

## REFORMING THE TAX AND WELFARE SYSTEM

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### INTRODUCTION

I am going to focus my talk on the research we do at the Institute for Fiscal Studies. What I want to discuss is work on reforming the tax and benefit system. This is an important area of work at the Institute and I want to look at this work in the light of recent reforms in the U.K., U.S.A. and Canada. Of course, there have been lots of reforms to the tax and benefit system. I want to concentrate my discussion on the concerns that people have about the welfare system as it affects those who are not in employment, and the issue of how best to get those types of individuals, or welfare recipients, into the labour market. It is the most important issue, in some sense, in the design of welfare systems and it is a red hot policy issue.

The problem with systems designed to relieve poverty among particular target groups of families — in particular, single parents — is that as these individuals start to earn, then there is typically an implicit tax rate of close to 100% in most welfare systems. Effectively, there is a dollar for dollar loss on the welfare benefit as earnings rise. In addition, in-kind transfers like free medical services, free dental care, free medical prescriptions, and subsidised housing are often lost with a move into employment.

What I want to focus on then, in light of these concerns, is

the move in the policy debate towards the use of in-work benefits. This is a topic that has been of interest on both sides of the Atlantic, and especially in the U.S. and the U.K. Coincidentally, there is a big debate going on in Canada right this minute and I'll try to refer to Canadian evidence as I am discussing this topic. The idea is to make work pay for individuals who are welfare recipients. The difficulty in the design of welfare reforms that attempt to achieve that goal is to avoid too large a reduction in the income of individuals who either can't find work or are not able to work.

Before I discuss the types of reform, I want to put these reforms within the context of the 1990s. Quite important things have been changing in the economic environment, especially in the labour market. And it is only within the characteristics of this environment that you can begin to understand how this kind of welfare reform is going to operate. One characteristic we are familiar with is the shift in demographic patterns. There are now more retired people and more single parents. In addition, there is a remarkable shift in returns to education and skill; in particular, declining real wages for individuals who are less educated or less skilled. For example, in the U.S. even median real earnings have fallen yearly since the late 1970s. And the lower deciles have fallen yearly since around 1974 or 1975. That characteristic is quite exaggerated in the U.S., but it is nonetheless common to most developed countries and those with low skills are exactly the type of people you find in the welfare system. Welfare recipients have found a continuously falling return to being in employment, certainly over the last 15 years.

In addition to that, we have seen an increase in income uncertainty, with higher chances for people to have repeat low income spells. On top of this, there are certain factors that bear on the cost of living for these individuals. In particular, one thing I'll focus on with regard to the U.K. — but I am sure it is true in Vancouver and lots of other North American cities — is increasing housing costs, especially among low income households. Typically in welfare programmes, some housing assistance is given, and so one can find individuals in cities, such as London, with quite high welfare benefits covering, to a large extent, their housing costs. With a lowering of

the real returns for individuals who are less skilled — exactly the group on welfare — there is a dual problem of a falling return from employment and an increasing level of benefit through welfare programs like housing assistance. I want to bring all these issues together and think about how we might design reforms that can get around those problems and try to produce some reasonable level of return for these individuals from being in the labour market.

### **IN-WORK BENEFITS**

In-work benefits are designed to counter the low wages and high implicit tax rates faced by those individuals on welfare. The idea is to modify the incentive structure so that a larger fraction of welfare recipients take jobs and leave welfare. We want to do that in a way that does not unnecessarily lower incomes for those who do not find it possible to find jobs.

In Canada there is an interesting experiment currently under way: the Self-Sufficiency Project, which is a randomized experiment into the effectiveness of in-work benefits. One of the groups in this experiment is in the Lower Mainland of B.C. I am going to use some recent evidence that has come out of that randomized trial to try to figure out how these systems work and how effective they really are. In the U.S., there has been a long standing system of “in-work” benefits called the Earned Income Tax Credit, but it is only in the last decade that it has really become an effective in-work benefit. In the U.K., over the last ten years, we have had something called “family credit,” recently reformed and renamed Working Families’ Tax Credit. These programs all share very similar characteristics and aims. They are designed with slightly different labour markets and slightly different target groups in mind, but nonetheless they have very strong similarities. They have become an important aspect of welfare reform; for example, earned income tax credits in the U.S. account for the largest part of the U.S. budget on welfare going to low income workers.

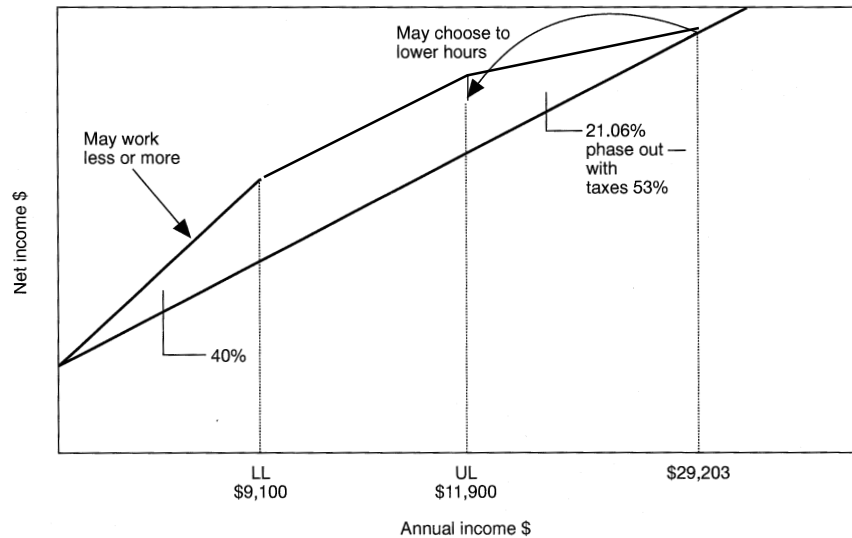
These programmes are designed to stimulate work and remove families from the welfare poverty trap; that is the part of the

welfare system that makes it difficult for individuals to take work because there could be severe losses of benefits from taking employment. Of course, individuals still do take employment, and there are good reasons for doing that. The stigma of being on welfare, for example, is enough for some people to do take employment despite the costs.

