

# ***Monopsonistic and Competitive Labour Markets - A Comparative Study of British Car Manufacturers During the Interwar Period***

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## **I**

The British car industry experienced major changes in its scale and organizational structure during the period 1918-1939. During this period the industry as a whole evolved from the small-scale craft enterprise of the turn of the century into the world's second largest car manufacturing industry with some of its firms employing mass production methods similar to those of the large American producers. On the aggregate level this resulted in the adoption of more stable employment and production patterns but at the firm level a wide variety of experience was exhibited.<sup>1</sup> This paper will analyse the factors that influenced the production and employment decisions of individual car manufacturers.

While there was a clear trend towards more stable patterns of employment within the industry as a whole, employment practices of individual firms were clearly influenced by local institutional and economic factors. Among these factors was the extent to which firms were able to exercise monopsony power in local labour markets. The role played by labour unions was another factor which varied between firms, though labour unions during the period covered by this paper were much less powerful than they later became. In an age in which employment security is becoming scarce the effects of such factors on employment stability are of great interest. They also have implications for macroeconomic theory

<sup>1</sup> M. Jolly, 'Employment variability' and mass production technology in the British automobile industry during the interwar period', *Journal of European Economic History* 25 (2) (1996), pp. 425-440.

since it can be argued that an increase in the prevalence of monopsony in labour markets would result in shifts in demand for labour being reflected in adjustments in quantities rather than wages.

This paper begins with an analysis of the effects on employment stability of competition for labour between firms. It will be argued that for an individual firm this depended on the extent to which the firm adopted mass-production techniques and the degree to which it was able to exercise local monopsony power. The paper then proceeds with an examination of the role played by labour unions in British car manufacturing during the interwar period. From this it emerges that industrial disputes were infrequent during this period and labour unions in the car industry were relatively weak so that union pressure does not provide an adequate explanation for employment stability where it existed.

The paper then presents and analyses some empirical evidence relating to several British car manufacturers operating in a variety of environments. The statistical data is found to be consistent with the argument that the production techniques used by firms and the existence or absence of local monopsony power determined their employment strategies.

## II

Car production was concentrated in a small number of centres during the inter-war period with the producers in these centres having very different production structures and degrees of control over the local labour markets.

Becker and others have pointed out that firms that have large specific investments in their employees may seek to hold on to their workers when faced with declining product demand.<sup>2</sup> The reason is that if the laid-off workers take other jobs the firm's investment in human capital may not be recoverable in the future when demand picks up. For this situation to arise two conditions must be satisfied:

(1) There are alternative jobs for the employees to go to. This would be much less likely if the firm has local monopsony power than if it draws

<sup>2</sup> G.S. Becker, *Human capital*, (Columbia Univ., 1975), p. 83.

from the same pool of labour as many other firms. In the British car manufacturing industry during the inter-war period we can find examples of firms which resembled local monopsonies and firms which operated in competitive labour markets.

(2) The type of training and experience vested in the employees is firm specific. An argument can be made that this is most likely to be the case for a firm which has adopted mass-production methods. In a mass-production firm employing largely unskilled or semi-skilled labour the lack of a more formal screening mechanism, such as would be provided by an apprenticeship system, means that known reliability becomes the primary reason for employing a worker to a greater extent than would be true for a firm which relies on craftsmen whose skill is vouched for by their apprenticeship.<sup>3</sup>

The extent to which these conditions were satisfied varied between the different car producing centres, of which the major ones were Coventry, Longbridge, Cowley, and Dagenham.

The car industry at Coventry provides a contrast with car manufacturing at Longbridge (Birmingham), Cowley (Oxford), or Dagenham, the plant sites of the Austin, Morris, and Ford Motor Companies respectively, in that rather than being dominated by one large firm it was characterized by a mix of large and small firms. It also provides an additional contrast with Cowley and Dagenham (though not with Longbridge) in that it operated in an industrial area, where the car industry had to compete for labour with other industries. Two of the Coventry car producers, Rootes and Standard, are numbered amongst the 'Big Six' firms which dominated motor manufacturing in the inter-war period but alongside them existed several small producers. In 1939 Coventry had 18 car manufacturing firms. This was probably a result of the availability of skilled labour and access to component suppliers since bought-out components spread research, development and production costs, which could be especially important for small firms.<sup>4</sup>

The following characteristics of the car industry at Coventry had a major effect on the labour market:

<sup>3</sup> M. Jolly, *op. cit.*, (1996), p.433.

