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McJobs and MacJobs: The Growing Polarisation of Jobs in the UK

Maarten Goos and Alan Manning

Key findings

- There has been a large rise in the number of well paid jobs (MacJobs) in the UK over the past 25 years but also a rise in the number of badly paid jobs (McJobs). 'Middling' jobs have been disappearing.
- The most likely cause of these trends is technology with machines and computers replacing jobs that can be mechanised. The worst paid jobs (e.g. cleaning) cannot be done effectively by machines so employment in these occupations tends to rise.
- The growing polarisation of jobs cannot be explained by the changing structure of the labour force.
- Policies to increase pay among the low paid, and immigration seem likely to be most effective at dealing with the problems caused by the increasing polarisation of work.

Introduction

Over the last 25 years inequality in Britain has increased. The gap in wages between rich and poor has widened, the employment rates of the skilled and unskilled have diverged and there is greater polarisation of work across households (see previous edition of *The State of Working Britain*, Gregg and Wadsworth, 1999). In their writings about these subjects, economists have emphasised the role played by 'skill-biased technical change', the idea that technical change is biased in favour of skilled workers and against the less skilled. As the demand for skill has increased, the resulting fall in the

demand for the unskilled has led to a fall in their relative wages and their employment rates.

One should not conclude from this that 'skill-biased technical change' inevitably causes problems like the rise in inequality that we have seen. If the increase in the demand for skills is matched by a similar increase in the supply of skills there is no reason to expect an increase in inequality to be the result. And, for much of the 200-odd years since the beginning of the Industrial Revolution, this is what seemed to happen: big rises in the demand for skills, big rises in the supply of skilled workers and not much happening to inequality. Since skilled jobs tend to be 'better' than less skilled jobs both in terms of the wages they pay and the content of the work, this also means that the number of 'bad jobs' has been falling, the number of 'good jobs' rising. The solution to our current predicament is simple: in the words of Tony Blair, 'education, education, education' to help the supply of skills catch up with demand. The government may not meet its targets on educational attainment, but at least it is pushing in the right direction.

The views of labour economists diverge from those of the man or woman in the street at this point. Your mother probably thinks that, while there may be more good jobs around than before in the professions, computing and information technology (the MacJobs), there are also more bad jobs in fast food, shops and personal services (the McJobs). These 'McJobs' offer low wages, and few prospects. To many labour economists this view makes no sense: the number of bad jobs can't be rising because the (relative) wages of the low skilled are falling and falling wages means falling demand according to the conventional wisdom. It follows that the problem for the low skilled is not an excess of bad jobs but a lack of jobs. This chapter shows, however, that there is something in the popular view.

To assess whether there are more good or bad jobs around, one first needs a definition of a job. The most natural definition to use is to define a job as an occupation: for example in the Labour Force Survey (LFS), the occupation variable is derived from the question 'what was your main job in the week ending Sunday?' We also include industry as, for example, being the manager of a McDonald's store is likely to be very different from being the manager of a bank (though the difference is probably less than it used to be). But, it is occupation rather than industry that plays the most important role in what follows.

Once we have defined a job we also need to define a 'good job' and a 'bad job'. We take a simplistic approach to this question: we rank jobs according to the average level of wages in that job so that 'good' means well paid and 'bad' means badly paid. This is not meant to connote the true 'worth' of any job: caring for old people is a 'good' job in the sense that the people who do it are to be admired but a 'bad' job on our definition because it is so badly paid.

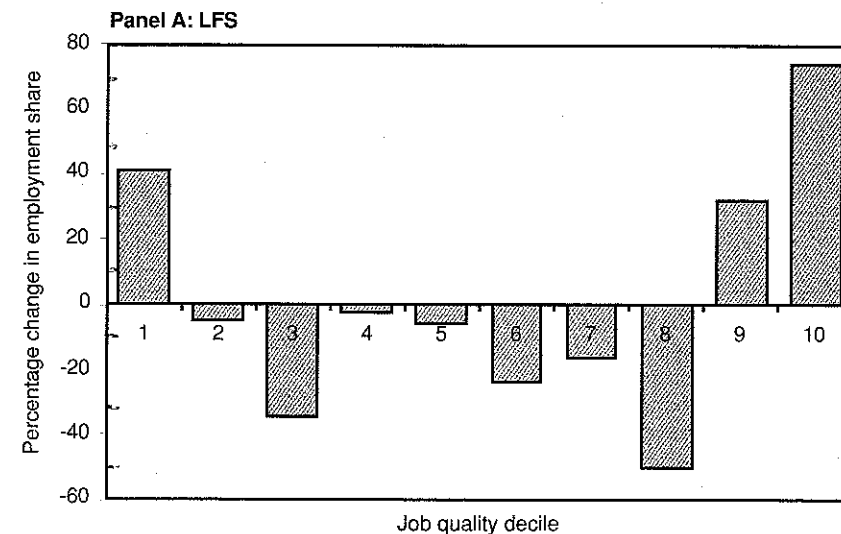
Our ranking of jobs is undeniably crude: there are some jobs that pay particularly high wages to compensate for dangerous working conditions