How do these systems work? A simple way of thinking about the welfare system is to evaluate all the income opportunities that an individual would have in and out of work; this set of opportunities we call the budget set. Let's take the example of the Earned Income Tax Credit (EITC) in the U.S., the one that has been around the longest and that has been substantially reformed by the Clinton administration. In Figure 1 you can see the net income an individual gets as she changes her annual income through earnings. If you take together all the different welfare benefits that an individual can get in the USA, we can draw a budget line which is effectively the amount of net income they get for an extra dollar of earned income — it is pretty flat. In this figure, we are abstracting from the Aid for Families with Dependent Children (the AFDC programme) and food stamps. If we included those, then the budget line would effectively be horizontal for an individual who gets a rather low wage in the economy — a little above the minimum wage say. Most of the earnings they get would be lost dollar-for-dollar against those benefits as they start earning income.

### **EITC, SSP AND FC**

The idea of the EITC is to give a worker a supplement of about 40% to earned income. If a worker earns a certain amount of income, she will get 40% back as a tax credit, and that gives her more income from work. The only criterion is that she (or he) has to be in a family. Typically, these systems are designed for poor families in the welfare system and the individuals must be in work. You can only get this tax credit on your earned income, thus the term “earned income tax credit.” There is a 40% phase-in, and that gives quite a large credit to an individual. For our illustrative individual in Figure

**FIGURE 1:** EITC in the U.S. - for poor families in work

1 who is earning about \$5 an hour in 1996 prices, the tax credit they would get if they were to work up to that limit would be just over \$3500 per year, which is a big supplement to their income. It gives an encouragement if they want to take a job, even if the wage rate they can get is relatively low. Of course, there are issues that have to be addressed. Individuals may take jobs with relatively low wages and one faces problems with policies toward minimum wages.

The big problem with designing these systems is balancing the level of the supplement with the rate at which the government claws it back. Individuals on very high earnings do not get a supplement; the in-work benefit is just trying to target the lower earnings group. Once individuals have got the maximum, the supplement is kept constant, and then it is phased out at what we call the “phase-out rate.” That is 21% at the current time for the earned income tax credit, until it pulls the worker back onto her original earning schedule. It is effectively an earning supplement for the low earnings group. Of course, it has to be clawed back eventually, and that clawback at the end is some implicit tax rate. If you put it together

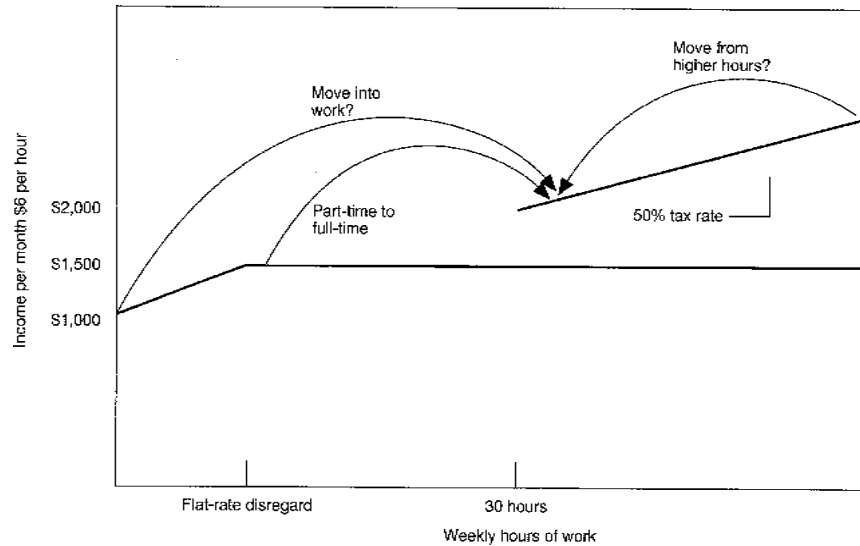
with the tax system in the U.S., you can find an implicit tax rate of around 53%. So individuals who are already working, but at fairly low earnings and could be eligible to claim an earned income tax credit, will find both their earnings rising and an implicit tax rate rising at that point. At some point, they may choose to reduce their work effort. They can reduce their hours of work per year — their work effort over the year — and still retain the same level of overall income through the earned income tax credit.

The issue is to figure out what actually happens when you bring in a reform of this type. For example, are there lots of people in the “windfall” group — the group that were working anyway, and now are given a supplement to their earnings? How does this number compare with the group that are not working and might find it now more attractive to take a job, even if it is at a relatively low wage? The other group that is of interest is the group who are working already on relatively low earnings who face a steeper budget constraint now. For every dollar they earn, they get a little bit back as a supplement in addition. One interesting question is “would we expect to see those individuals working more or less if they have the choice?” That is something that we can examine using both economic theory and empirical data.

Another programme that I thought would be interesting to look at and which has many similarities is the Self-Sufficiency Programme in Canada. In fact, what I am going to show you is some experimental evidence that was produced by a former Princeton economist and Canadian, now at Berkeley, David Card.

Figure 2 shows an exaggerated budget constraint for a Canadian welfare recipient. It gives the budget set that an individual would face if they were earning the minimum wage in B.C. which, when I last looked at it, was \$6 an hour. If they take a job at a few hours a week, they’ll get some earnings disregarded up to a small nominal sum of \$200. Then effectively they lose all their earned income in a dollar-for-dollar transfer back to the income assistance programme. So, until they have exhausted their income assistance — that is working nearly 50 hours a week — they would get no return, with an implicit tax rate of 100% on their earnings. Clearly, there is not going to be

FIGURE 2: SSP in Canada



many individuals who choose to be in employment if that is the kind of schedule they face.

Of course, there are other programmes in B.C., such as an enhanced credit and enhanced earnings disregard system, that raise this line a little. So the example in Figure 2 is an exaggeration, but it tells the story. Most of the welfare recipients that are in this particular randomized trial seem to face something rather like this.

