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Automatic stabilizers—the intersection of labour market and fiscal policies

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Abstract

The Great Recession has revived aggregate demand management policies. In particular, automatic stabilizers are praised since they are rule based and thus operate swiftly and symmetrically across the cycle. However, automatic stabilizers are not a result of macro design but the structure of the social safety net and the taxation system. The participation tax is a key determinant of the strength of the automatic stabilizers. Paradoxically, the disincentive effects of high participation taxes are often discussed at the same time as automatic stabilizers are praised. The paper considers the sources of automatic stabilizers and whether they (un)intentionally have been weakened via structural reforms to strengthen work incentives. It is considered whether it is possible to maintain strong automatic stabilizers without jeopardizing incentives via the design of the social safety net (workfare) or business cycle-dependent unemployment insurance. The criticism that automatic stabilizers may prolong downturns is also considered. Finally, it is discussed to what extent aggregate demand management policy can stabilize labour markets and, in particular, whether it is well targeted towards marginalized groups. Also, the potential sources of marginalization in the labour market are discussed.

JEL Classification: E62; H24; H61; J60.

1 Introduction

The Great Recession was a source of large shocks generated outside the labour market but which via steep declines in aggregate demand had substantial employment effects. In no less than 13 countries, GDP dropped by more than 5 % between 2008 and 2009, and unemployment rates increased by about 2.5 percentage points between 2008 and 2010 on average for OECD countries. The crisis has proved long - lived, and employment rates have not yet recovered in most countries. The crisis has severe direct social and economic consequences, but it also raises concerns that unemployment will become persistent as seen in earlier crises, especially in European countries.

Since the crisis caused aggregate demand to fall, attention turned to aggregate demand management policies as the remedy to decrease unemployment. This type of policy has not been in vogue since the heydays of Keynesian economics. Dismal experience with demand management policies during the 1970s and 1980s in combination with unemployment becoming persistent turned attention to structural issues, first wage formation and later search incentives.

The consensus view on stabilization prior to the Great Recession was that the main tool is monetary policy,[1] confining fiscal stabilization policies to the automatic stabilizers.

Discretionary fiscal policy actions should be employed only as an "escape clause" in particularly dire situations, which under any sensible definition would include the Great Recession.

Although monetary policies have been very expansionary in response to the Great Recession, they have not been sufficiently effective,[2] and this has brought fiscal policy back to the fore. It has been questioned whether fiscal policy reactions have been sufficiently strong—a difficult question to answer generally since the fiscal space for an active fiscal stabilization policy has been severely restricted in a number of countries.[3] In particular, automatic stabilizers have been praised, and the crisis induced calls to strengthen automatic stabilizers by the OECD, IMF and EU Commission.

The popularity of automatic stabilizers arises because they are rule based and do not suffer from information and implementation lags. Moreover, they are by nature symmetric; that is, they do not suffer from a pro-cyclical bias or any of the other problems associated with discretionary policies. The virtues of automatic stabilizers are commonly shared and therefore the calls to strengthen them in the wake of the Great Recession.

But what is the source of the automatic stabilizers? The size of automatic stabilizers is not a direct result of macro design but rather a by-product of policy choices in relation to tax, social and labour market policies. The automatic stabilizers are therefore the net outcome of the design of the social safety net and taxation schemes. This points out that it is not possible to make a sharp distinction between, on the one hand, fiscal policies and, on the other hand, welfare/labour/social policies.

Calls to strengthen automatic stabilizers also point to a paradox. There has been widespread focus on the (dis)incentive effects of taxes, unemployment benefits and other forms of social transfers. The quest has been to reduce the marginal effective tax rate on work (intensive margin) and make work pay (extensive margin). However, reforms aiming at strengthening the incentive structure may as an unintentional by-product weaken automatic stabilizers.

Ultimately, these choices depend on where to situate the economy on the trade-off between incentives and insurance/redistribution. In theory, this is well known and where any discussion of the design of e.g. the unemployment insurance scheme starts (Bailey (1978)). Yet, one may question whether theoretical work and policy discussions have focussed too much on one side of the trade-off. There are numerous studies of the incentive problems arising from taxation and unemployment insurance but only scant research on their effects for insurance. This questions how well the trade-off has actually been researched.

It is somewhat paradoxical to note that automatic stabilizers are praised in a macro perspective, but their sources are criticized in discussions on incentive structures. Perhaps this arises from a tendency to separate labour market policies from fiscal stabilization policies due to Musgrave's famous distinction between the allocative, distributional and stabilization effects of policy. However, modern literature has shown that this is not a meaningful split. Distribution issues cannot be separated from insurance. Schemes which redistribute ex post (i.e. based on employment status, income, etc.) will ex ante perform an insurance function; see e.g. Varian (1980) and Eaton and Rosen (1980). The insurance effects both have direct welfare implications and may be efficiency enhancing in the presence of market imperfections. The insurance effects pertaining at the individual level in the case of idiosyncratic shocks accumulate to macro effects encapsulated in automatic stabilizers released by common or aggregate shocks.

This paper discusses both the source and role of automatic stabilizers and therefore how fiscal and labour market policies interact. The part of automatic stabilizers related to employment variations is shown to depend fundamentally on the participation tax. This brings forth the tight interrelation between distribution/insurance, incentives and macroeconomic stability. The policy dilemma is that increasing participation taxes to strengthen automatic stabilizers may worsen incentive problems, which naturally poses the question "are there any ways to mitigate this dilemma?" The paper discusses how to maintain/strengthen automatic stabilizers without jeopardizing incentives via the design of the social safety net (workfare) or by building business cycle conditions into it (business cycle contingencies).[4] A particular concern is whether short-run stability via automatic stabilizers is achieved at the costs of more sluggish adjustment and thus persistence in employment. Despite the virtues of automatic stabilizers, the fundamental question is what aggregate demand management can accomplish in a labour market context. Most macro analyses implicitly assume labour to be homogeneous, an assumption which is decreasingly accurate.[5] In particular, in relation to the risks of marginalization (long-term unemployment), aggregate demand management policies are not well targeted and more specific labour market policies may be called for.

