% of employment. That unemployment has not risen faster in the past is attributable in part to out migration but principally to increasing net outward journey to work flows, mainly to the conurbation. The Clydebank area economy is thus characterised by declining male employment opportunities, significant excess supply of labour over demand and relative openness to the Glasgow Conurbation which itself has long had employment and unemployment problems.

ii. Registered Unemployment and Benefit Receipt

Although 85-93% of Singer job losses may result in incremental unemployment the actual numbers registering - and thereby being 'noticed' - as unemployed will increase by a significantly smaller proportion because not all unemployed persons register. Registration is a pre-requisite for standard benefits, but married women on the small stamp, those who have voluntarily left jobs during their first six weeks of unemployment, those expecting to be only a short while between jobs, some school and college leavers and some persons above retirement age either cannot get benefit or do not consider it worth the bother and many of these do not register as unemployed. An article in the December, 1976 D of E Gazette (4) concluded that on average 40% of the actual number of unemployed do not register - made up of around 13% of male and 180% of female registered unemployed.

In Strathclyde the proportion is probably lower because the labour market is more sticky and relatively fewer people will be in the two short term unemployment categories above. In addition, for the Singer job losses some allowances must be made for the higher male-type job proportion than on average. Also, the school leaver and retirement categories are much less significant for incremental registrations of the kind under discussion.

Taking account of these factors it is assumed that, in fact, only 15-20% of job losses at Singers resulting in incremental unemployment will not show up as registered unemployed. At its widest this means that only 68-80% of Singer job losses will be registered.

Moreover for the purposes of assessing income loss it is important to note that not all registered unemployed persons receive benefit payments. Married women on the small stamp, all those in the first three days of unemployment, some school leavers, some OAPs and those who have exhausted N.I. benefits and are not eligible for supplementary benefits are the main categories. In all, these groups have accounted for 18% of total registered unemployed in recent years. (e.g. Table 112 of the November, 1978 D of E Gazette).

iii. Aspects of Direct Job Losses: Summary

It is argued above that as a result of countervailing labour market effects, non registration and non eligibility, the proportions of the total job losses of 2,350 at Singers that will result in direct unemployment (etc.) effects are as follows:

Incremental Unemployment	85-93%
Incremental Registered Unemployment	68-80%
Incremental Benefit recipients	56-66%

also:

Incremental Migration from Strathclyde	5 -11%
Incremental Migration from Clydebank	7 -15%

4. Aspects of Indirect Effects of Job Losses at Singers

i. The Nature of Indirect effects

'Indirect effects' are here taken to mean all consequential adjustments resulting from the decision to shed labour.

The main effects are on income flows in the economy and associated ripple effects, and on orders placed for materials and services. A distinction between the localised effects in the Clydebank area and national effects is required however. Thus migration from Clydebank will worsen local impact but, assuming no overseas migration, have minimal net impact on the economy as a whole. Similarly it has already been suggested that the job losses at Clydebank will in some small part be offset nationally by gains elsewhere.

In the Clydebank area significant secondary effects resulting from a reduced income flow in the economy, partly as a result of Social Security payments being less than Singer take home pay but partly also from the absolute loss of local income due to out-migration will result in additional unemployment in the area and further knock-on effects. In Strathclyde as a whole these two effects will also be present - indeed the multiplier value will be higher than for the Clydebank area - as will employment losses resulting from reduced vendor contracts to Singers.

Because Singers has no domestic competitors the repercussive effects on the rest of the UK will also be much more significant than usual. There will be no countervailing pick-up in orders (and employment) elsewhere. Exports will fall and imports increase.

ii. Employment and Unemployment Income Flows

Average earnings at Singers in late 1978 were £82.18 p.w. on which PAYE of c£16.50 would be due and National Insurance of £4. Thus average take-home pay in late 1978 was of the order of £61.50. This includes employee superannuation payments and union dues, treated respectively as personal savings and consumption.

Average Unemployment (benefit) income for the incrementally unemployed in late 1978 is estimated at £25.50 p.w. The calculation of average benefit is rather more complicated than generally realised and the derivation of the estimate here is given in Appendix 2. (The average payment involved is also probably rather smaller than generally realised.)

iii. Net Reductions in Employment Income Flows

Given net pay of £61.50 p.w. and benefit of £25.50 p.w. the net reduction in Income Flow for job losses resulting in incremental registered unemployment is assessed at £36.p.w. for benefit receivers. Assuming that increases in basic social security allowances and the increase in the earnings related benefit each year offset (notional) increases in Singer wages over time and both rise at the same rate as inflation, this £36 p.w. will stand as a constant (1978 prices) differential over time.