The SSP operates so that if you find a job averaging 30 hours a week over a period of a month, calculated on a monthly rolling period, then it will give you a supplement to your income that suddenly makes it relatively attractive to work in those jobs. It is a neat programme in some ways, because it is targeted to individuals who are going to take full-time work; you have to have been a welfare recipient for 12 months out of the last 13 to be eligible. It is targeting those individuals — typically single parents — who are going to fall into this group and gives them a supplement. Of course, it does not change their income assistance level; so it is not, for example, causing more individuals who do not find employment to be on lower



incomes. It is giving a supplement to those who move into work. The question is: does it have any effect? This is a difficult group — typically comprised of fairly low skilled and low educated individuals. It may be thought that their opportunities to move into work are relatively low. And so one interesting thing is to see what happens. The nice thing about this experiment, as we will see, is that it is a randomized trial. In fact, in the trial, all the individuals chosen were single parents. So I am going to focus on that group. The other interesting thing about this is that it is an individualized benefit, so it does not depend on other earnings coming into the household.

Of course, there is a windfall gain group as well in this system. You find that when you invent a system to try to draw individuals into work, there is always a chance that there are people out there already working who will find their income is enhanced. The idea of this reform is to enhance income in work by 50% of the difference between a target income, which was set in B.C. to be \$37,000 a year — way above the income assistance level — and your earned income. Participants get a supplement of 50% of the difference of those two, which can be an incredibly large increase in income for a low wage individual who takes a full-time job. So it can be quite attractive.

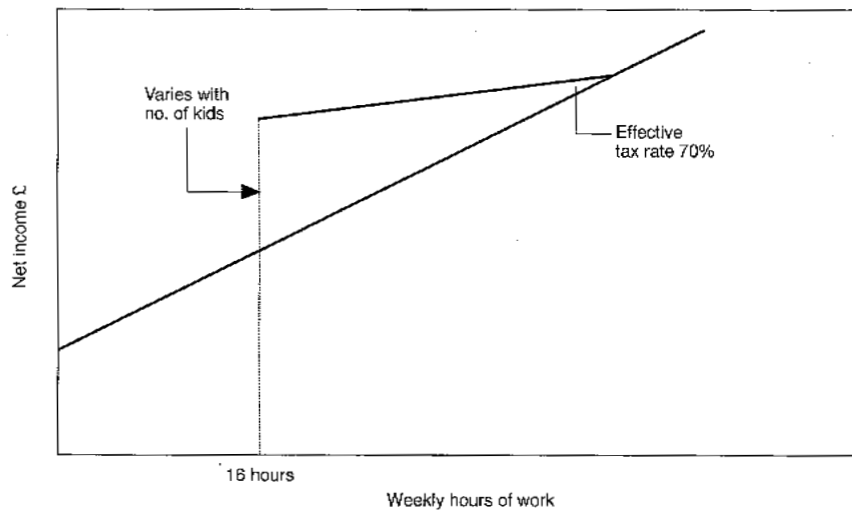
Individuals, of course, who are already working may decide to lower their work effort, and there is always that trade-off, because now they can, for the same earned income, get more actual net income by applying for this supplement. Individuals who would have worked anyway may reduce their work effort. Individuals who might have taken a part-time job may also decide to move into full-time work. We need to know exactly what the size of those effects are.

The earned income tax credit (EITC) in the U.S. has many similarities although its benefits are not *time limited* as is the case in the Canadian SSP experiment. In some ways the Canadian experiment is more attractive and much more generous. I'll be considering the importance of the relative generosity of these programmes when I look at the actual statistics of what happens when they are implemented.

The last in-work benefit I want to look at — just to show you

that this kind of programme is happening everywhere — is Family Credit in the U.K. This was designed for poor families, and it is now been extended for poor families with single parents and single individuals without children. This is a reflection of the fact that we see in the U.K. exactly the same story — those in the relatively low skilled, low educated group have had little rise in their real earnings. With an increase in housing assistance (Housing Benefit), it has become relatively unlikely that an individual at that level will find it attractive to be in employment. The Family Credit programme, and its replacement the Working Family Tax Credit, is designed to give a large supplement to individuals who satisfy the criteria — that is, they are family members and work at least 16 hours a week; i.e. part-time work. The idea was that single parents might find it possible to take part-time work, and because of their low labour market experience or low skill level, they're going to find they attract very low wages. The goal is to give quite a large supplement to part-time work. The issue then is whether there is much of an incentive created to move into work and how big is this effect? At the same time, those already in work on jobs with longer than 16 hours per week

**FIGURE 3:** Family credit in the U.K. - for poor families in work



may find it attractive to adjust their hours of work downward.

In the U.K., the generosity of the programme varies with the number of children. So the programme also depends on family size. As you can see from Figure 3, 70% is the benefit withdrawal rate, or the phase-out rate. It is quite interesting that in the EITC programme this was quite low, at around 20%. In the Canadian system, it is about 50%. With the 70% rate in the U.K. system, it is almost inevitable that individuals working up above this limit are going to find it relatively attractive to move down into more part-time work. So there is going to be a trade-off between individuals moving in, and others moving down into part-time work. Exactly what phase-out rate to choose is an interesting and difficult question, because if you make it too high, then you get a severe implicit tax rate. But if you make it too low, you find individuals on quite high incomes are able to attract some supplement from this credit system. The latter is precisely what has happened in the redesigned in-work benefit in the UK now called Working Families Tax Credit (WFTC). So the exact slope of the benefit reduction rate is critical, and it really all depends on how many people out there are likely to be affected. One interesting recent reform, just to put it in context, was to move the minimum hours limit in the UK from 24 work hours down to 16. In the U.K. there was been a deliberate effort to try to encourage individuals to move into part-time work to get them into the labour market.

