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Comment on Susanne Ackum Agell and Costas Meghir: Male Labour Supply in Sweden: Are Incentives Important?

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The discussion preceding the Swedish tax reform focused very much on potential "dynamic effects" of the reform. Such effects implied favourable incentive effects on supply of labour, effort and maybe a better functioning economy in general, which in the best of cases could help finance some of the costs of the reform. In the public discussion, economists were often associated with the view that such effects were of considerable magnitude and could contribute to financing the reform. However, the economists in the academic profession did not have a unified opinion on the issue. While serving as the secretary of the Swedish Economic Association, I remember a meeting of members in the fall of 1988 about the potential effects of a tax reform on labour supply. [1] The active researchers in the field participated in the discussion. I also recall that a few of the key politicians behind the reform were in the audience listening to the discussion. Even though they might have become a little confused by the discussion on "likelihood functions" and "corner solutions", the basic message was crystal clear: the academic economists did not have a unified opinion as to whether considerable "dynamic effects" could be expected or not.

As mentioned in the introduction of this paper, the major macroeconomic shock of the economy in the early 1990s ruined the possibility of making a solid *ex-post* evaluation of the effects of the tax reform on labour supply. Therefore the authors have concentrated on doing another

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[1] See Nationalekonomiska Föreningens förhandlingar (Proceedings of the Swedish Economic Association) 1988-11-21.

ex-ante evaluation of the tax reform. The study is in my view a major contribution to the field of labour supply research in Sweden. I appreciate very much that their basic model is not the simple static model of the textbook type that has been used in most previous work. (It is, I think, somewhat ironic that all the discussion on "*dynamic* effects" focused on the results from completely *static* models.) The model that they use is derived from a model of life-cycle maximisation behaviour which is, of course, a more reasonable behavioural framework for thinking about such decisions. Further, they use a data set that has not been used for these purposes before. Most likely the quality of the wage rate variable reported by firms is better in this data set than in the surveys of individuals on which previous investigations have been based.

Their results and judgements are disappointing to those who hoped that the reform would have significant behavioural effects on supply of labour. Their estimated crucial wage elasticity is very low indeed and they conclude that "incentive effects of tax reform are not substantial". In this comment I will play the part of the advocate, not of the devil's, but of those who have hoped for behavioural effects that would raise productivity and output, and in the long run also contribute to higher public tax revenue. Even though I have no more evidence than the authors do, I think it is premature to rule out the possibility that the tax reform will improve the working of the labour market in general and hence generate "dynamic effects" that in the end will generate more tax revenue.

My *first* point is somewhat technical. A disadvantage of the elaborate life-cycle model that Ackum Agell and Meghir employ is that the complicated non-linearities of the tax and benefit systems are not taken into account. Blomquist (1989) instead used a simpler behavioural framework – the static textbook model – but could take the actual budget constraints of the individual more explicitly into account in his estimation. It seems to me that researchers in the field of labour supply face this type of trade-off in their choice of methodology: either the more realistic life-cycle behavioural framework and a rather crude treatment of the budget constraint, or a less realistic static (one-period) behavioural framework and more elaborate treatment of the tax and benefit systems. From a methodological point of view, it is an important lesson that the two approaches give different results. However, it is not obvious to me what results one should have most faith in for the time being.

A *second* point concerns the data on labour supply that are used in the study. Hours of work include both normal and overtime hours reported

by the employer in the engineering industry. However, extra hours worked for *other* employers are not included. It could be argued that this is one of the main possibilities for those who want to earn more by working more.

In a report for a public investigation on working hours, I examined the importance of hours worked at other jobs than the primary job using the Swedish HUS data sets of 1984 and 1986 (Björklund, 1989). I found that around 10 per cent of all employed persons had an extra job and on average they worked close to six hours per week at such jobs. Approximately 2 per cent of all hours pertained to such extra jobs. Even though this is not an absolutely large number, it is reasonable to believe that an extra job is one of the most realistic options for those who want to work more because of the tax reform. It is easy to think of many occupations where the only possibility to earn more money is to take extra jobs. This view was also supported by the finding that the incidence of extra jobs was around 50 per cent higher among those who reported that they wanted to, but were not allowed to, work more hours at their regular job. The HUS data also showed that highly educated people were more likely to have extra jobs than those with shorter education. Because highly educated persons also have higher wages, this pattern might represent a labour supply effect. An analysis that takes into account the opportunity to take on additional jobs might be more likely to find favourable labour supply effects.

A *third* question concerns the impact of the tax reform on human capital investments in general and on choice of schooling in particular. It is well known from the human capital literature that progressive income taxes reduce the incentives to invest in schooling, whereas proportional taxes are neutral in this respect. Further, it has been clearly demonstrated by Edin and Holmlund (1995) that the tax reform raised the return to university education in Sweden.[2] Such an increase in the returns to schooling is likely to raise enrolment rates at the universities (see e.g. Fredriksson, 1994).

There are at least two important effects of a higher level of education of the work force. First, there is a direct effect in the sense that the "quality adjusted" labour force will increase. Second, there is a potential indirect effect on working hours since wage rates are increased for those who have completed a higher education. Unless the labour supply curve is

[2] This effect is also visible in the study by Björklund and Kjellström (1993).

backwards bending, this will have a positive effect on working hours as well.

My *fourth* and final point is that one can also expect effects on dimensions of labour market behaviour other than hours of work. Work effort and job mobility are two noteworthy and potentially important examples. In particular, job mobility is interesting because the impact of taxes on job mobility does not involve counteractive income effects as the effects on hours of work do. The tax reform will most likely make Swedish workers more sensitve to occupational, industrial and geographical wage differentials.

My overall conclusion, though, is that an *ex post* evaluation of the tax reform on the functioning of the labour market in general remains to be made and cannot be carried out until the economy has recovered from the severe recession of the early 1990s. If such a future evaluation would focus on the combined effects on working hours, work effort, job mobility and human capital investments, my very personal guess would be that considerable "dynamic effects" would be found.

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