For migrants, however, the local income loss is generally absolute and, allowing for the higher than average skilled proportion amongst migrants is estimated at £90 p.w. gross - or approximately £67 p.w. net - plus child allowances of c£6 p.w. For the non-benefit receiving unemployed (registered or unregistered) the local income loss will also be absolute but child allowances will not be lost. Assuming a lower than average pay for this group - £70 p.w. gross - the net income loss is estimated at c£54 p.w.

For the UK as a whole, however, income loss is the pay of the 2,350 jobs under threat (viz £82.18 p.w. x 52 x 2,350 = £10m) LESS an element for the net recruitment (etc.) effects discussed in Section 2. Setting this at 10% to 3% UK income loss is £9m to £9.7m. All these income losses are also assumed to be appropriate constant (1978 prices) income flow reduction over time. Redundancy payments which represent a one-off addition to income flow should strictly be offset against these income flow losses on a discounted basis, but in the Singer case - where job-loss is mainly by attrition - these payments are relatively trivial (around £600,000 in total) and are abstracted from,

iv. Sub-Contraction Income

In addition to the wage income flows discussed above the Singer company generates flows through its sub-contract orders. Sub-contraction income losses of c£0.3m in Strathclyde and c£2m in GB will occur as a result of the rundown*. An insignificant portion of Strathclyde sub-contracts is filled by Clydebank companies. For the purpose of this study sub-contract losses can be treated as an additional reduction in income flows in the economy. Assuming therefore that Singer sub-contracts would have continued at 1978 levels in real terms into the future in the absence of rundown, sub contract income losses of £0.3m in Strathclyde and £2m in GB are taken as annual (1978 prices) income losses through time.

v. Multiplier and Income to Employment Conversion Factors

There have been numerous regional multiplier studies in recent years and these coupled to a knowledge of the local economies suggest that the following income multiplier values are appropriate:-

Clydebank EEA	1.1
Strathclyde	1.3

In addition a multiplier of 2 is assumed for the UK as a whole.

Income losses are estimated to translate into job losses (the employment conversion factor) at the rate of 1 job for each £15,000 of income loss. This is based on the Scottish Council Input-Output Tables (5) average turnover per head estimate of £8,000 in Scotland in 1973.

vi. Social and Infrastructural Costs

This paper does not concern itself with the Social and Infrastructural repercussions of job losses at Singers. However, unemployment is known to be associated with numerous aspects of social distress and malaise - see for example the Liverpool Social Malaise Study (6). Incremental unemployment will therefore impose additional costs both on individuals and on public services - social work, health, police and so on - as the incidence of caseloads rises and the resultant costs are probably quite significant.

* Note that these reductions relate only to the decline in IP activity. Singer propose to increase outside sourcing for CP products. However it would appear that the bulk of this increase will be for specific parts, to be imported. If domestic CP contracts do increase significantly total contract losses will be less than estimated and indirect employment losses overstated.

Similarly, to the extent that job losses result in reduced usage of infrastructural services (including housing) in migrant loss areas and increased usage elsewhere, extra costs will be incurred. Here the evidence from the Singer case is much more equivocal. Changes in use of transport mode are expected to have only a very minor adverse effect on rail revenue and may even improve bus and private transport costings by reducing peak load congestion. Commercial and retail infrastructure provision is also unlikely to be greatly affected. Finally even the effect of migration on the housing market is minor. The vacancy rate for public housing in 1982 will only be slightly higher than without the job losses and it is not at all clear that this is a disbenefit anyway. Similarly in areas of labour absorption, even if increased migration leads to expanded building programmes it is by no means established that the provision of additional new infrastructures net of what would be required without migration is necessarily wasteful.

Consequently, the assessment of impact which follows will understate the true cost of job losses by ignoring social and infrastructural costs but of these, social costs are by far the more material omission.

5. The Impact of Job Losses at Singers

The various arguments of previous sections of this paper are pulled together in Appendix 3 to provide an assessment of the magnitude of Direct and Indirect impact of 2,350 job losses at Singers on the Clydebank EEA, Strathclyde Region and Great Britain as a whole. Overall it is estimated that consequent on the job losses at Singers average annual income flows (1978 prices) will be reduced by between £3.6-4.1m in Clydebank, £7.2-7.5m in Strathclyde and £22-23m in Great Britain once the full effects of the job losses will result in substantial indirect employment loss in addition to the direct Singer losses given rise to the total employment consequences shown in the table below.

