FIRST STEPS TOWARDS A BASIC INCOME:
THE TRANSITION FROM CONDITIONAL TO
UNCONDITIONAL SOCIAL SECURITY

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1 Introduction

In this chapter the first steps are presented that transforms conditional social security in a gradual way into unconditional social security. Why even consider a BI (which will require much higher tax rates) when the sustainability of the current conditional welfare state seems to be at stake? The problem social policy makers face in fighting unemployment is that the social minimum must be kept at a reasonable level, large scale unemployment (especially at the lower end of the labour market) must be reduced, under the restriction that whatever policy measures are taken, there must remain sufficient (overall) incentives to work. Advocates of a BI assert that if we want to maintain the social minimum at a reasonable level, and at the same time want to reduce large scale unemployment at the lower end of the labour market (through abolishing minimum wages, eliminating the poverty trap and maintaining monetary incentives to work), we inevitably move towards a BI-type scheme. I will therefore concentrate on what are probably the two most important adverse side-effects of the present welfare state: firstly, the poverty trap and secondly, unemployment at the bottom end of the labour market due to binding minimum wages. Removing both may be valuable in itself, but also brings the present system closer to that of a BI system.

The poverty trap is to a large extent due to the conditional nature of the present social security system. Most social assistance programs for the poor are means-tested (not only social security benefits, but also other benefits such as housing rent subsidies or subsidies for the use of day-care centres). Those who enjoy social security benefits face a very high marginal tax rate for that part of labour income less than or equal to the means-tested benefit. This is due to the high withdrawal rate on all net labour income up to the social security benefit, and also because working may engender additional costs (e.g. travelling expenses, costs of day-care centres, etc.). In practice it is no exception that the poor who have few marketable assets, face a marginal tax rate of 100% or more. Since they have low earning power, it is impossible for them to escape being trapped in poverty. Moreover, the opportunities for them to find employment are seriously damaged by high minimum wages. Those captured within the poverty trap experience a strong disincentive to work: they can only escape the poverty trap when they succeed in finding a job with gross-of-tax earnings considerably higher than the level of their benefits (see below). All

1 This chapter is a slightly modified version of the article published in De Economist 145, No. 2, 1997, 203-227.

2 See Whynes (1993).
(part-time) work with gross-of-tax earnings below a certain threshold will not yield any, or only very modest, monetary rewards for those who also receive a social security benefit. This may partly explain why part-time work is mainly undertaken by women. Most women with a working partner are not entitled to any benefit. Therefore they do not face the poverty trap and subsequently any part-time work will raise family income. As we will see in sections 3 and 4, the implementation of a flat-tax BI will eliminate this poverty trap.

A second problem that most modern welfare states have to deal with is unemployment. Although unemployment is prevalent among all categories of workers ranging from the lower to the higher educated, its incidence is particularly strong among those with low earning power, a low educational status and the least fortunate background characteristics. In order to change this, the welfare state must either initiate a more active labour market policy or impose quota’s on employers. Traditional text book economics sees unemployment as being partly due to the relatively high minimum wages which exist. Within a welfare state, a minimum waged marginal worker is that person who has a labour productivity which is equal to the gross-of-tax minimum wage. All workers must have a net labour productivity greater than or equal to their minimum wage. All potential work with a wage rate lying between zero and the minimum wage will either not be undertaken or will be carried out within the moonlighting sector. What are the employment perspectives for the long-term unemployed and for those with the least productive skills under a BI? In theory, a BI regime will offer employment opportunities for all those with non-negative labour productivity. In short, the argument is as follows. Under a BI regime there is no need for minimum wages, because all (potential) workers already receive a BI as a fall-back option. Therefore, under a BI system it is profitable for both employers and workers if those people with positive productivity levels do work. Under a BI scheme the marginal worker is any person who has a positive productivity level, rather then a productivity level equal to the gross-of-tax minimum wage. In the remainder of this chapter I will propose some measure which eliminate the poverty traps and the bite of the minimum wage on employment of the lower skilled. At the same time these measures can be seen as first steps towards a full-fledged BI system. In section 2 some remarks are made with respect to the so called impossibility theorem: A basic income is either too low to be socially acceptable or too high to be economically feasible. Section 3 looks at the royal way towards BI, namely when the present system of social security is transformed into a BI system by means of a gradually increasing partial BI. Section 4 provides an alternative route, section 5 deals with the position of part-time workers and section 6 discusses a differential BI dependent on household composition. Conclusions can be found in the final section.

