

#### 4. Regional Unemployment in Scotland (Special article)

One of the primary aims of the Fraser of Allander Institute is to try to form a detailed and consistent view of the structure of the Scottish economy. Disaggregation is an essential prerequisite to an appreciation of the diverse character of the Scottish economy.

In Scotland the first 'tier' of disaggregation is the new regional authority structure. Estimates of the numbers of employees in employment in the new regions for the period 1964 to 1973 have been made by the Department of Employment. These employment statistics provide one viewpoint from which can be formed a picture of the differing industrial structures in the regions, and the changes which have taken place in patterns of industrial activity over this period. The outstanding feature is the decline in employment in the Strathclyde region. Approximately 92,000 jobs have been lost there during this 10 year period. Nearly half of this decline has occurred in manufacturing industry. In contrast the Grampian and Highland regions have increased employment between 1964 and 1973. Their gains are concentrated in the manufacturing and service sectors. Although the employment figures for these regions support the view that the centre of economic activity in Scotland is moving north and east the figures for the other regions exhibit no clear spatial pattern. Fife gained approximately 4000 jobs between 1964 and 1973, while Tayside lost over 10,000. The Central region marginally increased its workforce, but around 17,000 jobs disappeared from the Lothians. The Borders lost over 1000 jobs but little net change was experienced in Dumfries and Galloway.

Patterns of regional migration are further indicators of changing economic circumstances in the regions, since immigration and emigration will to some extent be a response to changing regional labour market conditions. In the period 1961-66 all the regions of Scotland, except the Highlands region experienced net emigration. Population flows in the Highland region were in equilibrium. Net emigration from Strathclyde amounted to more than 23,000 people per year. This was

considerably in excess of the sum total of yearly emigration from all the other regions in Scotland. The net outflow of population from the rest of Scotland was just over 13,000 per annum.

Between 1966 and 1971 emigration from most regions diminished. In fact there was a small net inflow of population to the Central Region. Emigration from Strathclyde remained the dominant feature .

From 1971 to 1974 most regions changed from being areas of net emigration to areas of net immigration. The only exceptions were the Western Isles and Strathclyde which continued to lose more than 20,000 per year.

Yet another view of the pattern of economic activity in Scotland can be gained through an examination of regional unemployment statistics. Not only are unemployment series useful means of examining changing economic conditions, they also are of prime interest as key indicators of social welfare.

Unfortunately the Department of Employment in Scotland have been compiling unemployment statistics for the new regions only since June of this year. Historical series were needed to examine trends in unemployment in the regions. With the co-operation of the Department of Employment appropriate series were constructed for the new regions. This was done by re-allocating individual employment exchanges from the old planning authorities to the new regions. Male, female and total unemployment were computed for each region monthly from January 1968. Further, using the employment figures already mentioned, series of unemployment rates in each region were compiled. Since in total the data consist of 48 series each of 93 observations they are not presented fully here. Some key statistics are presented in Table 1. Figures 4, 5, 6 and 7 are plots of the unemployment rate in each region from January 1968 to September 1975. For easy reference the Scottish rate is also plotted on each graph.

Before discussing the regions in any detail one should note that changes in levels of unemployment need not necessarily indicate changes in the demand for labour. Supply side factors can and do influence the level of unemployment. Activity rates measure the proportion of the adult population who are supplying or wish to supply labour. These may change through time for sociological as well as economic reasons. Further, when comparing regions one should be aware that activity rates between regions are likely to differ. For example, male activity rates in the Highlands and Islands have been slightly lower than those in the rest of Scotland. Female rates exhibit the same pattern but the differential is much larger. For instance, the female activity rate in the Western Isles in the period 1966-1971 was around 25% whereas the female rate in Scotland as a whole was 42%. As will be evident from the detailed discussion of the regions differences in female activity rates are often reflected in differing proportions of females in the total unemployed.

When considering regional unemployment in other countries some writers have speculated as to the sensitivity of different regions to changes in aggregate demand in the nation as a whole. A sensitive region should experience a more than proportionate rise or fall in unemployment when a rise or fall in aggregate demand occurs. Research is now being carried out on the sensitivity of the different regions of Scotland. Three main aspects are being considered:-

- (i) the use of several different proxies for aggregate demand
- (ii) the use of 'rolling' regression analysis to allow sensitivity of a particular region to change through time as, say, its industrial mix changes.
- (iii) the use of spectral analysis to identify the contribution of cycles of differing frequencies to the total variance in any region's unemployment series.

Results will be made known at a later date. In this article discussion is limited to a descriptive rather than to an analytic approach to regional unemployment. The regions are grouped in a loosely geographical manner.

## Highlands, Shetland, Orkney and Western Isles

The Highlands and Islands have traditionally suffered from high unemployment rates and marked seasonal variations in unemployment. Figure 8 which plots the share of the Highland region in total Scottish unemployment amply illustrates the extent to which this share tends to sharply increase in winter and decline during summer. The heavy dependence on tourism and primary industry in these areas is certainly a contributory factor to the seasonal fluctuations.

