



How might labour supply respond to the changes in financial work incentives?

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Outline and introduction (I)

- An initial look at how labour supply may respond to the changes in financial work incentives from tax and welfare reforms
 - Employment rates and hours of work (individual level)
 - Worklessness (family level)
- Use a number of different models, each with strengths and weaknesses to explore how different parts of the population may respond along different dimensions
- No single quantitative prediction – focus on qualitative patterns
- Not modelling how people may respond to changes in conditionality, transparency, salience or effect of changed take-up...
 - Could be important, but modelling these is very challenging

Outline and introduction (II)

- DWP made some ex-ante predictions of how many extra people may enter work as a result of Universal Credit (but not the other reforms)
 - Uses estimates of responsiveness from the labour supply literature and applies them to calculated changes in work incentives
 - 100,000 to 300,000 more people in work as a result of improved financial incentives
 - More tentative 100,000 to 200,000 as a result of conditionality, etc.
- Our work seeks to explore the potential impact of the changes in financial incentives due to the wider set of reforms
 - See what results seem robust and where there is less certainty
 - Explore different types of responses to the reforms
- Such ‘ex ante’ modelling is important tool for evaluating reforms
 - ‘Ex post’ evaluation of the reforms will be difficult

Modelling labour supply responses

- There is not a single ‘best’ labour supply model
 - Cover different parts of the population
 - Incorporate different types of responses
 - Make different simplifying assumptions
- We use three different approaches
 - A calibration approach
 - A static model for couples and lone parents
 - A dynamic model for women
- These models have been developed over several years at IFS
 - Used in a number of pieces of work

1. The calibration approach

- Similar to the approach used by DWP for their analysis
 - So results are most comparable
- Examine labour supply literature to get estimates of responsiveness and combine with estimated changes in PTRs and EMTRs
 - Look at low, medium and high responsiveness scenarios to explore how sensitive results are
- Can include everyone in this approach, and look at employment, hours and earnings, and include changes to indirect taxes
- But a few drawbacks
 - Ignores income effects
 - Does not model the 16 and 30 hours rules in WTC well
 - Does not allow for joint decision-making in couples

2. The static modelling approach

- Estimate models of participation and hours of work for lone parents and couples in the UK
 - Use data from the FRS 1996-97 to 2010-11
- These models better incorporate income effects, 16-hours rules, etc
- For couples, decisions are joint
 - So can examine changes in the number of 0-earner, 1-earner and 2-earner couples
- But excludes a large part of the population (more than half)
 - Single adults without children
 - Youngest (21 or under) and oldest (60 or over), the disabled, the self employed, and their partners

3. The dynamic modelling approach

- Estimate model of women's education and labour supply decisions over their lifetimes
 - Uses data from the BHPS 1991 to 2006
- Incorporates dynamic effects
 - People are forward looking, but unsure of future wages etc
 - People save and borrow (subject to constraints)
 - Returns to experience
 - Educational choices
 - Look at 'short run' and 'long run' impacts of reforms
- But these additional complexities mean simplifications elsewhere
 - Women only
 - Fewer hours options

Using the models together...

- So each model can tell us something different and covers different parts of the population
 - e.g. the calibration approach covers everyone
 - e.g. the static model allows us to model behaviour jointly
 - e.g. the dynamic model allows us to look at longer-run responses
- Together, they can also tell us which results look more robust and where there is more uncertainty about how people may respond
- Models suggest reforms will increase employment among couples and singles without children
 - Although magnitude of these effects is unclear
- But for lone parents, the picture is less clear

Results: couples

Results

For couples... Tax reforms (I)

- Remember, tax reforms strengthen incentives to work, on average, but weaken incentives for those in work to earn more
- Various approaches all suggest modest positive impact of the tax reforms on employment among couples
- Static model suggests:
 - Responses bigger for couples with children and for women
 - e.g. 0.8 percentage points for women in couples with children (baseline employment rate: 77.1%)
 - e.g. 0.3 percentage points for men in couples without children (baseline employment rate: 93.6%)
 - Fewer 0-earner and 1-earner couples, more 2-earner couples

Results

For couples... Tax reforms (II)

- The dynamic model finds broadly similar effects
 - Also increase greater for those with children than without
 - Response may be larger in longer-term as more work experience leads to higher wages (feedbacks to further improvement in work incentive)
- The calibration estimates show
 - Smaller increases, perhaps reflecting the fact this model allows inclusion of VAT increases
 - A small fall in aggregate earnings, reflecting the fact that reforms strengthen work incentives for lower earners but weaken them for higher earners

Results

For couples... Benefit cuts (I)

- Remember, on average strengthen incentive to work, and to increase earnings if already working – but not for all groups
- All models suggest benefit cuts will increase labour supply of people in couples - effects a little larger than for tax reforms
- The static model finds employment effects of
 - About 0.7 to 1.0 percentage points
- It suggests falls in number of 0-earner couples (mostly among those without children); shift from 1-earner couples to 2-earner couples (a bit greater for those with children)

Results

For couples... Benefit cuts (II)

- Both the calibration and dynamic approach find smaller employment effects for those with children than without children
 - Again consistent with work incentive effects
- In addition these models suggest:
 - Increases in hours of work and aggregate earnings, offsetting falls due to tax changes
 - Long-term effects may again be larger than short-term effects

Results

For couples... Universal Credit (I)

- Remember, UC strengthens incentives for couples to have one person in work but weakens incentives for a second partner to work, especially if they have children
- Models suggest a small fall or small increase in employment
- The static model suggests slight falls in employment
 - Driven by those with children
- But this is because of a fall in 2-earner couples: the number of 1-earner couples is predicted to increase, slightly reducing the number of couples where no-one works