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3 Even if minimum wages were to be abolished it can be asserted that employment incentives (instead of perspectives) for the unemployed or for those with low earning power are stronger under a BI regime, due to the high withdrawal rate associated with the present social security system.
The impossibility theorem: A basic income is either too low to be socially acceptable or too high to be economically feasible

The above title verbalises a wide-spread belief that a BI is rather utopian. One may agree with some of the favourable aspects a BI has to offer but still be opposed to its implementation due to its impracticability or insustainability. Opponents of a BI assert that if the BI is set at the present social minimum level, the total reduction of labour supply will be so large that it will result in a reduction in GDP. Total tax revenues needed to finance a BI would be so high (e.g. 25-30% of GDP) that the level of the flat income tax rate would also have to be high (more than 50%). There is also the danger of a downward spiral: if overall labour supply is reduced, because of a reduction in labour supply among the low and middle income earners (due to a reduction in their after-tax wage rate) which is not compensated by an increase in labour supply among the unemployed who now face better incentives, GDP falls and the flat tax rate would have to be even higher to raise sufficient revenues for the BI fund. To avoid this danger, a BI would have to be set at a level which would not reduce GDP. Taking this into account, opponents believe that a BI compatible with the present level of GDP is too low to be socially acceptable as a social minimum. In short, opponents conclude that a BI would be either too low to be socially acceptable, or too high to be economically feasible.

The economic sustainability of a BI is a controversial matter. Some economic models do try to address the issue, but the outcome is very sensitive to how the labour market is modelled and what model makers believe motivates people. Secondly, whatever can be sensibly said about the economic feasibility of a full BI at the present state of knowledge, it is for certain that its implementation is not an overnight affair. However, certain trends within society may make it easier to introduce a BI, or may make its introduction more urgent. Since World War II most western countries have experienced continuous growth in GDP per capita, a decrease in the average number of hours worked, a gradual improvement of the conditions of employment, an increase in the female participation rate and an increase in the number of unemployed, disabled and early retired people entitled to a social security benefit. All these factors facilitate the implementation of a BI. High unemployment exerts pressure on working hours, reducing them so as to distribute the total amount of employment over more people, and in effect this can be used to accommodate the introduction of a BI. The gradual improvement of the conditions of employment, combined with the shortening of the working week, makes it all the more feasible to reduce labour income as a necessary compensation for the sacrifice endured. What makes the introduction of a BI so expensive is the large number of women who do not perform paid work

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4 The most important are MIMIC for The Netherlands (see Gelauff and Graafland (1994)) and TAXMOD for the U.K. (see Atkinson (1995)).

5 In the following sections I argue for a very gradual route of implementation where the basic features of conditional social security are maintained during the first two phases.
and are not entitled to a social security benefit under the present arrangements. If the female participation rate continues to rise in the future, it will become less expensive to finance a BI, provided a BI will not deter women from the labour market. At the same time, the larger the fraction of the work force receiving a conditional social security benefit, the more the economy suffers from the adverse effects of the poverty trap. Not unimportant, a BI might reverse the rising income inequality in the last decade. Finally, the ratio of the social minimum to the average net income is not fixed, due to the fact that a large part of the social minimum is a biological minimum (e.g. food, shelter). As GDP per capita increases, a greater proportion of it will be spent on luxuries (those goods which have an income elasticity greater than one, e.g. winter sport holidays). The purchasing power of a BI need not include these luxuries.

If the contentions above are true, there are good reasons to take the BI proposal seriously. The following sections compare two alternative ways of implementing a BI. The normal route, outlined in the next section, is to start with a partial BI which is gradually increased during a long period of time. This approach has several disadvantages: social security becomes a mixture of two regimes, incentives to perform paid work for persons neither performing paid work nor entitled to social security benefits are reduced, the partial BI paid to this group is to a large extent unnecessary from the perspective of guaranteeing a minimum income, and finally it does not reduce the poverty trap from below, but from above. The alternative route, expounded in sections 4 and 5, uses three characteristics of the present conditional social security system (the tax allowance, the minimum wage and the withdrawal rate) to implement gradually a gross-net earnings trajectory which closely resembles the gross-net earnings trajectory belonging to a BI system.

3 A partial basic income

Suppose that the government and the political parties which are in power are convinced that a transformation from conditional to unconditional social security is desirable in the very long term., acknowledging the adverse effects that the present conditional social security system has on the economy, e.g. the poverty trap, relatively high minimum wages (where no labour is demanded when the hourly wage rate lies between zero and the minimum wage), the dangers of a downward spiral and a split society when too many able-bodied citizens wish to work but

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6 When unemployment and disability rates are high, together with high unemployment benefits and disability payments, gross-of-tax labour costs (net wages plus taxes including social security contributions) will also be high. For the employer it is rational to hire more workers as long as their marginal productivity is at least as high as the gross-of-tax labour costs. As more people become unemployed or disabled, labour costs will rise due to the higher taxes which are needed to finance the higher social security outlays. But higher labour costs will lead to more layoffs. The productivity of marginal workers will no longer be high enough to outweigh the higher labour costs. This results in a downward spiral during economic downturns and an upward spiral during economic upturns.
cannot do so etc. Altogether they believe that in the long term a transition towards unconditional social security might be desirable.