<sup>4</sup> D. Thoms and T. Donnelly, *The motor car industry in Coventry, since the 1890s* (Croom Helm, 1985), pp. 94-95.

(1) A continued reliance on craft skills to a greater extent than in other centres.

(2) The persistence of a number of relatively small firms competing for labour.

(3) Competition with the engineering industry for labour. Though by 1939 the car industry absorbed 38% of Coventry's labour force of 100,000 workers the city was also a major centre of those branches of engineering not directly associated with cars.<sup>5</sup> In this respect Coventry had similarities with Birmingham, a major industrial centre where Austin accounted for 5 per cent of the labour force in 1937.<sup>6</sup> Both Coventry and Birmingham were large industrial centres where the car industry had to compete for labour with other industries. This is in strong contrast with Dagenham, where three firms closely associated with the car industry accounted for about half the total workforce.<sup>7</sup>

Consequently there was a very competitive market for labour in Coventry with periodic labour shortages starting in the 1920s and becoming more acute after 1933. Thoms and Donnelly<sup>8</sup> list the following three major strategies adopted by Coventry firms in their efforts to acquire labour. The first two strategies were also important in other car manufacturing regions but the third (poaching) was not readily available to firms in centres in which there was only one producer:

(1) Dilution (replacement of skilled by less skilled labour).

(2) Recruitment of labour from outside the area.

(3) Poaching. This was already pronounced in the 1920s and rose to a peak after 1935. Daimler manipulated its premium bonus system to attract experienced coachbuilders, while Hillman and Standard engaged

<sup>5</sup> *Ibid.*, p.106.

<sup>6</sup> In 1937 Austin employed 21,500 workers, while the number of persons covered by unemployment insurance in Birmingham was 431,040.

<sup>7</sup> Bob Lovell, a future shop steward at Ford, indicates that during the late 1930s Ford employed between 12,000 and 24,000 workers, while the closely associated companies of Briggs Body Works and Kelsey-Hayes employed 5,000 to 15,000 and 3,000 to 8,000 workers respectively; see Frow, *Engineering struggles*, p.97. On this basis Ford and its associates were responsible for employment of at least 20,000 workers in a normal year. The total labour force at Dagenham was 31,277 according to the 1931 census and 56,811 according to the 1951 census.

<sup>8</sup> D. Thoms and T. Donnelly, *op. cit.*, (1985), pp 107-108.

in similar practices. By 1936 several leading motor firms were said to be offering excessively high rates to pattern makers and at the end of the same year it was reported that Rootes had recruited so many employees from one company that its jig and tool department had been practically brought to a standstill.<sup>9</sup>

Competition for labour resulted in high wages. By 1937 the city's engineering workers were said to be the best paid in the country. It remains to be seen whether this competition for labour also took the form of providing workers with greater stability of employment or whether the existence of a number of competing firms resulted in less stability of employment than was the case in other centres. In the empirical section of the paper it will be shown that employment stability at Coventry varied between large mass-producers and the smaller firms.

As indicated above, firms in other centres were able to adopt some or all of the employment strategies available to the Coventry firms. This paper will look at the strategies of firms at Longbridge (Birmingham), Cowley (Oxford), and Dagenham as well as those at Coventry. The position facing Austin at Longbridge was similar to that of the Coventry producers for, though Austin was the only car producer in the area, it had to compete for labour with firms in other manufacturing industries. In contrast, Ford and Morris dominated the local labour markets in which they were located, enjoying substantial monopsonistic power. About 60 per cent of the Oxford labour force was employed by either Morris or Pressed Steel, while Ford and its associates, Briggs and Kelsey-Hayes, accounted for at least half of the labour force at Dagenham.<sup>10</sup> This would suggest that Ford and Morris were not subject to such severe competition for labour as were other car producers, such as Austin, in Birmingham, or the car firms of Coventry, and that it was less necessary for them to provide security of employment as a means of holding on to their labour

<sup>9</sup> *Ibid.*, p.108; M. Jolly, *op. cit.*, (1996).