The paper is organized as follows: Section 2 clarifies some key properties of automatic stabilizers, and Section 3 discusses their source and in particular the relation to participation taxes. Section 4 considers ways to strengthen automatic stabilizers without jeopardizing incentives, and Section 5 discusses whether automatic stabilizers can be a source of persistence in the labour market. Section 6 asks to what extent demand management policies are well targeted from a labour market perspective, and Section 7 offers a few concluding remarks.

2 Automatic stabilizers

The automatic budget response or stabilizers is a summary concept for the automatic response of public sector revenues and expenditures to a change in the level of economic activity (the business cycle situation). These responses arise because revenues and expenditures (primarily unemployment benefits) are contingent on e.g. income and unemployment. A recession will therefore be associated with a deteriorating public budget position and vice versa.

The primary effect of these responses is to cushion disposable income to variations in market incomes, which in turn contributes to stabilization of private consumption and hence aggregate demand.[6] This may be interpreted as social insurance or diversification of shocks via the public budget in the sense of running deficits when activity is low and surpluses when it is high. On average over the cycle, the budget is not affected, but the pro-cyclical movement of the budget diversifies shocks across time.

There are five important facts about automatic stabilizers worth noting:

- Automatic stabilizers cushion individual disposable income and therefore serve an insurance function having a direct positive welfare effect for risk-averse agents. Private alternatives for this type of insurance are highly imperfect and incomplete; see e.g. Dynarski et al. (1997), Gruber (1997), Knieser and Ziliak (2002), Browning and Crossley (2001) and Dolls et al. (2012a, b).

- Automatic stabilizers contribute to stabilization of the aggregate economy via its stabilizing effect on disposable income and hence private consumption and thus aggregate demand; see e.g. Van der Noord (2000), and IMF (2015).
- Automatic stabilizers mute the consequences of economic crises on income inequality; see e.g. Domeij and Flodén (2010), Dolls et al. (2012c) and OECD (2014).
- The size/strength of automatic stabilizers is closely related to the extent of welfare arrangements, cf. Fig. 1, i.e. countries with more extended tax-financed welfare states tend to have large automatic stabilizers.
- Automatic stabilizers are rule based, inducing an automatic response to a change in the business cycle situation. Hence, they do not require up-to-date information on the state of the economy, and they do not require any discretionary actions to work.

Since the source of the automatic stabilizers[7] is the contingencies in expenditures and incomes, it follows that the extent of the welfare arrangements is of importance to the strength of the automatic stabilizers. It is hard to imagine an extended welfare state in which automatic budget effects would not be strong.

A necessary condition for automatic stabilizers to work is the presence of fiscal space allowing for the implied budget variations. The symmetry is important, budget surpluses (and thus consolidation) in upturns create the room for budget deficits and automatic stabilizers to work in downturns. In the presence of explicit fiscal norms/limits on the budget, it is particularly important that the budget balances in normal times are such that there is room to accommodate downturns within the budget norms.[8]

Automatic stabilizers work by stabilizing private consumption and thus one component of aggregate demand. This implies that the specific effects of the automatic stabilizers in general are shock dependent. Two dimensions of shocks are important, namely the nature of the shock (demand or supply) and its persistence (temporary or permanent). In general, the optimal policy response depends on the nature of the shock, while automatic stabilizers in some sense "average" across shock types.[9] Automatic stabilizers do not distinguish between temporary and permanent shocks. Since it is possible to diversify

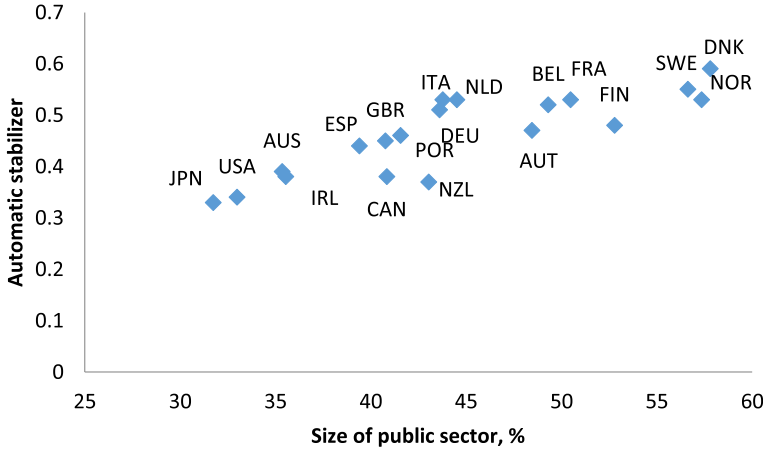

Fig. 1 Size of public sector and automatic stabilizers. Note: Public sector size measured by the gross tax burden in percent of GDP in 2005 and automatic stabilizers as the automatic budget response, i.e. the change in budget position relative to GDP to a 1 percentage point change in GDP. Source: Internet: www.oecd-ilibrary.org and Girouard and André (2005)

temporary but not permanent shocks, this is important. The effects of aggregate shocks as reflected in the budget balance accumulate over time if shocks are persistent. It is an implication that automatic stabilizers can never be an "auto pilot". If shocks are persistent, close monitoring and intervention are needed to avoid that public debt comes on an unsustainable trajectory; for further discussion, see e.g. Andersen (2005).

3 Automatic stabilizers and participation taxes

To identify a key source of the automatic stabilizers, consider the following stylized representation of the public sector primary budget balance (B):

$$B = t\left(w_{\mathrm{p}}L_{\mathrm{p}} + w_{\mathrm{g}}L_{\mathrm{g}} + bN\right) + T - w_{\mathrm{g}}L_{\mathrm{g}} - bN - G \tag{1}$$

Here t denotes the tax rate, w_{p} the wage rate in the private sector, w_{g} the wage rate in the public sector, L_{p} the employment level in the private sector, L_{g} the employment level in the public sector, b the level of social transfers to non-employed,[10] N the number of recipients of social transfers (not in employment), T other sources of tax revenue (exogenous) and G other public expenditures (exogenous). Note that the tax rate should be interpreted broadly as capturing both income and consumption taxes.[11] Observe also that in most OECD countries more than 90 % of tax revenue accrue from the direct and indirect taxation of labour incomes and about two thirds of public consumption is wage expenditures; hence, the above captures the main effects on the budget.