The only problem is the transition from conditional to unconditional social security in the long term. The immediate implementation of a full BI scheme would give the economy too large a shock and would cause unacceptable and sudden changes in the distribution of net disposable incomes. The present social security system needs to be transformed to a BI regime with as few (unexpected) shocks and (unintended) redistributional effects as possible. According to the BI literature the correct way to make this transition is to start by implementing a partial BI and then to increase it incrementally until the full BI level is reached (defined as a fixed percentage of average income per capita, say 25%). The gradual increase of the partial BI will be accompanied by a gradual increase of the tax rate along with a gradual decrease of the minimum wage. During this transition the tax rate is always set at a level high enough to finance both the growing expenditures needed for the disbursement of the partial BI and the necessary supplementary conditional benefits required to keep those with very low incomes or no income at all at the prevalent social minimum level.

The advantage of this approach is that the government during transition can check whether the measures have a positive effects. If the expectations were too optimistic, the government can eventually decide to aim at a partial BI which falls short of the prevalent social minimum level. The disadvantage of this approach is that social security becomes a mixture of two regimes: conditional and unconditional. As long as the transition is not complete, the government will keep a large administrative apparatus to control citizens’ claims on the supplementary conditional benefits. But besides the forgone reduction in administrative costs this approach suffers from other disadvantages. The second disadvantage is that a partial BI is given to all adult citizens, whether working or not, whether rich or poor, thus including those who have enough means (family income) to provide themselves an adequate level of subsistence. One major factor which makes the implementation of both a partial and a full BI so expensive is the large number of citizens who are at present neither performing paid work nor entitled to a conditional social security benefit. This group is mainly populated by dependent housewives. As stated above, this group does not face the poverty trap. One may even expect a (partial) BI to reduce the incentives for this group to perform paid work, as on balance the negative income effect of an unconditional BI dominates the substitution effect with respect to their labour supply. A BI paid to this group is to a large extent unnecessary as family income will be more than sufficient in most cases. Thus the transition from conditional to unconditional social security through the use of a partial BI

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7 See e.g. Heij et al. (1993), WRR (1985), and Centraal Planbureau (1992).

8 With a BI, the income effect on labour supply is negative for those with low labour income or no labour income at all. The sign of the substitution effect is more difficult to predict for this group. Women with a working partner face the same marginal tax rate as their partners as tax liabilities depend on family income. But the implementation of a BI will also raise the (marginal) tax rate. If the marginal tax rate for women is more or less equal in both regimes, the substitution effect will be close to zero.
scheme may lead to an immediate infringement of one of the basic principles of the present social security system (the principle of selectivity). Moreover, present social security benefits are only meant to be temporary (residual) while the BI is a permanent benefit (institutional). Recipients of conditional benefits are assumed to resume work as soon as possible, while BI recipients do not have this duty. Thirdly, a partial BI does not reduce the poverty trap from below, but only from above. To observe this consider Charts 1 and 2.

In Chart 1 conditional and unconditional social security systems are represented in their pure forms (in all schemes the social minimum is taken as given).\(^9\) The horizontal axis measures gross-of-tax labour income and the vertical axis net-of-tax and transfer income. The line SD represents the gross-net trajectory of a pure BI regime with a single proportional tax rate on all income (equal to 60% here, whereas the balancing budget tax rate for the first system is assumed to be 25%). The line SAC represents conditional social security, which is characterized by a gross

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\(^9\) Highly stylized graphs are used to characterize both systems. Admittedly, welfare arrangements in the real world are much more complicated, but as long as welfare states incorporate minimum wages and maintain a social minimum the basic idea of an alternative route towards a BI is valid.
and net minimum wage ($y_m$ and $M$, respectively) and a withdrawal rate of 100%. The unemployed receive a social security benefit equal to OS, and additional earnings up to a certain level will be retained on their benefit. With a tax allowance equal to $V$ and a single proportional tax rate equal to $t$, gross-of-tax earnings $y_p$ (which correspond to point A) which equates net-of-tax labour income to the social minimum can be derived from the formula:

$$(1) \quad (1-t)(y_p - V) + V = S \Rightarrow y_p = (S - tV)/(1-t)$$

In most countries the social minimum is a fixed percentage $f$ of the net minimum wage $M$:

$$(2) \quad S = f M.$$ 

Given $M$, $V$ and $t$ it is easy to derive the gross minimum wage $y_m$:

$$(2a) \quad (1-t)(y_m - V) + V = M \Rightarrow y_m = (M - tV)/(1-t)$$

Now that we have derived the poverty trap and the gross minimum wage we can locate the different categories in the labour market:

1: persons without earnings and not entitled to social security benefits in O;
2a: social security recipients with gross-earnings $y$ equal to zero in S;
2b: social security recipients with positive gross-earnings $y < y_p$ on SA;
3a: minimum wage earners in H and workers with gross earnings greater than $y_m$ on HC;
3b: part-time workers on OJAC or SAHC.

