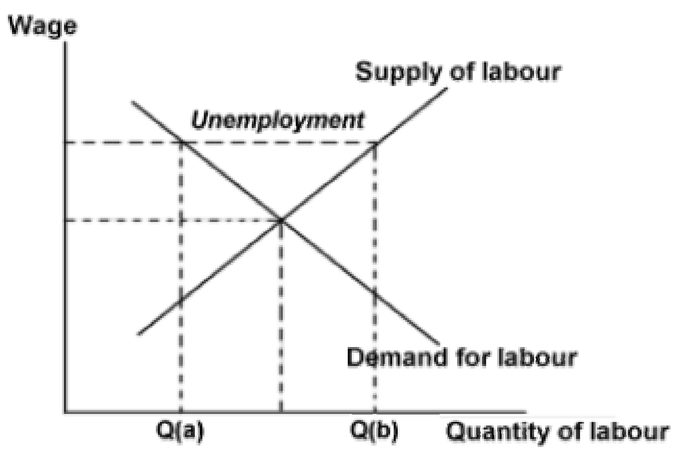
Discuss the view that minimum wage legislation leads to unemployment. Has this been the recent experience of the UK?

Minimum wage legislation is often contemplated by governments as a way of combating poor wages and the poverty that typically accompanies these wages. This is a direct form of government intervention and its use causes a great deal of debate, particularly from Classical (or free market) economists. Free Market economists argue that the minimum wage causes unemployment. This paper will discuss the argument that minimum wage causes unemployment and go on to analyse whether this has been the case in the UK over recent years.

When a government introduces a minimum wage it sets a wage level to which every worker is entitled. Any employer which pays less than this minimum wage does so only by breaking the law. A minimum wage only has an effect if placed above the market equilibrium as can be seen in Fig.1. When the minimum wage is implemented the supply of workers increases as more are willing to work for the higher wage and we move up the labour supply curve. At the same time employers are less able to afford as many workers at the higher wage level and reduce the amount of workers that they employ. As is seen in Fig.1 there is a simultaneous move up the labour demand curve. The introduction of the minimum wage has therefore created unemployment of QaQb.

Fig.1



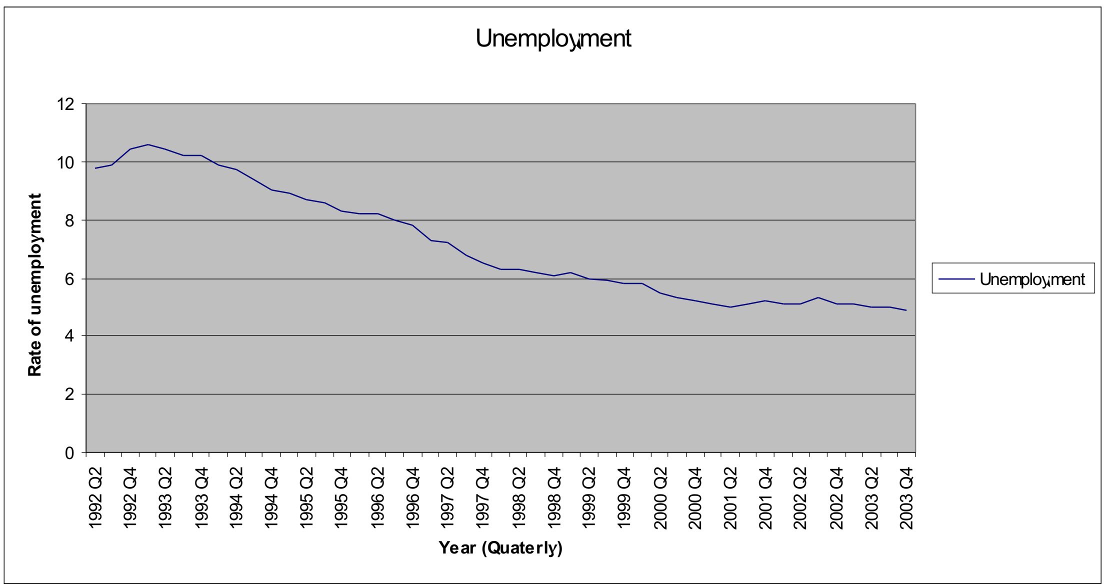
Source: www.bized.ac.uk

The introduction of a minimum wage can have one of two effects. If the theory holds out and workers are laid off, then it will be lower paid workers who lose their jobs and the effect of the minimum wage will be a detrimental one. If the theory does not hold then the minimum wage will have its desired effect and raise the wages of those low paid workers and help raise their standard of living. The existence of a causal link between minimum wage policy and unemployment is a crucial issue because if there is such a link the policy may be harming the workers it is seeking to protect.