Figure 8 also illustrates how, between 1968 and 1975, the Highland region significantly improved its unemployment record relative to the rest of Scotland. The region's share of total unemployment in Scotland has declined from 4.7% in January 1968 to 2.6% in August 1975. After reaching a peak of 7.9% in January 1972 the unemployment rate fell sharply. In May 1975 it had declined to 2.8%

Shetland, like the Highland region, has considerably reduced its unemployment problem since 1968. At the beginning of 1969 Shetland's unemployment rate was 11.5%. In November 1973 the rate was 1.3%. Not only have rates been brought down but also seasonal cycles have been severely damped.

In both the Highland region and Shetland the introduction of oil related activity must have played a large part in reducing the comparatively high unemployment rates. Further, employment shifts from primary and tourist activity into the oil industry will have caused the dampening of the seasonal fluctuations in employment. This dampening is evident from the plot of unemployment rates in Shetland in Figure 4.

Since 1968 Orkney has not experienced quite so severe seasonal variations in unemployment as have Shetland and the Highland region (see Figure 4). It has also tended to have lower unemployment rates. In fact Orkney is the only area in the highlands and islands which has succeeded in keeping its average unemployment rate below the Scottish average rate. Only the Grampian and Border regions have lower average rates. Oil

Tayside has not benefited to the same extent as the Grampian region from oil-related activity. In fact total employment in this region fell quite substantially between 1968 and 1975. With a weakening employment situation it is not surprising that Tayside's share of Scottish unemployment rose steadily from 5.5% in January 1968 to 7.7% in December 1971. However, since then it has declined slowly, possibly as a result of its stake in North Sea oil and the growth in the service sector to stand at 6.6% in August 1975.

Like Tayside, Fife has not gained a large share of oil-related employment. However, between 1968 and 1973 employment in Fife expanded. Possibly for this reason the region's share of Scottish unemployment fell from a peak of 7.1% in August 1969 to 5.1% in September 1974. Since last September the trend has been reversed and by August 1975 the share had drifted up to 5.9%.

#### Lothians, Central and Strathclyde

Most of Scotland's employment is in the Central Belt area which is roughly encompassed by the Strathclyde, Central and Lothian regions. Most of Scotland's unemployment is also in this area. (See Figure 7).

More than half of total Scottish unemployment is accounted for by the Strathclyde region alone. Average unemployment since 1968 has been nearly 60,000 and the average rate of unemployment at 5.5% is well above the average Scottish rate of 4.7%. Mean rates in the Central and Lothian regions at 3.6% and 3.7% respectively are substantially lower.

It is not true, however, that Strathclyde's unemployment problem has been worsening relative to the Lothian and Central regions. The regions which have already been discussed have collectively reduced their share of Scottish unemployment between 1968 and 1975. Some region or group of regions must have correspondingly increased its share. Strathclyde's share has remained virtually static. In January 1968 59.2% of total unemployment in Scotland occurred in Strathclyde, while in September 1975 the share was 59.0%. It is in fact the Lothian and Central regions

related activity has recently further increased the demand for labour in Orkney. The result was that at 2.5% in September 1975 Orkney's unemployment rate was the lowest amongst all the Scottish regions.

The Western Isles has yet to benefit in the same way as the other regions from North Sea oil. It still suffers from chronically high levels of unemployment. Average unemployment since the beginning of 1968 has been 17.3%. This easily surpasses the average rate for any other region in Scotland.

Low female activity rates in the Western Isles are reflected in the small proportion of females amongst the total unemployed. The average proportion from 1968 to date has been 12.9%. This compares with a corresponding Scottish figure of 20.7%. The same phenomenon is evident in Orkney and Shetland. The proportion of females in the total unemployed in Orkney and Shetland since 1968 averaged 16.7% and 16.0% respectively. Both these regions have low female activity rates. In the Highland region where the female activity rate is considerably higher the mean proportion of females in total unemployment between 1968 and 1975 was 24%.

#### Grampian, Tayside and Fife

Since 1968 average unemployment rates in the Grampian, Tayside and Fife regions have all been below the average Scottish rate (see Figures 6 & 7). In the strongest position is the Grampian region with an average rate of 3.1%, well below the Scottish average of 4.7%. Tayside and Fife, with average rates of 4.2% and 4.6% respectively are much closer to the Scottish figure.

Between 1968 and 1975 the Grampian region, as one might expect, significantly reduced its share of Scottish unemployment. In 1968 it accounted for 6% of the Scottish total. By August 1975 this share had been cut to 3.7%. As in Shetland, Orkney and the Highland region a large part of this reduction must be due to employment in and around the oil industry.

who have markedly increased their share. From January 1968 to September 1975 the Lothian's share rose from 8.7% to 12.8%. Over the same period the Central region experienced an increase from 3.5% to 4.7%. A possible explanation of the relatively poor performance of the Lothian and Central regions lies in the migration statistics discussed previously. Although Strathclyde was losing jobs more quickly than any of the other regions there was not a consequent rise in Strathclyde's share of Scottish unemployment because many workers were leaving the region. In the Lothian and Central regions there has been no significant exodus and as a result these regions account for a greater proportion of Scottish unemployment in 1975 than they did in 1968.