<sup>10</sup> Firms belonging to the Nuffield Organization accounted for nearly 44 per cent of the insured labour force in the Oxford area in 1930 (i.e. 10,000 out of an Oxford total of 22,790). If Pressed Steel is added another 15 per cent of the labour force is accounted for since this company had 5,250 employees in 1939 at a time when the labour force in the Oxford area had risen to 34,450.

forces. It will be shown that the empirical evidence is consistent with such a pattern of behaviour.

### III

After World War II the British car industry became notable for having strong, aggressive labour unions. For this reason some discussion of the role of unions before the war is appropriate. During the inter-war years many unions were involved in the motor industry but the majority of them were craft unions covering small numbers of specialized workers (e.g. electricians, patternmakers). The industry was dominated by the following three large unions, two of which were originally craft unions which admitted some semi-skilled workers, while the third was from the beginning of its existence a general union, composed mainly of unskilled and semi-skilled workers:

(1) The Amalgamated Engineering Union (A.E.U.). The A.E.U. was formed by the merger of the Amalgamated Society of Engineers (A.S.E.) and several other craft societies in 1920.

(2) The National Union of Vehicle Builders (N.U.V.B.). Originally the union of carriage makers, the N.U.V.B. had its stronghold in the body-building and trim shops.<sup>11</sup>

(3) The Transport and General Workers Union (T.& G.W.U.). In 1928 the Workers Union was amalgamated with several dockers' unions and some of the smaller vehicle workers' unions to form the Transport and General Workers Union, which began an aggressive campaign of organization in the motor industry during the 1930s.

Throughout most of the 1920s the unions were in retreat in the face of high unemployment and their defeat in the engineering lock-out of 1922. In the mid-1930s the unions recovered to some extent, being helped in their recovery both by the upswing in the business cycle after 1934 and their own greater willingness to broaden their membership by recruiting unskilled and semi-skilled workers.

Nevertheless there was still a low degree of union penetration on the

<sup>11</sup> H.A. Turner, G. Clack, and G. Roberts, *Labour relations in the motor industry* (Allen & Unwin, 1967).

eve of World War II. During the 1930s seldom more than one-fifth and often only 1/50 of mass production operatives were organized and union members were sometimes a minority even amongst skilled groups. Major obstacles to a greater extension of trade unionism included seasonal fluctuations in employment and the hostile attitude of most employers.

The most serious challenge faced by labour organizations, however, was how to react to the changing nature of the labour force in the car industry. During the 1920s and 1930s the development of mass production involved jobs formerly performed by a variety of skilled tradesmen being taken over by semi-skilled operatives who were at first very little organized. The craft unions did not want them and the general unions outside the new motor industry paid them very little attention. It was the amalgamation of the Workers Union into the Transport and General Workers Union (T.& G.W.U.) in 1928 and its subsequent organization of car production workers during the 1930s that led the A.E.U. and the N.U.V.B. to also recruit from amongst this group of workers.

The weakness of unions throughout the inter-war period was reflected in the low number of strikes at this time. The number of striker-days lost in the period 1921-39 was only one-tenth of those lost in the period 1945-64.<sup>12</sup> Given that the average manual employment of car firms in the inter-war period was about half that of the post-war years the incidence of strikes rose about five-fold.

The striker-days lost in the period 1921-39 were not, however, evenly distributed across firms. Both the large and small scale stoppages tended to be concentrated in a minority of companies. During the inter-war period Austin and Pressed Steel were more strike-prone than other firms associated with the car industry. Car producers which have since acquired a reputation for strike-proneness, notably Standard and Morris, enjoyed industrial tranquillity between the wars, with Standard experiencing only one (minor) stoppage in 1936, while the Morris works at Cowley was free of disputes before World War II. Ford also experienced an almost complete absence of strikes in the inter-war years (apart from 1933).

The experience of Austin was very different. Strikes at Austin were more

<sup>12</sup> *Ibid.*, Table II/I.

frequent and generally large. Although the Austin workers struck in some strength in 1921 over an employment issue, the history of sizeable strikes at the Austin plant at Longbridge really begins in 1929 when there were two, both against wage reductions. There was another big strike in 1938 when workers engaged in aircraft manufacture struck over wages. It is worth noting that wage rates rather than employment security were the issues at stake.

