

Fiscal and Structural Policy Challenges Created by the Economic Crisis of 2008–2009

The economic crisis of 2008–2009 has greatly compounded the challenge of economic policy-making at the EU level and at the national level. This study focuses on the related real economy aspects, namely on fiscal and structural policies.

Judging from current trends, Austria will most probably not be able to reduce its high deficits of 2009 and 2010 via economic growth alone. Furthermore, the repercussions of the crisis on public finances are going to be exacerbated in the medium term by the implications of demographic change. These developments result in a considerable need for consolidation, which will go significantly beyond the need to finance the economic stimulus packages ex post – but by how much cannot be estimated precisely as yet. At any rate, it will be important to coordinate the necessary consolidation measures internationally, not to undertake consolidation before the economic recovery becomes self-sustained, and to avoid conflicts with other economic policy goals.

Having analyzed the medium- to long-term structural growth potential which may support fiscal consolidation, we find Austria to have got some catching-up potential in terms of labor supply and productivity compared with typical comparison countries. This catching-up potential is good news, as this means that Austria should find it easier than other countries to revive growth. With a view to offsetting the crisis-related loss in potential growth in the medium term, which would materially support consolidation efforts, policymakers could leverage growth above all by raising employment, improving the education system, enhancing competition policies and reforming innovation funding. Economic policymakers in Austria and elsewhere have indeed got the power to influence the growth path after the crisis.

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The economic crisis of 2008–2009 has greatly compounded the challenge of economic policymaking both at the EU level and at the national level by causing a permanent loss in potential output – which may reach between 4% and 6% in the case of Austria (Gaggl and Janger, 2009) – and by sharply driving up public deficit and debt ratios.

This study highlights the implications these developments are likely to have for fiscal and structural policy-making in Austria. Section 1 outlines how the economic crisis of 2008–2009 and upcoming demographic changes would cause public finances to deteriorate significantly and permanently in the absence of consolidation. Section 2 discusses the timing and composition of consolidation strategies: When should policymakers act, and on which areas

should they focus? Section 3 describes structural policy areas in which policymakers in Austria could mobilize as yet untapped growth reserves, judging from a comparison with top European performers. Section 4 offers conclusions.

1 High Consolidation Needs due to Crisis (and Aging Societies)

The global financial and economic crisis has not only caused GDP, and thus real income, to contract in 2009 compared with 2008; it has also caused public finances to deteriorate sharply. An analysis of historical economic crises, especially those associated with a crisis of the banking sector, shows that public deficits – and even more so public debt ratios – may become unsustainable in the medium to long term in the aftermath of a crisis.

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Recent data on, and forecasts of, deficit and debt levels world-wide have confirmed these patterns for European countries and, with some qualifications, also for Austria (see the article by Fenz and Schneider in this issue). Thus, the economic crisis jeopardizes the long-term sustainability of public finances, as economic recovery alone will not suffice to lower debt and deficit levels – it will take further consolidation measures to achieve that. In addition to the medium- to long-term impact of the global financial and economic crisis and its budgetary implications, the impact of Europe's aging

societies constitutes a further risk to the long-term sustainability of public finances, also for Austria.

In the following we discuss the impact of these two aspects on the sustainability of public finances. The notion of sustainability is based on the idea of ensuring intergenerational fairness and is aimed at securing fiscal policy leeway in the long run. In this context the aging-related public expenditures play a key role, as they typically increase the budgetary burden. Box 1 explains how sustainability is defined and measured.

Box 1

Definition and Measurement of Fiscal Sustainability

Economists have developed a number of theories for assessing the long-term sustainability of public finances. These theories are all based on Domar's model of government debt dynamics (1944), and they typically start with the following (current) government budget equation:

(1) $D_t - D_{t-1} = E_t - T_t + SF_t + r_t D_{t-1}$, where: D_t = public debt, E_t = public expenditure (excluding interest payments), T_t = public revenues, SF_t = stock-flow adjustment (which captures transactions that increase the outstanding debt stock but not the deficit), and $r_t D_{t-1}$ = interest payments on outstanding government debt.

Expressing equation (1) as ratios of GDP yields:

(2) $\frac{D_t}{Y_t} = \frac{E_t}{Y_t} - \frac{T_t}{Y_t} + \frac{SF_t}{Y_t} + \frac{1+r_t}{1+g_t} * \frac{D_{t-1}}{Y_{t-1}}$, where g_t ($Y_t = (1+g_t)Y_{t-1}$) denotes nominal GDP growth.

Equation (2) shows that changes in the public debt ratio depend on the primary balance (government net borrowing or net lending excluding interest payments), the stock-flow adjustment as well as the accumulated debt burden (debt ratio multiplied by the interest rate-growth differential). If the interest rate-growth differential is positive, it takes a primary surplus to keep the debt ratio constant.

Intuitively speaking, fiscal policies will be sustainable as long as governments do not default¹ (Balassone and Franco, 2000). The **notions of long-term sustainability** of public finances found in the literature fall into three broad families:

- According to Domar (1944) the public debt ratio should converge to a finite value in order to avoid a continual rise of the tax burden.
- Sustainability as defined in Buiter (1985), Blanchard (1990) and Blanchard et al. (1990) requires that the debt ratio converges back to its initial level (in order to prevent the debt ratio from exploding).
- Taking this idea one step further, Blanchard (1990) and Blanchard et al. (1990) define a fiscal rule that will ensure the convergence of the debt ratio to its initial level – and thus sustainability. According to this rule, the discounted value of all future primary surpluses equals the current level of public debt.

¹ A government would be considered to have defaulted on its debt if it is no longer in a position to refinance itself, i.e. to place debt securities in the market.

Even though there is no agreed definition of what constitutes a sustainable position of public finances (Balassone and Franco, 2000), analyses of fiscal sustainability tend to concentrate on the public debt ratio, as a continually growing debt ratio and fiscal sustainability are considered to be a contradiction in terms.

Fiscal sustainability may be measured either *ex ante* or *ex post*. **Forward-looking methods** for evaluating fiscal sustainability (e.g. debt ratio projections; synthetic indicators as published by the European Commission) combine information available on the future development of public finances with assumptions on the macroeconomic and demographic framework conditions. The quality of these methods is constrained by the input of projection values, which are highly dependent on the underlying assumptions (e.g. on the interest rate-growth differential). Moreover, the sustainability assessment is biased by the budgetary conditions of the basis year (e.g. size of the primary balance), as those conditions have a significant impact on the projected development of the debt ratio. For those reasons, the ability to derive robust evidence on the timing and extent of budgetary action (Giammarioli et al., 2007) very much depends on a meaningful interpretation of the size and sign of the indicators (Knell et al., 2006).

Ex post analyses with **backward-looking methods** essentially evaluate fiscal sustainability by assessing past compliance with intertemporal budget constraints. A major shortcoming of such analyses is the fact that a “clean bill of health” for a given review period does not provide meaningful information about the future solvency of a government. Moreover, numerous industrial countries whose fiscal policies have been found to be unsustainable in *ex post* analyses never actually experienced insolvency problems.