There is a sharp contrast between the Lothian and Central regions with respect to the proportion of females in the unemployed. The Lothian region has a mean proportion of 15.4% for the period 1968-1975, while the Central region has 28.6%. The figure for the Lothians is the second lowest amongst the regions, whereas the Central region figure is the highest. Yet the female activity rate in the Lothians is above that in the Central region. The reason for the difference is probably the differing employment structures in the two regions. In the Lothian region there is a strong concentration of female employment on the relatively stable service sector whereas female employment in the Central region tends to be centred round industries such as textiles which provide less secure employment.

#### Borders and Dumfries and Galloway

Although these two regions border each other their employment problems differ considerably. Dumfries and Galloway has experienced high unemployment rates between 1968 and 1975, (see Figure 6). Its mean rate of 5.4% is surpassed only by Strathclyde and the Western Isles, whereas at 2% the mean rate for the Borders is the lowest for all the Scottish regions. The Borders does not seem to have a significant unemployment problem. Not only are its rates of unemployment very low but also they fluctuate much less than those of other regions, (see Figure 6). In contrast Dumfries and Galloway exhibits marked variation including the

seasonal variation typical of the highlands and islands. Nevertheless between December 1968 and September 1972 it reduced its share of Scottish unemployment from 3.9% to 2.0%. Since then the trend has been reversed and the share has slowly increased reaching 2.6% in September 1975.



Table 1 Summary Statistics of Regional Unemployment

| Region              | 1      | 2     | 3     | 4    | 5    | 6   |
|---------------------|--------|-------|-------|------|------|-----|
| Highland            | 3.13   | 2.39  | 0.74  | 23.6 | 5.1  | 1.2 |
| Shetland            | 0.25   | 0.21  | 0.04  | 16.0 | 5.0  | 2.5 |
| Orkney              | 0.18   | 0.15  | 0.03  | 16.7 | 3.5  | 0.9 |
| Western Isles       | 1.01   | 0.88  | 0.13  | 12.9 | 17.3 | 3.5 |
| Grampian            | 5.01   | 3.99  | 1.02  | 20.4 | 3.1  | 0.7 |
| Tayside             | 6.78   | 5.30  | 1.48  | 21.8 | 4.2  | 1.3 |
| Fife                | 5.85   | 4.34  | 1.49  | 25.4 | 4.6  | 0.9 |
| Strathclyde         | 59.79  | 47.52 | 12.27 | 20.5 | 5.5  | 1.3 |
| Lothians            | 11.79  | 9.96  | 1.83  | 15.5 | 3.6  | 0.9 |
| Central             | 3.91   | 2.79  | 1.12  | 28.6 | 3.7  | 1.1 |
| Dumfries & Galloway | 2.64   | 1.98  | 0.66  | 25.0 | 5.4  | 0.8 |
| Borders             | 0.80   | 0.64  | 0.16  | 20.0 | 2.0  | 0.7 |
| Scotland            | 101.16 | 80.16 | 21.0  | 20.7 | 4.7  | 1.1 |

Column 1 - mean total unemployment (thousands)

" 2 - " male " "

" 3 - " female " "

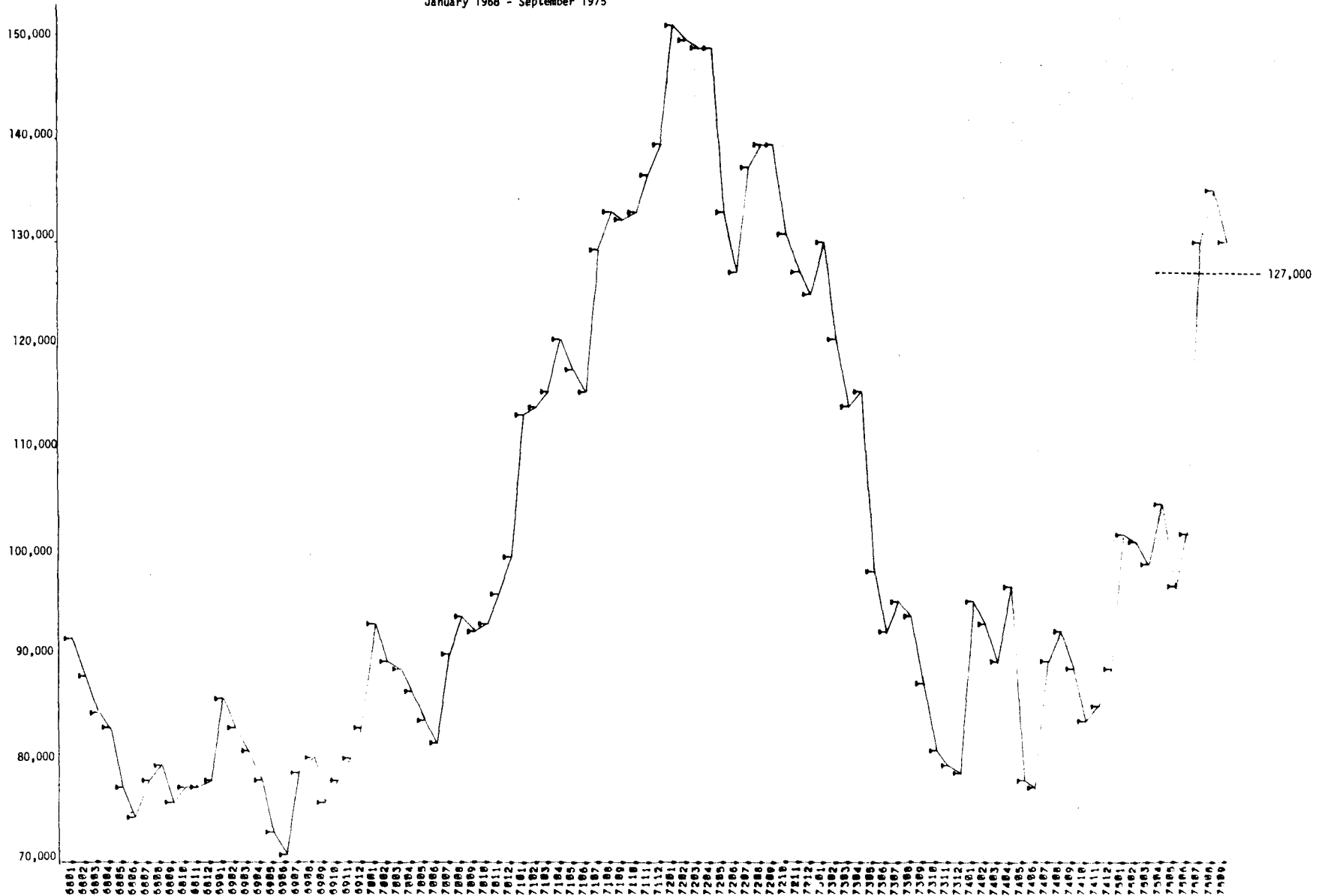
" 4 - mean percentage of women in total unemployed