Results

For couples... Universal Credit (II)

- The other models find small increases in employment on average among couples
 - But same qualitative pattern: smaller/negative effects for those with children (especially among those with a working partner)
- Models agree that the labour supply effects of UC look to be fairly modest for couples
 - Both the static and dynamic model show the tax changes and benefit cuts to have substantially larger impacts

Results

Summary for couples

- Tax reforms and benefit cuts predicted to increase employment fairly modestly; UC could increase or reduce but likely to be small
- Tax reforms and benefit cuts reduce 0-earner and 1-earner couples, and increase 2-earner couples
 - UC offsets this a little but far from entirely
- The long term impacts of the reforms may be greater as education choices and work experience change

Results: single adults without children

Results

For single adults without children... Taxes

- Included in calibration approach (men and women) and dynamic approach (women only)
- Remember, tax cuts strengthen employment incentives, weaken incentive to earn more if working
- Tax reforms likely to boost employment, but the magnitude of the effect is unclear
 - Calibration approach: 0.1 to 0.3 percentage points
 - Dynamic model (women only): 2.0 percentage points
 - Inclusion of VAT change in the former will explain some of this gap
- Hours of work and aggregate earnings predicted to fall
- Employment effects may be larger in the longer run

Results

For single adults without children... Benefit cuts

- Remember, strengthen both the incentive to work and the incentive to increase earnings if already working
- Predicted to boost employment, hours and earnings of single adults without children, but size of effect uncertain
 - Calibration approach: 0.25 to 1.0 percentage points increase in employment
 - Dynamic model (women only): 1.9 percentage points in short run, a little larger in long run

Results

For single adults without children... Universal Credit

- Remember, UC strengthens incentives for single adults to work, but slightly weakens incentives for them to earn more if already working
- Not entirely clear if this will boost employment
 - Calibration suggests it will (0.2 to 0.9 percentage points)
 - But dynamic model predicts little effect for single women
- So like for couples, impact of UC less clear than tax reforms or benefit cuts

Results

Summary for single adults without children

- Employment predicted to increase due to the tax changes and the benefit cuts, with impact of UC more uncertain
- Magnitude of effects uncertain – calibration suggests only modest impacts, while dynamic model suggests sizeable impacts (4 percentage points for women, overall)

Results: lone mothers

Results

For lone mothers... Taxes

- Can use all three models to examine what happens for this group.
- Again, each model predicts increases in employment for lone mothers due to the tax reforms
 - Fairly modest, generally
- But things are much more complicated for the benefit reforms

Results

For lone mothers... Benefit cuts

- Remember, benefit cuts reduce RRs (strengthen work incentives) but increase PTRs (weaken work incentives) so difficult to predict what would happen to employment
- Both calibration (which ignores RRs) and dynamic model suggest benefit cuts will reduce employment of lone mothers
 - In dynamic model that fall is large: over 2.0 percentage points
- But static model suggests the benefit cuts will increase employment of lone mothers
 - Again, magnitude is fairly substantial: 1.2 percentage points
- Increase or decrease in employment is feasible given the complex changes in incentives

Results

For lone mothers... Universal Credit (I)

- Even more challenging to model the labour supply effects of UC
- Remember, effects on work incentives of lone parents are mixed
 - Increases the average PTR
 - Increases the numbers facing moderately high PTRs while reducing the numbers facing the very highest PTRs
 - Removal of 16 hour and 30 hour rules very important for this group
 - Big changes in incentives for people to take jobs of under 16 hours a week (large strengthening for renters, weakens for some home owners)
- Impact of UC on lone parents' labour supply therefore particularly uncertain
 - None of our models are very good for under 16 hours per week
 - Results strikingly different between models

Results

For lone mothers... Universal Credit (II)

- Both calibration and static model suggest UC reduces lone mothers' employment a little
 - Static model also suggests few take up 'mini jobs' of <16 hours a week
- But the dynamic model predicts UC will increase employment of lone mothers by around 5 percentage points
 - Unlikely that dynamic nature of model is responsible for this difference
- So unclear how welfare reforms affect lone mothers' labour supply

Overall summary: the labour supply impact of the reforms

Summary (I)

- Tax reforms strengthen incentives to be in work, and our models suggest this will increase employment modestly
 - But weakens incentives for higher earners so may reduce aggregate earnings
- Benefit cuts likely to increase employment modestly overall
 - Strengthen incentives to earn more too, increasing aggregate hours and earnings
- Both effects may be larger in the long term as people gain more work experience and adjust their education decisions

Summary (II)

- The impact of Universal Credit is less certain: our different models predict very different impacts for lone mothers
- Indeed, the impact of the welfare reforms as a whole on lone mothers is highly uncertain
 - Benefit cuts have ambiguous effect on average incentives to be in work
 - UC has complicated and difficult-to-model effects on lone mothers' work incentives

Summary (III)

- Not possible to predict precise effects of reforms with confidence
- Across population as a whole calibration suggests increase in employment of:
 - 50,000 to 230,000 as a result of Universal Credit
 - 125,000 to 540,000 as a result of tax and welfare reforms together
 - But these figures should not be taken as definitive lower and upper bounds
 - Dynamic model has somewhat larger responses, and shows responses increasing in the long run as education and work experience change
- Remember this is only response to financial work incentives
 - Also may be changes associated with conditionality, simplicity etc
 - Labour demand may limit job availability