Sustainability analyses are, as a rule, based on partial equilibrium models, which do not allow for any interaction between fiscal variables and macroeconomic variables. In other words, these methods ignore the impact that alternative fiscal policies may have on macroeconomic developments (such as the upward pressure that higher debt ratios exert on the interest rate level).

The **European Commission** assesses the fiscal burden of demographic aging with two synthetic indicators named “S1” and “S2” (European Commission, 2005). These two sustainability gap indicators show the size of the budget adjustment that is required to ensure that a given (future) target debt ratio is reached. These indicators are based on the sustainability concept of Blanchard et al. (1990), with the exception that the underlying target is not the original debt ratio but the upper limit for the debt ratio prescribed by the Treaty of Maastricht (60% of GDP), which is the European Commission’s yardstick for sustainability. S1 shows the budget adjustment required to reach the target debt ratio in 2060, S2 show the sustainability gap for an infinite time horizon.

The specification of the **indicator S1** of the European Commission yields, subject to the projections of age-related expenditure, the difference between the current tax ratio and the tax ratio that is required to reach a debt ratio of 60% of GDP in 2060. The important thing is that the (tax) gap thus quantified needs to be closed immediately, as the indicator signifies the permanent adjustment that is necessary to ensure sustainability. Moreover, the need for adjustment quantified by S1 is limited to the observation period (Langenus, 2006).

The **indicator S2** is based on the government’s intertemporal budget constraint over an infinite horizon and shows the difference between the current tax ratio and the tax ratio that is required to adjust the current debt ratio to the discounted value of all future primary balances.

In its **2009 Sustainability Report**, the European Commission (2009e) finds Austria to have a sustainability gap (S1) of 3.8% of GDP, based on the budgetary position of 2009, the European Commission’s spring forecast and the projected increases in age-related expenditure (European Commission, 2009c); in the “lost decade” crisis scenario, which assumes below-average growth until 2020, the sustainability gap would be even 5.3% of GDP. Measured in terms of S2, Austria is found to have a sustainability gap of 4.7% of GDP (or 6.1% of GDP in the “lost decade” crisis scenario).

The following comments are not based on a specific notion of sustainability, as the prevailing big uncertainty about macroeconomic developments in the future (and thus about estimates for the output gap or the structural budget balance of the basis year) would not allow for an exact and reliable quantification of the need for consolidation (or of the sustainability gaps). Much rather, the paper shows that it will take fundamental consolidation measures and structural reforms, even under relatively optimistic macroeconomic assumptions, to reach a trend primary deficit that is small enough to reduce the public debt ratio to a level of or below 60% of GDP.

1.1 Structural Deterioration of Public Finances Caused by a Combination of Factors

Part of the crisis-related deterioration in public finances will have long-term implications, thus creating a need for consolidation in the post-crisis period. The burden on public households has been increased by a range of direct (1) and above all indirect factors (2, 3 and 4):

1. fiscal cost of financial market intervention (= direct fiscal cost of financial crises);
2. additional debited interest resulting from the sharp rise in debt ratios;
3. discretionary fiscal policy stabilization measures (especially if permanent);
4. permanent effect of automatic stabilizers following a loss in potential output.

The fiscal effects of financial market interventions include above all the potential cost of guarantees, in case the underlying risks should materialize, and overvalued purchases of problem banks or their toxic assets. These costs loom

large in the public mind; yet how big an effect these measures are actually going to have on public finances in Austria, or in other EU Member States or worldwide, is difficult to say at the current juncture. At any rate, these direct costs can be expected to be a mere fraction of the associated indirect costs. According to Cottarelli and Viñals (2009b), even in the current crisis, only a relatively small portion of the expected debt surge is due to official financial support operations. This has been the rule also in past financial crises, as is evidenced by historical analyses provided by Reinhart and Rogoff (2009) or by the European Commission (2009e, Part III).

The public debt ratio is expected to shoot up quickly also in Austria. At present, the OeNB projects the debt ratio to climb by more than 14 percentage points from end-2008 to end-2011 (see Fenz and Schneider in this issue on the OeNB's December 2009 economic outlook). The measures taken to stabilize the banking sector actually account for a relatively small share of this increase. The key drivers behind the budget deterioration are the free operation of automatic stabilizers and the discretionary fiscal policy stabilization measures. Even if output growth were to return to its old path and even if all stabilization measures were to be of a temporary nature, the surge in debt would still have effects into the future through higher interest payments. Given that average interest rates on public debt currently exceed average nominal output growth in Austria, as in most other euro area countries, and given that this negative interest rate-growth differential is likely to persist in the next decade, the government will need to achieve a higher primary balance to stabilize the debt ratio.

While there is a case for economic stimulus packages in the current situation,² it must also be clear that such packages create the need for even further adjustments when the crisis is over. These adjustment needs may go beyond the afore-mentioned higher interest burden if, as is the case in Austria, the bulk of measures is of a permanent nature (tax reform including family package; most of the measures adopted by parliament on September 24, 2008).³

At the time of writing it is too early to say whether and, if so, how deeply the economic crisis of 2008–2009 may affect the long-term potential growth rates of the individual economies (Gaggl and Janger, 2009). Yet even if

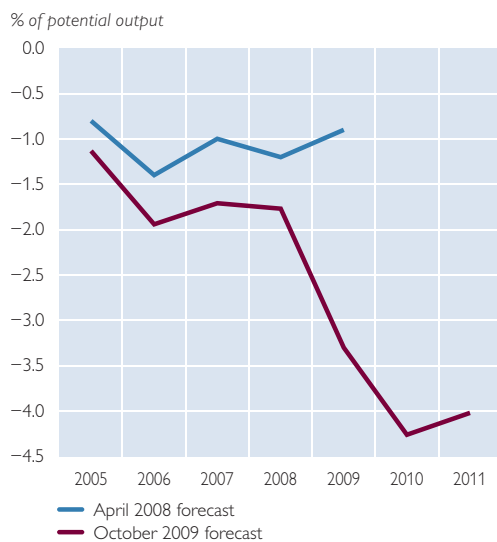
the economies were to return to their pre-crisis potential growth rates when the crisis is over, they would appear to be unlikely to recoup all of the output losses incurred in 2009 and 2010 in the foreseeable future. Subject to the free operation of automatic stabilizers, this fact constitutes an additional challenge for fiscal policy, as lower output will go hand in hand with lower tax revenues, and as a potentially higher trend unemployment rate will push up social transfers. This means that the cyclically adjusted budget balance is going to deteriorate.

Chart 1 shows how these effects add up, comparing the European Commission's spring 2008 forecast for Austria's cyclically adjusted general gov-

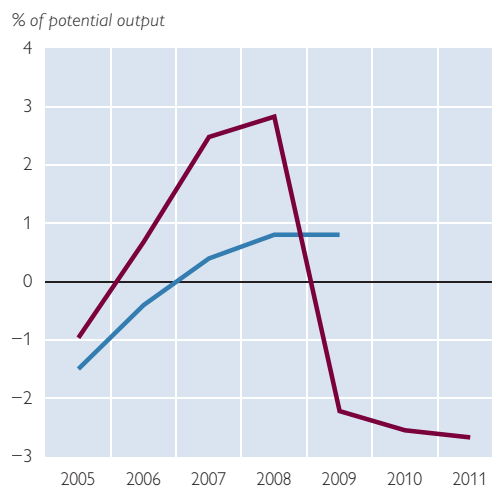
Chart 1

Change in the European Commission's Forecast for Austria

Cyclically Adjusted Budget Balance



Output Gap



Source: European Commission.