that we will mistakenly categorise as better than they really are. And there are other jobs with a particularly easy life that pay relatively low wages which we will mistakenly categorise as worse than they really are. But, our ranking probably gives the right impression: managerial and professional occupations are good jobs, cleaners and unskilled jobs are bad jobs.

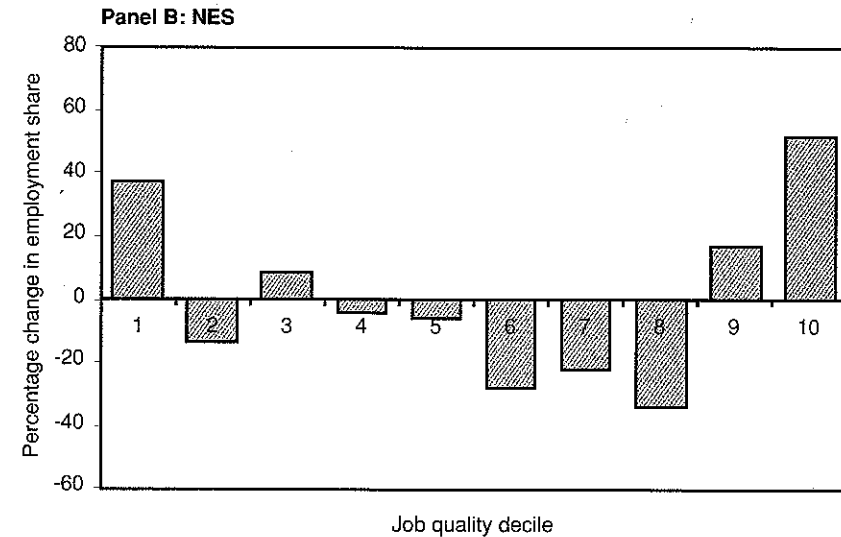
The data used in this chapter come from two sources, the New Earnings Survey (NES) and the LFS. Both have advantages and disadvantages relative to the other. The LFS is a more representative sample than the NES but is smaller (so allows less precise estimation of the numbers in different jobs) and does not have wage information until 1993. We disaggregate jobs into 90 occupations and ten industries though our results are robust to using other definitions of a job. Examples of 'jobs' in this definition are a 'waiter in a restaurant' or a 'computer analyst in finance'. Note that not all occupation–industry combinations exist – for example, there are no nurses working in construction or air traffic controllers working in hospitals. Of the possible 900 jobs 766 actually exist in the LFS and 757 in the NES data.

Figure 5.1 presents the basic result. The top panel of Figure 5.1 uses data from the LFS, the bottom panel from the NES. We group jobs into the 'lowest 10 per cent', the 'second-lowest 10 per cent', up to the 'top 10 per cent' based on their average wage (measured as the median) in 1979. In technical jargon, these are called deciles, the first decile being the bottom 10 per cent etc. Both the LFS and the NES show the same pattern – a large growth in the share of employment in the top two deciles, but also a growth, albeit smaller, in the share of jobs in the bottom decile. So Figure 5.1 shows that there has been a strong increase in the number of workers in good jobs but also that there has been a significant increase in the number of low paid jobs with 'middling' jobs being in decline. Though the increase in the number of workers with bad jobs has been less relative to the increase in workers with good jobs, employment polarisation into low paid and high paid work is clear from Figure 5.1. It is this process of job polarisation that is the central theme of this chapter.

What are these fast growing jobs? Table 5.1 lists the two largest jobs in the bottom and top three deciles and their change in employment using the LFS. The most prevalent jobs in the lowest quality decile are sales assistants and check-out operators, together with cooks, waiters and bar staff. Between 1979 and 1999 the number of workers employed in these occupations increased from about 1.2 million to 1.9 million. Also the number of nurses, hospital ward assistants and care assistants has increased over the last 25 years despite their relatively low wages. The number of workers in jobs paying about the economy-wide average has decreased instead. For example, the number of routine process operatives (3rd decile) or machine operators (8th decile) fell between 1979 and 1999. As can be seen from Figure 5.1, this must be true for most jobs in the 3rd to 8th quality deciles (many of which were in manufacturing and production). Most of the occupations in the top two deciles



Notes: Data are taken from the LFS allowing for 90 occupations in 10 industries. Changes are measured between 1979 and 1999.