The other regular strike performer was Pressed Steel, which produced car bodies for Morris at Cowley.<sup>13</sup> Disputes at this firm were generally associated with working conditions and demands for union recognition rather than wage rates, in contrast to the situation at Austin. Pressed Steel experienced a number of small strikes in 1929-31 but it was not until 1934 that the first major strike occurred. In July of that year there began a dispute over low piece-work earnings but the main issue soon became union recognition. After a ten-day strike the management had to concede recognition. The success of the workers in 1934 did not bring an end to industrial disharmony at Pressed Steel, which experienced a further three major strikes before 1938.

Tightness in the labour market enabled Coventry car workers to enjoy high levels of pay. The city's engineering workers were said to be the best paid in the country. Both basic and bonus rates of pay were high and there were opportunities for considerable overtime.<sup>14</sup> In Coventry labour unions do not, however, appear to have played a major role in these years. Since World War II car producers have had to take account of strong and aggressive trade unions when determining employment policies but unionism was not strong in the industry during the inter-war period.

#### IV

It remains to be seen what employment practices were adopted in the absence of strong unions. There exists some evidence for employment at Austin but, given the paucity of data on the numbers of employees of individual car producers during the interwar period, proxies have been

<sup>13</sup> R.C. Whiting, *The view from Cowley*, (Oxford, 1983), Chapter 3.

<sup>14</sup> D. Thoms and T. Donnelly, *op. cit.*, (1985), p.109.

used to give an indication of employment at some of the Coventry firms, and at Morris and Ford.

The records of the Amalgamated Union of Engineers (A.E.U.) are sources of data for individual car producers at Coventry. Variation in the employment of A.E.U. members is measured by variation in the number of members "on benefit", i.e. those receiving supplementary donations. These numbers are available on a monthly basis from 1929 so that dividing the number "on benefit" by total union membership gives an indication of the proportion of union members who were experiencing unemployment or short-time for each month. There are, however, problems with this approach. Firstly, the total figures provide a measure of stability of employment for individuals in the area but do not directly measure stability with particular firms and, secondly, a proportion of the engineering workers represented by these figures were not employed by car manufacturers. Some indication of employment stability by firm is, however, obtainable by breaking down the statistics by branch and looking at the experience of branches which drew the bulk of their membership from amongst the employees of car firms. Data drawn from the Union's fines book suggests that Branches 9 and 27 drew the bulk of their membership from workers employed at car manufacturing firms, with the latter of these two units drawing a large proportion of its members from Humber alone.<sup>15</sup> Humber was part of the Rootes Group, one of the 'Big Six' car producers during the 1930s. We have, therefore, in Branch 27 an indication of employment variability at a large firm, while Branch 9 gives some indication of employment fluctuations experienced by employees of small car producers.

Table 1 indicates the mean values of the proportion of members "on benefit" between 1929 and 1939. T-statistics are given in brackets for

<sup>15</sup> In 1922 85 per cent of the references in the fines book to members of Branch 27 and Branches 26 and 33 (which were later incorporated into Branch 27) applied to members employed by car firms, with 40 per cent of the references applying to employees of Humber alone. At the same time 94 per cent of the references in the book to members of Branch 9 and Branch 36 (which was later incorporated into 9) applied to employees of car manufacturers.

Branch 27 for the years 1929-35, after which the variance for the branch becomes significantly greater than that for the total A.E.U., invalidating the use of the t-statistic in comparisons of proportions. With  $p=0.95$  and 22 degrees of freedom the acceptance region for the hypothesis that the means of the two populations are equal is

$$-2.074 < t < 2.074$$

Table 1 shows that, in contrast to Branch 9, the proportion of members on benefit at Branch 27 moved closely with that of total membership during the earlier part of the period.