² See Almunia et al. (2009) for evidence on the relatively high multipliers with which discretionary fiscal policies come attached in times of crisis, as well as Köhler-Töglhofer and Reiss (2009) for the merits of using stimulus packages in the current situation.

³ Subject to a very narrow interpretation of “permanent fiscal measures,” even the tax reform and increases in some transfers would not qualify as such, as income tax brackets as well as the size of some of the transfers in case (e.g. family allowance) are not indexed. In other words, any additional negative fiscal impact of such measures will be automatically reduced by any bracket creep that may occur in the future, or by any real depreciation of such transfers.

ernment budget balance⁴ and its output gap⁵ (which was still based on the assumption that the economic downturn would be limited) with the Commission's autumn 2009 forecast. The latter brought a downward ex post revision of the cyclically adjusted balance for 2006 by 0.5 percentage points and for 2007 by 0.7 percentage points. The European Commission considered a comparatively larger part of the tax revenues of those years to be of a cyclical nature in its autumn 2009 forecast – which means that it has become more pessimistic in its assessment of the underlying structural developments. This change in the assessment of Austria's cyclical position is also evident from the sharp downward revision of the output gaps for those years.

Furthermore, the comparison of the successive forecasts for 2009 highlights the effect of the comprehensive discretionary fiscal measures that were adopted after the spring of 2008. Together with the very low growth of potential output estimated for 2010, those measures are a key driver behind the further deterioration in 2010.⁶

1.2 Without Consolidation, Public Finances Would Deteriorate Further until 2020

1.2.1 Even Comparatively Optimistic Assumptions ...

The following scenario is meant to show how Austria's debt ratio and deficit ratio are likely to change, even under optimistic macroeconomic assumptions, should policymakers fail to un-

dertake fiscal consolidation until 2020. This scenario is based on the following assumptions:

- The starting point for our scenario is the OeNB's economic outlook from 2009 to 2011 (see Fenz and Schneider in this issue). According to these projections, the OeNB expects Austria to have a deficit ratio of 5.4% of GDP, a debt ratio of 76.9% of GDP, and a negative output gap of 1.9% of potential output in 2011. We assume this gap to close in a linear fashion from 2012 to 2014. Over the years, the loss in potential output would thus add up to slightly more than 5% of GDP compared with a baseline scenario without a crisis.
- We assume that the temporary measures adopted until 2011 will indeed be phased out thereafter. Moreover, we expect the revenues from profit-related taxes, which declined more sharply in 2009 than historical elasticities would have suggested, to return to the old trend path by 2014 (so that the GDP share of these revenues will rebound to the 2006 level in 2014). This would allow the government to recoup some of the revenue shortfall that occurred in 2009.
- The trend growth of real GDP and the rise in age-related expenditure for education, long-term care, health care and pensions as a share of real GDP from 2020 onward are based on the latest Ageing Report of the European Commission

⁴ General government budget balance as adjusted for the estimated effect that the business cycle may have through the play of automatic stabilizers.

⁵ Difference between current output and potential output in percent (for an extensive discussion of the concepts of potential output and output gap, see Gaggli and Janger, 2009).

⁶ The autumn 2008 forecast was completed shortly before the economic crisis broke out (i.e. before the stimulus packages were adopted). At the time, the European Commission expected Austria's cyclically adjusted budget deficit to reach 1.2% of potential output in 2010. This forecast has since been revised upward by around 3 percentage points.

(2009c).⁷ The GDP share of age-related expenditure is projected to rise by roughly ½ percentage point from 2011 to 2020.

- All other revenues and other categories of primary expenditure are assumed to grow at a trend rate of 2%, which corresponds to the average rate of GDP growth (2012 to 2020) and implies constant structural ratios.⁸ Like the European Commission (2007) we also assume the primary balance to have a semi-elasticity of 0.47⁹ relative to real GDP.
- For the period from 2016, we expect real interest rates on public debt to be 2.5% per annum, with interest rates gradually rising to this level from 2012 to 2016. A level of 2.5% roughly matches the average since 1999 and is below the 3% level assumed by the European Commission in its Ageing Report (2009c).
- We have not specifically taken into consideration the government's banking package, as the amounts budgeted so far have negligible effects on the debt ratio (less than 1.5% of GDP in 2020) and on the deficit ratio (roughly neutral).

Our scenario runs until 2020, as this is roughly the point when the effects of

aging on the Austrian economy in general and on public finances in particular are going to increase sharply (see below).

1.2.2 ... Imply a Further Rise in the Debt Ratio in the Absence of Fiscal Consolidation

Even under this fairly optimistic macroeconomic scenario would the public debt ratio rise to about 92% of GDP until 2020 (see chart 2 for an overview). While the budget balance improves until 2014 as the negative output gap is closed, the fact that the debt ratio will have breached the 80% mark by then means that the primary balance would still be roughly 1.5 percentage points below the level that would be necessary, under the underlying interest rate and growth assumptions, to stabilize the debt ratio at this very high level.

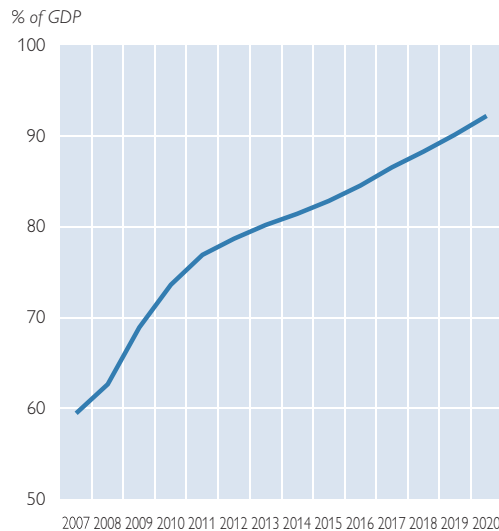
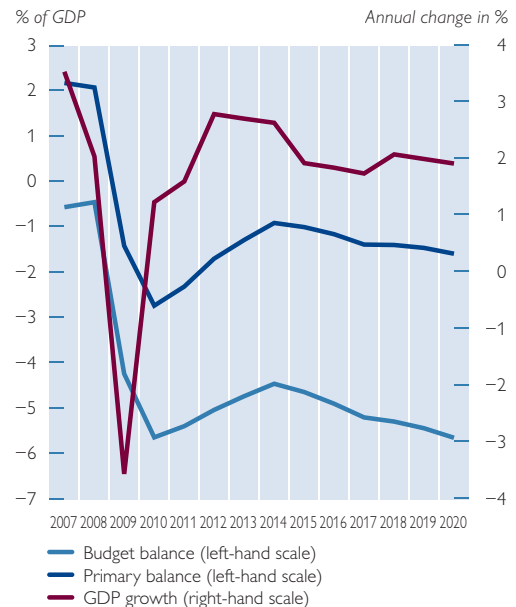
Yet given the growing share in GDP of interest payments on government debt (from 2.5% of GDP in 2008 to 3.5% of GDP in 2014, to 4.1% of GDP in 2020)¹⁰ and given the slight rise in age-related costs we will see even in this period and the assumed economic slowdown, both the budget deficit and the debt ratio stand to deteriorate further. As noted in section 1.1, the higher interest rate burden exacerbates the need for consolidation.