So overall, how well do welfare-to-work benefits work? They are designed, as we have seen, to stimulate work for individuals in the welfare trap, typically poor families with children. How well they are going to work depends on a lot of things. It depends first on the way we think the labour market operates, and that is a controversial issue. We all have different views of this; some commentators think there are incredibly strong disincentives, and the reason you see individuals not working is purely because of the benefit system. Others think that there are other things going on in the labour market that cause those individuals not to be in work. It is essentially an empirical issue. Are individuals likely to respond to earning supplements of the type that I have just been describing? And will those people who are already in work, but now are eligible for the supple-

ment, choose to reduce their work effort because they can do just as well financially by working fewer hours over the year? And, perhaps most importantly, is there a longer run pay-off to labour market attachment?

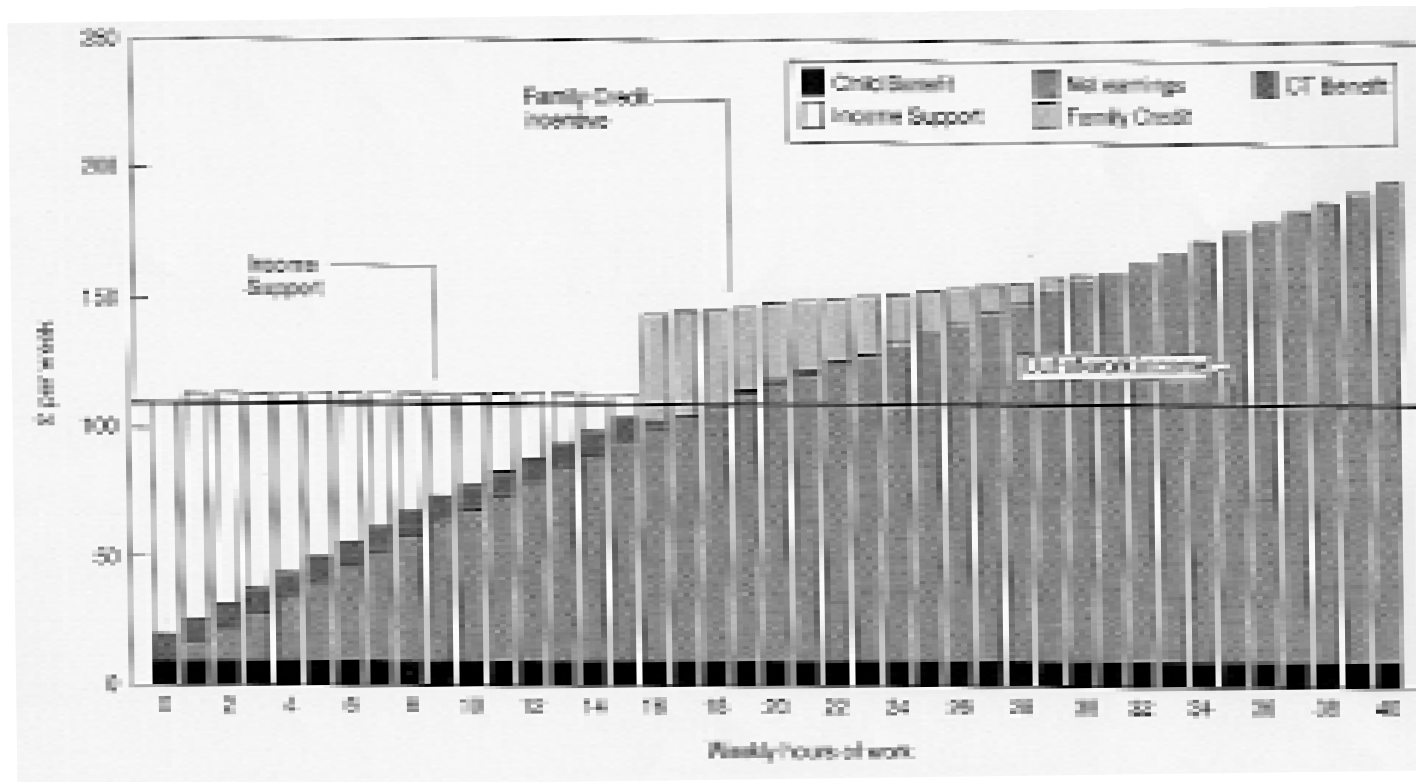
Why are governments doing this anyway? Do we think there is something bad about people being out of the labour market for the long term? Most people probably think there is. If there is, then there must be some longer run pay-off to labour market attachment for these people. Earned Income Tax Credits typically do not save large amounts of welfare income for the governments because of the new payouts made to the windfall group. Eventually, one might hope through the progression of wages, and getting attached to the labour market, workers get themselves out of a low income group and into a reasonable earnings level; which means, of course, they would be less likely to be drawing income assistance or any forms of tax credits.

We need to know what labour supply elasticities look like; that is, how elastic is the response of people's work effort to changes in the economic environment. And we need to know this information for different types of people too. Lone parents are going to have a different response from single young women or men without children, and married couples.

