

## COMPARATIVE PAY LEVELS IN DOMESTICALLY-OWNED AND FOREIGN-OWNED MANUFACTURING PLANTS: A COMMENT

DAVID BLANCHFLOWER\*

IN a recent paper in this Journal, Buckley and Enderwick (1983) used data from the 1980 Workplace Industrial Relations Survey, to compare pay levels in domestically-owned and foreign-owned plants in U.K. manufacturing. They concluded that 'foreign-owned firms do appear to provide higher levels of remuneration. The differential is highest in the case of semi-skilled manual workers, where it is some 8 per cent. While still positive the pay differential for skilled manual workers is slightly lower, at 7 per cent. There is no difference in median pay levels for management employees.' (p. 397). They also presented wage distributions of selected employee groups by industry and noted that there were 'some inconsistencies in the view that foreign-owned firms invariably pay higher wages. Exceptions are notable in Food, drink and tobacco, Textiles, and Bricks, pottery, glass, cement etc.' (p. 397).

The purpose of this note is to correct a number of important errors in the paper by Buckley and Enderwick.

The 1980 Workplace Industrial Relations Survey used the 1977 Census of Employment as its sampling frame, and covered the manufacturing and service sectors of civil employment in Great Britain.<sup>1</sup> The unit of analysis was the establishment, which is defined as an individual place of employment at a single address; all establishments with less than twenty-five employees either at the time of the Census or the sample itself (Summer 1980) were excluded. Differential sampling was undertaken to ensure that there were sufficient larger establishments for satisfactory inter-size comparisons to be made; hence larger units were sampled with greater frequency than smaller ones. To restore the numbers in each size band to their proper proportions according to the Census, a series of weights must be applied. Buckley and Enderwick's results do not meet this requirement and their results are therefore in error.<sup>2</sup>

Table 1 presents wage distributions and median gross weekly pay of a 'typical' employee,<sup>3</sup> in two manual worker groups (semi-skilled and skilled) and two non-manual groups (clerical and middle-management) using both weighted and unweighted data. The unweighted results are very similar to those reported by Buckley and Enderwick for semi-skilled and skilled manuals and clericals in their Table 1; their results for middle management, however, are plainly incorrect, and should be £140.5 for foreign-owned plants and £120.6 for domestically-owned plants, giving a differential of 16.5% of the former over the latter.<sup>4</sup> When weighted data are used, the differential in median pay between foreign and domestic plants is very small for both manual groups (4 per cent for semi-skilled and 1 per cent for skilled manuals). In the case of non-manual workers it appears that foreign-owned plants do pay higher levels of remuneration than their indigenous competitors; the differential is greater for middle management (14.3 per cent) than it is for clerical workers (10.4 per cent). Unfortunately, this is not an appropriate method for determining, for example, whether such higher wages are a result of labour quality differences.

Buckley and Enderwick argue that the 'difficulty with comparisons of this nature is that they obscure the effect of differences in plant size and industry distribution' (p. 397) and hence they provide a 'comparative analysis by industry order'. Unfortunately, they have made a crucial error by allocating establishments to industries on the

\* Queen Mary College, University of London

TABLE 1  
Distribution and Median Gross Pay of Workers in Domestically-Owned and Foreign-Owned Firms in British Manufacturing

	<i>Semi-skilled Manuals</i>				<i>Skilled Manuals</i>			
	<i>Unweighted</i>		<i>Weighted</i>		<i>Unweighted</i>		<i>Weighted</i>	
	<i>Domestic</i>	<i>Foreign</i>	<i>Domestic</i>	<i>Foreign</i>	<i>Domestic</i>	<i>Foreign</i>	<i>Domestic</i>	<i>Foreign</i>
Less than £50	2.6	—	2.8	—	0.4	—	0.1	
£50 - £59	7.5	2.5	8.2	2.2	0.4	—	0.3	
£60 - £69	14.9	12.6	16.7	16.1	1.9	—	1.2	
£70 - £79	22.2	19.3	21.9	24.4	5.5	0.9	7.2	0.9
£80 - £89	21.3	20.2	22.9	25.5	13.6	16.8	13.1	20.2
£90 - £99	14.3	18.5	14.8	13.8	22.5	8.8	24.4	6.9
£100 - £109	8.9	10.9	7.2	8.5	21.6	24.8	21.6	34.2
£110 - £119	4.0	2.5	3.0	1.5	12.9	18.6	13.4	13.9
£120 - £139	2.6	8.4	1.2	4.8	14.2	17.7	10.4	15.5
£140 - £159	1.4	4.2	1.3	3.0	3.9	6.2	5.3	3.3
£160+	0.2	0.8	—	0.3	3.2	6.3	3.1	5.0
Number	572	119	481	67	565	113	480	63
Median	81.31	87.32	80.19	83.43	102.6	109.3	105.5	106.6
Foreign/ Domestic	1.074		1.04		1.065		1.01	