A view taken by the Employment Policies Institute is that a minimum wage will keep more people on benefits for longer. The people that occupy the low paid jobs are very often very low skilled, often illiterate. For these individuals, entry level jobs represent their only employment opportunities. Without formal education and training, they cannot expect to walk into more skilled and more highly paid jobs.[1]

There are arguments for and against minimum wage legislation but does the data show that the minimum wage has the desired effect, or are there obstacles that prevent its success? To try and answer this we can look at the recent experience of the United Kingdom. The National Minimum Wage (NMW) was introduced in Britain on 1st April 1999 at £3.60 per hour. Fig.2 looks at the quarterly data for unemployment from 1992 to 2003 to try and show any trends that might indicate the effect of the minimum wage.

Fig.2



Source: Labour Market Trends: Unemployment Rates - www.statistics.gov.uk

The data is inconclusive in that there are no marked changes as a result of the NMW. The data reflects more than just the introduction of the minimum wage. It is noticeable that the rate at which unemployment is falling is slower after quarter 2 of 1999. This could be a consequence of government intervention to raise the level of wages through the NMW. On the other hand it may be that the rate of change is falling as the economy is nearing its level of full employment. The NMW may be artificially 'holding up' the natural level of unemployment. Employers can no longer pay workers cheap wages leaving more people unemployed and unable to occupy low-paid jobs. The higher wages also mean that employers need to make existing staff more productive through training and technology, further reducing the need for more labour. Five per cent unemployment could be the UK's natural rate of unemployment. If indeed the UK economy is at its natural level then the minimum wage could be keeping that natural level higher than if there were no intervention.

[1] Employment Policies Institute www.epionline.org/study 'From Welfare to Work. The Transition of an Illiterate Population'

As the results obtained from simply looking at the unemployment trends from 1992 to 2003 are inconclusive, I decided to attempt a simple statistical regression. The model has unemployment as the dependent variable using GDP as a variable and the NMW as a dummy variable (introduced in the second quarter of 1999) can hopefully show the effect of the NMW in numerical terms. Obviously unemployment is affected by other variables but if we expect these variables to be relatively stable then it is the introduction of the NMW that will have the greatest effect. All that can be seen is whether there is a strong positive effect on unemployment after the NMW is introduced.[2]

Using Eviews, the coefficient obtained for the minimum wage dummy variable was **0.495058**. This tells us that the impact of the minimum wage has been to increase unemployment. The R squared value of **0.92607** suggests that the model is representative but this may also be due to heteroskedasticity being present in the model. On the basis of this model the NMW has increased unemployment.

Whilst the results of my simple regression were positive showing a connection between the NMW and unemployment, it is unsafe to draw a firm conclusion from the results. This is because it includes too few variables. Even the work of Benjamin Nardella[3] which included a total of nine variables cannot statistically prove the effect of a minimum wage. Most models will confirm a connection between minimum wages and unemployment, but Machin[4] argues 'the effect of a minimum wage *always* depends on the assumptions that the modeller makes prior to the experiment.' A major problem in evaluating the effect of the minimum wage using mathematical models is the lack of data – the minimum wage introduction was effectively a one-off event.

David Metcalf[5] reported for the Low Pay Commission that the NMW actually had a slight positive effect on employment. He mentions that 'aggregate employment continued to rise around the time the NMW was established and presently there are a record 25 million employees in employment.' He concluded his report by saying that 'the evidence – using a rich variety of sources and methods of investigation – suggests that, at the rate(s) set the NMW has not had adverse employment effects.' Whilst the introduction of the NMW has not prevented these record levels of employment who is to say that they would not have been better still had the NMW not been introduced?