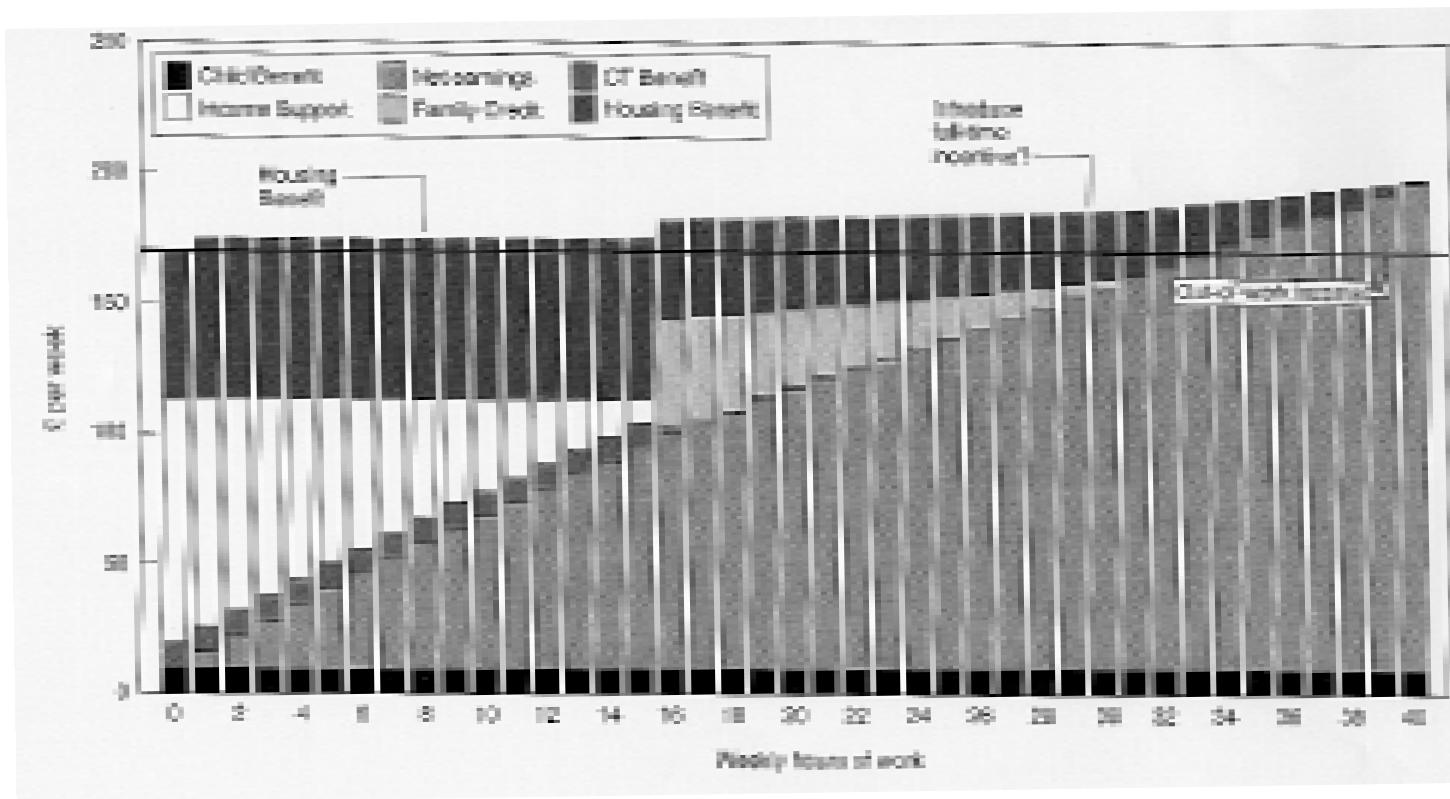
More importantly, we need to account for the interactions between all the forms of the welfare and tax system. This is something that is often not acknowledged. Policy makers tend to look at an individual programme in isolation, and then discover that it didn't have the outcomes expected often because it interacts with other benefits and taxes in quite a complicated way. I'll give you an example of this from the British system.

Figure 4 shows a budget constraint and the hours worked per week for a particular individual. If this individual works no hours at all, then they will receive some income support — just over a hundred pounds per week. As individuals increase their hours of work, they earn more pounds but lose them in the sense that benefits are withdrawn. As they move into work, they have no change whatsoever in their earned income. This is the characteristic we saw in the

FIGURE 4: Family credit and income support in the U.K.



**FIGURE 5:** Introducing housing benefit



Canadian income assistance programme and it is more or less what you see in the aid for families with dependant children programme in the U.S., and the food stamps programme.

Now look at what the in-work benefit “Family Credit” does. At 16 hours the low income worker gets a supplement to his income, and you can see already that it makes it relatively attractive for this individual if they were not working, to look and perhaps take a job at a 16-hour, part-time rate. Of course it is also potentially attractive for individuals working quite long hours — full-time hours — to move back into part-time work. That might be attractive for a single parent who is paying child care costs and prefers to stay with their children.

Now consider what happens if we add in housing benefit — such benefits are very important in the U.K. It has similar effects in the U.S. through housing assistance. Individuals with low enough incomes who are in private or public sector rented housing can claim their rent back, more or less, pound for pound, against the benefit system. In Figure 5 you can see that when you introduce housing benefits — this example is for someone actually living in London where rents are relatively high — it more or less wipes out the whole Family Credit system. In fact, if this individual is determining how much to work in this kind of budget constraint framework, then there really is going to be very little likelihood that they choose, at least on short-term economic grounds, to take a job at all. You can see that the pay-off of doing so is relatively slight — as they move from zero to 34 hours of work a week, they gain just a few pounds. And if there are any costs associated with employment, then they wouldn’t take it. Interestingly, just like the Canadian system, the reaction in Britain now is to give an additional supplement, very like SSP, the self-sufficiency programme. Workers get a supplement for full-time work; e.g., 30 hours a week.

So what are the policy issues? It is a really difficult area because each time you think of a possible reform, it produces some other difficulty. The first policy issue is reducing phase-out tapers (or benefit reduction rates). That is what causes the poverty trap in the first place — an individual is on some benefit like income assis-

tance, and as they make earnings, they are losing benefit pound for pound. So you might want to phase it out at a lower rate. You saw already that in the U.K. we have a high benefit reduction rate, at 70% on our family credit, the U.S. has the lowest at around 20%, and Canada's experimental self-sufficiency project has it around 50%. The exact design of the phase-out rate is critical in trying to figure how to think about these in-work benefits. There are always this problem if it is too low, then it is going to go too far up the income distribution. There are going to be lots of individuals for whom you really do not feel that a credit is a reasonable thing — they're already earning quite a decent income. For them, a credit is unnecessary and is unlikely to have an impact on their taking a job and/or working more. Nevertheless, those individuals are able to claim some of that credit — that is the windfall group — and it is effectively a loss to the system. Obviously you want to target certain groups, and the groups that are most important to target are the individuals with young children.