As a net minimum wage $M$ exists, all full-time workers will have gross labour incomes greater than or equal to $y_m$. Between O and this point on the horizontal axis only part-time workers exist. They work at least against the hourly minimum wage rate but their total labour income will probably not often exceed $y_m$. To escape the poverty trap the unemployed must find a (part-time) job with gross earnings greater than or equal to $y_p$. All employment with earnings below this point are only financially attractive for those not receiving means-tested benefits (e.g. dependent housewives) and therefore not subject to the poverty trap.
Now consider what happens if a partial BI $G$ is substituted for the tax allowance (Chart 2). All adults will receive a BI equal to $G$, but the unemployed will receive supplementary conditional benefits equal to $(S - G)$. Group 2a will stay at point $S$, but group 1 will move from point $O$ to point $G$ along the vertical axis. To finance this partial BI the tax rate must be raised from $t$ to $t'$.\(^\text{10}\)

The width of the poverty trap $(SA')$ can be derived from the formula which again equates net-of-tax labour income to the social minimum:

\[(3) \quad (1 - t')y_p + G = S \Rightarrow y_p = (S - G)/(1 - t').\]

Chart 2 shows that the width of the poverty trap can be reduced from above by a maximum amount of $G$. This can be derived by deducting the outcomes of (3) from (1), given that $G$ equals $V$ and assuming that $t$ equals $t'$:

\(^{10}\) For illustrative purposes it is assumed that for all variants the government works with a balanced budget. Whether the budget balances or not cannot be seen from the figures, as they do not show how many people are located at the different points.
Any \( t' > t \) will make the reduction in the poverty trap smaller. If the increase in the tax rate is more significant, a partial BI will also have a smaller effect on the decline in the gross minimum wage:

\[
(4a) \quad (1-t')y^* + G = M \Rightarrow y^* = (M - G) \frac{1}{1-t'}.
\]

Subtracting (4a) from (2a) and assuming again that \( G = V \) and \( t = t' \) gives:

\[
(4b) \quad y_m - y^* = (M - tV) \frac{1}{1-t} - (M - G) \frac{1}{1-t} = (G - tV) \frac{1}{1-t} = G.
\]

Due to the fact that a partial BI reduces the poverty trap from above, the trap \( (SA') \) remains for the gross earnings section of \( O \) to \( y_p' \). Transforming the present conditional social security scheme to an unconditional social security scheme by means of a partial BI has four main disadvantages: social security becomes a mixture of two regimes, incentives to perform paid work for persons belonging to group 1 are reduced, while at the same time the partial BI paid to this group is to a large extent unnecessary from the perspective of guaranteeing a minimum income and finally a partial BI does not reduce the poverty trap from below, but from above. The main problem is that the partial BI scenario is in conflict with the basic principles upon which the conditional social security is built. The substitution of the tax allowance for the partial BI means that some fundamental basic features of the BI proposal are directly imposed on the social security system at the expense of some fundamental basic features of conditional social security. However, an alternative scheme of transition towards unconditional social security which departs more from the present social security arrangements than the partial BI scheme and which can be implemented more gradually over time can be proposed.

### 4 An alternative route

The alternative route to be outlined makes use of three elements: the tax allowance \( V \), the net minimum wage \( M \) and the withdrawal rate \( k \) (the poverty trap). By carefully choosing each of these variables it is possible to attain a gross-net trajec that closely resembles the gross-net trajec of a BI regime. The first two steps are undertaken for the alleviation of the poverty trap and a reduction of minimum wage labour costs respectively, and they can be implemented even if one does not want to implement a BI. This is not true for the third step.

The transition problem is how the move from SAC to SD should be accomplished (see Chart 1). Chart 3 shows the first ingredient, a withdrawal rate less than 100%.
Suppose that the government decides that the unemployed are allowed to retain part of their earnings (say, 25%) on top of their benefit up to a maximum of ST. The line which represents all possible combinations of gross and net income is SBA"E. The poverty trap is reduced from below and has become shorter (the distance BA" in Chart 3 is shorter than SA in Chart 1, although the distance SA" measured along the horizontal axis is longer than SA). The government may also choose a withdrawal rate which, given the level of the net minimum income $M$ and the social minimum $S$, ensures that those receiving benefits and performing (part-time) work can never attain a net income higher than the net minimum income of a full-time worker. This is depicted in Chart 4 by the line SHK.