⁷ We wish to thank Caroline Haberfellner for having made the underlying data available to us. While these data are based on a different macroeconomic scenario (the assumptions were made before the fall of 2008; see below), the dampening effect of comparatively weaker employment growth and of lower real wages on pension benefits (reflecting lower pensionable earnings and shorter contribution periods of newly retiring workers) will remain limited on pensions in Austria until the medium term, because unlike in other countries, pension benefits are indexed to consumer prices in Austria.

⁸ In other words, we assume that quantity taxes (such as the petroleum tax), fees, nominally fixed transfers and wage and income tax brackets will be adjusted regularly, or that these factors will offset each other.

⁹ An increase in output growth by 1 percentage point changes the budget balance by 0.47 percentage points (through the automatic stabilizers).

¹⁰ In calculating the budget deficit, we furthermore assumed that the GDP deflator would grow by 2% (thus implicitly using the change in the GDP deflator to calculate real interest rates). The results for the debt ratio and for the primary balance would be the same even if we used different assumptions for the inflation rate (see e.g. Blanchard and Illing, 2009, chapter 27).

Scenario: Development of Public Finances until 2020 without Consolidation**Debt Ratio****Budget Balance, Primary Balance and GDP Growth**

Source: OeNB, Statistics Austria.

The scenario outlined here is somewhat more pessimistic about the development of the debt ratio until 2020 than the baseline scenario that the European Commission used in its latest Sustainability Report (2009f); it does, however, broadly match the mechanical projections without consolidation that the European Commission published in its autumn 2009 forecast (2009g, Part I, chapter 3).

The diverging underlying assumptions make the projections of the individual scenarios hard to compare, though. For instance, the scenarios of the European Commission are implicitly based on a spending elasticity of close to 1 relative to real GDP (with the exception of pension payments). A spending elasticity of close to 1 means

that the shares of spending aggregates in GDP will remain broadly constant as long as the demographic development remains constant. If we assume GDP to have dropped by a cumulative 10% over x years, this would mean that, say, health-care expenditure will likewise have gone down by a cumulative 10% over the same period.¹¹

In our scenario, we have expressly refrained from making such an assumption, even though real spending growth will have to go down by necessity during an economic setback in order to avoid an explosion of spending. Yet such measures are in fact already consolidation measures. Moreover, this assumption would imply that, in a short- to medium-term perspective, automatic stabilization would be limited to cycli-

¹¹ This assumption is controversial. It does, however, explain why, in the lost-decade scenarios of the European Commission's Ageing Reports and Sustainability Reports, the additional cost of aging in % of GDP is shown to be largely driven by pensions for Austria but also for the EU average, whereas the share of health-care expenditure in GDP remains basically unchanged when compared with the baseline scenario.

cally sensitive spending categories (typically passive labor market policies, such as unemployment benefits, or possibly short-time working arrangements).¹²

The minimum structural adjustment need highlighted by our scenario exceeds the 1.5% of GDP that would be necessary in the short run to stabilize the debt ratio (as outlined above) at the level of 2014. After all, the demographic changes start to affect public households already in the second half of the next decade, by raising costs for pensions, health care and long-term care, and above all by reducing trend growth. Lower output growth, in turn, increases the primary balance required to stabilize debt, while at the same time causing the actual primary balance to shrink through the effect of the automatic stabilizers. The automatic stabilizers affect the primary balance only through weaker tax revenue growth, however, as the slowdown in output growth reflects a smaller supply of labor rather than a rise in the unemployment rate.

1.3 Developments from 2020 Shaped by Demographic Change

From roughly 2020 onward, the budgetary pressures of demographic change will increasingly add to the repercussions of the economic crisis. This shift in the weight of the driving factors

makes 2020 an ideal end point for our scenario.

The Ageing Report of the European Commission (2009c) projects the working-age population in Austria to keep increasing until 2020, but to decline thereafter (see table 1 for an overview of key demographic metrics and projected age-related costs for Austria for the period from 2007 to 2060).¹³ While the overall population will keep growing beyond 2020, partly through migration, the share of the population aged 65+ will increase by a disproportionately large extent.¹⁴ The reduction in the working-age population will cause potential output growth to drop relatively sharply,¹⁵ which will in turn hurt growth of tax revenues and social security contributions.

At the same time, these projected dynamics – growth of total population, reduction of working-age population – imply that in the absence of offsetting measures the growth rate of public spending will exceed that of revenues or GDP. This is especially true for spending on health care and on long-term care. The pension reforms that Austria adopted between 2001 and 2005¹⁶ actually keep the rise in pension expenditure relatively low compared with other EU countries. Due to these measures, Austria boasts the fourth-lowest real increase in average pensions in the period from 2007 to 2060 within

¹² In reality, though, the public sector automatically creates stabilization effects for the real economy by continuing to pay public pensions, retaining public employees etc.

¹³ The macroeconomic assumptions for the baseline scenario were taken before the summer of 2008, i.e. before the economic crisis hit Europe with full force. This is why the results in table 1 on employment and potential output growth in 2010 and the figures on age-related expenditure as a percentage of GDP are not directly comparable with the scenario until 2020 in section 1.2.

¹⁴ This causes the dependency ratio to rise sharply.

¹⁵ The baseline scenario projection reflects the assumption that the labor market participation of the working age population (15–64) will rise, that the unemployment rate will drop slightly, and that productivity growth will remain broadly constant in Austria over the period from 2007 to 2060.

¹⁶ Among other things, the reforms provided for longer averaging periods and lower accrual rates. However, some reforms were subsequently diluted somewhat, e.g. through the extension of the early retirement scheme for workers with long employment histories.

Table 1

Key Results of the Ageing Report for Austria							
	2007	2010	2020	2030	2040	2050	2060
<i>million</i>							
Total population	8.3	8.4	8.7	9.0	9.1	9.1	9.0
<i>Share in total population in %</i>							
65 years and above	16.9	17.6	19.4	23.7	27.2	28.2	29.0
below 15 years	15.6	14.9	14.3	14.1	13.6	13.5	13.8
<i>Annual change in %</i>							
Working-age population (from 15 to 64 years)	+0.2	+0.4	+0.1	−0.6	−0.1	−0.2	−0.3
Employment	+0.7	+0.6	+0.2	−0.2	−0.2	−0.2	−0.2
Potential GDP	+2.2	+2.2	+1.9	+1.5	+1.5	+1.5	+1.5
<i>% of GDP</i>							
Age-related expenditure	26.0	25.7	26.2	27.7	28.6	29.3	29.0
of which: Pensions	12.8	12.7	13.0	13.8	13.9	14.0	13.6
Health care	6.5	6.6	7.0	7.4	7.8	8.1	8.0
Long-term care	1.3	1.3	1.4	1.7	2.0	2.4	2.5
Unemployment	0.7	0.6	0.6	0.6	0.6	0.6	0.6
Education	4.8	4.5	4.1	4.2	4.2	4.2	4.3

Source: European Commission (2009c, 2009d).

the EU; and within the euro area Austria is outperformed only by Italy (European Commission, 2009d, table A66).