Notes: Data are taken from the NES allowing for 90 occupations in 10 industries. Changes are measured between 1976 and 1995.

Figure 5.1 Percentage change in employment share by job quality decile

are professional occupations like managers or engineers. Note that job cell sizes are smaller for jobs in the highest quality deciles, also reflected in the relative high number of jobs in these deciles reported in the last column of Table 5.1.

Table 5.1 Characteristics of selected jobs in different job quality deciles

Job quality deciles	Two largest jobs within selected deciles		Number of workers in 1979 (000s)	Number of workers in 1999 (000s)	Number of jobs
	Occupation	Industry			
Lowest decile	Sales assistants, check-out operators	Retail distribution	926	1,449	21
	Cooks, waiters, waitresses, bar staff	Hotels and catering	270	483	
2nd decile	Nurses, hospital ward assistants, care assistants	Medical and health services	240	758	65
	Counter clerks, cashiers	Retail distribution	133	150	
3rd decile	Textiles, garments and related trades	Manufacturing of textiles	381	172	71
	Routine process operatives	Manufacturing of textiles	225	116	
8th decile	Machine setters and repairers	Manufacturing of metal goods	533	267	65
	Machine operators	Manufacturing of metal goods	246	104	
9th decile	Service officers	Public services	217	313	144
	Production managers	Manufacturing of metal goods	113	125	
Highest decile	Engineers and technologists	Manufacturing of metal goods	123	186	100
	Health professionals	Sanitary services	90	207	

Note: Data are taken from the LFS allowing for 90 occupations in 10 industries.

Because workers in the best jobs are less concentrated, Table 5.2 lists the 'top 10' jobs by employment growth. As one might expect, here are many jobs involving new technology in business services and finance. It is also noteworthy that there is evidence here of the 'managerial' epidemic that has swept Britain in the past 25 years with very rapid growth of workers in managerial positions. All of these jobs are 'good jobs' from the top end of the pay distribution. But it is not only good jobs that are in the 'top 10':

Table 5.2 Top 10 jobs by employment growth

Occupation	Industry	Real median wage in 1979	Employment in 1979 (000s)	Employment in 1999 (000s)	% change in employment
All	All	3.10	22,653	27,231	
Engineers and technologists	Banking, finance, insurance, business services and leasing	5.34	25	212	749
Computer analysts/programmers	Banking, finance, insurance, business services and leasing	5.67	20	167	717
Financial institution and office managers	Public administration	4.28	17	142	716
Literary, artistic and sports professionals	Banking, finance, insurance, business services and leasing	4.28	13	90	605
Specialist managers	Banking, finance, insurance, business services and leasing	5.26	64	352	453
Managers and administrators (not otherwise specified)	Public admin, sanitary services, education	4.02	29	152	428
Specialist managers	Transport and communication	4.88	17	85	404
Merchandisers and telephone sales persons	Retail distribution	2.15	12	54	364
Matrons, house parents, welfare, community and youth workers	Public admin, sanitary services, education	3.27	52	236	350
Security guards	Banking, finance, insurance, business services and leasing	2.62	21	92	343

Note: Data are taken from the LFS allowing for 90 occupations in 10 industries.

further down the list one finds 'merchandisers and telephone sales persons' in 'retail distribution', and 'security guards' in 'banking, finance, insurance, business services and leasing'. These are 'bad jobs'. The domination of 'good jobs' in the 'top 10' reflects the fact that, as can be seen from Figure 5.1, there is some tendency for the growth in the best jobs to be larger than the employment growth in the worst jobs. But, if one moved outside the 'top 10' one would also find rapid growth in the numbers of low paid workers in restaurants, shops and medical and health services.

Table 5.3 presents the 'bottom 10' jobs in which there have been the largest declines in employment. There are two sorts of occupations that dominate here: craft jobs and clerical jobs in non-service industries.