Given $S$, $M$ and $t$ the withdrawal rate $k$ can be determined by the following formula:\(^{11}\)

\[(5) \quad S + (1-k)y_m = M \Rightarrow k = \left( y_m - (M - S) \right) / y_m \quad with \quad y_m = \left( M - tV \right) / (1-t). \]

\(^{11}\) If we take the withdrawal rate $k$ over net earnings, formula (5) becomes:

\[ S + (1-k)(y_m - V)(1-t) + V = M \quad with \quad y_m = \left( M - tV \right) / (1-t) \rightarrow k = S/M. \]

The expression between accolades is the net income after taxes from which the recipient may retain a share of $(1-k)$ on top of his benefit $S$. 
Eq. (5) states that, given the social minimum is a fixed percentage of the net minimum wage ($S = fM$), the closer the social minimum to the net minimum wage (a higher $f$), the higher the withdrawal rate $k$ must be in order to keep the net income of those receiving any positive amount of benefits below the net income of a full-time minimum wage earner. If $S$ equals $M$ it follows from (5) that $k$ must equal 1, which means that all net income derived from gross earnings between $O$ and $y_m$ will be deducted from the benefit.

Meanwhile, the purpose of this whole exercise (to transform the curve SAC to SD) must not become lost. One has to keep in mind that in a pure BI regime there is no minimum wage, no poverty trap and all adults receive the same basic grant. Moreover, all will face the same marginal tax rate as there is just one single proportional tax rate operational in the pure form of the BI. The position of those who are neither performing paid work nor entitled to a conditional social security benefit (mainly dependent housewives) is not changed at all by the change in the state of affairs depicted in Chart 1 to those depicted in Chart 4: they are still at point $O$. If the previous scenario operated they would receive a partial BI (they would move to point $G$ in Chart 2), but until now nothing has been done to change their conditions as they are not subject to the poverty
trap. So far, the poverty trap has been made less severe. For those receiving a benefit the poverty
trap is attenuated by choosing a withdrawal rate less than 100%, but this rate will be higher than
the normal tax rate $t$ for workers with labour incomes above the gross minimum wage. If this
policy measure is not self-financing, there will be an increase in the gross minimum wage.$^{12}$

Although welfare recipients are now allowed to keep part of their earnings, their chances to
find employment are still meagre due to the relatively high gross minimum wages. All potential
jobs with a productivity between zero and the minimum hourly wage rate will not be undertaken.
For employers it is not profitable to hire unemployed who have a productivity level which falls
short of the gross minimum wage. Even if potential employees want to work against an hourly
wage rate which lies below the minimum wage rate this is forbidden by the minimum wage
legislation. And probably, the density of those with relatively small productive assets or human
capital is particularly high among the unemployed.

The above analysis suggests that the next ingredient in the transformation process is to look
for ways of lowering the gross minimum wage. The difficulty we face here is that the social
minimum $S$ is tied to the net minimum wage $M$ (see Eq. (2)). If we keep the tax rate and the tax
allowance at the same levels, a reduction in the gross minimum wage rate will also lower the
social minimum, which is undesirable for maintaining the effective guarantee of a minimal share
in welfare. There are, however, two other ways of lowering the gross minimum wage, while
keeping the levels of $S$ and $M$ unchanged: One could lower the tax rate for earnings up to the
gross minimum wage or increase the tax allowance. This can be seen from the general expression
of the gross minimum wage given by Eq. (2a) above. If we set $t$ equal to zero for earnings up to
the gross minimum wage or raise the tax allowance $V$ to $M$ there will no longer be a difference
between gross and net minimum wages, which means that the gross minimum wage can be
reduced down to $M$. In fact, the choice between a lower tax rate for the first income bracket or
a higher tax allowance is not a real one, as the two are equivalent. For the minimum wage earners
it makes no difference to their tax liabilities (or the marginal tax rate) if the tax allowance is
made equal to the minimum wage or if the tax rate for earnings up to the minimum wage is set
equal to zero.

Of course both measures will cause a decline in the amount of tax revenues. Abstracting from
dynamic effects on the economy it is possible to derive the increase in the tax rate that is
necessary to keep the total amount of tax revenues ($T$) constant (i.e. the tax rate that is applied
to earnings above the gross minimum wage). By using $V_0$ for the old tax allowance and $V_i$ for
the new tax allowance, and assuming $n$ workers all with gross earnings greater than $V$ and on
average equal to $\bar{y}$, the new tax rate $t'$ can be derived from the following equations:

\begin{equation}
(6a) \quad T = nt(\bar{y} - V_0) \Rightarrow t = T / [n(\bar{y} - V_0)].
\end{equation}

$^{12}$ If the reduction in the withdrawal rate to less than 100% is not self-financing, the tax rate must increase which will
cause an increase in the gross minimum wage, given the level of the net minimum wage.
(6b) \( T = nt' (\bar{y} - V) \Rightarrow t' = T / [n(\bar{y} - V)] \).

The formulas (6) state that tax revenues are proportional to the total amount of gross earnings above the tax allowance. Dividing (6b) by (6a) gives:

\[
(7) \quad t' = t(\bar{y} - V_0) / (\bar{y} - V_1)
\]

For a given increase in the tax allowance, the corresponding necessary increase in the tax rate is lower the higher the average income. As both measures are equivalent, Eq. (7) can also be interpreted as the new tax rate which will result if the tax rate for earnings up to \( V_1 \) is set to zero.