Until roughly 2020, the projected rise in the spending ratios for health care, pensions and long-term care is broadly offset by a considerable decline in the share of spending on education in GDP. The number of students is expected to bottom out in absolute terms around 2020 (European Commission, 2009d, table A111). From 2020 onward, the share of age-related expenditure in GDP is projected to rise by 3 percentage points until 2050, and to shrink somewhat until 2060.

In the baseline scenario of the Ageing Report the rise in spending is driven not only by purely demographic factors, but also by rising demand (especially for public health care). Given the

assumptions underlying the Ageing Report for the long-term projections for Austria, it does not come as a surprise that those assumptions may be found to be controversial.¹⁷

Looking ahead, based on current knowledge, the additional costs arising from demographic aging would appear to be higher than the additional costs created by the global economic crisis.

2 When and How to Consolidate?

The following section essentially deals with the action required to offset the rise in the deficit and debt ratios in the aftermath of the economic crisis of 2008–2009. Economic policy measures that may be taken to counter the problem of demographic change are also touched upon in section 2 but discussed in greater detail in section 3.

¹⁷ See e.g. Kramer (2009), who challenges the optimistic assumptions regarding the development of early retirements.

2.1 Fundamental Considerations

Given the sharp global contraction, the expansionary fiscal measures that policymakers adopted by concerted international action to dampen the setback and stabilize the real economy have driven up public deficits. Exceptionally high public deficits are an economic necessity in times of recession, but they are not sustainable. In order to restore and secure the long-term sustainability of fiscal policies it is imperative to permanently reduce the current high level of deficits so as to keep the debt ratio from exploding.

If the consolidation drive of the coming years is to be a success, it will have to go beyond a mere stabilization of the debt ratio once the crisis is over. There are three reasons for this: First, Austria will have to meet the requirements of the European fiscal framework (see below). Second, the challenges that result from aging populations, as outlined in section 1.3, will have to be tackled. These challenges alone imply that the medium-term need for consolidation and reform will go far beyond the short-term requirements under the corrective arm of the Stability and Growth Pact (reducing the deficit ratio to below 3%). Third, the government will have to create scope for the operation of the automatic stabilizers and for discretionary measures that may have to be taken in future crises¹⁸ – in other words, the government will have to strengthen Austria's resilience to shocks. As evidenced by Nowotny (2009), the stabilizing function of fiscal policy had been limited since the 1980s because of insuffi-

cient action to reduce structural deficits.

2.1.1 The Dampening Effect of Consolidation on the Real Economy Requires ...

While the principle necessity of post-crisis consolidation is undisputed, there is a lack of agreement about WHEN the crisis would be considered to be over in order to be able to actually launch consolidation measures. When making the start of consolidation contingent on a “self-sustained economic revival” one forces the same problem. According to the OeNB's latest economic outlook, the contraction has bottomed out. At the same time, the recovery continues to be based on numerous special factors, including comprehensive expansionary monetary and fiscal policy measures. Unwinding those expansionary fiscal measures too soon would jeopardize the as yet fragile recovery and would thus prolong the recession and increase unemployment (and hence undo previous improvements of the fiscal situation to a certain extent); there is no unambiguous empirical evidence for the existence of non-Keynesian effects in this context.¹⁹

2.1.2 ... Coordinated Action within the European Fiscal Framework ...

Given the high degree of international economic integration, national consolidation measures have dampening effects on trading partners' economies. These spillover effects essentially call for consolidation strategies to be coordinated internationally similar to the way support measures have been coordinated.

¹⁸ According to an IMF analysis of the packages adopted by India, China and the G-7 countries, countries with originally lower debt ratios have tended to put together bigger packages (Horton and Ivanova, 2009).

¹⁹ See Prammer (2004) for an overview of non-Keynesian effects, a description of the conceptual frameworks and an assessment of their empirical relevance.

For the EU Member States, the Treaty establishing the European Community and the Stability and Growth Pact, which are binding for Member States, constitute an operational framework for coordinating the timing and extent of consolidation. Under the provisions of the excessive deficit procedures under Article 104 (7) of the Treaty, the earliest possible start of consolidation as well as the year until which the deficit must have been brought back below 3% of GDP have been laid down for the countries concerned. Moreover, the minimum structural consolidation that is to be achieved per year during the respective period has been specified. The recommendations and requirements of the European Commission or of the European Council are guided by the principle of taking adequate account of national conditions and particularities, such as the size of the economic or fiscal contraction, or the size of the debt.

Based on the recommendations of the European Council (2009) made at the end of November 2009, Austria should continue implementing the fiscal measures under the stimulus package in the first half of 2010. At the same time, Austria is expected to develop a detailed consolidation strategy until June 2010, which it should start implementing in 2011, so as to remove the excessive deficit by 2013. Consolidation should moreover be designed to reverse the trend in the government debt ratio, so as to ensure a gradual reduction to the reference value of 60% of GDP in the foreseeable future.

2.1.3 ... and A Credible Long-Term Strategy that is Communicated as Soon as Possible

Box 2 summarizes the principles for fiscal consolidation recommended by the OECD and the IMF. These princi-

ples essentially relate to the design of the exit and consolidation strategies (i.e. type and composition of measures) and underline the necessity of communicating clearly that these strategies will be implemented in the medium term.

The OECD considers the question of “when” to wind down measures to be of secondary importance. What is of primary importance is how to proceed – in the sense that “getting the exit process right will be more important than doing it quickly” (OECD, 2009f). In this respect, the focus should be on both reaching fiscal sustainability and raising potential output (section 3). According to the OECD, it would be important to target a smooth transition between phasing out temporary support measures stimulating the economy and strengthening financial market stability, and phasing in structural measures with a medium- to long-term horizon. When unwinding temporary stimulus and stabilization measures too late, policymakers run the risk of destabilizing expectations, thus undermining the effect of the implemented measures and raising the actual need for consolidation (through rising interest payments on public debt).

As argued by Giavazzi (2009) structural reform measures promising medium-term savings – such as the introduction of fiscal rules or medium-term finance plans; raising the regular retirement age – should have priority, in order to convince investors that policymakers really mean to resume sound fiscal policies and in order to prevent investors from demanding risk yields on sovereign bonds. While such measures do dampen spending in the medium term, they do not imply any short-term setback in demand.

OECD and IMF Principles for Fiscal Consolidation

OECD (2009e)

- Economic stimulus measures that have been adopted should be implemented in full as planned.
- Stimulation measures should be phased out and consolidation measures should be phased in once the economic recovery gains momentum. Measures need to be aligned with the overall macroeconomic conditions and with monetary policy measures.
- Credible, medium-term consolidation strategies need to be coordinated and communicated quickly in order to prevent expectations of continued high or rising debt ratios, which would increase the pressure on long-term market interest rate levels and dampen private consumption.