The population accounting identity is that the total population (P) is given as[12]

$$P = L_{\mathrm{p}} + L_{\mathrm{g}} + N \tag{2}$$

Consider next the budget effect of a change in private employment (for given public employment L_{g} and population P) which from (1) is given as

$$dB = \left(t\left(w_{\mathrm{p}} - b\right) + b\right)dL_{\mathrm{p}}$$

or

$$dB = \left(tw_{\mathrm{p}} + (1-t)b\right)dL_{\mathrm{p}} \tag{3}$$

The direct budget effect of a transition of one single individual from non-work to work in the private sector is thus $\tau w_{\mathrm{p}} + (1 - \tau)b$, i.e. the sum of the tax paid, and the after tax value of the social transfer. Transition from work to non-work thus has a double effect on the budget, both the direct loss of tax revenue from reduced private income (τw_{p}) and the extra expenditures on social transfers ($(1 - \tau)b$).[13] Clearly, the more extended the welfare state, the higher the tax rate and social transfers and hence the more sensitive the budget is to changes in private employment.

The budget term in (3) can be reformulated as

$$tw_{\mathrm{p}} + (1-t)b = w_{\mathrm{p}}\left(t + (1-t)\left(\frac{b}{w_{\mathrm{p}}}\right)\right) = w_{\mathrm{p}}\tau,$$

where

$$\tau \equiv t + (1-t)\left(\frac{b}{w_{\mathrm{p}}}\right)$$

is the so-called participation tax for the individual when transiting between work and

non-work and b/w_p is the replacement rate of the transfers. To see this, note that the difference between income when working and non-working is

$$w_p(1-t)-b(1-t) = w_p\left(1-\left(t+(1-t)\frac{b}{w_p}\right)\right) = w_p(1-\tau)$$

It follows that the higher the participation tax, the more sensitive is the budget to changes in private employment.

The above clearly shows how the underlying design of welfare arrangements and their financing are at the root of the automatic stabilizers and that the participation tax is the main channel through which employment fluctuations affect the budget. In practice, the participation tax varies across groups in the labour market, and the budget effect is therefore in general the summation over changes in employment for different groups multiplied by their respective participation taxes. To illustrate the above interlinkage, Fig. 2 plots the metric for the size of automatic stabilizers and the participation tax for an average production worker living as single. There is a clear positive correlation between participation taxes and the assessed size of the automatic stabilizers.

The preceding also stresses the importance of maintaining a high structural employment rate in the private sector to ensure the financial viability of welfare arrangements. To elaborate on this, consider how an increase in population size (e.g. due to ageing or migration) affects public finances depending on whether it leads to an increase in private employment or recipients of transfers. An increase in population leading to an increase in private employment $dL_p = dP$ improves the budget by $dB = \tau w_p > 0$, while an increase in population leading to more receiving benefits $dN = dP$ deteriorates the budget by $dB = -(1 - t)b < 0$. This shows in a nutshell why tax-financed welfare arrangements are sensitive to the balance between the number of people working in the private sector and receiving transfers (see below). In the same vein, note that the effect of a change in public employment matched by lower private employment is

$$dB = \left(-(1-t)w_g - tw_p\right)dL_g$$

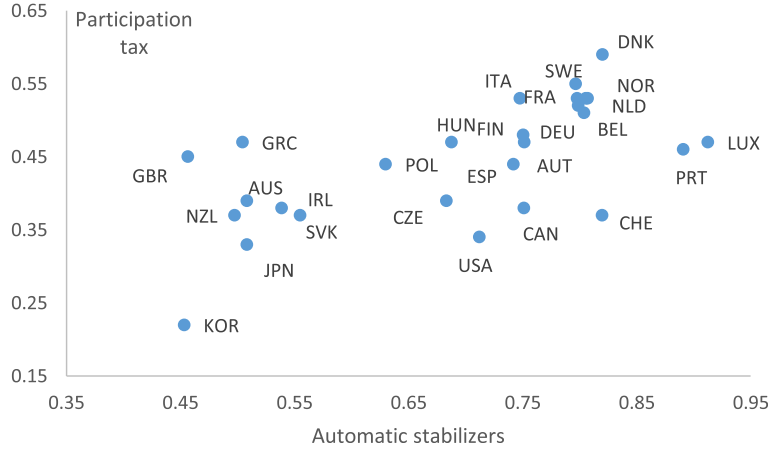

Fig. 2 Automatic stabilizers and participation taxes, OECD countries. Note: 2005 values for both participation taxes and automatic stabilizers. Automatic stabilizers measured as in Fig. 1 and participation taxes as defined in Fig. 3

Transition from private to public employment thus has a double effect on the budget, i.e. both the direct loss of tax revenue from private income and the extra expenditures on public wages. This suggests that an increase in public employment to improve the supply of welfare services can have large budgetary costs. Notice that $\tau w_p + (1 - \tau)b < \tau w_p + (1 - \tau)w_g$ for $b < w_g$, and hence, the budgetary consequences of changes in public employment are larger than the consequences of changes in the number of recipients of social transfers (for a given population size).

Given the importance of participation taxes for the automatic stabilizers, it is a question whether recent reforms aiming at increasing the gains from work (making work pay) have had as an (un)intentional consequence that automatic stabilizers have been weakened;[14] cf. also Knieser and Ziliak (2002). Figure 3 plots participation taxes for selected OECD countries over the period 2001–2013, where countries are grouped depending on whether participation taxes have been roughly unchanged, increased or decreased. Slightly more countries have decreased participation taxes than increased them, and for some countries, there are no discernible changes. Among the countries having decreased participation taxes (tending to weaken automatic budget reactions) are countries like New Zealand, Australia and the US, known to have more lenient welfare arrangements, but also Denmark and Sweden fall in this category. On the basis of the evidence in Fig. 3, it is not possible to conclude generally whether recent reforms motivated by structural concerns have tended to weaken automatic stabilizers.

