Investigating the relationship between tax credits and wages offered by employers

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Summary

Working tax credits lower the reservation wage (the lowest wage at which a worker would be willing to enter the workforce) of many individuals who can consequently work for less in the knowledge that their pay will be topped up by the government. This means that, following the introduction of working tax credits, more people are willing and able to enter the workforce. An increase in labour supply would theoretically work to depress wages and there is evidence that employers share in the benefit of tax credits. The picture is complicated, however, by the fact that multiple factors affect pay, which makes it difficult to isolate the specific impact of working tax credits on wages.
Introduction

Tax credits are state benefits through which income is redistributed by topping up the wages of people on low earnings who satisfy certain criteria. The current generation of tax credits, that includes Working Tax Credits (WTC) and Child Tax Credits (CTC), was introduced in 2003, replacing the previous Working Families Tax Credit (WFTC) which operated from April 1999 until March 2003. WTC are available to low income in-work families with and without children, whereas CTC are only available to in- and out-of-work families with children. Families eligible for the WTC receive the full entitlement until their annual household income reaches £6,420, after which there is a taper whereby the amount of tax credits they receive reduces by 41 pence for every £1 they earn above the threshold.1 In-work families with children are also eligible for the CTC in addition to the WTC. It should be noted that the WTC (as well as the CTC) will be incorporated into the Universal Credit in 2017.2

Given that the analysis within this report attempts to ascertain the relationship between tax credits and wages, the primary focus will be on in-work tax credits as they are explicitly conditioned on a claimant being employed. In this sense, there exists a corporate-social welfare continuum whereby in-work benefits potentially fall into the categories of both corporate welfare – by acting as a wage subsidy for employers – and social welfare – by providing support to low-income families.3

The retail sector and supermarkets

The retail sector, with a particular focus on supermarkets, is a pertinent area to examine in order to investigate the relationship between tax credits and wages. This is highlighted by recent concerns raised by Citizens UK that wages are being subsidised by the taxpayer.4 There are also broader economic reasons for focusing on this sector and supermarkets. Employing almost three million people, the UK retail industry is the largest private sector employer in the UK whilst Tesco is the UK’s largest individual private-sector employer.5 This is combined with the fact that there is an issue of low pay across the sector, with ‘sales assistants and retail cashiers’ being the category with the highest number of total employees earning less than the Living Wage (920,000).6 Therefore, given that low pay is prevalent in this area and low-earning employees are likely to be recipients of WTC, focusing on this sector in examining the general relationship between tax credits and pay is valuable.
Theoretical and empirical analysis

An increase in labour supply
The key channel through which wages may be subsidised is through an increase in labour supply. We will assume that economic actors will supply their labour if doing so will enable them to make ends meet – that is, they are able to obtain a living wage. This equates with a reservation wage rate (the lowest wage rate at which a worker would be willing to enter the workforce) that has to be met by employers. Tax credits both create and bridge a gap between the wages firms choose to pay and the final income that workers receive. This is highlighted by the fact that tax credits are worth 43% of the original incomes of the poorest tenth of British working families and 27% for the second decile (Figure 1). It is of significance that tax credits are worth such a large proportion of original incomes for low-paid workers of these two deciles. Very clearly, this state benefit is an important source of income for such workers and will undoubtedly help them to make ends meet. As a result, an effect of tax credits is to lower workers’ reservation wage levels, which means that many individuals will be willing to work for a lower wage than they would have done previously in the knowledge that their pay will be topped up by the government. Similarly, the Earned Income Tax Credit (EITC) in the US, which is similar in design to the WTC, offers direct inducements for low-wage workers to enter the labour market, even if this means accepting positions that do not offer adequate pay.

![Figure 1 - Tax credits as a proportion of original income](image)

According to supply-demand theory, as more non-workers enter the labour market because they have lower reservation wages (i.e. there is an increase in the labour supply), this will lead to a corresponding suppression of general wage levels for workers of a similar skill level. However, data shows us that, in practice, tax credits have had a more nuanced effect on labour supply. What we see is that tax credits have had different effects on the labour supply decisions of different groups within society. Evidence suggests that since 2000, the share of lone parents in employment has risen from 51% to 64%. In contrast, tax credits have had no significant effect on the labour supply of mothers in couples or indeed encouraged them to exit the workforce. This can be rationalised by the fact that tax credits paid to men allow their partners to leave work without reducing the family's income.