The difference in pattern exhibited by Branches 27 and 9 is conspicuous in monthly fluctuations in unemployment rates. This is brought out in Table 2, which compares the variance in proportion receiving supplementary donations for the two branches. Also given in the table, in brackets, are the F-ratios for testing the differences between variances of the branches. With a probability level of 0.95 and degrees of freedom of 11 and 11,  $F = 2.82$ . It can be seen that for six of the seven years between 1929 and 1935 the variance for branch 27 is lower than

Year	Total A.E.U.	Branch 27 (t-statistic in brackets)*	Branch 9 <sup>b</sup>
1929	3.7	4.9 (1.27)	5.8
1930	10.3	11.4 (0.49)	14.5
1931	21.3	22.3 (0.51)	29.5
1932	17.2	20.4 (2.28)	21.4
1933	15.5	17.9 (2.04)	19.9
1934	6.9	9.4 (3.38)	7.6
1935	5.6	8.3 (3.73)	7.7
1936	2.1	4.7	2.0
1937	1.0	2.7	0.9
1938	1.4	2.0	2.4
1939	1.3	2.3	1.8

\* Before May 1934 "Branch 27" includes Branches 26 and 33, which also drew the bulk of their membership from car manufacturing firms, especially Humber.  
<sup>b</sup> Before February 1934 "Branch 9" includes Branch 36.

Source: Minute Books of the Coventry Division of the A.E.U.

that for branch 9, although in only one year (1933) is the difference statistically significant.

(2) Between 1930 and 1936 unemployment variability was greater for Branch 9 than for Branch 27. Branch 9 drew the majority of its members from small manufacturers of cars. In 1922 50 per cent of Branch members indicated in the fines book were employed by Armstrong-Siddeley or Triumph. For Branch 27, 51 per cent were employed by either Humber (which became part of the Rootes Group in 1929) or Standard. Both of these were relatively large firms and each adopted mass production methods in 1930-31. The different patterns of unemployment variation experienced by the members of Branches 9 and 27 during the first half of the 1930s supports the hypothesis that there is a connection between the methods of production adopted by firms, the structure of the labour market, and variability of employment. The members of Branch 27, which drew its membership mainly from mass-producers operating in a competitive labour market, would be expected to have a more stable employment pattern than the members of Branch 9, who were largely drawn from smaller, more craft-oriented firms. The dominance of employees of Humber and Standard in Branch 27 may also explain the changed pattern which emerges after 1936. Both of these firms erected, in 1936-37, "shadow" aero factories as part of a programme approved by the Government, involving the construction

**TABLE 2. Variance in Proportion of Members "on Benefit"**

Year	Branch 27	Branch 9	F-Ratio
1929	2.59372	2.48506	0.958
1930	5.94689	6.60518	1.111
1931	5.18542	7.12207	1.373
1932	3.65871	8.62271	2.357
1933	2.77223	8.66074	3.124
1934	2.01608	3.06965	1.523
1935	1.71154	3.59920	2.103
1936	1.72118	1.48652	0.864
1937	0.89387	0.52836	0.591
1938	0.91997	1.42599	1.550
1939	1.91940	1.48616	0.774

of 8,000 airplanes for the Royal Air Force. Factories were to be government-financed and equipped but managed by motor manufacturers and were to be adjacent to existing vehicle manufacturing factories. As a result of this scheme essential skilled workers were transferred from the vehicle manufacturing factories to the shadow factories, necessitating reorganization of the labour force of the car firms.<sup>16</sup> The number of employees involved in this scheme were substantial. Rootes' No.1 Aero Engine Factory employed 820 workers in 1937, 1,535 in 1938, and 1,804 in 1939.<sup>17</sup>

## V

The Austin Company changed its volume of output and its production methods substantially during the interwar period, with reorganizations of its plant in 1925-26 and 1933-34. By the late 1920s the firm was a large-scale mass producer of cars, while during the early years of the decade it had been producing a relatively small output and using craft methods.<sup>18</sup>

Table 3 gives annual car production figures for the Austin Motor Company and employment figures in those years for which they are available. It can be seen from the table that both production and the size of the workforce fluctuated considerably in the period before 1934, though in the later 1930s the labour force remained relatively stable. The table implies rapid growth in productivity in the 1920s and much slower productivity growth in the 1930s. Car output grew more than 17-fold between 1922 and 1929, while the labour force increased by about 69 per cent. In contrast, during 1929-37 car output grew by about 93 per cent, with vehicle output increasing at about the same rate.<sup>19</sup> The increase in car output between 1929 and 1937, however, was accompanied by a shift towards smaller cars so that sales turnover increased by only 58 per cent, roughly the same rate as the increase in the labour force. During

<sup>16</sup> D. Thoms and T. Donnelly, *op. cit.*, (1985), Chapter 5.