The fact that automatic stabilizers have participation taxes as core determinants points to the trade-off between micro incentives and macro stability. A higher participation tax may be associated with large incentive problems, but at the same time, it implies more insurance and contributes to macroeconomic stability. Distribution, allocation and stabilization are mutually interlinked. This raises the question whether it is possible to improve on the insurance and stability side without jeopardizing incentives. The following section turns to this issue.

4 Strengthening automatic stabilizers

It is an important policy question whether automatic stabilizers can be maintained and possibly strengthened without jeopardizing the incentive structure. Is this at all possible, or is there an inevitable conflict? This section considers two possibilities by which to reduce this dilemma, namely the design of the social safety net and the possibility of introducing explicit business cycle conditions in unemployment insurance schemes.

4.1 Balancing incentives and insurance

Policy designs are important for both the moral hazard and adverse selection problems arising from insurance provided by the social safety net. Most discussions focus on participation taxes neglecting other aspects of the design of the social safety net. In particular, it is implicitly assumed that it is possible to passively claim social benefits when out of work. This may be a poor characterization of social insurance arrangements and overlooks important aspects of the design of the social safety net. The fact that the Nordic countries have high employment rates, also for low skilled, despite high participation taxes can be seen as an illustration of this. The social safety net is relatively generous measured in terms of replacement rates, but it also has a strong focus on workfare/active labour

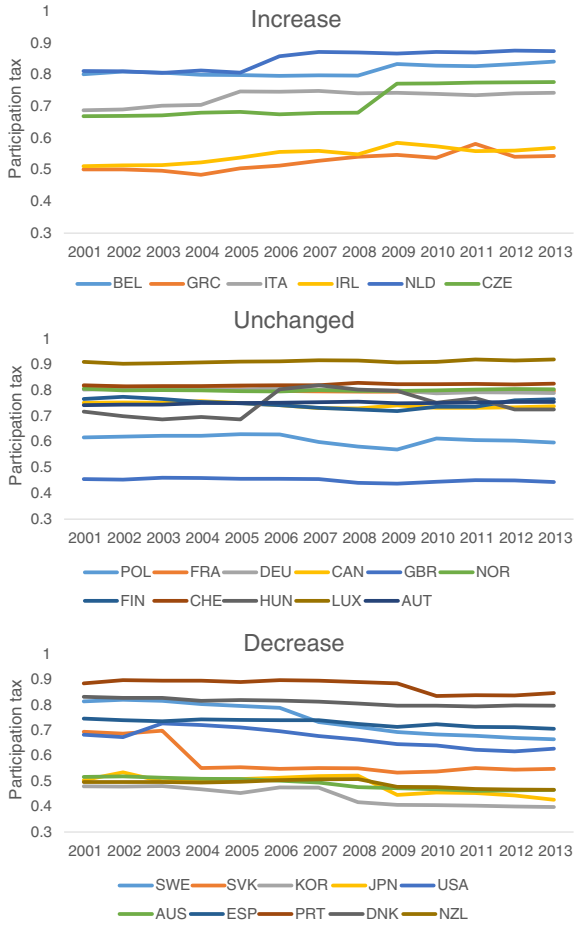

Fig. 3 Participation tax, 2001–2013 OECD countries. Source: The graphs plot the participation tax (*t*) for countries split into three groups (increased 3 pct. points, unchanged, decreased 3 pct. points over the sample period). The participation tax is adopted from the OECD and here for single average production workers. The consumption tax is computed as the ratio of all taxes less subsidies on products relative to total private consumption. The plotted participation thus includes all forms of taxes and the relevant benefits (but no supplementary benefits like e.g. housing allowances). Data: www.oecd-ilibrary.org

market policies. Eligibility to benefits includes numerous conditions to qualify for benefits; that is, although eligibility is universal in the sense that all have a formal right, there are conditions to be fulfilled to receive the transfers. These conditions apply both to the situation in which the person or family finds itself but also to behavioural variables like active job search, participation in education and activation programmes. The gateway into more permanent types of support like disability pension entails screening involving medical conditions, external monitoring, etc.

The eligibility conditions thus include various elements ranging from control/enforcement of job search and availability criteria to enhancement of qualifications to improve job-finding rates. These conditionalities have important implications, which can be seen by considering the limiting case of a participation requirement for an unemployment benefit recipient. That is, there is a requirement to participate in some programme to claim benefits. For the sake of argument, it is assumed that participation does not affect qualifications but only serves as an availability test. Participation in such a programme increases the opportunity costs of receiving

benefits, which reduces both adverse selection and moral hazard problems related to individual search incentives.

As an illustration of how the trade-off between incentives and insurance is affected by such conditionalities, consider a standard search-matching model of the labour market frequently used to point to the adverse incentive effects of e.g. unemployment insurance (see Andersen and Svarer (2014)). In this setting, unemployment benefits distort search incentives and benefits financed by general taxation release standard common pool or moral hazard problems. Higher benefits (replacement rates) lower the gain from working, which in turn reduces job search and thus employment. Inclusion of workfare elements implies a higher opportunity cost from claiming benefits, which makes unemployed search more for the basic reason that employment becomes more attractive for given benefit levels. Moreover, this may affect wage setting. Therefore, such conditionalities serve to maintain incentives in the labour market and thus support high employment rates despite a high level of income insurance (replacement rate). Job search incentives can thus be strengthened either by a benefit cut or by strengthening of workfare elements. This is illustrated in Fig. 4 showing combinations of the replacement rate and the workfare requirement (measured in terms of the time requirement relative to normal working hours) delivering the same employment rate (see Andersen and Svarer (2014)).

The important point is that it is possible to maintain the incentive structure without necessarily deteriorating the level of economic support offered by the social safety net. It can also be interpreted in the sense that there is a complementarity between replacement rates and workfare requirements. From a policy perspective, the important lesson[15] is that incentives in the labour market can be maintained without retrenchment of the social safety net and weakening automatic stabilizers.