" 5 - mean unemployment rate

" 6 - standard deviation of unemployment rate

All figures relate to wholly unemployed including school leavers and adult students for the period January 1968 - September 1975 and include estimates for December 1974 and January 1975 when no figures were available.

Figure 1 Total Unemployed in Scotland (unadjusted, including school leavers and adult students)  
January 1968 - September 1975



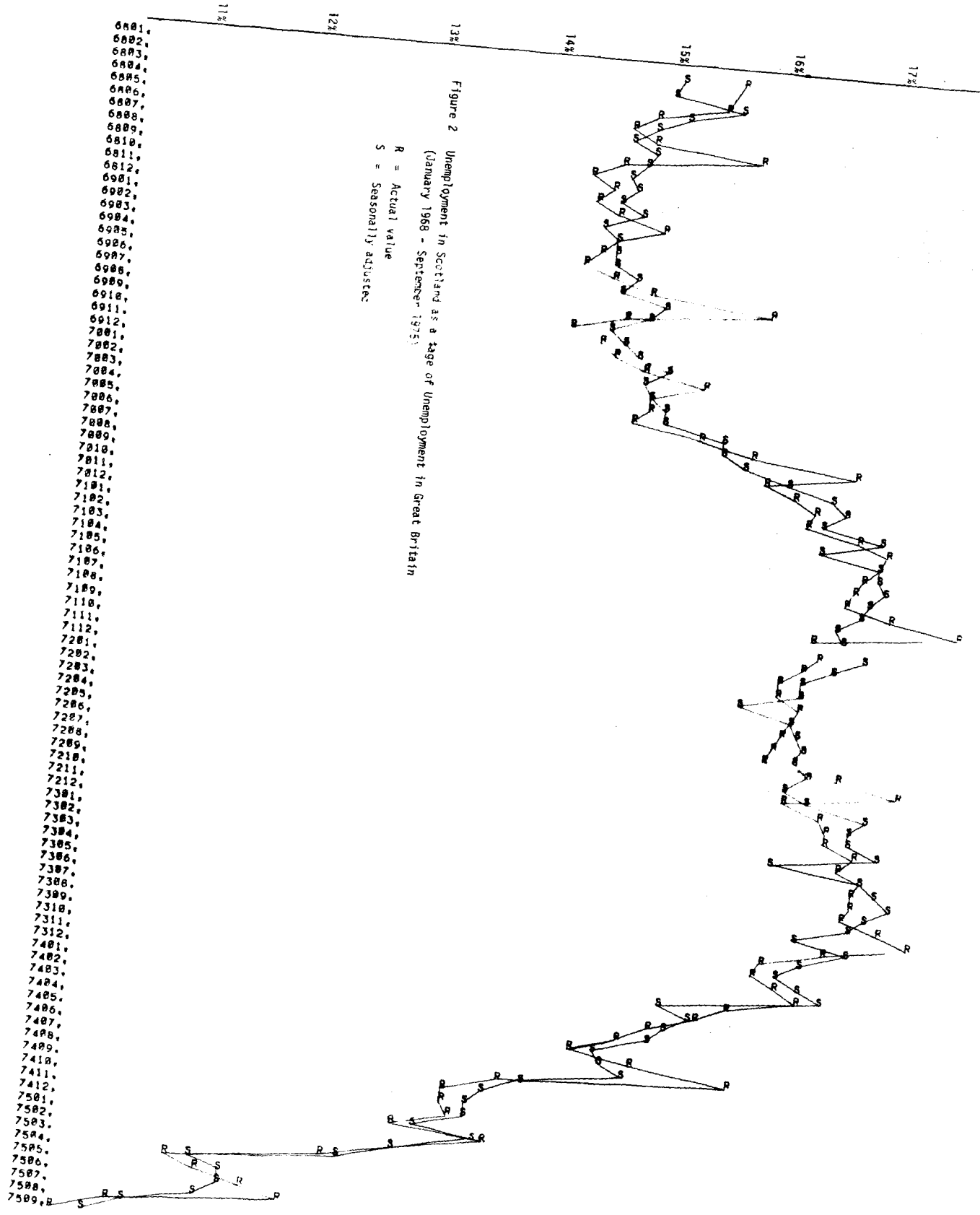


Figure 2 Unemployment in Scotland as a %age of Unemployment in Great Britain  
 (January 1968 - September 1975)