To put the whole situation within a broad economic context, what we see is that part of the problem is that the returns to work for individuals who are less educated, at the bottom of the pile as it were, have been falling continuously over time. There are a number of solutions you can think of. One solution that looks simple and attractive, at least to begin with, is a minimum wage — just up the wage, do not let it go too low. But we all know that there are problems with this approach. The alternative is to try to raise the return to those individuals through training programmes or longer times spent in education. Of course all these things have to be taken together. If you can do that effectively, then there is no need for most of these programmes as the return that individuals get in work will be sufficiently high.

Another issue concerns job experience effects and the pay-off to employment. It is surprising that labour economists know relatively little about this and it is still a controversial issue. It is an issue of whether individuals — particularly low skill, low educated individuals — really get much of a pay-off to staying in work in terms of enhancing their wages over time. If the pay-off is relatively



low, then it means that these systems that try to get people into the labour market, if they do not lift them up the wage distribution, they are going to be stuck on these credits and may be stuck continuously in the welfare system. Another issue is the individualization of benefits. Most welfare benefits, unlike taxes, are based on family income. They are needs-based; i.e. they are based on measures of poverty of the whole family, for good reason of course. Consequently, if any one individual in a family earns money then, typically, that will affect the benefits going to the whole family. That can create a high disincentive to work.

The interesting issue is how would people respond to these kinds of welfare reforms? This is an empirical issue, and the things we want to look at are the participation effects for those not in work. We would like to know if it is likely we're going to get people moving off the welfare roles into work if we put these credits in place. But if we do put these credits in place, what are the responses of those already working, particularly in the phase-out region? Are they likely to cut back their work effort so that, in fact, the two effects counteract each other? It is possible that could happen. And if it does, then is there really any benefit to the system whatsoever? You could have some people moving in, but others working less who are already in.

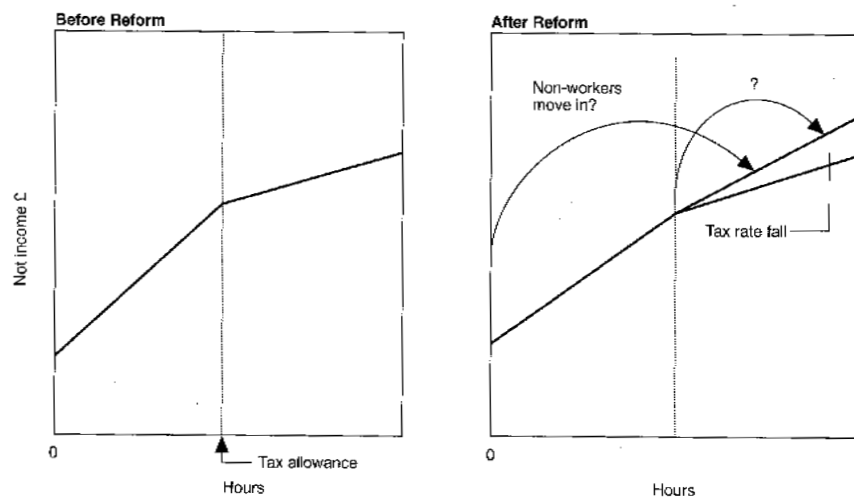
What are the likely size of responses? One problem in empirical economics is that it often looks as if there is some very strong correlation or association in the data, but typically it is not a causal effect on which to base policy. You can plot the relationship between the hours of work of a sample of individuals and different wages. The result will be a nice upward sloping curve — or what we call a labour supply curve. That is, if we increase the wage, it looks like people put in more effort. If we knew that for sure, then this will at least suggest to us that if we can increase the wage for those who are not in work, there is a very good chance that some of those will move into work and we'll get at least an increase in work effort for those individuals.

The problem with these kinds of simple plots is that there are lots of explanations for what you see. One way you can think of this

is in terms of elasticities. For example, an elasticity of .80 just means that a 10% increase in hourly wage rate, for example — which is the kind of thing you often see in these kinds of supplements — will induce an 8% increase in effort or in hours of work. That is the kind of information we need to predict what the effect of these reforms is likely to be. The problem, when you think about it, is that there are many reasons why hours and wages, work effort, and returns you get in work are correlated, but it may be nothing to do with a causal link from an increase in wages to increasing labour supply. It might be, for example, that individuals working long hours also have high wages; but they do not work longer hours just because they have higher wages, it is just an association due to other factors (probably unobservable) about the individual. Researchers have consequently moved away from basing policy on simple cross-section plots.

In fact, the term “natural experiment” is used a lot in economics now, and you might think there is good reason for this, especially in this kind of area because you see lots of reforms happening. And you can ask: why can’t you use the changes in policies that were going on as quasi-experimental data? That is certainly being done in the U.K. and the U.S. but it is not so clear that this was going

**FIGURE 6:** “Before” and “after” policy experiments

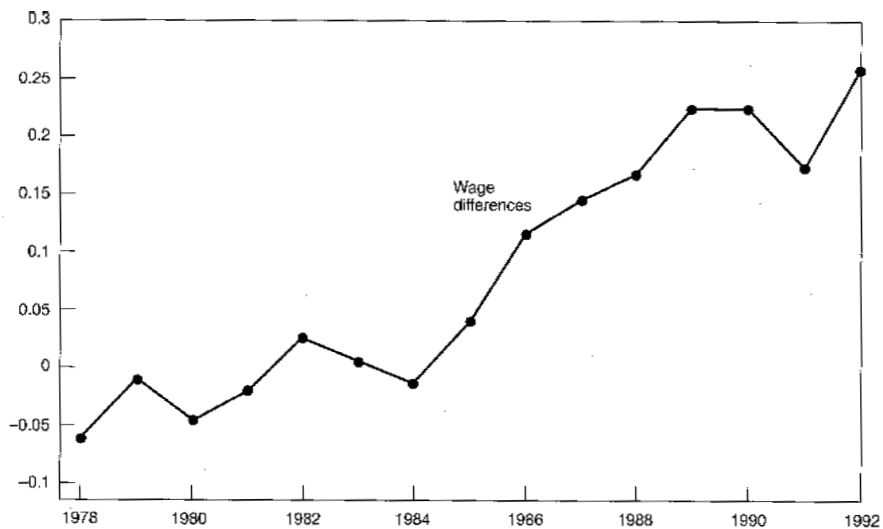


to work that well. Let me give a simple example that shows how misleading results can be with this kind of methodology.