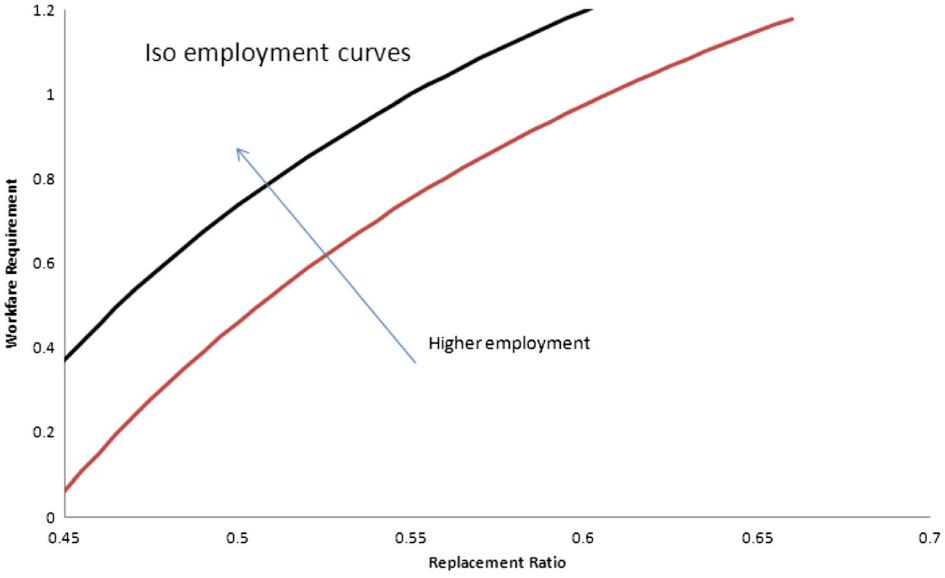

Fig. 4 The role of the replacement rate and workfare conditionalities in a basic search framework. Note: Workfare requirement is measured as the time requirement relative to normal working hours. The figure is based on model simulations in Andersen and Svarer (2014)

4.2 Business cycle dependent unemployment insurance

Another route may be to introduce explicit business cycle contingencies in the social safety net. This could be implemented in the unemployment insurance scheme by making benefit levels, duration or eligibility criteria dependent on the business cycle situation such that the system becomes more generous in downturns and less generous in upturns. Such contingencies are used in Canada,[16] while the USA has a semi-automatic system.

It is intuitive that the social value of insurance is larger in a downturn with high unemployment. Providing insurance when it is most valuable is an argument for making benefit generosity counter-cyclical. It is even possible that the distortions created by insurance are lower in downturns than upturns; for an overview and references, see Andersen (2014). If this is the case, then both insurance and incentive arguments go hand in hand in supporting business cycle-dependent elements in the unemployment insurance scheme. These effects depend crucially on using the public budget as a buffer, implying risk diversification via the budget, and such contingencies therefore strengthen automatic stabilizers.

Explicit business cycle contingencies in the unemployment insurance scheme can thus contribute to a more flexible system which provides more insurance when it is most needed at the same time as the incentive structure is strengthened by reducing benefit generosity when it is most distortionary. Such a scheme can be rule based and consistent with a balanced budget over the business cycle.

Although business cycle dependencies in the unemployment insurance scheme strengthen automatic stabilizers, there is an important difference between such contingencies and the standard automatic stabilizers. As discussed above, the latter is generated by the underlying microstructure in taxation schemes and the social safety net. Since tax payments are dependent on current activity (consumption and income) and entitlements depend on the individual situation (unemployment), it follows that e.g. a recession automatically leads to lower revenue and higher expenditure. These automatic responses are part of the virtues of the rule-based automatic stabilizers as the responses arise without any information, decision or implementation lags. A business cycle contingency in the unemployment insurance scheme is qualitatively different since it depends on the aggregate situation of the economy. Such a contingency thus requires a trigger defined in terms of macro variables (e.g. unemployment), which requires information to be collected inducing a lag in how this mechanism works.

The setting for the trigger or the "normal" in the unemployment insurance scheme is crucial for several reasons. First, it is important that it is easily measured and statistics are readily available to minimize information lags. The indicator triggering shifts in e.g. benefit duration must reflect the business cycle situation accurately and timely. The indicator should be based on publicly available statistical information. The aggregate unemployment rate is an obvious candidate if it is defined in a way which reflects the labour market situation adequately (includes all unemployed). Moreover, the trigger level should be such that changes are only released in case of a significant change in the labour market situation; that is, the contingency should not be released due to small and temporary variations in the unemployment rate but only when unemployment exceeds the trigger level. Finally, and critical, is the unemployment level which is the "normal" in the system. Hence, if the structural unemployment rate is high, it may be

problematic to define business cycle contingencies around this level as the "normal" since this will tend to conserve structural problems. If substantial structural reforms are needed to reduce structural unemployment, it may thus be problematic to introduce a business cycle contingency in the unemployment insurance scheme.

5 Persistence—failure to adjust

Does the short-run stability achieved via automatic stabilizers come at the costs of a more sluggish adjustment process and thus stronger persistence in unemployment? Possible causes of such persistence include depreciation of human capital depending on the length of unemployment spells, changes in the wage-setting mechanism if it is primarily affected by insiders (the employed) with little weight given to the outsiders (unemployed), or a reduction of production capacity as a response to the crisis. The key question is whether these sources of persistence are strengthened by a generous social safety net and thus strong automatic stabilizers.

There are two lines of reasoning on this issue. The first is that automatic stabilizers (and aggregate demand management policies more generally) mute the consequences of shocks and therefore the increase in unemployment. When the increase in unemployment is smaller, the mechanisms outlined above will create less persistence.