R = Actual value  
 S = Seasonally adjusted

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Figure 3 % Share of Females in Total Unemployed in Scotland  
(April 1972 - September 1975)

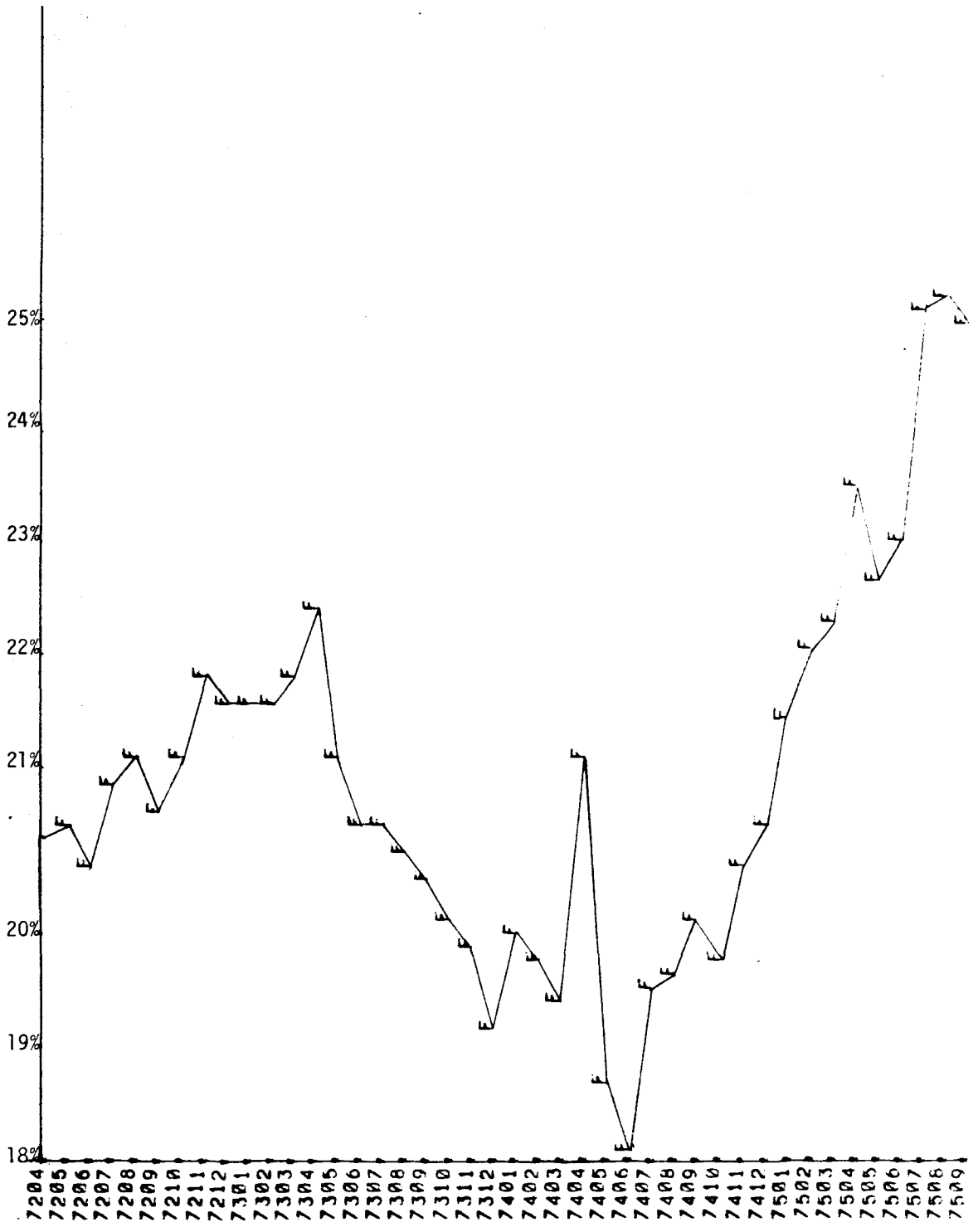


Figure 4 Unemployment rates in Orkney (O), Shetland (Z), Highlands (H) and Scotland (S)  
(January 1968 - September 1975)