IMF (2009b, G-20 Meeting on November 6 and 7, 2009)

- The timing of exits should depend on the state of the economy and the stability of the financial system.
- Fiscal exit measures should be transparent, comprehensive and communicated clearly now, with the goal of lowering public debt to prudent levels within a clearly specified time frame.
- Fiscal adjustment should be achieved through measures that strengthen the primary balance (rather than through fiscal transactions with which governments would “sell the family silver”).
- The temporary nature of fiscal stimulus measures must be beyond any doubt.

2.2 Where to Start with Consolidation?

The potentially most controversial issue is the question of which taxes to increase, and which spending items to cut.

2.2.1 Increasing the Structural Primary Balance through Spending Cuts and, If Need Be, by Raising “Growth-Friendly” Taxes

Public interventions in time of crisis and exit policies may have highly divergent effects on macroeconomic developments, depending on the design of the measures and the starting conditions. Those are the findings of, for instance, Kehoe and Prescott (2007), who examined in their analysis of great

depressions why Chile managed to achieve dynamic productivity growth whereas Mexico witnessed stagnation after the crises in the 1980s (see also the example of Japan versus Sweden and Finland in this study or in Gaggli and Janger, 2009).

Sweden and Finland, too, suffered strong economic contractions as a result of banking crises or the disappearance of key trading partners following the collapse of the Soviet Union in the early 1990s. Based on Handler (2008) we describe the fiscal policies of those two countries in the 1990s in box 3. Sweden and Finland also represent important benchmarks for structural policy recommendations in section 3.

Consolidation Success of Finland and Sweden after Economic Crises in the 1990s

In Finland, a deep economic crisis breaking out in the early 1990s – triggered by the bursting of a financial bubble in the late 1980s and the collapse of trade with the Soviet Union – caused the budget balance to change from a surplus of 5.4% of GDP (1990) to a deficit that peaked at 8.3% in 1993. Finland consolidated its public finances from 1994 onward above all by cutting spending (reduction of transfers to households and of subsidies to businesses, cuts of public consumption expenditure) and through institutional reform (multi-year budget process with spending ceilings, facilitation of spending cuts through a lowering of decision-making ratios in parliament, replacement of margin calls on the central government with intergovernmental appropriations based on budget forecasts). The fiscal measures were supplemented with monetary policy measures and macroeconomic structural reforms (e.g. of the banking system, the labor market and the pension system). In actually implementing the announced measures, the Finnish government successfully stabilized expectations, which contributed significantly to the real success of the measures.

In Sweden, a financial crisis emerging in the late 1980s and a heavy recession hitting in the early 1990s caused the budget surplus to turn into a massive deficit, which peaked at 11.2% of GDP in 1993. Sweden launched a comprehensive consolidation program in 1994: Guided by the goal of unconditionally eliminating the budget deficit until 1998, Sweden put the main emphasis on spending cuts (e.g. reduction of transfers, subsidies, public wage bill; limits for intergovernmental appropriations and for the debt capacity of regional and local governments). These measures were supplemented with specific revenue measures (e.g. increase of social contributions). The consolidation process was moreover accompanied by institutional measures (e.g. expansion of parliamentary control, introduction of spending caps).

Both Sweden and Finland appear to have benefited from their central consolidation strategies, i.e. from including all levels of government, also the local governments; from reforming the institutional budget process, such as changing over to a multi-year budget plan; from giving priority to spending cuts over revenue increases; and above all from the credibility of their political consolidation strategy (by acting on announcements) as well as from favorable monetary policy framework conditions. The rapid recovery of the economy and the increase of trend output growth were proof of the strategy's effectiveness.

The lessons from Sweden and Finland are, of course, not fully transferable to the case at hand. Both Sweden and Finland had suffered from a regional crisis, and they both benefited from strong export growth in the recovery stage. In the case at hand, we are dealing with a global crisis, as is well known, and the global setback in demand has hit small, open economies, such as Finland, Sweden and Austria, across the board. Yet Finland and Sweden this time had a better starting position thanks to the consolidation measures they had taken before the global crisis, which has given them more leeway for discretionary measures and for letting the automatic stabilizers work and which facilitates consolidation after the crisis.

To reduce the general government debt ratio, policymakers must use the very channels through which the fiscal position was affected in the first place. In other words, economic policymakers should strive to increase real GDP growth in a sustainable manner and to raise the structural primary balance (section 1.1). To be successful, the consolidation strategy must also include

measures that would improve the quality of the public finances.

Sustainable consolidation strategies go beyond improving budgetary conditions by effectively contributing to raising the growth path in the medium run. A comparatively higher growth path will, in turn, create leeway for fiscal policy. Economic policymakers could leverage growth by enhancing

quality, quantity and productivity of production factors. We are dealing with these issues in section 3. Some of the potential structural reforms discussed there may even have direct, and not only indirect, fiscal implications, such as measures that would raise the effective retirement age.²⁰

Yet a (sustainable) consolidation strategy hinges above all on an adjustment of the primary balance, which may a priori be achieved through spending cuts or revenue increases. Empirical evidence suggests that consolidation measures tend to be more successful (i.e. more sustainable) when they are based on spending cuts (e.g. Ardagna, 2004; European Commission, 2007, part IV). What is also crucial is that revenue increases or spending cuts do not conflict with other economic policy goals, as would, for instance, spending cuts for research, education and childcare projects (section 3).

Spending cuts should, as far as possible, be achieved through an increased output orientation and measures that raise efficiency. In this respect, the second part of Austria's budget law reform, which takes effect in 2013, may create a positive momentum, as may efforts to improve the quality of the public finances in general (e.g. Haberfellner and Part, 2009). Measures to improve the incentive structures of the fiscal sharing scheme (Schratzstaller, 2006)²¹ as well as measures to enhance the efficiency of public administration at all levels of government and in the area of health care and education have typically been cited as ways to achieve this goal (e.g. during the current IMF

article IV consultations with Austria, 2009a).

On the revenue side, policymakers would be well advised to consider redistribution effects as well as the "growth friendliness" or the allocative effect of different options. Based on an empirical study by Johansson et al. (2008), the OECD (2009e) has formulated the general recommendation of raising taxes on immovable property and consumption (above all the consumption of goods with negative externalities such as alcohol, tobacco and fuel).

Likewise, the IMF (2009a) advised Austria against increasing the tax burden on labor, recommending petroleum tax and land tax increases instead.²² The IMF's recommendations match the recommendations identified by WIFO, the Austrian Institute of Economic Research, with regard to offsetting measures that would allow the government to reduce the tax burden on labor (Aiginger et al., 2008).

Payroll and wage taxes as well as relatively high social security contributions push the average and marginal tax burden of Austrian workers with low or medium wages far beyond the corresponding OECD and EU-15 averages (OECD, 2009d). This is why policymakers would be well advised not to increase taxes on labor any further (Haberfellner and Part, 2009). We also wish to point out that – from an incentive perspective – the tax burden on labor needs to be assessed together with the transfer system, as upper income limits or progressive adjustments of transfers raise effective marginal tax rates.

²⁰ Raising the retirement age is imperative for securing the long-term sustainability of the public pension systems, as well as for preventing too sharp an economic contraction as a result of demographic change.