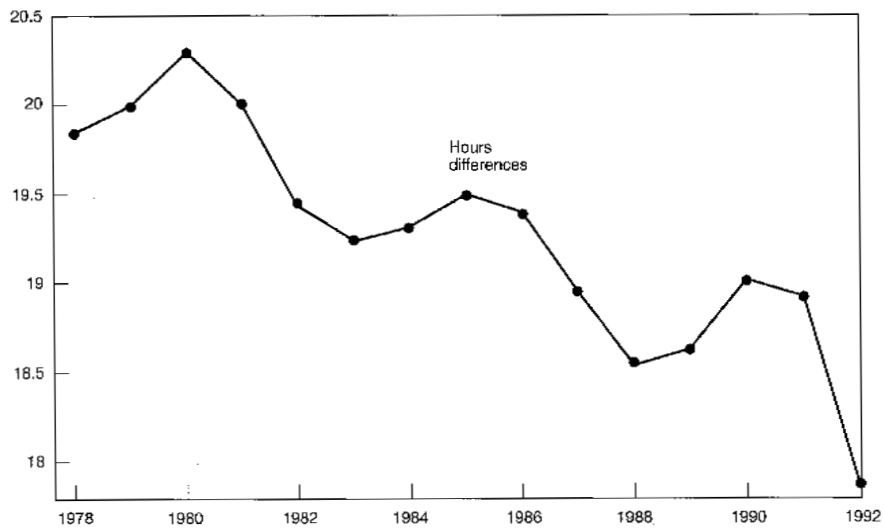
Figure 6 shows net income received by individuals as they increase their hours of work. There is one group of individuals who do not pay taxes — they're the low income individuals. There is a tax allowance, or some tax threshold, and below that there are no taxes to be paid. But if their hours of work, in particular wages, go over the allowance 'A', then they start paying taxes. Most tax systems are progressive, in that you find that one group of individuals pays relatively low direct tax rates, and then as you move up the earnings distribution, effective marginal tax rates will increase. You might consider using that as an experiment, because if you think of a reform — imagine the Reagan-style or Thatcher type reforms that happened in the U.S. and the U.K. — individuals that were paying taxes had their marginal tax rate reduced. So effectively, they received more income for each hour they worked. We have something we could call a “before and after” experiment. There are lots of these changes happening so we should be able to learn something from this. This is rather like an experiment, because the people that were not affected by the tax reform should not change their behaviour at all. They are like a control group. In experiments you have controls and treatments — controls are the individuals who are there to control for other things that are happening in the economy at the same time as the reform took place, but are not affected by the reform. They work as a good baseline to compare with the individuals that did face the tax change. What we might do is look at what happened to individuals who faced the changing tax rates during the Thatcher or Reagan reforms. Their tax rates went down, so their net wages went up. We can see that there was a big increase in the relative net wages over that period for people who paid taxes compared to people who did not pay taxes, and use that as some kind of experimental control. If you look at the differences for the U.K., it is pretty astonishing.

Figure 7 shows the difference between the wage rate of people paying basic taxes and those who are not on the benefit system but who have earnings that are low enough to not be paying taxes. This

**FIGURE 7:** Wage differences between taxpayers and non-taxpayers



**FIGURE 8:** Hours differences between taxpayers and non-taxpayers

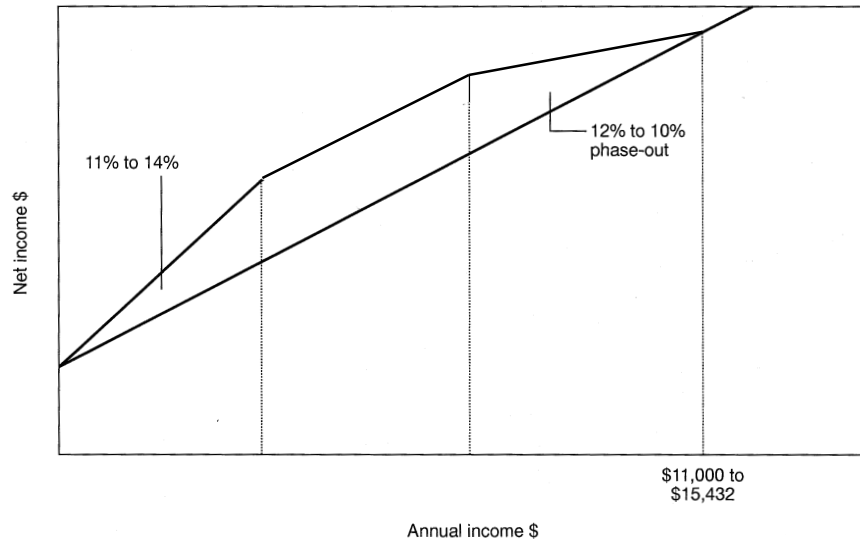


is quite a large group in the U.K., especially, for example, married women working part-time. What you see is that the tax reforms appear to have had a big effect, with the wages of those taxpayers increasing relative to the non-taxpayers. What we had hoped to see is that their work effort would have also increased; but if you look at work hour differences, you get exactly the opposite. In fact, as Figure 8 shows, the hours of people paying taxes have fallen over this period relative to those not paying taxes. When you put the picture together and you try to work out the elasticity, you get the incredibly puzzling result that as wages increase, hours of work, or labour supply, goes down.

The reason why these “experiments” can be misleading is because they’re not really like experiments that we conduct in a randomised trial. The problem is that there are lots of changes happening, and we’re not really comparing like with like. In fact, the composition of the groups changes over time. A good example of this is that after the reform, a significant group of individuals join the labour market, and when they join the labour market working full-time, they do so at relatively low full-time hours. As a result, the treatment group is really a different group over time. It is easy to see that the labour supply is falling just for composition reasons.