Total (Direct and Indirect) Employment Effects of Singer Job Losses

Area	Direct Job Losses	Total Unemployment	Registered Unemployment	Benefit Unemployment
Clydebank EEA	1,400	1,490-1,350	1,250-1,080	1,020- 880
Strathclyde	2,350	2,700-2,540	2,260-2,050	1,860-1,660
G.B.	2,350	3,740-3,450	3,070-2,730	2,520-2,250

Source : Appendix 3 Tables A1 and A3

These estimates of job and income losses are for the post-transitional phase and take account of 'labour market' and 'dynamic recruitment' effects during that phase. They, therefore, represent estimates of the annual cost through time of the Singer job losses after transition - at constant 1978 prices. Given: the present state of the labour market in Strathclyde; the gloomy predictions for future employment (if not output) into the foreseeable future both in Strathclyde and the UK as a whole; and the

price, availability and quality. In short, it can be assumed that there will be little additional dynamic adjustment of the labour market consequent on Singer job losses, for the foreseeable future. The job loss and income loss estimates above will, therefore, hold good as the annual loss for the foreseeable future. (Average annual losses for the 1978-82 period will be about 70% of post 1982 levels).

Perhaps the most striking feature of these results is that at both the local Clydebank level and the wider Regional level the incremental number of persons registering as unemployed is expected to be less than the number of job losses occurring at the plant. Moreover at the local Clydebank level the effect of migration is expected to result in virtually no net addition at all to unemployment beyond that directly planned by Singers. More generally both the very low implicit employment multipliers at the Regional and Local level and the very significant numerical differences between registered, unregistered and non benefit receiving unemployed persons are worthy of note. (The latter, incidentally implies that State benefit-costs are considerably lower than is normally suggested in 'crisis' impact studies.

The relatively much more significant indirect employment losses at the GB level are the direct consequence of the absence of any domestic competitors to Singers. More typically, domestic competitors would pick up 'new' orders and, indeed, in the anti-thesis of the Singer case, net employment loss at the GB level could be reduced virtually to nil if all orders were transferred to other GB firms.

Finally, turning the spotlight on the Clydebank EEA itself, an increase in registered unemployment of the magnitude indicated above would raise the unemployment rate by c4 points to near 15% and increase the numbers registered as unemployed by c35%. At the same time the Singer rundown will reduce total job opportunities in the area by c9.5% by 1982 (Vide Section 2 ii above) All this in an area where prospects for alternative employment are already very poor. Faced with problems like these it is readily comprehensible that the state should seek to preserve as much as possible of the remaining industrial fabric.

6. Conclusions

In this paper an attempt has been made to explore in depth what happens in the economy - and particularly the local labour market - when a major employment rundown occurs at a plant. This emphasis results in a picture of impact somewhat different to that normally presented. In particular the significance of dynamic change in the labour market phenomena such as non-registration are highlighted. The implications for the calculation of 'impact' give rise, in the Singer case at least, to some perhaps surprising results.

References:

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- 2) L. C. Hunter and P. B. Beaumont Labour Shortages and Manpower Policy
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Appendix 1 Estimating Incremental Unemployment

Given the paucity of data available about both local labour markets in Strathclyde and the reactions of the unemployed it is well nigh impossible to estimate incremental unemployment from job losses accurately. Rather the approach adopted is to set a range of values within which the actual figure will probably lie.

Extrapolating from Hunter's data to the current and prospective future labour markets both at the Strathclyde and GB level and bearing in mind that migrants tend to be the better skilled and long-distance migrants, at least, tend to have jobs lined up before leaving it seems reasonable to make the following assumptions:

- i) All migrants who leave the Region as a result of Singer job losses have jobs lined up in areas of labour shortage in their particular fields.- there is no substitution for local labour.
- ii) Half of the migrants who leave Clydebank for the rest of the Region are going to jobs in areas of labour shortage in their particular field ("Net Recruitment"). The other half will substitute for local labour.
- iii) 'Dynamic recruitment' consequent on filling scarce job vacancies will augment direct recruitment by 25%. This is an ad hoc estimate. Note, however, that the scarce-labour recruitment gain will mainly show up as a reduction in vacancy length and the main impact will probably be on overtime working by scarce trades rather than on

Given that the casual link postulated above is from labour scarcity to migration it is unfortunate that ex ante it is impracticable to quantify recruitment effects directly. The method used here is to work back to recruitment through what is known about migration trends. In the case of Clydebank this may not be too heroic in that the area has experienced consistent economic decline in recent years (Vide Section 3 above) and the Singer losses fit very neatly into this pattern.