	CLERICAL WORKERS				MIDDLE MANAGEMENT			
	<i>Unweighted</i>		<i>Weighted</i>		<i>Unweighted</i>		<i>Weighted</i>	
	<i>Domestic</i>	<i>Foreign</i>	<i>Domestic</i>	<i>Foreign</i>	<i>Domestic</i>	<i>Foreign</i>	<i>Domestic</i>	<i>Foreign</i>
Less than £50	3.1	—	6.0	—	—	—	—	—
£50 - £59	14.2	6.6	14.8	8.2	—	—	—	—
£60 - £69	28.6	21.5	30.3	25.8	0.8	—	0.4	—
£70 - £79	22.9	28.9	23.1	24.1	1.1	—	2.0	—
£80 - £89	18.1	19.8	15.0	15.8	3.2	—	3.1	—
£90 - £99	8.1	28.9	7.3	17.6	8.3	7.0	8.3	8.1
£100 - £109	2.9	14.0	2.2	3.0	13.8	5.2	15.0	4.4
£110 - £119	1.7	1.7	1.0	2.6	20.6	10.4	23.2	12.6
£120 - £139	0.2	2.5	0.2	2.6	24.0	21.7	26.3	31.4
£140 - £159	0.2	—	0.1	—	16.0	20.0	13.1	18.6
£160+	—	0.8	—	0.3	12.3	35.7	8.7	25.0
Number	590	121	502	68	530	115	447	65
Median	71.79	77.58	69.37	76.64	123.83	145.7	119.57	136.66
Foreign/ Domestic	1.080		1.104		1.177		1.143	

Source: WIRS data tapes.

basis of the main activity of the *organisation* rather than on the basis of the main activity of the *establishment*. (This explains why they are able to present data for 'Coal and Petroleum products', which was not defined as a separate category in the establishment breakdown.) Once establishments are correctly allocated to industries (at the SIC level) and weighted data are used, the number of foreign-owned plants in any industry group becomes very small (because of their preponderance amongst large plants, which were over sampled). As can be seen from Table 2, in only three groups are there more than five such plants for any skill group.

TABLE 2  
Number of Observations on Wages Disaggregated by Industry

	MANUALS				NON-MANUALS			
	Semi-skilled		Skilled		Clericals		Middle managers	
	Domestic	Foreign	Domestic	Foreign	Domestic	Foreign	Domestic	Foreign
Food	38	4	39	4	42	4	35	3
Drink & tobacco	11	3	11	3	10	3	10	3
Chemicals	20	9	20	9	20	10	20	9
Metal manuf.	30	2	30	2	30	2	29	2
Mech. Eng.	68	17	74	17	73	17	66	17
Instr. Eng.	4	4	4	4	5	4	4	4
Elec. Eng.	11	1	11	1	10	1	10	1
Other Elec.	23	7	18	7	24	7	22	7
Shipbuilding	1	2	1	1	1	2	1	2
Motor vehicles	17	3	14	3	18	3	16	3
Other vehicles	4	3	6	3	4	3	4	3
Metal n.e.s.	51	2	52	2	57	2	50	2
Man-made fibres	6	1	6	1	6	1	6	1
Other textiles	40	1	37	1	39	1	36	1
Clothing	26	1	27	1	32	1	23	1
Bricks	17	1	16	1	15	1	15	1
Timber	37	1	41	1	41	1	29	1
Paper	28	0	28	0	25	0	24	0
Printing	30	2	29	1	30	2	27	2
Other manuf.	20	3	19	2	20	3	19	2
Total	481	67	480	63	502	68	447	65

Source: WIRS data tapes

In these circumstances, the median is an inappropriate summary statistic; the fact that the data are grouped and open-ended, means that other summary statistics can only be used if unacceptable assumptions are made about the distribution of wages *within* wage bands. It would be inexpedient therefore, to present any simple comparison of differentials disaggregated into industry groups as Buckley and Enderwick have done in their Table 2.<sup>5</sup>

## NOTES

1. For more information on the technical details of the Survey see Daniel and Millward, 1983
2. It is understood from the authors that this was primarily due to a programming error.
3. Not the 'typical weekly gross pay' as reported by Buckley and Enderwick (1983, p. 396).
4. The number of observations in the unweighted equations reported in this note are smaller for each skill group, than those reported by Buckley and Enderwick. I am unable to determine the reason for this; the most plausible explanations are that they i) wrongly allocated establishments to the manufacturing sector, ii) did not exclude some missing values.
5. Wage distributions by industry show that there is considerable variation in responses across wage groups within each industry. For example, for semi-skilled manuals there are three foreign-owned plants in Motor Vehicles; one of these plants reported a gross weekly wage of a 'typical' employee in the range £60-£69; one reported it in the range £110-£119, whilst the third reported it in the range £140-£159!

## REFERENCES

- Buckley, P.J. and Enderwick, P. (1983) Comparative pay levels in domestically-owned and foreign-owned manufacturing plants in the U.K.: Evidence from the 1980 Workplace Industrial Relations Survey. *British Journal of Industrial Relations*, Vol. XXI, No. 3, p. 395-400.
- Daniel, W.W. and Millward, N. (1983) Workplace Industrial Relations in Britain. Appendix B. Heinemann.