In our own research (Blundell, Duncan and Meghir, 1998) we have used the changes in the returns to education as an experiment: something that is exogenously affecting individuals, driven by changes in trade patterns as well as technical change. Those things are outside the control of the individuals. If we use those as relatively exogenous changes in wages — external to the individual’s choices and free from composition changes — then we get an elasticity that is relatively small but at least it is positive!

The idea of using policy reforms as natural experiments is very popular and sounds very convincing but, as I have argued, researchers using this method have to be careful. Unlike the Canadian SSP experiment referred to above, these do not follow an exact experimental design when you have composition changes over time in the treatment and control groups. It is no longer analogous to a controlled experiment.

**FIGURE 9:** EITC in the U.S. - the 1986 reform

What I want to look at now, in the last few minutes remaining of my lecture, is some of the evidence on in-work benefits; first, the EITC reforms in the U.S. which are very interesting. The reforms in the mid-1980s included the phase-in rate raised 11 to 14%, and phase-out rate reduced from 12% to 10%. (See Figure 9) What you are doing is inducing a bigger rise in the tax credit, so it is more likely to induce individuals into work, but reducing the taper-off so it is going further up the budget constraint. What was found by Nada Eissa of Berkeley and Jeffrey Lieberman of Harvard is that among low educated groups, there was a 6.1% point increase in participation. That is quite a big effect in fact. Although their results are opened to criticism, these programmes do seem to work pretty well on these types of low educated groups, exactly the groups who are typically welfare recipients. There is also the question of the size of the windfall which is the cost of the programme. You put in a programme and it may cause individuals who are already working, or would have worked, to reduce their work effort. In fact, that does not seem to be the case. The evidence seems to point to some reduction, but it is not enough to offset the increase in participation, and

this is a pretty positive result for these kinds of programmes.

I thought I would finish my talk with the programme that is closest to all of your hearts: the self-sufficiency programme in Canada. The reason it is a nice one to finish on is that we can draw on the evidence from the randomized trial and that is the closest thing to an experimental design. The study entailed following 6,000 families for 5 years, and we're only in the middle of that now. It was the beginning of 1993 that this all started, so I can only discuss results that are reported for the first part of that study. One-half of the group of 6,000 were offered the programme and the others were not — they are the controls. The ones that are on the programme are the treatments — and we can compare those two groups.

The control and the treatment groups look very similar before the experiment takes place. That means that effectively the controls are really quite a good match for the treatment group. What we're looking for then is this self-sufficiency programme increasing earnings for those who take the 30-hour jobs and move off welfare into work.

There is almost a doubling in earnings for the treatment group. That is a significant result. The impact on hours is very similar. These are low hour working individuals. The criterion is that they work at least one week of the month for 30 hours. The treatment group has increased its hours of work, more or less, twofold over the control group. So it is having quite a big effect on the hours of work chosen by these individuals. And similarly, if you look at the impact 16 months into the project, which is all that there is currently evidence for, there is quite a long-lasting effect on employment. The treatment group is doing much better in terms of employment than the control group. These are all single parents, and it is quite a surprise that there is such an effect for those individuals.

The big questions are: do these participants retain attachment to full-time work, and do they fall back into the income assistance programme? Well there seems to be a reasonable impact, especially for families with two or more dependent children in the B.C. project. After 14 months we see that the fraction of those on this programme working full-time is twice as much as among the controls. This fits

in neatly with the results using the more reasonable elasticities that I gave for the U.S. There is clearly some impact on participation from these programmes. The problem though is that recipients typically take low wages and this is where we need more research on wage progression.

## **CONCLUSIONS AND CHALLENGES**

In terms of conclusions, the first thing I have emphasised is to take care in the methods you are using to evaluate likely responses. Exactly how people react is the critical thing; if you have very big elasticities, it will give you very different effects than for low elasticities. This presents a major challenge for empirical economists. We do not want to mistake correlation for causation. Just an association in the data is not enough on which to base policy. I gave you one example of where you can see that going wrong.

A second point is to capture the interactions with the rest of the welfare system. If these programmes are seen in isolation, ignoring the rest of the tax and benefit system, they can look very attractive. When you consider particular individuals who are involved already in food stamps, income assistance, housing assistance, or whatever other programmes are available to them, you can find very different impacts. Of course, the experiment I was alluding to takes full account of all that because it allows individuals to have full access to all the benefits available to them. The idea of most reforms is to counter the low real wages for the less skilled, and welfare recipients are clearly going to be in this group, as they're the most disadvantaged group. They have relatively low experience in the labour market, they wouldn't have had any experience effects on their wages, and they're typically low education. So as the real wages fall for this group — and this seems to be something that is probably going to be a continuing pattern as trade and technology change — then for a given level of benefits, it is going to become less and less attractive for those individuals to be in employment. With that in mind, the idea is how do we re-design the welfare system to stimulate those individuals back into work?



A careful design of the phase-out benefit reduction rate and the level of the benefit seems to be one possible way of doing this. The self-sufficiency programme seems to be quite a nice compromise. These have a 50% implicit tax rate as the benefit is withdrawn. It avoids a large windfall group, but does not have such a high implicit tax rate as we find in the U.K. system where effectively the credit is withdrawn at a very high rate.

Is there a lasting effect of the reform? I wanted to look at the Canadian data because it is the first experiment I have seen where individuals have been followed for some time after the reform. In fact, because they are still in the system, it is not a complete story; we need the whole 5-year trial before we can really tell. But it looks like there is a continuing labour market attachment that is significantly enhanced. There is also very little drop-back into welfare for these individuals which, if it remains true after the programme time limit ends for each individual, is going to be a very positive thing to find. A downside though is that the individuals typically receive very low wages, and this is not much above the minimum wage. If hourly wages do not increase with experience, then these individuals will remain in very poorly paid, low skill jobs. On this aspect, we need more evidence as we do on the impact of training and minimum wages for these types of workers.

## REFERENCE

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