Suppose that the government chooses to reduce the tax rate on family income at or below the gross minimum wage to zero (thus \( V_1 = M \)), while this tax reduction in the income bracket \([0, y_m = M]\) is accompanied by a rise in the tax rate for all family income above \( y_m \) in order to keep

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\[13\] Consider two countries with equal average tax rates (0.35) and equal tax allowances (500), but different average incomes (2000 or 4000). If both countries decide to raise the tax allowance to 1000, the new tax rate according to (7) in the low-income country will increase to 0.525 and in the high-income country to 0.41.
tax revenues at a constant level. Substituting $V_t = M$ in (7) gives:

$(8) \ t' = t(\bar{y} - V_0)(\bar{y} - M)].$

The withdrawal rate for welfare recipients can again be derived from the condition that their net income may not exceed the net minimum wage:

$(9) \ S + (1 - k)M = M \Rightarrow k = S / M.$

This situation is depicted in Chart 5. The withdrawal rate $k$ is now further reduced to $f$ (given that $S = fM$). The line SHC is now very close to the line SD which corresponds to the pure BI scheme, and it may even be more close to a ‘claw-back’ BI regime with a surcharge.14

Chart 6 here

Within a structure of conditional benefits which incorporates withdrawal rates and a linking of social security benefits to the net minimum wage, there are no further possibilities to reduce the gross minimum wage without seriously destroying monetary incentives to work.15 From now on the only possibility to further reduce the gross minimum wage is to introduce a partial BI ($G$), which partly replaces the tax allowance $M$. This is illustrated by Chart 6.16

If we choose a partial BI equal to the difference between the old net minimum wage and the social minimum ($G = M-S$), the (net and gross) minimum wage (and the tax allowance) can be reduced by the amount $G$. Someone with gross earnings equal to the new minimum wage ($S$) has a net income of ($G+S$). The withdrawal rate is now equal to $(S-G)/S$. If $G$ is increased further, the

14 A claw-back BI regime is a two-tier regime which has two tax rates. The high rate ($t_h$) in the first income bracket is such that the maximum amount of taxes paid over this bracket equals BI ($G$). Thus:

$t_h y_d = G \rightarrow y_d = G/t_h.$

All gross earnings above $y_d$ are taxed at the lower tax rate $t_l$. This means that one pays the high tax rate as long as one receives more in the form of a BI than one pays in the form of taxes. The surcharge is the difference between the high and the low tax rate ($t_h - t_l$). A two-tier BI regime is sometimes put forward in order to reduce the disincentives of a high marginal tax rate for high-income earners.

15 One possibility left is to lower $M$ accompanied by an increase in $f$ (given $S = fM$) in order to keep the social minimum at the same level. But this possibility will bring the net income of a full-time minimum wage worker very close to a full-time welfare recipient. This may reduce their monetary incentives to (find) work and it will reintroduce the poverty trap.

16 One can think of an intermediary step between the schemes depicted in Charts 5 and 6. Instead of introducing a partial BI to all adults it is possible to discharge social security recipients of their duty to search for work or to accept work. If one can prove that (family) income is below the social minimum, one can claim a social security benefit. This amounts to a state-supported right to be idle.
minimum wage moves further towards the origin. But a higher $G$ will induce a higher tax rate in order to keep the budget balanced, which will cause the line HC to rotate clockwise towards SD.

Alternatively, as soon as a partial BI scheme is implemented, we can anticipate the full BI regime effects. Suppose that we know what someone’s total net income would be with earnings equal to $y_m$ under a full BI regime (see point H in Chart 6). Given point H we can derive the level of the partial BI which ensures that the first section (SH) of both a full BI regime and a partial BI cum tax allowance equal to the minimum wage coincides. The line HC is steeper than HD because the tax rate in the first regime is probably higher than the latter. Further increases in $G$ mean that the minimum wage earner ends up with a net income somewhere on the line SH. If the partial BI approaches $S$, the minimum wage approaches zero and the marginal worker ends up with a net income equal to $S$, a full BI.

The alternative route outlined above consists of three steps. Firstly, allow welfare recipients to keep part of their earnings on the condition that their net income may never exceed the net income of a minimum wage earner. Secondly, raise the tax allowance up to the level of the net minimum wage which lowers the gross minimum wage to the net minimum wage $M$. Up to this point the position of those neither performing paid work nor receiving benefits (group 1) is not changed. Thirdly, substitute a partial BI for the tax allowance. Only with this last step will group 1 move from O to G. The unemployed remain at point S, but if the minimum wage is lowered, their chances to find employment will increase which means that more recipients of conditional social security will be on the line SH. Any further increase in the partial BI gives rise to an equivalent decrease in the minimum wage until it can be abolished altogether when the full BI stage is reached.