Another approach stresses how the social safety net can be a source of persistence. Ljungqvist and Sargent (1995,1998) describe a generous welfare state as a "time bomb" in the sense that it may operate efficiently in tranquil times but be vulnerable to turbulence, in which case unemployment tends to become persistent.[17] The cause of the latter is weakened job search activities and higher reservation wages due to a generous social safety net. It is argued that shocks tend to depreciate skills and thus require workers to accept a wage cut to find a new job, but unemployment benefits depending on past wages tend to create inertia in the adjustment of reservation wages, which prolongs unemployment spells. Moreover, mobility across jobs may be lowered, all of which reduces the restructuring process in the economy. The end result may be a higher structural unemployment rate.

For a different explanation of why a generous social safety net may induce persistence pointing to the role of work norms, see e.g. Lindbeck (1995) and Lindbeck et al. (2003). If there is a strong norm to be self-supporting, employment may be high, even if economic incentives to work are small due to generous welfare schemes. This situation is vulnerable if norms are endogenous. A large shock causing high unemployment implies that many live on public transfers. This, in turn, makes it more acceptable to be receiving benefits, which thus reduces work norms. If so, job-search incentives are reduced and unemployment remains persistently high.

If the social safety net is a source of persistence in unemployment, it is critical since the viability of generous welfare arrangements depends critically on maintaining a high (private) employment level; cf. above. Is there any empirical support that countries with more generous welfare arrangements and thus strong automatic stabilizers are suffering from more persistence in unemployment?

It is not straightforward how to measure persistence in the adjustment process; cf. Andersen (2015). Ideally, one would want to separate exogenous persistence (driven by persistence in shocks) from endogenous persistence (driven by adjustment mechanisms in the system). This is obviously very difficult and will invariably rely on identifying

assumptions, which may be open for debate. It is beyond the scope of this paper to go into details with this, and rather, a more simplistic approach is pursued.

For illustration, Fig. 5 plots a measure of unemployment persistence[18] and the participation tax. There is no strong statistical relation between the two (the same conclusion holds when considering the relation between automatic stabilizers and persistence) and thus no immediate support for the hypothesis that social insurance or strong automatic stabilizers are associated with more sluggishness or persistence in the adjustment process.[19]

It is too early to assess the extent to which the Great Recession is resulting in persistent unemployment. While unemployment has remained high for a number of years, it is premature to assess whether any endogenous mechanisms in the labour market have been released. Aggregate demand is still low in most countries, and therefore, the underlying shock has in itself been strongly persistent. An indicator of persistence is long-term unemployment. Most countries have experienced an increase in long-term unemployment; see Fig. 6. It is also clear from the figure that countries having experienced the largest increase in unemployment have seen the largest increase in long-term unemployment. It is a lesson from previous crises that deep employment crises are more likely to be persistent. Accordingly, from a labour market perspective, it is critical whether unemployment turns persistent. It is seen that e.g. Denmark, Finland and Sweden have experienced a relatively large increase in unemployment but not in long-term unemployment. Hence, from the evidence from the response to the Great Recession, it is not clear that countries with strong automatic stabilizers display more persistence in the labour market.

The issues of persistence in the labour market are closely related to possible marginalization affecting particular groups. This suggests that the traditional approach to these issues may be too aggregate, overlooking the specific mechanisms through which marginalization and long-term unemployment may arise. The next section turns to this issue.

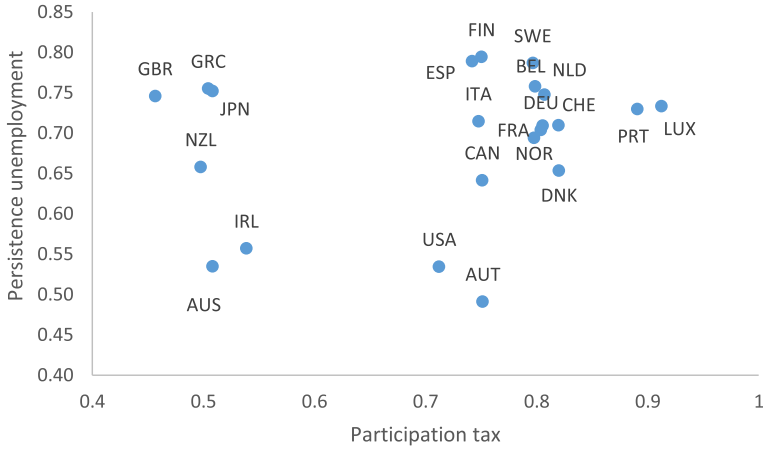

Fig. 5 Unemployment persistence and participation taxes, OECD countries. Note: Persistence in unemployment measured by the autocorrelation in hp-filtered unemployment rates over the period 1970–2007; participation tax as in Fig. 3

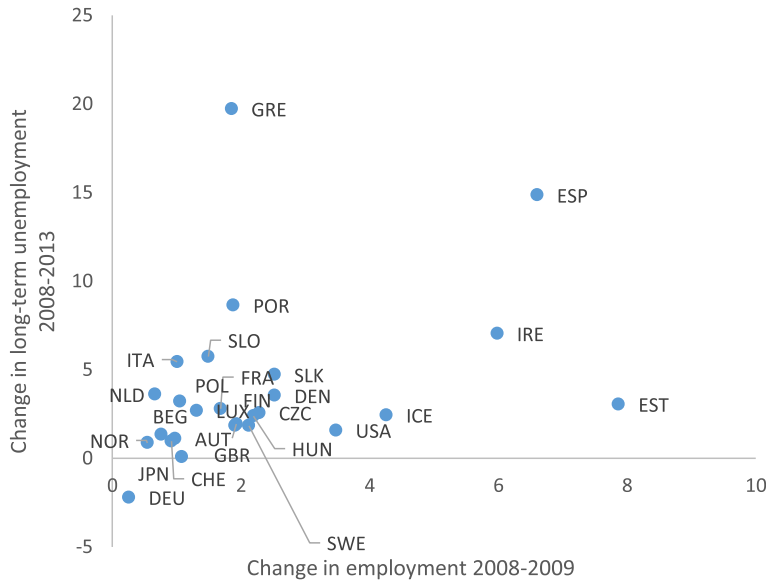

Fig. 6 Increase in long-term unemployment, relative to increase in unemployment. Note: The change in unemployment 2008–2009 is used as a measure of the impact effect of the crisis and the change in long-term unemployment 2008–2013 as an indicator of persistence in unemployment caused by the crisis. Source: www.oecd-ilibrary.org

6 What can and should be stabilized?

There are a number of links in the transmission mechanism through which changes in fiscal policy affect the labour market. How strongly income affects consumption and thus aggregate demand is one, and another is how changes in aggregate demand and thus production affect employment. The latter is not much discussed, and this section takes up this interlinkage.