Approximately 60% of the Singer workforce reside within the immediate vicinity of the plant - i.e. within Clydebank Employment Exchange Area (EEA). The remaining 40% are widely spread mainly around the western side of Glasgow. The impact of Singer job losses outside the immediate catchment area of the plant will, therefore, be small relative to total employment and unemployment in the areas. Therefore, it is assumed that migration caused by Singer job losses will be minimal outwith the Clydebank EEA.

Within the Clydebank EEA it is estimated that between 1971 and 1977 some 230 households, net, migrated from the area each year.

During the same period approximately 1,000 job opportunities (net) were lost each year in the area.

It is not known why migration from Clydebank has been so high but it is known that overspill agreements and housing shortages in general are not significant factors. The most plausible explanation is the state of the local economy. Given the lack of hard evidence two assumptions are made:

- a) there is a direct 100% relationship between net job opportunity losses and net household migration - i.e. 23% of all net job losses in the Clydebank area will result in household out-migration.
- b) the reduction in employment opportunities is only a partial (50%) explanation for the loss of households - i.e. 11% of all net job losses in the Clydebank area will result in house-hold out-migration.

Thus it is postulated that of Singer job losses the 60% - on a pro-rata basis - that will fall on Clydebank residents will give rise to 11-23% out-migration to which migration from other areas will add a little. Overall, therefore, it is estimated that between 7-14% of total job losses at Singers will result in migrations. (Made up of 60% of 11-23% plus a small allowance for migration from outside Clydebank).

Analysis of Health Area Board statistics suggests that upwards of 70% of migrants from Clydebank migrating for employment reasons will leave Strathclyde. Assuming the same to be true of the residential migrants implies that between 5-10% of Singer migrants will leave Strathclyde. Therefore net intra-Strathclyde Household migration (i.e. from Clydebank to the rest of Strathclyde) is assessed at 2-4% of total job losses.

Pulling together these arguments, the proportion of total job losses at Singer that will not result in incremental unemployment is assessed at 7-15% made up as follows:

	<u>Lower</u> %	<u>Upper</u> %
i) Migration from Strathclyde - net recruitment	5	10
ii) Migration within Strathclyde:	(2)	(4)
i) net recruitment	1	2
ii) substitution recruitment	(-1)	(-2)
iii) Dynamic Recruitment:		
i) Migration from Strathclyde	1	2.5
ii) Migration within Strathclyde	0	.5
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Total Labour Markets and Migration Effects	7	15

Finally, it is assumed that the number of firms within easy travel-to-work distance of the bulk of Singer worker places of residence (i.e. Clydebank and N.W. Glasgow) is small and therefore the dynamic and net recruitment effects arising from non-migrants entering the labour market can be abstracted from.

Appendix 2 Unemployment (Benefit) Income

Unemployment benefit was payable in late 1978 at the following rates: Single Earner £15.75; Wife £9.75; each child £1.85. In addition for the first six months of unemployment (after the first two weeks) an Earnings Related Supplement based on pay in the last full tax year before January is payable. Average male weekly earnings for all manufacturing industries during 1976/77 were approximately £73 p.w. Female earnings, approximately £42.50 (*Source: D of E Gazette*). Adjusting to the Singer sex proportion this gives an overall average rate of £65. Adjusting for youth employment and the tendency for the unemployed to have below average wages when in employment suggests a figure of £55 p.w. as the probable average wage, when in employment, of the incremental unemployed resulting from Singer Job losses. This earnings level would attract earnings related benefit of £9.50.

Average household size in Clydebank (and Strathclyde) is approximately 3.5 for Households headed by an adult of working age and this average household is made up of: principal earner = 1, wife = .8, children 1.7.

Unfortunately, however, the age/sex and marital status profile of the unemployed does not tend to be the same as that for the population at large and as a result calculation of average benefit payments cannot simply be based on average population profiles.