5 Part-time workers

So far I have scarcely paid attention to the position of part-time workers. If the ultimate aim is to move forward towards a full BI regime, it is necessary that during the transition process their position too should move closer to what it would be under a full BI. Using the figures, it is easy to describe the changes in position which occur when different schemes are in operation.

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17 Given the level of $S$, a higher partial BI will lower the minimum wage and the tax allowance at the same time.

18 Dependent on the levels of $G$ and the net (total) income of a minimum wage worker the withdrawal rate can be higher or lower than the tax rate. Suppose we can find a partial BI for which the withdrawal rate equals the tax rate. The line SHC will then be a straight line and further increases in the partial BI can be made which means that the net income of a full-time minimum wage worker will lie on the line SH.

19 That is, we know what the balancing budget tax rate is in a full BI regime.
In Chart 1 part-time workers are located on the line OJAHC, with relatively few of them on the section HC. A direct implementation of a partial BI will cause part-time workers to be located on the line GAHC in Chart 2. What was previously said concerning persons belonging to group 1 equally applies to part-time workers. They are not lacking the means of subsistence, therefore, from the perspective of a minimum income guarantee there is no reason to give part-time workers, of whom many have a working partner, an unconditional benefit from the state. The introduction of a partial BI will cause the tax rate to rise. If many of them decide to abstain from part-time work under a partial BI regime the tax rate will rise even further. This can be seen more clearly in Chart 1. Whereas part-time workers would be located on the line OJAC under conditional social security, under a full BI regime they are on the line SD. When many of the part-time workers on OJAC are complementing a family income, they have the real choice of abstaining from part-time work altogether once a BI of S is introduced.

In the alternative route the sequence of changes in the tax-and-transfer system is different. The first steps along the alternative route are only meant to strengthen the position of the least advantaged members of society (by allowing them to retain part of their earnings on top of their benefit and by reducing the gross minimum wage, which will increase labour demand at the bottom end of the labour market). Of course, some of the part-time workers would be members of the least advantaged group, if they would not perform part-time work (the same applies for many of the low skilled full-time workers). But this only strengthens the force of the alternative route as it delays policy measures which would probably reduce incentives to work for those who have enough means for an adequate livelihood. Only in the final stages of the transition process towards a BI do these people see any improvement. The least advantaged see the positive effects first.

In Chart 4 the poverty trap is eliminated for those who are worst off. Part-time workers are still located on the line OJHK and rightly so because most part-time workers do not face the poverty trap. In so far as they do, they will be on the line SH. In Chart 5 the gross-net earnings trajectory is made more favourable for part-time workers without a working partner. They do not have any tax liabilities up to the gross earnings level of a full-time minimum wage worker. But part-time workers with a working partner have to share the tax allowance with their partner (since taxation is based on family income). This means that up to the point half-way between O and H they move along the 45°-line, and thereafter they will move along the line which runs parallel to HC. Due to the decrease of the gross minimum wage the greatest advantage for part-time workers is probably more employment opportunities at the lower end of the labour market for which they have to compete with social security recipients who are allowed to retain part of their earnings. A really significant improvement in their position occurs if a partial BI is introduced (Chart 6). Part-timers without a working partner move along the line GHC, while those with a working partner have to share the tax allowance (they will be located on the first half of the line GH, and after they have used up half the tax allowance on the line parallel to HC). If the partial BI is increased further, their gross-net earnings trajectory will move closer to the line SD, which
describes a full BI regime.

6 A differential basic income

The phase has now been reached where one can aim for a full BI, but we have to deal with the question of whether it should be indeed on an individual basis or not. At present, welfare arrangements still bear the vestiges of its orientation on the traditional family with a single breadwinner, many social security provisions are not unconditional with respect to the wealth and income of the living unit, and many women without an income of their own but with a working partner are not entitled to any social security benefit. An individualized social security system, which is unconditional with respect to the circumstances of the living unit, is more in line with the principle of equal treatment, but alas, it is more costly. If one conceives the household or family as units of income and expenditures it is natural, in order to attain effective minimum income guarantees, to make social security benefits conditional on household or family composition.

Now a BI is unconditional in several respects, and being unconditional with respect to family, household or living unit composition is just one of them. There are some important reasons why one should advocate a differential BI, dependent on household composition. Firstly, the most important aim of the present welfare state is the effective guarantee to all citizens of the satisfaction of basic needs and a minimal share in welfare. To individualize this right through a BI means that the costs of providing this guarantee will be much higher than the costs of a BI which takes the household composition into account. As a consequence, the level of the individualized BI will be lower for single person households than that received in a differential BI scheme (see below). Secondly, it is questionable whether a differential BI, which is dependent on household composition, violates the principle of equal treatment, given that economies of scale in consumption within a household is a well established empirical fact. A differential BI reflects this empirical fact. Policymakers here face a conflict between the principle of equal treatment and the aim of providing effective social security. Thirdly, the incidence of poverty is especially strong among one-income households. There is a serious danger, because of the decline of the single breadwinner family and the rise of two-earner families, that a great part of future income inequality will be between one and two-earner families. Finally, the rationale behind a differential BI is not to discriminate between one and multi-persons households, or to promote one or the other, but to maximize the guaranteed social minimum. As soon as somebody leaves the household, he or she is entitled to a differential BI for a single person.