The first observation is that employment (hours or heads) is clearly cyclically dependent but the relation is not tight. Figure 7 gives some stylized business cycle facts on employment by considering the variability of employment (total numbers of hours

Fig. 7 Employment variability relative to output and correlation with output, selected countries, 1998–2013. Note: Relative variability measures the ratio of standard deviation of employment relative to the standard deviation of output and the correlation coefficient between the two. Source: Own computations based on data from www.oecd-ilibrary.org

worked) relative to output variability and the correlation between employment and output. In general, employment is less volatile than output, and the correlation between employment and output is well below unity.

Stabilization of output does not necessarily lead to a stabilization of employment. The direct effect of such policies, e.g. via the automatic stabilizers, is to cushion income, not employment. The immediate effect hereof is that the fall in employment is not reinforced by a decline in consumption, which further decreases production and employment. This is surely important, but it is equally clear that this is not directly targeted at stabilizing employment. The employment effect of a given change in aggregate demand depends critically on the composition of the change since sectors have different employment intensities and use different types of labour. This may be important both for overall volatility in the labour market but in particular if persistence problems are most relevant for particular groups in the labour market.

Traditional macro models take labour input to be homogenous,[20] and thus implicitly assume that it easily and at small costs is possible to relocate labour across uses/sectors. Only the level of aggregate activity matters, not its composition. A reduction in one component of aggregate demand (e.g. net exports) could according to this line of reasoning be substituted by an equal increase in any other component (e.g. public consumption) to leave aggregate activity and hence employment unchanged. The different demand components are perfect substitutes with respect to aggregate employment, or to put it differently, an increase in aggregate activity lifts all boats in the labour market.

Labour is not homogenous and differs across various dimensions, of which education/qualifications are particularly important. These differences are crucial in discussions of structural unemployment, wage dispersion, inequality, etc. Discussions on the importance of technological changes, globalization, etc. stress the increasing heterogeneity in the labour market. The homogeneity assumption w.r.t. labour is thus decreasingly a useful approximation of how the labour market is working. This applies along several dimensions including sectors and qualifications. These differences are also of importance in a cyclical context, both because various groups are generally exposed differently to cycles and because each cycle has its own structure. It is accordingly very difficult, if not impossible, to separate the cycle from structural changes.

Consider the sectoral composition of labour demand. Employment intensities differ across sectors, implying that the composition of demand matters for labour demand. The linkage from production to employment is complicated by several mechanisms: (a) different sectors have different labour intensities, and therefore, the nature/composition of shocks matters for the employment effects of a given change in GDP, and (b) firms may not adjust labour input immediately due to anticipation effects or explicit/implicit costs of adjustment work input. Even if labour in principle is perfectly substitutable across sectors in the long run, there are likely to be non-trivial costs of relocating labour across sectors.[21] Whether a reallocation of labour is socially desirable depends on the extent to which changes are purely cyclical (transitory) or include structural (permanent) elements.

The importance of the sectoral dimension of labour demand is illustrated in Fig. 8, which shows the increases and decreases in employment across 14 sectors during upturns and downturns in the Danish economy prior to and after the Great Recession. Despite aggregate employment changes being approximately numerically equal in size

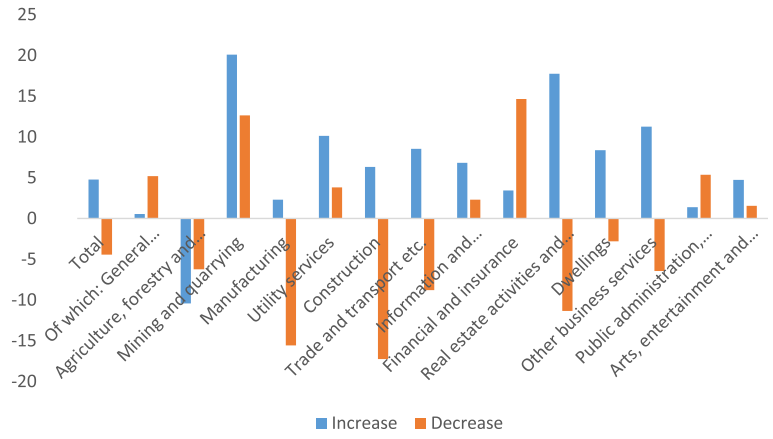

Fig. 8 Employment changes at the sector level; Denmark during boom (2005.1–2008.3) and recession (2008.1–2009.3). Note: The boom and recession period selected such that the aggregate employment change is approximately the same; boom period increase 4.8 %, recession decrease 4.4 %. Employment measured in hours, seasonally adjusted data. Source: www.statistikbanken.dk

across the two business cycle phases, the sectoral changes differ significantly. Changes in employment at the sector level are not symmetric across up- and downturns, although they at the macro level are equally sized.

The above discussion has important implications for how to perceive stabilization policies from a labour market perspective. Stabilization of aggregate demand and activity is not automatically ensuring a stabilization of employment. The cyclical swings may affect differently across sectors and skill groups. Active demand management policies may thus be poorly targeted in terms of the employment effects. The sectors affected negatively by the downturn are not necessarily those affected most by fiscal policy changes. The instruments available to increase aggregate demand in the short run (e.g. infrastructure investments) may primarily affect specific groups (the building sector), and it cannot generally be assumed that this is the area in largest need of a stimulus.[22] More important in relation to the issue of unemployment persistence, aggregate demand management policies are in general poorly targeted those groups in high risk of marginalization (unskilled, migrants, old). Specific labour market instruments like active labour market policies and training and subsidies are more easily targeted and thus appropriate. The expectations on what aggregate demand management policy can accomplish in a labour market context may thus be overoptimistic. Even though a downturn is driven by a fall in aggregate demand, labour market policies remain important.