<sup>17</sup> *Ibid.*, Table 5.1, p.116.

<sup>18</sup> M. Jolly, *op. cit.*, (1996), pp. 431-32.

<sup>19</sup> Vehicle output also grew by 93 per cent between 1929 and 1937, but this is on the basis of September years, not calendar years.

1934-37 car output, vehicle output, and the labour force grew by 31, 44, and 26 per cent respectively. During these years, however, sales turnover increased at the same rate as the labour force.

The employment estimates for the period before 1933 leave substantial gaps between years but they do suggest that there was a substantial degree of fluctuation. Employment in 1924 was only 66 per cent of the level of two years earlier, while employment in 1922 was less than half that of 1919. In the 1930s, however, the figures indicate that employment showed slow, steady growth on a year-to-year basis during 1934-37, for which period annual estimates are available. This greater stability in employment suggested by the table is consistent with a greater concern on the part of the firm's management to achieve more stable employment conditions.

**TABLE 3. The Austin Motor Company: Production and Employment**

Year	Sales (£)	Vehicle Output	Car Output	Employment
1922	1,653,400		2,559	8,000
1923	1,943,018		6,417	
1924	3,087,135		9,673	5,300
1925			16,429	
1926			24,900	8,000
1927	7,679,776		37,520	
1928	8,789,776		44,654	
1929	8,403,718	46,562	46,029	13,500
1930	7,405,925	36,682	39,251	12,023
1931	6,767,775	42,817	39,676	
1932	6,755,217	36,526	43,802	
1933	8,622,831	53,186	57,741	14,500
1934	10,520,773	62,292	68,291	17,000
1935	11,331,425	77,171	73,562	19,000
1936	11,187,624	70,458	71,855	20,000
1937	13,283,074	89,745	89,175	(21,500)*
1938	10,430,553	64,053	60,224	

Notes: Data for sales turnover and vehicle output are based on September years; car output is based on calendar years.

\* According to Chairman's statement at the 23rd Ordinary General Meeting (October 1937).

Sources: Sales turnover and vehicle output: Church, *Herbert Austin*, Table 8; Employment: Church, Table 15; Car output: Wyatt, *The Austin*, Table 7.

Up to this point the evidence discussed has related to fluctuations in employment at Austin between years. The evidence relating to fluctuations within years is somewhat scanty but does suggest that demand for labour fluctuated considerably during the the course of the year throughout both the 1920s and the 1930s. In 1937-38 the Austin Company put on suspension 'several thousand' workers and there was short-time working throughout the spring of 1938<sup>20</sup>. This was due, however, not only to a cyclical reduction in demand for cars as a result of the recession of 1937-38 but also to the restructuring required as a result of the 'shadow factory' scheme previously referred to. The reorganization of the labour force required as a result of the scheme was probably substantial. During the four months between 8 June and 28 September the shadow factory engaged an additional 570 workers, compared with 2,401 for the Austin Motor Company.<sup>21</sup>

There is evidence of much more severe fluctuations in employment within the course of the year during the early 1920s when the Company was still a relatively small producer. In 1922 the Company's prospectus recorded 8,000 workers at Longbridge but in 1929 Sir Herbert Austin (the Company Chairman) recalled that the number employed fell at one point in 1922 to 2,300. Church attributes this discrepancy to seasonal variation.<sup>22</sup> The data from Austin, therefore, like the data from the A.E.U. in Coventry, are consistent with the hypothesis that mass-producers operating in a competitive labour market would be more anxious to provide stable employment than would small producers using craft methods.

## VI

In contrast to the car manufacturers at Coventry or Longbridge the Morris and Ford companies enjoyed substantial monopsony power in

<sup>20</sup> R.J. Wyatt, *The Austin, 1905-1952* (David & Charles, 1981), p. 213.

<sup>21</sup> Letter from Austin Motor Company (Employment Manager) to the Engineering and Allied Employers' Association, 11 October 1940. Engineering Employers Federation Papers: Labour Turnover and Absenteeism.