This conclusion that tax credits have different effects on different groups is important since, as discussed earlier, we would only expect a suppression of general wage levels due to tax credits if overall labour supply has increased. Hence, because tax credits have contributed to an increase in the labour supply of one group (lone parents) but a decrease for another (mother in couples), we have to analyse what the net effect is on the labour supply to determine whether our hypothesis still holds. Indeed the consensus seems to be that the increase in the labour supply of single mothers outweighs the decrease in the number of mothers in couples in the workforce. Therefore, we would still expect a decrease in general wage levels. This does not mean WTC may not sometimes fulfil its function of encouraging work and increasing labour supply, thereby negatively affecting the general wage level. Rather, it means that it is the structure of the particular redistributive benefit which dictates how labour supply is affected. WTC can be contrasted with a ‘making work pay’ reform introduced in Germany in 2003: the mini-job reform. The main objective of this policy, like the WTC, is to provide positive work incentives for people with low earnings. It does so by subsidising social security contributions (SSC). Employees with a gross income of up to 400 Euros per month are exempted from employees’ SSC whilst there is a degressive subsidy for those with a gross monthly income between 401 and 800 Euros. Importantly, because the German reform has a structure that is conditioned on individual earnings rather than on family income, it does not create negative work incentives for secondary earners. In this respect, such transfer programmes that are individualised – in contrast with the WTC – are more efficient in boosting the labour supply of different groups of workers.
The effect of tax credits on wages
As noted, we would expect a corresponding depression of wages following an increase in the size of the labour force. This would equate to employers sharing in the benefit of the wage subsidy and qualify as leakages for the government in its operation of tax credits insofar as employees do not obtain the full payment of the benefit. The unpublished results of a study being conducted by the National Institute of Economic and Social Research (NIESR) suggest that 72-79% of the 76p an hour the government spends in tax credits for someone on the minimum wage goes to workers. Similarly, a study on the EITC in the US found that for each dollar spent on tax credits, existing workers’ income rose by $0.64 but employers gained $0.36 by spending less on wages. Thus, the benefit of the tax credit is not received solely by claimant workers. Furthermore, the wide availability of WTC also means that employers have no incentive to increase wages. Arguably the prevalence of low pay - with the proportion of the working population on less than the Living Wage now 23%, up from 22% last year - means that the existence of a tax credit system has unintended consequences. Employers begin to expect the top-up from the government and set their pay accordingly as a responsive adjustment. From the perspective of employees, wage top-up schemes may entrench labour market conditions in which workers feel that they do not receive sufficient recognition because the wage paid by the employer does not conform to the norm of reciprocity; that is, the wage paid is not fair pay for fair work.

Research carried out by Azmat et al highlights the importance of the visibility – the salience – of tax credits from the perspective of employers. They examine the effects of tax credits on wages following the introduction of the WFTC in the UK in 1999, which was included in the wage packet and visible to the employer unlike Family Credit, its predecessor. They find that, through increased visibility (what they term the ‘salience mechanism’), firms cut the wage of claimant workers relative to similarly skilled non-claimants by 30% of the tax credit, approximately 7% of the wage. Furthermore, the wage effects of a tax credit are not limited to eligible workers, as there is a negative spillover effect of 1.7% on the wages of comparable non-claimant workers, which they find is approximately 8% of the tax credit for claimant workers. In other words, employer awareness of employees benefiting from tax credits has the potential to have a negative impact on the wages of both eligible and non-eligible workers. The size of the firm can magnify this spillover effect as the burden can be shared more easily across all workers. What this means is that the proportion of the benefit transferred from employee to employer increases as the size of the firm increases. This is because larger firms
have more uniformity in wage contracts across employees since more people do
identical tasks that carry the same pay structure.\textsuperscript{23} Indeed the Low Pay Britain
2015 report commissioned by the Resolution Foundation found that 29\% of the
workforce at the largest firms – those with 5,000 employees or more – were on low
pay (although they also found that the smallest firms, those with fewer than 10
employees, had the highest prevalence of low pay, 35\%).\textsuperscript{24}