Atkinson and Fleming (7) provide an analysis of unemployment benefit based on data provided by the D. of E. and D.H.S.S. Based on this analysis, a typical breakdown of male unemployed persons in Strathclyde Region is probably:

Single Person School Leaver	1.5%
Single Person (or non-dependent wife)	37 %
Claimant + (dependent) wife	14 %
Couple + 1 Child	7%
Couple + 2-3 Children	13 %
Couple + 4 or more Children	4 %
Claimant + dependent children	10 %

Assuming that the female breakdown of the unemployed will not significantly affect the average benefit pay-out and allowing school-leavers a £9.00 p.w. supplementary benefit, applying the benefit rates noted earlier to the

proportions above gives an average benefit payout of just over £25 p.w. (i.e. 80% of earnings related supplement (ERS) will add just over £8.00 p.w. (i.e. 80% of £10.00) to school-leavers not receiving ERS, i.e. .85 x £29.50). At the end of the period of supplementary benefit even during the period of ERS qualification the average benefit of £30 p.w. for unemployed benefit receivers with ERS is estimated.

Atkinson and Fleming also calculate the replacement rate (i.e. the ratio of net income replaced by benefit, etc.) for the unemployed. The replacement rate above over varying periods of unemployment, etc. is estimated. Extrapolating from these, on average 80% of the unemployed are estimated to be entitled to ERS is approximately 80% of the £30 p.w. benefit. The average gross pay level appropriate to the analysis is estimated to be £35 p.w. after week 28 average benefit is estimated at £25.00 p.w.

Finally, Atkinson and Fleming quote a figure of 246,000 ERS receivers. This would imply that c23% of benefit receiving unemployed received ERS. Thus, it is estimated that the average rate of benefit for the benefit receiving unemployed consequent on Singer job losses is £25.50 p.w. ($£30 \times .23 + £29 \times .77$).

Appendix 3 The Impact of Job Losses at Singers

Of the total workforce 60% reside within the Clydebank EEA and 100% within Strathclyde. Assuming job losses affect workers on a pro-rata residence basis the argument of Appendix 1 implies direct incremental unemployment by mid 1982 of 2210-2000 in total, 2240-2094 in Strathclyde and 1255-1085 in Clydebank. (Table A1)

Table A1 Direct Job Loss, Migration and Labour Market Effects of Singer Rundown

Area	Total Direct Losses	Migration	Net Recruitment*	Migrant Ripple+	Incremental Unemployed
	(+)	(-)	(-)	(+)	+
Clydebank EEA	1,400	160-350	0	15-35	1,225-1,085
Strathclyde	2,350	120-260	20-75	10-25	2,220-2,040
G.B.	2,350	0	160-350	0	2,190-2000

Notes: * Inclusive of Dynamic Recruitment
 + 10% of migrants figure: this reflects the public sector to population employment relationship. (See e.g. Greig (8))

Of these direct job losses the numbers who will register and who will receive benefit are, following the argument of Section 3 above and again assuming uniformity across local labour markets, as shown in Table A2.

Table A2 Unemployment, Registered and Benefit Receiving from Singer Total Loss

Area	Incremental Unemployment	Registered Unemployed	Benefit Unemployed	Non-Benefit Unemployed
Clydebank EEA	1,255-1,085	1,070- 870	880- 710	375
Strathclyde	2,220-2,040	1,890-1,640	1,550-1,340	670 - 700
G.B.	2,190-2,000	1,860-1,600	1,530-1,310	660 - 690

Following the analysis of Section 4 (iii) in the text, post mid 1982 annual net employment income loss (1978 prices) is, therefore, £3.3-3.7m for Clydebank, £5.2-5.5m for Strathclyde and £9-9.7m for G.B. Adding sub contract losses and applying the appropriate multipliers overall annual income loss from Singer job losses of 2,350 in 1978 prices are estimated as:

Clydebank EEA	£3.6m-£4.1m
Strathclyde	£7.2m-£7.5m
G.B.	£23.4m-£22 m

Consequential indirect job losses applying the £15,000 per job conversion factor are therefore 235-265 for Clydebank, 480-500 for Strathclyde and 1,550-1,450 for G.B. Assuming a 22% non registration rate and an 18% non benefit ratio the total employment consequences of 2,350 Singer job losses are then shown in Table A3.

Table A3 Total (Direct and Indirect) Employment Effects on Singer Job Losses

Area	Total Unemployed	Registered Unemployed	Benefit Unemployed	Non Benefit Unemployed
Clydebank EEA	1,490-1,350	1,250-1,080	1,020- 880	470
Strathclyde	2,700-2,540	2,260-2,050	1,860-1,660	840 - 880
G.B.	3,740-3,450	3,070-2,730	2,520-2,250	1,220-1,200

For the transitional period 1978-82 during which the job losses will take place the average annual impact will be c70% of final impact but clearly much lower than this in 1978/79 and greater in 1981/82.