<sup>22</sup> R. Church, *Herbert Austin*, (Europa, 1979), p. 149.

their local labour markets. Sales and car production statistics for Morris are given in Table 4.

The Morris Motor Company was based at Cowley, Oxford, throughout the inter-war period. This makes it possible to make use of data collected and published by the Ministry of Labour during the years 1927-1938. Firms belonging to the Nuffield Organization accounted for nearly 44 per cent of the insured labour force in the Oxford area in 1930.<sup>23</sup> If Pressed Steel is added, another 15 per cent of the labour force is accounted for.<sup>24</sup> We would therefore expect any change in the pattern of employment fluctuations in the motor industry to show up in the figures for the overall unemployment rate in the Oxford area. Table 5 gives the mean

**TABLE 4. Total Sales and Car Production at Morris, 1927-1938**

Year	Total Sales (£)	Car Production
1927	14,295	61,632
1928	14,466	55,480
1929	15,619	63,522
1930	15,828	58,436
1931	11,433	43,582
1932	12,182	50,337
1933	11,379	44,049
1934	13,711	58,248
1935	17,124	96,512
1936	21,535	—*
1937	19,170	—*
1938	18,247	—*

\* There are no production figures available for the period after 1935 but Overy comments that it is clear from what evidence there is that Morris production of all models remained at about 90,000 a year for the rest of the 1930s.

Source: R.J. Overy, *William Morris, Viscount Nuffield*

<sup>23</sup> In 1930 the number of insured persons in the Oxford area was 22,790 (*Local Unemployment Index*, H.M.S.O., 1930). According to R.J. Overy, *William Morris, Viscount Nuffield*, (Europa, 1976), Table 3, the Morris (Nuffield) businesses employed a total of 10,000 workers in that year.

<sup>24</sup> According to R.C. Whiting, *op. cit.*, (1983), Table 4, Pressed Steel employed 5,250 workers in 1939, in which year the number of insured persons in the Oxford area was 34,450. Pressed Steel manufactured steel bodies for the Morris cars.

unemployment rate at Oxford and the annual variances of this rate for the period 1927-1938. It therefore provides information on seasonal, as well as cyclical, fluctuations.

Table 5 implies that seasonal fluctuations were greater after 1930 than during 1927-1929. The reorganization of the Nuffield Organization during 1932-33 seems to have increased rather than decreased seasonal fluctuations in the Oxford area. This is to be expected since the different stages of production were now more synchronized than before.

The Ford Motor Company, which had previously been based at Old Trafford, Manchester, acquired a site at Dagenham, Essex, in 1925 and production began there in 1932. Also at Dagenham were two major suppliers of components to Ford: Briggs Body Works, which manufactured bodies for the Ford cars, and Kelsey-Hayes, which made the wheels.

Ford and its suppliers were characterized by considerable employment variability. The descriptive sources imply that both cyclical and seasonal fluctuations were more severe for Ford in the 1930s than for the other producers of cars. According to Bob Lovell, a future shop steward at Ford, the firm employed during the late 1930s between 12,000 and 24,000 workers, according to the season and requirements of

**TABLE 5. Unemployment Rate at Oxford**

Year	Mean	Variance
1927	2.70	0.71
1928	3.15	0.72
1929	3.79	0.10
1930	4.85	2.85
1931	8.92	7.05
1932	9.03	5.19
1933	7.85	7.84
1934	5.79	4.14
1935	5.83	5.76
1936	6.57	4.04
1937	7.38	10.41
1938	7.37	4.71

Source: Local Unemployment Index, H.M.S.O., 1928-1939

production'. Fluctuations in demand for labour were also very characteristic of Briggs Body Works and Kelsey-Hayes. According to Lovell, employment at Briggs fluctuated between 5,000 and 15,000, while Kelsey-Hayes employed 3,000 to 8,000 workers.<sup>25</sup> This picture of extreme fluctuations in employment is consistent with Turner's assertion that instability 'seemed to be endemic' at Ford during the 1930s.<sup>26</sup>

The quantitative evidence provides some support for this view. Ford, Briggs, and Kelsey-Hayes were between them responsible for half or more of the labour force at Dagenham during the 1930s. Extreme seasonal and cyclical employment fluctuations would therefore appear in the total unemployment statistics for the Dagenham area.