There are several interesting points to note. Firstly, the finding that it is both eligible
and non-eligible workers who experience a wage effect due to tax credits is
conditioned on the Resolution Foundation’s use of a model which accounts for
worker heterogeneity. It is the substitutability between claimants and other workers
that causes an indirect spill over effect on the wages of non-eligible workers. The
magnitude of the wage effect is dependent on the level of substitutability between
the two groups and the proportion of each group relative to the other.\textsuperscript{25} This is
particularly relevant when we consider that, particularly for certain low-paid roles,
such as those prevalent in supermarkets, there will be a high degree of
substitutability between workers where the completion of certain tasks will not
require a high degree of training. Secondly, the ‘big four’ supermarkets in the UK
are amongst the biggest private sector employers; hence, their size could also give
them an enhanced ability to share in the incidence of tax credits. This could,
therefore, help explain why pay for low-skilled workers in supermarkets has been
low although recent increases in minimum pay rates at several supermarkets are
soon to improve this (as discussed below).\textsuperscript{26}

There is, however, conflicting empirical data. In its report \textit{Creditworthy}, the
Resolution Foundation finds that there is no evidence to support the hypothesis
that tax credits have put downward pressure on wage growth. The authors find an
absence of any difference in wage growth across the bulk of the earnings
distribution in the WTC/CTC period, suggesting no general wage slippage.\textsuperscript{27}
However, the difficulty here is that comparing the wage growth of a wide
distribution of workers who may not share the same skillset or productivity may not
produce accurate data. A more useful approach would be one similar to that
undertaken by Azmat et al. They compare the difference between actual and
predicted wages for WFTC-eligible workers and ‘similar’ non-eligible workers: those
who are in industries and education groups with a high density of eligible
workers.\textsuperscript{28} They find that the WFTC did have a negative effect, resulting in lower
than predicted wages for WFTC-eligible workers after the policy was implemented,
compared to non-eligible workers.\textsuperscript{29} The benefit of looking at ‘similar’ workers is
that it allows for a much more fair comparison in wage growth between eligible and non-eligible workers.

Isolating the effects of Working Tax Credits

Interestingly, in *Creditworthy*, the Resolution Foundation notes that wage growth was relatively strong in the bottom decile in the period 2003-2008 and acknowledges that this is likely to reflect the introduction and the relatively rapid increase in the National Minimum Wage (NMW).\(^{30}\) Indeed the existence of an increasing safety-net that ensures those on the lowest wages cannot see their pay fall beyond a pre-determined limit complicates the picture. The NMW has been increasing rapidly in recent years (Figure 2), thereby increasing the wages of low-paid workers. As a result, it becomes difficult to calculate the exact extent to which employers have shared in the benefit of tax credit payments because wages have been rising – reducing the leakage to employers. This highlights a broader point about the difficulty of isolating the exact effects of working tax credits on wages given the existence of numerous factors affecting the latter.

*Figure 2 - National Minimum Wage (21 and over)*

Source: National Minimum Wage rates\(^{31}\)

The NMW could also explain why the Resolution Foundation found an absence of any difference in wage growth across the bulk of the earnings distribution. This is because minimum wages tend to increase wages further up the earnings distribution as a ripple effect.\(^{32}\) Increases in the NMW tend to lead employers raising the wage of other workers earning above the NMW in order maintain pay gaps between different workers. They do so to maintain their ability to recruit and retain workers who would have improved options elsewhere due to the minimum
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wage increase. Hence, as the NMW has rapidly increased in recent years, workers on wages higher than the absolute minimum would have experienced a pay rise.

In addition to the NMW, CTC and non-governmental factors, such as the recent strategies of competitors of the ‘big four’ (as discussed below), also demonstrate how the exact impact of WTC on wages is difficult to isolate. Firstly, CTC, unlike WTC, are not conditional upon employment of the claimant. This means that it would be inaccurate to label CTC as a wage subsidy to employers since unemployed individuals may also receive it. However, since in-work individuals can claim both WTC and CTC simultaneously, the CTC may also work to lower the reservation wage of individuals entering the workforce. If so, it becomes difficult to separate the individual effects that both the availability of WTC and the availability of CTC have on the lowering of reservation wage levels. Interestingly, although the total number of in-work families receiving WTC and CTC is a small proportion of the total number of in-work families receiving tax credits, the former group’s total entitlement makes up most of the total entitlement of all families (out-of-work and in-work) receiving tax credits (Figure 3, Figure 4 and Figure 5). This suggests the importance of both CTC and WTC in topping up the wages of individuals in this group, allowing them to participate in the workforce.