²¹ For instance, it has often been criticized that compulsory school teachers are regional civil servants but paid by the central government (see also Government Debt Committee, 2009).

²² The IMF estimates that those measures might contribute up to ¾% of GDP to consolidating the budget.

2.2.2 Temporarily Higher Inflation is No Viable Option

In the literature, allowing higher inflation rates is also discussed as a possible solution, as an unexpected rise in inflation would lead to a real devaluation of the nonindexed part of outstanding public debt. Moreover a rise in inflation – be it expected or unexpected – would increase seigniorage income. Cottarelli and Viñals (2009a) estimate an annual inflation rate of 6% from 2009 to 2014 in the highly developed economies to depress the debt ratio by 8 to 9 percentage points by 2014. Likewise, a rise in the inflation rate by 1 percentage point in the G-7 economies would increase seigniorage income by roughly 0.1% of GDP, given the low levels of base money.

The current situation differs somewhat from past episodes of high public debt ratios, which have typically been the result of warfare. While wars may sharply drive up national debt levels, the primary balance will, as a rule, improve automatically once the war is over (as military expenditure goes down again).

At the current juncture, a real devaluation of outstanding public debt would indeed reduce the effect of additional interest payments by lowering the debt ratio, yet it would have no direct impact on the primary balance, which has deteriorated permanently given a loss in output and lasting economic stimulus measures. Higher inflation rates would affect the primary balance only through a real reduction of nominally fixed transfer payments (such as the family allowance) and through the effect of bracket creep. In fact, even lower inflation rates may have such effects (in a weaker form) – which goes to show that inflation may also have undesirable effects on redistribution and growth.

Moreover, public refinancing costs might rise despite disinflation if inflation expectations and thus market interest rates were to remain high (at least temporarily).

3 Economic Policy Options for Raising the Medium-Term Growth Path

Gaggl and Janger (2009) as well as section 1 of this study have highlighted the potential economic and fiscal effects that the current crisis may have under an unchanged-policy assumption. Section 3 discusses how higher output growth would support fiscal consolidation. Given that trend growth had started to decline even before the crisis hit the Austrian economy, in early 2008, the question arises as to how an optimistic growth scenario might be achieved. Economic policies aimed at raising the medium-term growth path in times of crisis may be guided by three big goals or guidelines: First, avoid past mistakes; second, raise the quality and quantity of labor and capital; third, raise the productivity of labor and capital. Concrete economic policy measures derived from those guidelines will have to take adequate account of today's big challenges: climate change, increasing competition in the wake of globalization as well as demographic aging. Accelerating growth must also be compatible with budget consolidation (sections 1 and 2). As a rule, priority should go to reforms that cost but little (such as changes to competition legislation or university organization legislation) or to a reshuffling of budgets (e.g. reform of secondary schooling). These strategic guidelines are basically identical with the policy recommendations of the European Commission (e.g. Koopman and Székely, 2009). The specific policy measures aimed at raising output are,

however, very different across countries. The following three sections discuss the above-mentioned guidelines in greater detail.

3.1 Avoiding Past Mistakes

This time, economic policymakers have, by and large, avoided the mistakes made in previous crises, but some mistakes might yet be repeated, depending on the length of crisis.²³ The biggest mistakes can be classified in four categories: i) procyclical fiscal and monetary policies, ii) domestic competition and external trade restrictions, iii) reduction of labor supply and iv) hesitant tackling of financial market problems. The massive use of monetary and fiscal tools to stabilize the economy prevented a full-fledged meltdown: In the first months of the economic crisis of 2008–2009, in the fall of 2008, GDP, industrial production and exports contracted almost as fast as during the Great Depression of the 1930s. By now, however, the current recession differs significantly from the Great Depression, in the early stages of which policymakers had attempted to balance public finances through tax increases and spending cuts, at a time when real interest rates were extraordinarily high as a result of deflation and monetary policymakers' failure to adjust nominal interest rates (Aiginger, 2009a).²⁴

Despite some signs of preferential treatment of domestic products in national economic stimulus programs, markets have remained very open in comparison with the Great Depression, when a number of countries moved to increase their import tariffs, including the United States (Smoot-Hawley Act,

1930); European countries raised their import tariffs by as much as 12.7% on average at the time (Aiginger, 2009a). Unlike in the 1970s, which saw early retirement waves in many European countries, there has also been a distinct lack of broad-based programs to reduce the supply of labor.

Hesitation to solve financial market problems may lead to years of slow growth. This will be the case if banks shy back from capital-reducing credit write-downs, thus keeping inefficient firms alive, while at the same time making fewer funds available to efficient firms, as happened in Japan (e.g. Caballero et al., 2008). It will take a new regulatory model that will give the financial institutions medium-term planning security and reopen traditional financing channels for the real sector. In both areas, policymakers undertook efforts in the fall of 2009 which will hopefully result in the implementation of effective measures (e.g. G-20, 2009). In September 2009 a number of draft regulations were presented, including a proposal for the establishment of European supervisory agencies. This complex issue will not be discussed here in order to limit the scope of this paper (for an analysis of the difficulties involved in EU banking packages, such as target conflicts between short-term microeconomic objectives and long-term financial stability, readers are referred to Posch et al., 2009).

Structural change and the concomitant process of resource allocation can be slowed down through deliberate waiving of competition rules and subsidies to firms which go beyond crisis intervention and lead to permanent com-

²³ In reviewing the national emergency measures, the European Commission (2009a) concluded that no big mistakes had been made.

²⁴ As discussed by Gaggli and Janger (2009), short-term stabilization policies may, indeed, be relevant for medium-term growth trends.

petitive distortions. In 1933, the National Industrial Recovery Act weakened U.S. anti-trust legislation and thus prolonged the depression; Japan authorized so-called depression or rationalization cartels in the 1950s and 1960s in order to reduce excess capacities in a coordinated manner. These crisis cartels were subsequently outlawed because of the negative repercussions they had in the medium term (OECD, 2009a).

Furthermore, a successful normalization of monetary and fiscal policies as well as exit strategies for unwinding structural policy emergency measures will also foster growth in the medium run (section 2). The following part of the paper focuses on policy areas in which Austrian policymakers could leverage growth. Numerous national and

international institutions have published on this issue;²⁵ we are therefore going to single out just a few areas that we consider to be priority areas. As the Austrian economy was doing well in a European comparison before the crisis broke out, we provide comparisons not only against the EU average but also against other highly developed, small, open economies – namely Denmark, Finland, Sweden and Switzerland, which typically top innovation and performance rankings, in order to highlight unexploited growth potential for Austria.

3.2 Raising the Quality and Quantity of Capital and Labor Supply

Principally, there are four groups in which the quality and quantity of labor supply can be raised: older workers

Chart 3

Difference in Employment Rates: Austria versus EU-15, OECD and Selected Comparison Countries



Source: Eurostat, OECD.

Note: The “selected” countries are Denmark, Finland, Sweden and Switzerland; their employment rates are shown as unweighted averages. The chart compares the employment rates of men and women aged between 15 and 64 (15-64 M+F), older men and women (55-64 M+F), women (15-64 F) as well as low-skilled workers (25-64 low-skilled). The employment rates of the comparison countries are deducted from Austria’s employment rates, so that negative values imply the catching-up potential.