Table 5.3 Bottom 10 jobs by employment growth

Occupation	Industry	Real median wage in 1979	Employment in 1979 (000s)	Employment in 1999 (000s)	% change in employment
All	All	3.10	22,653	27,231	
Glass product makers, musical instrument makers	Production of glass products, musical instruments	2.848	50	13	-75
Metal machining, fitting and instrument making trades	Energy and water supplies	4.087	48	13	-74
Numerical clerks	Production of metals, mineral products and chemicals	2.958	46	14	-69
Secretaries, personal assistants, typists, word processor operators	Manufacture of metals, mineral products and chemicals	3.017	35	11	-68
Metal machining, fitting and instrument making trades	Production of metals, mineral products and chemicals	3.603	94	32	-66
Rail, crane, fork lift operatives	Manufacturing of metal goods	3.277	61	23	-63
Builders and related occupations	Construction	2.972	33	13	-60
Cabinet, box and pattern makers	Manufacturing of metal goods	3.534	32	13	-60
Electricians	Communication	3.411	142	58	-60
Financial associate professionals	Manufacturing of metal goods	4.382	28	11	-59

Note: Data are taken from the LFS allowing for 90 occupations in 10 industries.

We have presented results for total employment of men and women, using 90 occupations and 10 industries. But, we would arrive at the same qualitative conclusion whether we define employment in terms of bodies or total hours, however we disaggregate occupation and industry and whether we combine men and women or consider them separately. There is some evidence that employment polarisation is more marked for men than for women (because women have made inroads into some of the better jobs) and that it is slightly less marked when one looks at hours rather than employment (because more of the growth in the worst jobs has been in part-time employment). One might also be worried about the rankings of jobs changing over time. But, such changes are relatively minor – what are good jobs now were, for the most part, good jobs 25 years ago and the same is true for bad jobs.

Whichever way we look at it, there is a growing polarisation of jobs in the UK: there are more good 'MacJobs' and more bad 'McJobs'. The data show there have been strong increases in the number of high paid jobs but also significant increases in the number of low paid jobs over the last 25 years. Craft and clerical occupations in non-service industries are disappearing while the importance of low and high paid service jobs has increased.

The natural questions to ask are: Why is this happening? What are the consequences? What, if anything, should be done about it? Let us consider these questions in turn.

The roots of increasing job polarisation

A natural place to start is to consider the impact of changes in technology on employment. If technical change is biased towards more skilled workers in better jobs, 'skill-biased technical change' increases the average quality of jobs. As a statement about the average quality of jobs, this conclusion is undoubtedly right: our data also suggest that the average job quality is increasing, but this net effect hides the increased polarisation towards both good and bad jobs.

Many current discussions of the impact of technical change on employment and wages focus on the role played by computers and technology. But, it is important to realise that many of these changes occurred *before* the widespread application of computer technology. As Card and diNardo (2003) argue, there is a tendency to think that innovations in computer technology are older than they really are. For example, more advanced graphical interface operating systems only gained widespread use with the introduction of Microsoft's Windows 3.1 in 1990. Use of the Internet grew very rapidly only after the introduction of Netscape's Navigator program in 1994. The sharper rise of wage inequality in the 1980s should point to more important technological innovations very early in the computer revolution, such as the introduction of the IBM PC in 1981. Whether or not you believe the 1990s were more innovative than the 1980s, comparisons of relative timing are subject to

substantial leeway in interpretation, depending on the lags in the adoption of new technologies.

Technical change tends to increase productivity in manufacturing more than elsewhere. As productivity rises in manufacturing, the relative costs and prices of manufactured goods fall, but not by enough to make demand for manufactured goods rise as fast as the rise in productivity. As a result, the share of manufacturing in total employment falls. This differential in productivity growth between manufacturing and services was identified a long time ago by Baumol (1967) and can explain why there is a long-run decline away from jobs (often skilled craft jobs) in manufacturing towards relatively labour-intensive sectors that include 'good' professional and managerial jobs but also 'bad' personal service jobs like restaurant and retail work.

The 'computer revolution' has given an extra twist to these long-running trends. Autor, Levy and Murnane (2001) show that workers doing routine manual or information processing tasks are easily substituted for capital. In contrast, jobs involving non-routine tasks only have limited opportunities for substitution or are even complements in production. For example a waiter's job cannot be easily done by capital (perhaps excepting sushi bars) and asking a robot to clean your house is a recipe for disaster. Also, computers cannot easily substitute for the job of an engineer. But machines and computers can do the work of routine process operatives or machine operators or of book-keepers.

So far, the discussion has focused solely on the impact of changes in technology on the pattern of labour demand. But, there might also be changes in the pattern of labour supply. The two most dramatic changes in labour supply are the increased educational attainment of the labour force and the increased labour market participation of women.

Figure 5.2a plots the percentage of workers with an A-level or higher degree by job decile in 1979 and Figure 5.2b the change in the percentage over the period 1979-99. Figure 5.2a shows that, not surprisingly, the more educated are concentrated in the best jobs. As these jobs are increasing in number, more educated workers are needed to fill them. But the actual rise in the educational attainment of the population far exceeds that needed to fill the increasing number of good jobs: Figure 5.2b shows that there are more educated people in the worst jobs now than there used to be. Some, but by no means all, of these jobs are being done by students whose employment has increased a lot in recent years.