Figure 3 - Numbers of in-work families receiving different types of tax credits

Source: HMRC Child and Working Tax Credit statistics

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Figure 4 - Annual entitlement by type of tax credits received

<table>
<thead>
<tr>
<th>Year</th>
<th>Total in receipt (out-of-work and in-work families)</th>
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<th>Total in-work families receiving WTC and CTC</th>
<th>Total in-work families receiving WTC only</th>
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<td>16400</td>
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<td>8334</td>
<td>296</td>
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</table>

Source: HMRC Child and Working Tax Credit statistics

Figure 5 - Annual entitlement by type of tax credits received

Source: HMRC Child and Working Tax Credit statistics

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Likewise, recent decisions by supermarkets with regard to pay – explored below – demonstrate how business-related considerations, not related to the availability of WTC, may also affect the level of pay that employers choose to adopt.

The impact of the discounters

The UK supermarket sector has recently experienced significant change with the growing importance of discount chains. Lidl became the first UK supermarket to implement a minimum wage of £8.20 an hour and £9.35 an hour in London in 2015, above the minimum wage recommended by the Living Wage Foundation at the time of the announcement. This has arguably had a ripple effect in the sector, with other supermarkets such as Aldi and Morrisons increasing their minimum wage. Sainsbury's also responded by giving 137,000 shop-floor staff a 4% pay rise – increasing pay from £7.08 to £7.36. Numerous reasons help explain why discounters such as Lidl and Aldi have been keen, and indeed able, to increase pay. Such moves can be seen as part of a strategy to continue to increase market share. The ‘big four’ have been losing ground in recent years as Aldi and Lidl reached 10% of the British grocery market for the first time this year. By gaining positive publicity from a marketing point of view, such moves may help entice middle-class shoppers in more affluent areas who have traditionally shunned large discounters to come to their stores. Another factor is that the business model utilised by these German brands enables them to be more flexible with their pay structures. Aldi and Lidl's model involves limiting their variation in stock. The hard discounters stock only around 2,000 lines against Tesco's 40,000; this allows for large economies-of-scale savings as Aldi and Lidl can purchase a higher volume of each line of stock. The ability of Aldi and Lidl to pay more can also be explained by the fact that these are private companies in comparison to the listed Tesco, Sainsbury's and Morrisons. There is an asymmetry between them insofar as they do not have shareholders to please and dividends to distribute.

Conclusion and next steps

In summary, tax credits lead to increased labour supply as reservation wage levels for workers decrease. Many are willing to work for less pay as their final income will be higher than the income that they receive from their employer. An increase in the size of the labour force would theoretically work to depress wages and, as discussed, there is evidence that employers share in the benefit of tax credits insofar as the whole payment of the benefit does not in effect go to employees.
The NIESR’s upcoming suggestion that 72-79% of the 76p an hour the government spends in tax credits for someone on the minimum wage goes to workers is significant because it means that employers may be gaining almost 30% of the tax credit payment in some cases. However, it is currently difficult for us to calculate the exact extent to which wages are being depressed due to WTC. This is because it is the interaction of numerous factors, in addition to WTC, which determine the wage level of employees on low pay who are likely to be in receipt of WTC. As a result, more research that helps isolate the effects of WTC on wages would be valuable. Specifically:

1. Research undertaken to produce statistics on predicted wage growth in the absence of the NMW would enable us to see precisely whether wage growth at the bottom of the earnings distribution, where receipt of WTC will be highest, has fallen behind wage growth further up the distribution.

2. Breaking down the employment costs found within the annual reports of supermarkets would allow us to see the exact proportion going to those in low-paid positions. This could then be used to work out and compare wage growth of those in low-paid positions with that of others in supervisory or management positions (although changes in employment numbers would have to be accounted for).

3. Research looking into how many of those currently employed would remain in the workforce if CTC was not available would help us distinguish between the separate effects that CTC and WTC have on lowering employees’ reservation wage levels.
References


2 Universal Credit, November 2015, available at: https://www.gov.uk/universal-credit/claiming-other-benefits


6 Felsted, A., ‘Tesco poised to axe offices and jobs’, The Financial Times, 02 January 2015, available at: http://www.ft.com/cms/s/0/0e0d0d52-9299-11e4-9e68-00144feabdc0.html#axzz3tLHvLnZn


12 Brewer et al, ‘Did working families’ tax credit work The impact of in-work support on labour supply in Great Britain’, 2006

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21 Dean, H., ‘Welcome relief or indecent subsidy? The implication of wage top-up schemes’, 2011


24 Ibid

25 Ibid


Investigating the relationship between tax credits and wages offered by employers

29 Ibid
36 Ibid