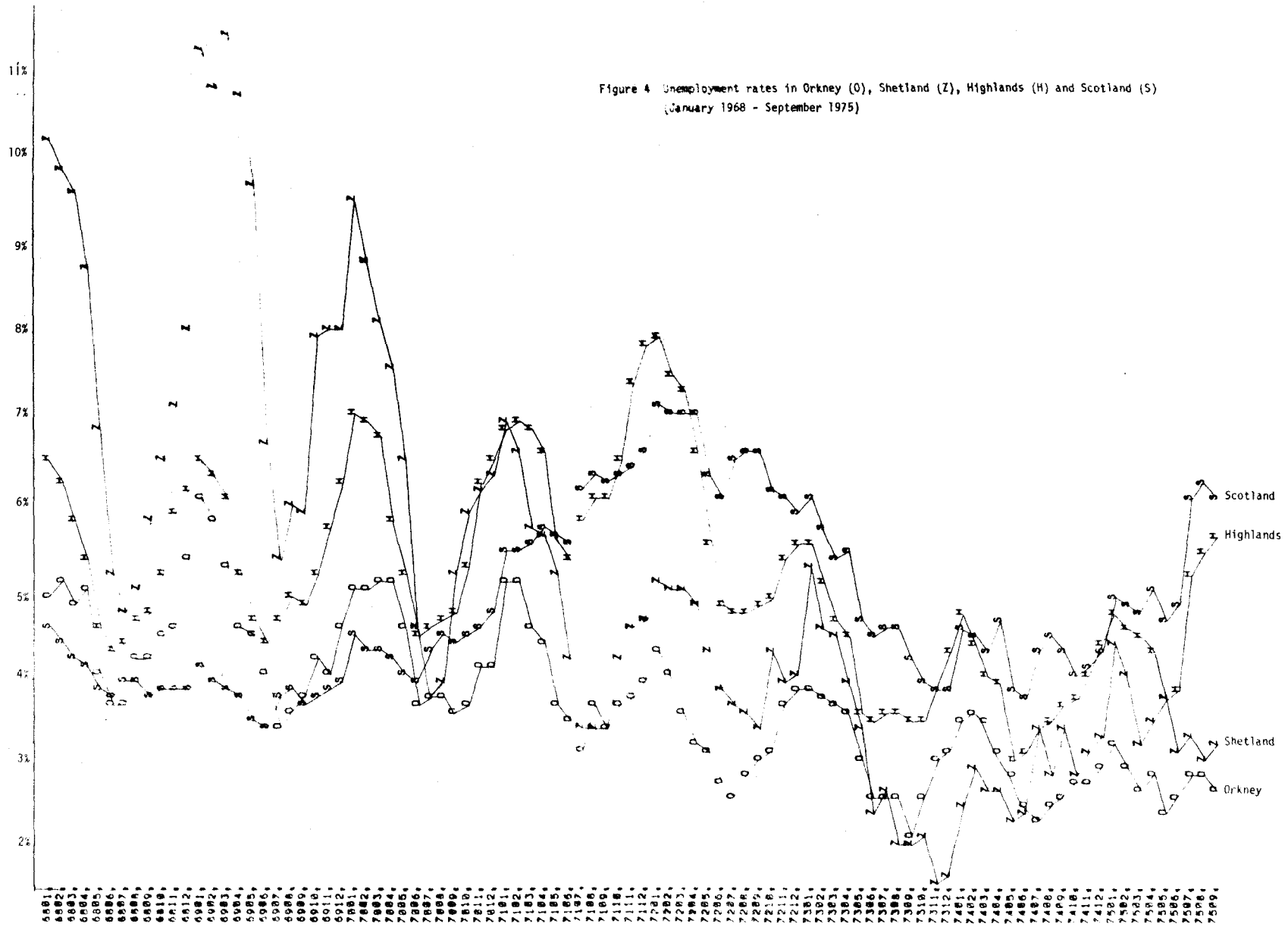




Figure 6 Unemployment rates in Borders (B), Grampian(G), Fife (F),  
 Dumfries & Galloway (D) and Scotland (S)  
 (January 1968 - September 1975)