7 Conclusions

Aggregate demand management in general and automatic stabilizers in particular have been much discussed in the wake of the Great Recession. Automatic stabilizers are important and contribute to the stabilization of the economy. The root of these stabilizers is the design of tax systems and the social safety net, and the so-called participation tax is an important determinant of how the public budget is affected by employment variations. While research has focussed much on the detrimental effects of high participation taxes, the crisis reminds us that their determination involves a trade-off between incentives and

insurance/stabilization. This nexus has not been much researched, and there is clearly a need for more work—both theoretical and empirical—on this issue.

From a policy perspective, it is important that it is possible to strengthen automatic stabilizers without necessarily harming the underlying incentive structure for work and job search. Two such possibilities are workfare elements in the social safety net and explicit business cycle contingencies in the unemployment insurance scheme.

From a labour market perspective, two issues are particularly important—changes in (un)employment and persistent unemployment. Most discussions of these issues take an aggregate approach implicitly assuming that labour is homogeneous and thus easy to reallocate across uses. This assumption is a poor description of actual labour markets, and aggregate demand management policies are in many instances poorly targeted from a labour market perspective. There is a need for more research that targets labour market heterogeneities explicitly and considers how various types of labour are affected by cycles and what the most appropriate policies are.

Endnotes

[1]This is clearly illustrated by the so-called Maastricht assignment for Euro countries stipulating that the monetary authority has the responsibility for the stabilization policy via its inflation targets, while the single member countries can pursue their independent fiscal policies, primarily via automatic stabilizers, to stabilize national activity.

[2]Both due to the liquidity trap and the small response of private investments and consumption to declining interest rates.

[3]Due to failure to consolidate public finances prior to the crisis (pro-cyclical bias in fiscal policy) in combination with fiscal consequences of financial sector problems.

[4]There is some ongoing discussion on whether to establish an EU-wide unemployment insurance scheme. This raises other issues which are beyond the scope of this paper.

[5]There has been some debate whether fiscal multipliers may change signs in particular situations (e.g. in the presence of high debt). The consensus view is that multipliers are positive and larger in downturns than upturns; see Gechert and Rannenberg (2015) for a survey.

[6]The link between variations in income and consumption depends both on the nature of the shocks (temporary/permanent) and whether households are liquidity constrained. Liquidity constraints make the demand effects larger; see e.g. Dolls et al. (2012a) for empirical evidence and e.g. Corsetti and Müller (2015) and Brinca et al. (2015) for theoretical analyses.

[7]The metric here is from the OECD and often used in macro contexts. For an analysis based on microdata, see e.g. Dolls et al. (2012a, b, c) and Auerbach and Feenberg (2000).

[8]This is e.g. explicitly recognized in the fiscal norms associated with the Stability and Growth Pact and the Fiscal Compact in the EU.

[9]In the sense that the response is the same for a given change in income, employment, etc. However, different shocks can affect these variables differently, and the source of the shocks generating cyclical variations thus affects the precise budget effect.

[10]It is assumed that all transfers are taxable income (as is the case in some countries), but this is not crucial for the arguments.

[11]In this simple formulation, there is no distinction between income and consumption. Similarly, profit income is disregarded (taken to be exogenous).

[12]This implicitly assumes that all out of job are entitled to the transfer. The trust of the argument does not depend on this.

[13]In the case where there is only a change in wages in the private sector, the budget effect arises solely from the tax side and the automatic stabilizer is thus smaller in this case.

[14]Using OECD estimates of automatic stabilizers (see van der Noord (2000) and Girouard and André (2005)), the average size across OECD countries has remained unchanged between 2000 and 2005. However, there seems to be a pattern since countries with initial weak automatic stabilizers have tended to get stronger automatic stabilizers, whereas they have been muted for countries with initial strong automatic stabilizers.

[15]Designing active labour market policies involves a number of concerns. Such activities are costly (as an example, direct costs of active labour market policies amount to 1.3 % of GDP in Denmark), and the shift in the trade-off between incentives and insurance is thus not obtained for free.

[16]The Canadian scheme is probably the most sophisticated since it is entirely rule based and operates with business cycle contingencies in three dimensions (eligibility, level and duration). The trigger in the scheme is the regional (13 regions) unemployment rate, which determines eligibility for benefits, the duration of the benefit period and the benefit level. These contingencies are tabulated and thus transparent to all (seehttp://www.servicecanada.gc.ca/eng/sc/ei/index.shtml).

[17]A possibility of multiple equilibria also arises when taking into account the financing of the safety net. Similarly, if incentive problems are countered by costly monitoring, the effectiveness of such monitoring is large at low levels of unemployment reinforcing this situation and oppositely in a situation with high unemployment (Ljungqvist and Sargent (1995)). See also Ljungqvist and Sargent (2008).

[18]Measuring persistence by different measures like autocorrelation for unemployment rates, sign metric and half-lives gives the same result.

[19]Van der Noord et al. (2006) find a weak positive relation between persistence measured by the half-lives of output gaps and social expenditures as a share of GDP.

[20]This also applies to so-called New Keynesian models; see e.g. Gali (2011).

[21]The effects and design of fiscal policy in the presence of sectoral adjustment costs have not beenmuch researched. One exception is Steigum and Thøgersen (2003). In a full employment model, they allow for the costs of transferring labour from the non-tradable sector to the tradable sector. One implication of negative private wealth shocks is that fiscal policy redistributes from future to current generations by running deficits (consumers are non-Ricardian) and that demand for non-tradables is supported in the transition.

[22]The Great Recession clearly illustrates the dilemma. In a number of countries, employment in the construction sector was increasing prior to the crisis due to a housing price bubble. Post crisis, the employment in the sector has plummeted, but it is not obvious that the right remedy in this situation is measured to increase employment in the sector.

Competing interests
The IZA Journal of European Labor Studies is committed to the IZA Guiding Principles of Research Integrity. The author declares that he has observed these principles.

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