Besides an increase in the supply of more educated labour, women have increased their attachment to the labour market over the past 25 years. Figure 5.3a plots the fraction of female workers by job decile in 1979 and Figure 5.3b the change in each decile. Figure 5.3a shows that women are heavily over-represented in the worst jobs. So if women are more likely to enter low paid jobs, an increase in the supply of female labour might be able to explain

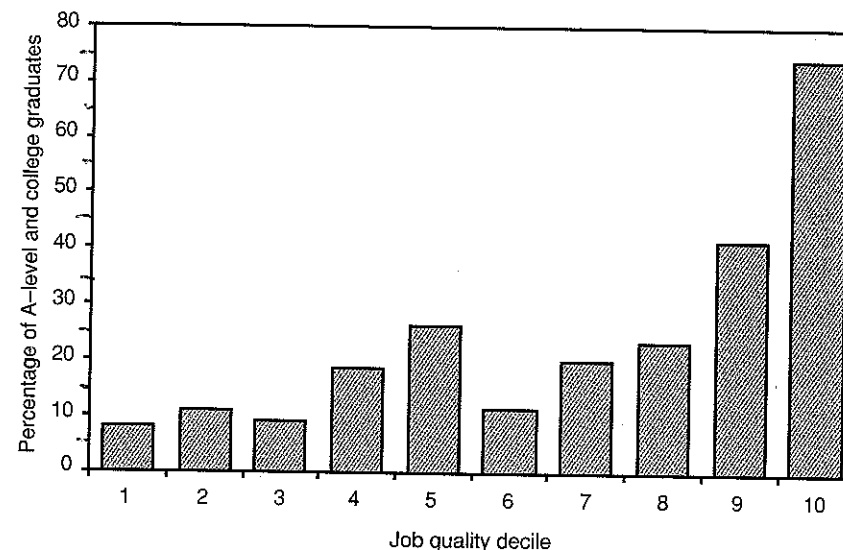


Figure 5.2a Percentage of A-level and college graduates by job quality decile

Note: Data are taken from the LFS allowing for 90 occupations in 10 industries in 1979.

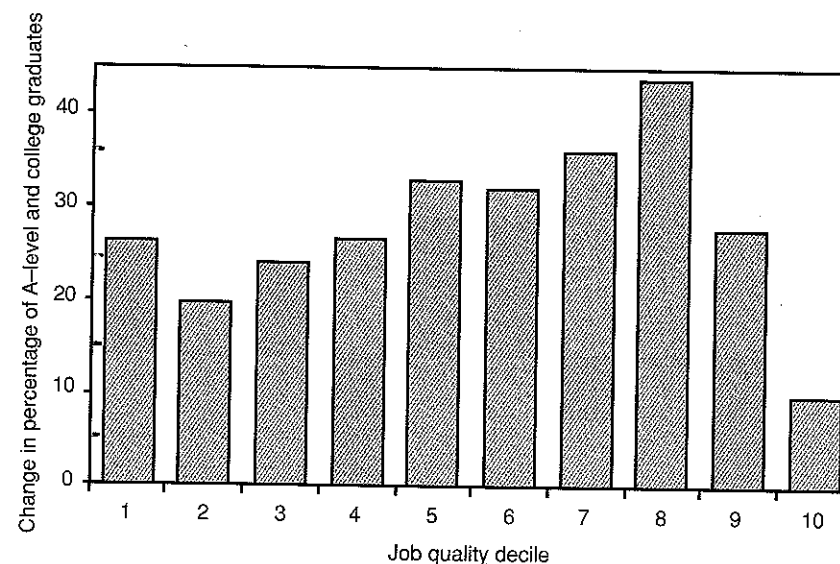


Figure 5.2b Change in percentage of A-level and college graduates by job quality decile

Notes: Data are taken from the LFS allowing for 90 occupations in 10 industries. The changes are measured between 1979 and 1999.