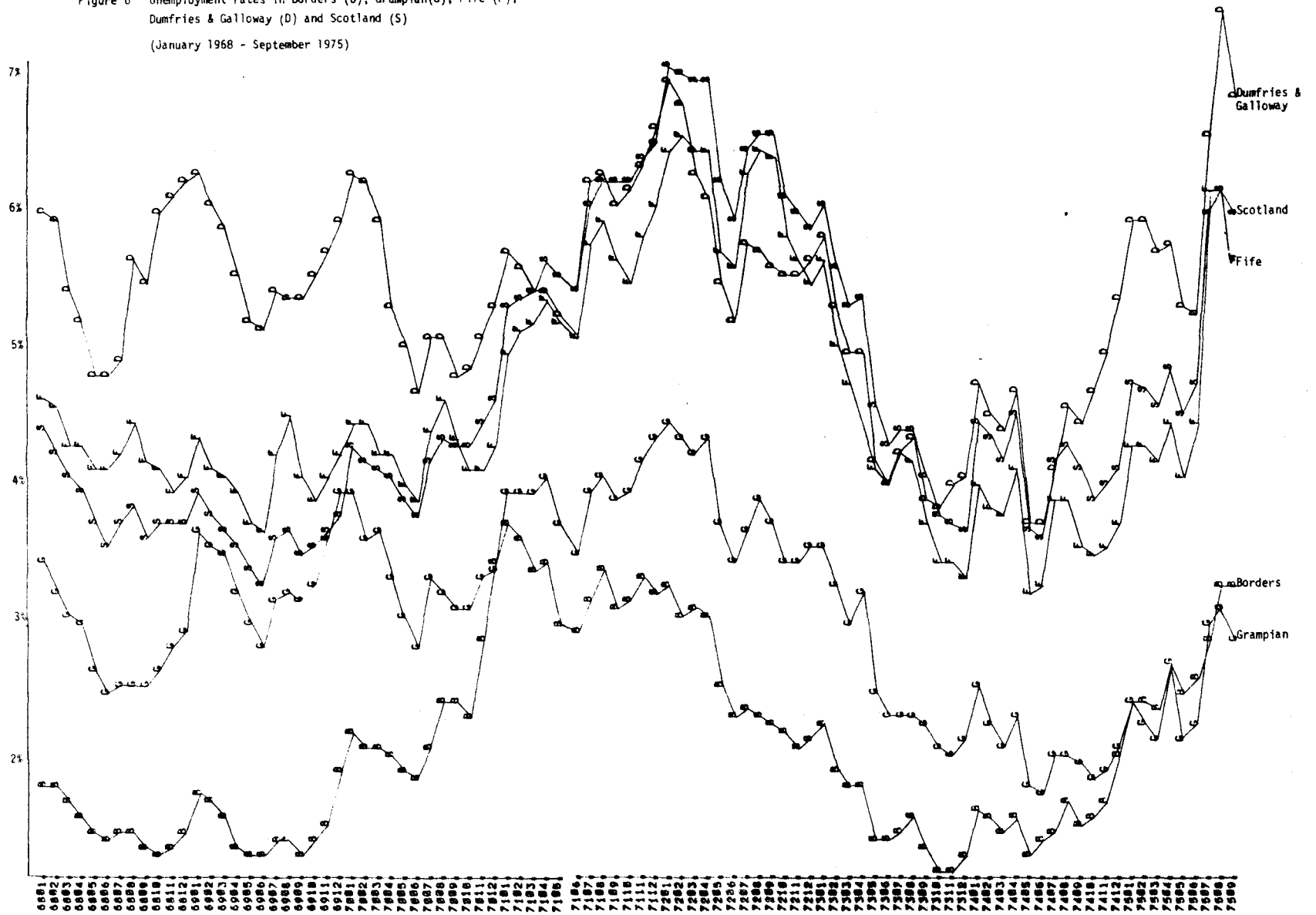


Figure 7 Unemployment rates in Lothians (L), Tayside (T), Central (C),  
 Strathclyde (G) and Scotland (S)  
 (January 1968 - September 1975)