Clearly there has not been a dramatic increase in unemployment. This could imply that demand and supply at low wages are price inelastic meaning that changes in wages will only lead to a small change in labour demand. Reasons for this could be any of the following:-

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[2] The full results of the regression can be seen in the appendix.
[3] Nardella, B 'Economics Paper 043' November 4, 2003 - Variables: minimum wage; money supply; population; real gdp; labour force; inflation; government surplus; consumer price index.
[4] Machin, S 'A National Minimum Wage: who would be affected and the effect on employment' (University College, London) Background Paper 1 pp.2
[5] Metcalf, D 'The National Minimum Wage: Coverage, Impact and Future' Oxford Bulletin of Economics and Statistics, 64, Supplement 2002 pp.574

Although it is illegal to pay workers below the minimum wage, some employers continue to do so. The BBC Website has reported that 'almost £13 million in unpaid wages has been uncovered from rogue employers since the minimum wage was introduced in 1999'[6]. Although some has been recovered, this information implies that there are many employers that continue to pay wages below the minimum wage. This could help explain the small impact of the NMW and support the argument that the gradient change in Fig.2 is mainly due to the UK reaching its natural rate of unemployment. Admittedly, some employers may be breaking the law but many other employers are not and the NMW should still have some impact upon unemployment.

The impact of the NMW may also have been negated by the strong steady economic growth that the UK has experienced over recent years. Firms would benefit from this in two ways. Economic growth would result in a greater demand for their products resulting in greater revenue, with which they could pay the higher wages. Economic growth also means that the higher wages are not as great in relative terms. This could well help to explain the small impact of the NMW. Had the NMW been introduced during a time of recession, its effect on unemployment may have been much greater.

Rather than shedding labour, an alternative for employers is to reduce the overall working hours of their employees. The second report of the LPC (2000) stated 'a frequently reported response to the minimum wage was a unilateral reduction of workers' hours by the employer.'[7] This area is still open for debate but could be another reason why the NMW may not had the expected effect upon unemployment.

Measurement of the precise effect of the NMW is not practical if at all possible. However, the main indication is that the NMW has had little effect on the level of unemployment. The introduction of the minimum wage in the UK came at a time of economic prosperity. Had it arrived during a time of recession the effect of it may have resulted in a completely different picture.

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[6] www.bbc.co.uk/unemployment

[7] 2nd Report of the Low Pay Commission (2000) p.105

Appendix

1.1 Annual unemployment figures for Fig.2 (quarterly figures included in chart and regression for greater accuracy)

1992	9.8
1993	10.5
1994	9.8
1995	8.8
1996	8.3
1997	7.2
1998	6.2
1999	6.1
2000	5.6
2001	4.9
2002	5.2
2003	5.0

1.2 Results of statistical regression:

Dependent Variable: UNEMPLOYMENT				
Method: Least Squares				
Date: 03/30/04 Time: 15:56				
Sample(adjusted): 1992:1 2003:3				
Included observations: 47 after adjusting endpoints				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	18.26817	0.749137	24.38561	0
MW	0.495058	0.314841	1.572408	0.123
GDP	-5.43E-05	4.08E-06	-13.30164	0
R-squared	0.92607	Mean dependent var		7.140426
Adjusted R-squared	0.92271	S.D. dependent var		1.943625
S.E. of regression	0.540349	Akaike info criterion		1.668499
Sum squared resid	12.84699	Schwarz criterion		1.786593
Log likelihood	-36.20972	F-statistic		275.5801
Durbin-Watson stat	0.141813	Prob(F-statistic)		0

1.3 Results of Benjamin Nardella's regression:

Dependent Variable: UNEMP				
Method: Least Squares				
Date: 11/04/03 Time: 23:43				
Sample(adjusted): 1959:01 2002:09				
Included observations: 525 after adjusting endpoints				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
MINIMUMWAGE	1.113130	0.180466	6.168085	0.0000
MONEYSUPPLY	0.001590	0.000205	7.741704	0.0000
POPULATION	0.000194	1.33E-05	14.62016	0.0000
REALGDP	-0.005619	0.000180	-31.22630	0.0000
LABORFORCE	0.000416	1.76E-05	23.66911	0.0000
INFLATION	-0.173792	0.016102	-10.79290	0.0000
GOVTSUP	0.000626	0.000459	1.362775	0.1735
CPI	-0.158707	0.009237	-17.18170	0.0000
C	-37.48853	2.088863	-17.94686	0.0000
R-squared	0.829552	Mean dependent var		5.917714
Adjusted R-squared	0.826909	S.D. dependent var		1.478307
S.E. of regression	0.615038	Akaike info criterion		1.882727
Sum squared resid	195.1879	Schwarz criterion		1.955814
Log likelihood	-485.2159	F-statistic		313.9142
Durbin-Watson stat	0.334728	Prob(F-statistic)		0.000000

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BBC Website www.bbc.co.uk/unemployment

2nd Report of the Low Pay Commission (2000)