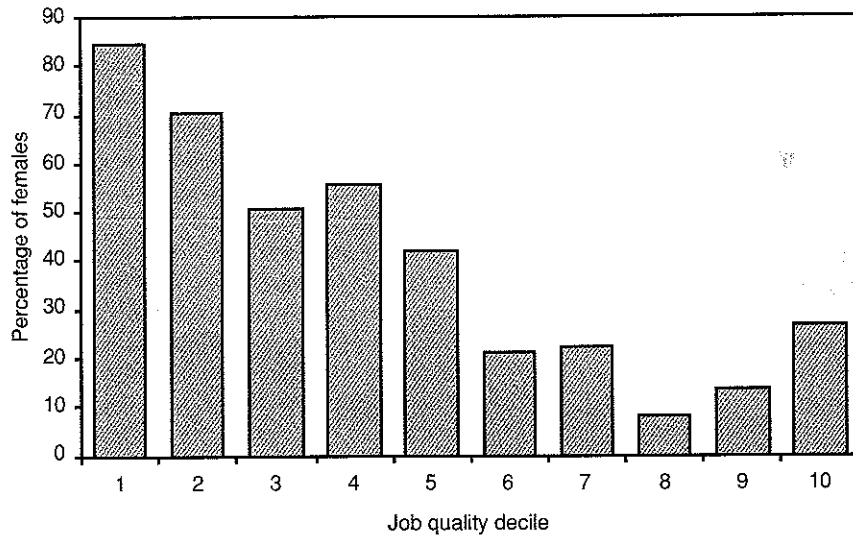


Figure 5.3a Percentage of females by job quality decile

Note: Data are taken from the LFS allowing for 90 occupations in 10 industries in 1979.

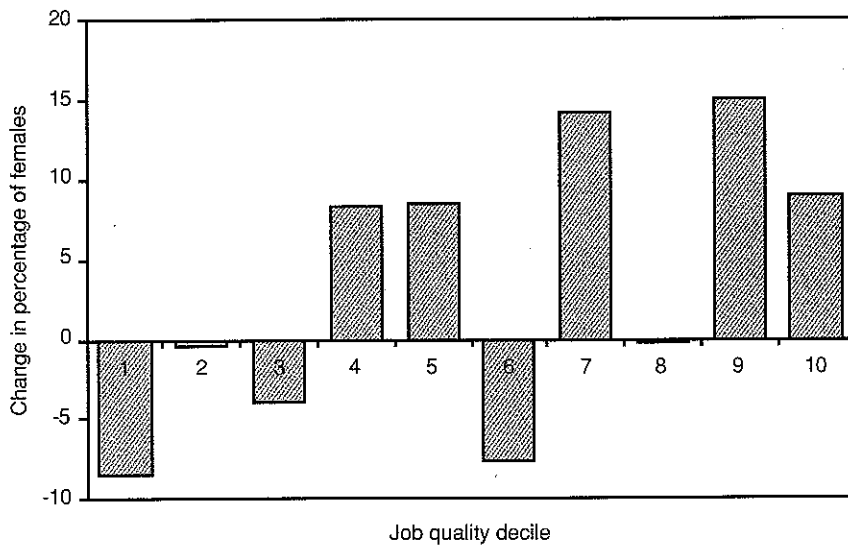


Figure 5.3b Change in the percentage of females by job quality decile

Notes: Data are taken from the LFS allowing for 90 occupations in 10 industries. The changes are measured between 1979 and 1999.

part of the increase in the number of bad jobs. But, when one quantifies these effects of increased supply they are insufficient to explain what is happening. This is also intuitively clear from the fact that women are getting better jobs today than they did 25 years ago: Figure 5.3b shows that the percentage of women in the worst jobs has been falling and the percentage in the best jobs rising as women have made inroads into the better-paid occupations.

The consequences of increased job polarisation

One of the consequences of increased job polarisation is that it is likely to be associated with an increase in wage inequality. Suppose the wage distribution within jobs remains the same but there are more workers in high paying jobs and low paying jobs. The gap between the top and the bottom of the wage distribution will change. How large is this effect? As a measure of the gap between the well paid and the average we use the gap between the earnings of the top 10 per cent and the average (median). As a measure of the gap between the badly paid and the average we use the gap between the average (median) and the earnings of the bottom 10 per cent. Figure 5.4 compares what actually happened over the period 1976–95 with what would have happened if the only change in the wage distribution were that caused by the increased