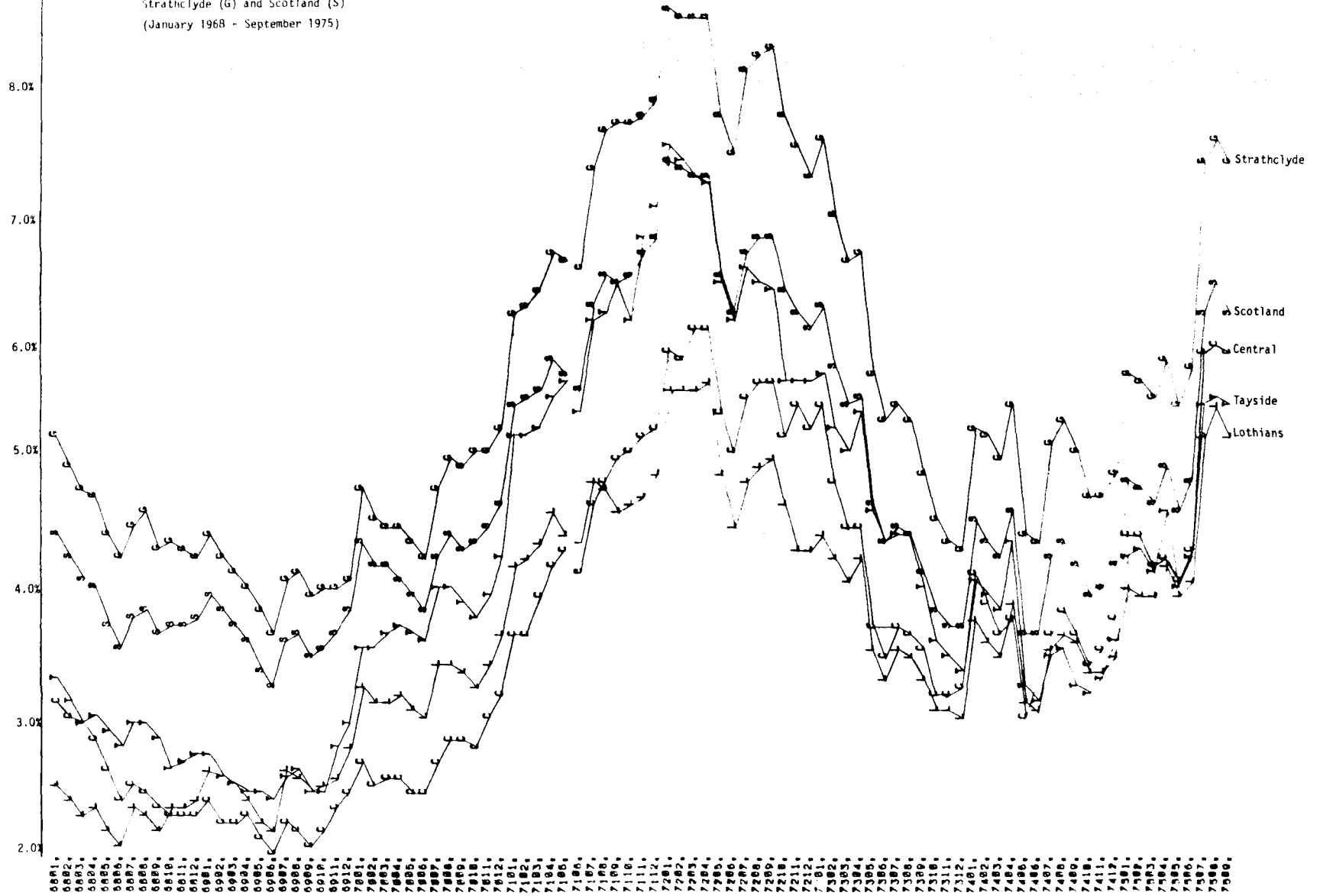
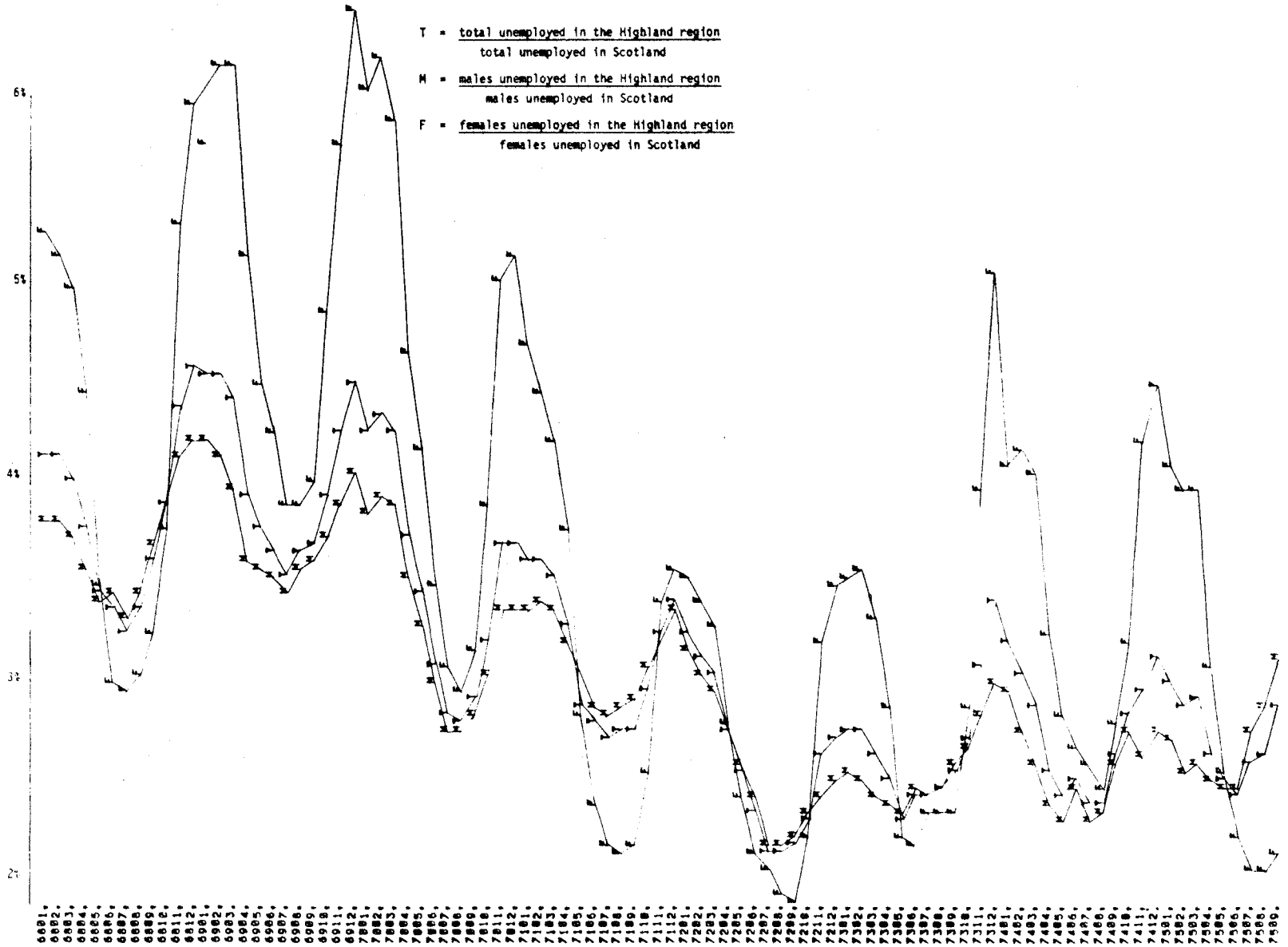




Figure 8 The Fluctuating Share of the Highlands in Scottish Unemployment  
(January 1968 - September 1975)



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