Table 6 gives variances for Dagenham, Oxford, and Coventry and for all vehicle workers for the years between 1933 and 1938. Also shown are F ratios for Dagenham and each of the other categories.<sup>27</sup> From the table it can be seen that the variances in monthly unemployment rates were generally lower at Dagenham than at Oxford but high when compared with those of the Coventry A.E.U. or with unemployment variance for all vehicle workers in the United Kingdom.

These results would suggest that variability in unemployment was

	<b>Dagenham</b>	<b>Oxford</b>	<b>Coventry A.E.U.</b>	<b>Vehicle Workers U.K.</b>
1933	4.65	7.19 (1.55)	7.95 (1.71)	5.18 (1.24)
1934	5.33	3.80 (1.40)	2.32 (2.30)	1.26 (17.89)
1935	0.78	5.28 (6.81)	2.68 (3.46)	0.75 (1.08)
1936	1.39	3.70 (2.65)	0.64 (2.17)	0.67 (4.30)
1937	0.97	9.55 (9.81)	0.12 (8.17)	0.45 (4.65)
1938	0.71	4.32 (6.08)	0.42 (1.70)	0.66 (1.16)

Sources: Local Unemployment Index, Minute Books of the Coventry Division of the A.E.U., and the Ministry of Labour Gazette

<sup>25</sup> Letter from Bob Lovell, quoted in E. and R. Frow, *Engineering struggles*, (Manchester 1982), p. 97.

<sup>26</sup> G. Turner, *The car makers*, (Haemonds sworth, 1964), p.28.

<sup>27</sup> As with the statistics given in Table 2, the critical F-ratio is 2.82.

greater for Ford and for Morris than for car producers as a whole, even though these two firms were both mass producers. This phenomenon may be explained by the fact that they dominated the labour markets in which they were located. Almost 60 per cent of the Oxford labour force was employed by either Morris or Pressed Steel, while Ford and its associates, Briggs and Kelsey-Hayes, accounted for at least half of the labour force at Dagenham. This would suggest that Ford and Morris were not subject to such severe competition for labour as were other car producers, such as Austin, in Birmingham, or the car firms of Coventry, so that in spite of being mass producers they found it less necessary to provide security of employment as a means of holding on to their labour force.

## **VII**

The paper has presented and tested the hypothesis that the employment practices of firms in the British automobile industry during the interwar period were determined by the interaction of production methods and the structure of localized labour markets. The data relating to employment fluctuations at a sample of British car manufacturers confirms the importance of production technique and local labour markets in determining stability of employment. Though the paper specifically examines the British car industry during the period between the two world wars its findings are suggestive for the wider economy over a longer period of time. The three or four decades following World War II were characterized by relatively stable employment patterns in most of the industrialized countries, with large corporations providing their employees with secure jobs. Such ties between workers and individual firms were much less common earlier in the century, when casual employment was usual. The changes in attitude and practice may be partly explained by interactions between the structure of local labour markets and production methods used by employing firms.

The nineteenth and early twentieth centuries were characterized by competitive labour markets and, for the most part, relatively small, craft-based firms. As shown in the paper this pattern tends to be

associated with a lack of permanent attachments between employees and employers since firms will tend to recruit labour when it is needed through such practices as 'poaching' from other firms, relying on formal apprenticeships as screening mechanisms for skilled workers. In contrast, the period from the end of World War II until the late 1970s was characterized by more long-term attachments between firms and their employees, which could be explained by the temporary co-existence of competitive labour markets and the widespread adoption of mass production methods which, by de-skilling labour, reduced the value of apprenticeships as means of screening potential employees. These years saw the growth of powerful labour unions but labour markets in general were competitive in the sense that firms found themselves competing against each other for labour and, given the fact that workers could permanently be drawn away from a firm by other employers, there was a need to encourage long-term attachments between workers and firms. The need for securing workers in this way, however, was a result of the existence of competitive labour markets as well as the use of mass-production methods. The experience during the 1930s of mass-producers such as Morris and Ford, which operated in less competitive markets, demonstrated that mass-production methods and employment instability could coexist in imperfectly competitive labour markets.

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