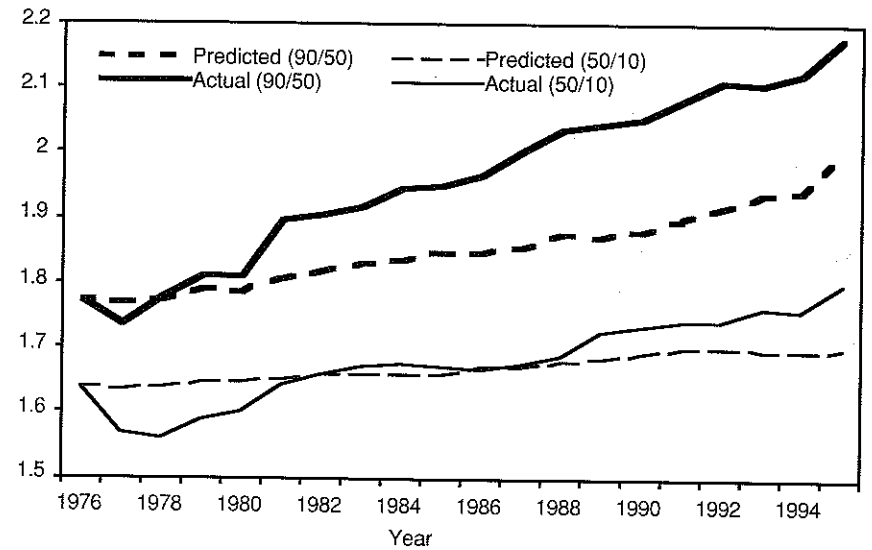


Figure 5.4 How much of actual wage dispersion can be explained by job polarisation?

Notes: Data are taken from the NES allowing for 90 occupations in 10 industries. The vertical axis measures the ratio of the different percentiles of the actual and predicted wage distribution.

polarisation of work. Something like 60 per cent of the rise in wage inequality at the top of the distribution can be explained by increased job polarisation and 40 per cent of the rise at the bottom. So job polarisation is an important factor in understanding the rise in wage inequality though it does not explain everything and some other factors must have been at work.

The most important other factor is that the gap in average wages between the best and the worst jobs has been rising. Figure 5.5 plots the growth in average wages over the period 1976–95 by job decile. One can readily see that wage growth has been greatest in the best jobs and lowest in the worst jobs. This will act to increase the extent of wage inequality. When one quantifies the importance of job polarisation together with increased differences in average pay between jobs, one can explain over half of the actual changes in the wage distribution.

It is easy to understand why wage growth at the top is high in terms of a simple demand and supply model beloved of economists. If the demand for skilled workers increases faster than their supply, employment and wages in good jobs increase. But what is happening at the bottom end of the distribution is harder to understand using a supply and demand model. As argued above, the nature of technological change is a plausible explanation

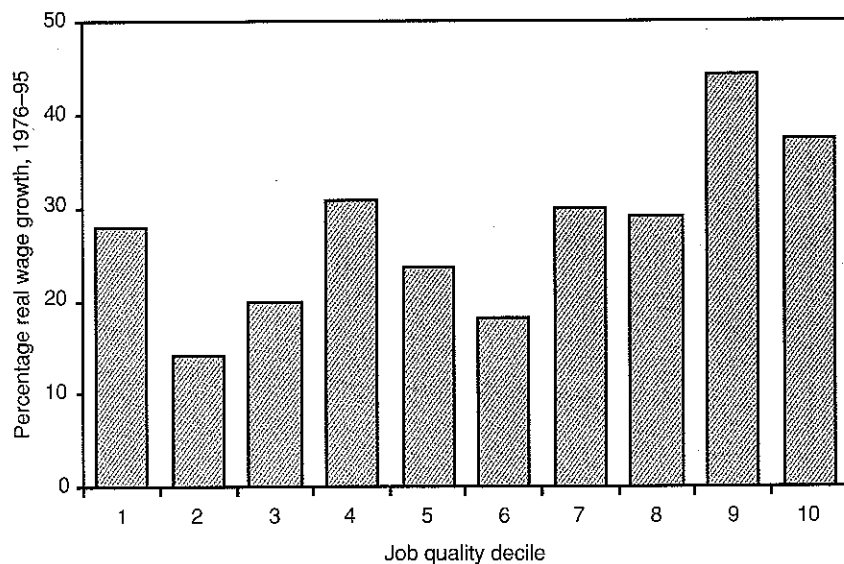


Figure 5.5 Relationship between Real Wage Growth and job quality decile

Notes: Data are taken from the NES allowing for 90 occupations in 10 industries. Wage growth is measured between 1976 and 1995.

for the increasing number of bad jobs. But, if the demand for workers in these jobs is rising, why have their wages not increased relative to the average as Figure 5.5 shows?

One explanation is that institutions have changed in such a way as to lead to a fall in wages at the bottom of the wage distribution. Evidence from the US suggests that the evolution of unionisation and the minimum wage can explain a lot of what is happening to the bottom half of the wage distribution there. The UK has also seen a marked decline in unionisation (see Chapter 11), a decline in minimum wages (though they were never very strong and still are not – see Chapter 13) and the indexation of welfare benefits to prices not to wages – see Gosling and Lemieux (2003) for an overview. Perhaps these changes can account for the rise in wage inequality in the bottom half of the distribution.