To see the difference, let $N$ be the number of adults entitled to a BI, $B$ the total amount available for providing a BI, $s$ the fraction of single person households and $t$ the fraction of two

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20 See the *Journal of Income Distribution*, No. 2, Vol. 4, 1994/1995 for a theoretical discussion and empirical estimates of equivalence scales. For a BI we ideally should have data on equivalence scales for different families or households for all expenses on commodities which belong to a package which is classified as the social minimum.
Let $b_s$ be the BI for a single-person household and let $b_t$ the total sum of BI received in a two-person household. So we have:

(10) $s + t = 1, \quad s, t \geq 0$;

(11) $b_t = f b_s, \quad 1 \leq f \leq 2$.

If $f$ equals 2, it does not matter whether one lives in a one- or a two-person household. If $f$ equals 1, all households, irrespective of their composition, receive the same BI.

First consider the case of an individualized BI ($f = 2$). In that case we have just $N$ persons all receiving the same BI $b$. Therefore,

(12) $b = B/N$.

Next consider a differential BI with $f$ between 1 and 2. Thus,

(13) $s b_s N + t b_t N/2 = B$.

Substitute (11) in (13) which gives:

(14) $s b_s N + t f b_s N/2 = B$.

Rearranging (14) gives:

(15) $b_s = B/[N(s + t f/2)]$.

Dividing (12) by (15) and substituting (10) gives:

(16) $b/b_s = [s(2-f) + f]/2$.

Equation (16) expresses that $b_s$ equals $b$ only in the trivial cases where $f$ equals 2 (which corresponds to an individualized BI) or if $s$ equals 1 (which corresponds to the case where all households are one-person households). If $f$ is greater than 1 and less than 2, $b_s$ is greater than $b$. The smaller the fraction of single person households, the greater the deviation of $b_s$ from $b$. To make up our minds, if $f$ equals 1.5 and $s$ equals 0.2 (the actual figure in The Netherlands), the BI in a differential regime can be 25% higher for a single-person household compared to an individualized BI. To put it as simple as possible, with a fixed amount of money ($B$) available

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21 For simplicity I assume that there are only one and two-person households.
for providing a BI to all, giving a two-person household an amount that is less than proportional to their number is equivalent to giving a one-person household an amount that is more than proportional. The effect is larger the smaller the fraction of one-person households.\footnote{At present, income tax liabilities are dependent on family income. If one gives all adults the same individual BI \( b \), one can still get the same result brought about by a differential BI regime by means of taxing two-person households’ family income between \((2b - fb)\) at a 100% tax rate. The advantage is that one can make use of information already available at the tax authorities.} Alternatively, one can easily derive that the reduction in expenses by providing a BI differentially instead of individually equals \( \{t(1-f/2)\} 100\% \).

**Summary and conclusions**

In this chapter an alternative route towards a BI is proposed. The first two steps, to allow welfare recipients to retain part of their side-earnings and to lower the gross to the net minimum wage by raising the tax allowance to this level, can be taken independently whether one aims toward a BI or not. However, the important point to be stressed is that there are good reasons to start with these two steps and not with a partial BI (the third step). The two most important reasons are that the alternative route is more gradual in the sense that it departs entirely from the basic features of social security provided by the conditional welfare state and that it eliminates two shortcomings of that system: the poverty trap and the relatively high gross minimum wages. Of course, any proposal has winners and losers and efficiency gains and losses. The winners are mainly those entitled to social security benefits, the losers are mainly those who are neither entitled to social security benefits nor perform any paid work, and high income earners. Along the road towards a full BI efficiency gains can be reaped from the elimination of the poverty trap and from the positive dynamic effects of the reduction of the level of the gross minimum wage. Losses are to be expected in so far as these measures cause the tax rate to rise. A real appreciation of these gains and losses and of the effects on the income distribution requires a general equilibrium framework which takes welfare and taxation arrangements into account. Admittedly, the analysis here is comparative and static.

The BI proposal has, from an efficiency point of view, at least two important strings on its bow: the removal of the poverty trap and the abolition of minimum wages. Part of these efficiency gains will reveal themselves during the first two steps. Thus, despite the serious limitations connected to such a static approach as adopted here, if it turns out that the first two measures proves too costly, it will become very difficult to implement a BI anyway, regardless of the route chosen.