Another consequence of increasing job polarisation is an increased amount of over-education. Although the growth in the best jobs requires an increased number of educated workers to fill them, the actual increase in the number of educated workers has been far in excess of that necessary. To some extent, this is the result of increased educational requirements within jobs but it is also occurring in jobs where we do not think this is very important. This is not to say that increasing educational attainment is a mistake: it is necessary to fill the ever-increasing numbers of good jobs and the rising returns to education suggest that we do not have a general over-supply of educated workers. But, there is an inevitable tension between increasing the educational attainment of the whole population and the change in the structure of employment that results in an increasing level of employment in jobs where formal educational qualifications are not that necessary.

What can be done about it?

It seems likely that we are going to see an increasing polarisation in jobs in the future as the reasons for it seem unlikely to disappear in a hurry. We are going to need increasing numbers of people to do ever-increasing numbers of good jobs but also to do increasing numbers of bad jobs. But, are the effects of this inevitably bad?

We do need more education to fill the increasing number of good jobs. But, 'education, education, education' is not enough as, on its own, it will result in increasing numbers of educated people trapped in bad jobs. We also need to do something about the increasing number of bad jobs.

One of the reasons that these jobs are bad is that they are badly paid. It seems unlikely that cleaning toilets will ever be a high-status occupation (though the reasons why not are a sad reflection on our culture) but one can act to mitigate the gap in pay between bad jobs and good jobs. The minimum wage is the simplest way to put a floor to wages, though the level at which the UK's National Minimum Wage (NMW) has been set has only had a

minimal effect on wage inequality. Although the Low Pay Commission thought they were setting a minimum wage at a level that was going to benefit 9 per cent, Chapter 13 suggests that, in fact, 5 per cent (and perhaps fewer) of adult workers were affected by the NMW and suggests that even this might be an over-estimate. Subsequent increases in the NMW have done little to reverse this.

There is the possibility that a higher minimum wage might reduce demand for workers in bad jobs. But, this is not necessarily a problem as long as these workers can fill the better jobs, and the existence of many over-qualified workers suggests that this is possible. Other policy tools can also be used in conjunction with the minimum wage to make 'bad' jobs more remunerative. The Working Families Tax Credit helps to raise the take-home pay of those in low paid jobs.

One other policy tool is immigration. An increasing fraction of those in the UK without any educational qualifications (who are likely to fill the bad jobs) are immigrants. More immigration might provide a ready source of workers for the 'bad' jobs. Immigration policy tends to look more favourably on skilled workers to help fill the increasing number of good jobs. But, perhaps we also need more unskilled immigrants to do the bad jobs. To some extent this is already the pattern: immigrants' qualifications are more polarised than those of the native-born (see Chapter 8).

Some find the prospect of deliberately importing unskilled immigrants to do our dirty work distasteful. We must ensure (through the minimum wage) that they are not exploited. But the discomfort that the liberal conscience often feels when confronted with the sight of immigrants doing the bad jobs often has more to do with the guilt felt at the pampered lifestyle we are accustomed to leading and has little to do with what is best for the immigrants.

Another alternative is the view that the bad jobs still have to be done (e.g. toilets need to be cleaned) and we should all do our share at some point in our life-cycle. One could interpret this as a form of 'community service'. To some extent this is already happening: more and more of the bad jobs are being done by students who, in later life, will go on to be in the good jobs. But there could perhaps be further moves in this direction.

Conclusion

There is an increasing polarisation of jobs in the UK. There are more 'good' jobs around, in managerial, professional and technical occupations, but also more 'bad' jobs, in shops, bars, restaurants and caring. The 'middling' jobs of craft and clerical workers are disappearing, the casualties of technological progress. It seems likely that this process will continue so it cannot be ignored. Unchecked it will lead to widening inequality in our society. Over the past 25 years the consequences of this increased polarisation of work have been compounded by a rising gap in average pay between the good and the bad jobs.

What can be done about this? We need to do something to narrow the gap between good and bad jobs. The 'gap' is partly a pay gap but also a status gap. The pay gap can be addressed by policies like the minimum wage though it needs to be raised for it to have anything more than a token effect. In a recent book, Toynbee (2003) illustrates pay is not just a matter of income but also of respect, status and personal worth. Indeed, the status gap is problematic too in a society in which the correlation of status with pay is increasingly strong.

To fill the increasing number of good jobs, we need to continue to strive to increase the educational attainment of our workers. But, perhaps we also need immigration of less-skilled workers to meet the increased demand for workers in 'bad' jobs. What is clear is that current policies are, at best, only going to deal with some aspects of these changes but not others.

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