²⁵ See e.g. the OECD’s economic surveys for 2005, 2007, 2009b; the WIFO White Paper (Aiginger et al., 2006) as well as the results of the evaluation of the Austrian research promotion system (Aiginger et al., 2009).

(55- to 64-year olds); workers with lower skills; women; and migrants (or their descendents) in low-skilled jobs or jobs below their qualifications. Chart 3 shows the employment rates of these groups (excluding migrants) in an international comparison.

Even though the employment rate of older workers has risen sharply in recent years from approximately 32% in 2005 to 41% in 2008, it continues to lie significantly below the EU-15 average of 47.5% and below the average of the comparison countries (close to 63%). The retirement age declined by about three years since 1970 for both men and women (Sozialversicherung, 2009),²⁶ while the life expectancy of 60-year olds rose by about six years in the same period.

Basic measures for raising employment levels of the 55- to 64-year olds identified by the OECD (2007), among others, include the limitation of invalidity pensions as well as of other possibilities for retirement before the statutory age such as for instance discounts for early retirement that are not justified by actuarial methods (as granted under the early retirement scheme for workers with long employment histories).

Yet it will take accompanying measures to prevent a higher participation of older workers in the labor force from pushing up unemployment rates. Necessary measures include measures to flatten the seniority wage curve, which continues to be steep in Austria; measures to increase mobility between the public and the private sector; and mea-

asures to enhance the acquisition of transferable skills, which can be useful in a variety of jobs and which constitute lifelong learning²⁷ and may thus enhance job flexibility and the chance of employment in old age. Bock-Schappelwein et al. (2006) put forth numerous other proposals for raising participation in lifelong learning, including financing models, collective agreement frameworks, etc.

At 65%, the employment rate of women was close to 5 percentage points above the EU-15 average in Austria in 2008, but 6 percentage points below the average of the comparison countries. This high employment rate masks the continued high share of women in part-time jobs. While payroll employment of women has increased by 18% since 1995, the number of part-time female workers has increased by 70% as opposed to 4% for full-time jobs. The part-time rate thus jumped from 21% in 1995 to 31% in 2008, which means that it has become aligned with the EU-15 level. Without the Swiss outlier (19%), the comparison countries have a part-time rate of 25%. The share of women working part-time not out of their own will is actually no higher in Austria than in other countries; yet the framework conditions for reconciling work and family life raise the question of whether there is still room for raising the full-time employment rate of women.

In Austria the share of children below 3 years or between 3 and 6 years who are in formal childcare²⁸ for more than 30 hours continues to be very low.

²⁶ In 2008, the effective retirement age for old age pensions was 62.7 years for men and 59.5 years for women, compared with 53.7 years or 50.3 years for invalidity pensions. Invalidity pensions have been sharply on the rise compared with old-age pensions since 2003, accounting for roughly one-third of the annual number of new pensions (Sozialversicherung, 2009).

²⁷ At the time of writing, 13% of Austrians participate in lifelong learning activities. This is somewhat above the EU average but significantly below the average of the selected comparison countries (28%).

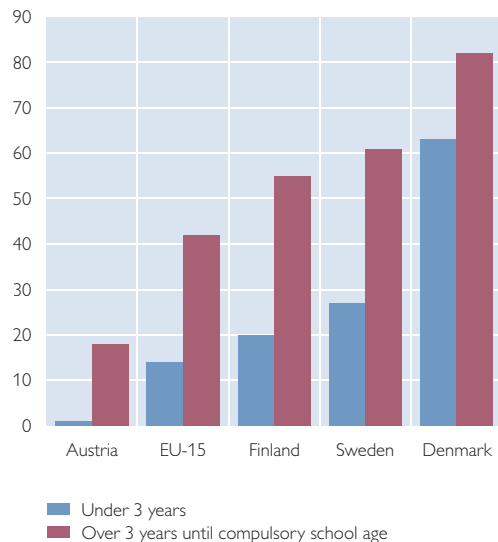
²⁸ Formal childcare relates to institutional childcare by qualified teachers.

Chart 4

Formal Childcare versus Part-Time Employment Rate of Women by Age Groups

Use of Formal Childcare by Age of Children

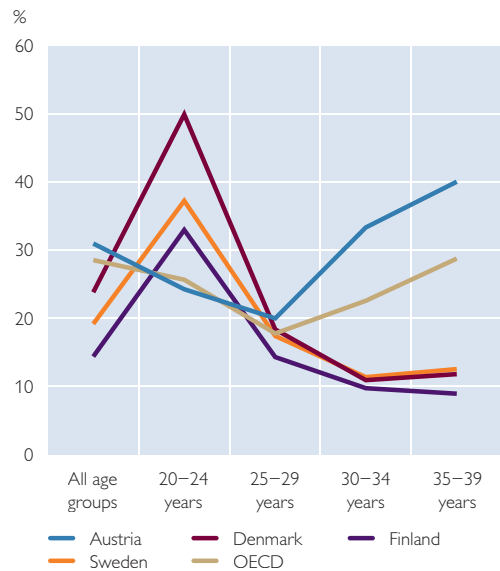
Children in childcare in % of total children



Source: Eurostat, OECD.

Note: Childcare of more than 30 hours per week.

Part-Time Employment Rate by Age of Women



This and the system of half-day schooling might explain part-time employment patterns by age groups (chart 4): Whereas younger women (20- to 24-year olds) often work part-time both in Austria and in other countries because they have yet to complete education, and whereas 25- to 29-year old women have low part-time rates, part-time employment rises drastically from the age of 30. Compared with the Nordic countries, a gap of almost 30 percentage points opens up.

The low use of childcare may be due to a combination of factors, including the availability of kindergarten facilities and the cost and quality of kindergarten childcare:²⁹ The OECD (2009b) has criticized the lack of uniform national pedagogical standards, insufficient training of kindergarten teachers and problems resulting from

shared federal and regional government competences. The overall low average part-time rate suggests the large potential that exists in the Austrian labor market and that might be tapped under different framework conditions.

The problem areas childcare and half-day schooling are relevant not only for the employment rate of women, but also for the quality of education of educationally disadvantaged children, including children with a migration background. This is where the seed is sown for the employment problems both migrants and low-skilled workers have at later stages (chart 3). The downward variation of students' performance is high at Austrian schools; moreover, the second generation of migrants tends to do no better in school than the first generation (this performance gap is however, not limited to children of mi-

²⁹ The latest reforms, such as compulsory (half-day) kindergarten childcare in the final pre-school year, or for instance cost reductions in Vienna are going to improve the situation, but can only be seen as a first step.

grants; see e.g. Haider and Schreiner, 2006).

A better integration of migrants into the labor market hinges on many different points. Together with experts, the Austrian Red Cross has designed an agenda of nine points on which the government could act (Austrian Red Cross, 2009), including controlled immigration, language acquisition, better access to work permits, enhanced credit system for foreign qualifications, better representation of migrants in the media, etc.

Childcare reform and the better integration of migrants are going to require additional public monies. In the medium run, however, the positive effects of such measures, such as higher employment rates, lower unemployment rates and higher productivity, should turn the erstwhile burden on the budget into an asset.

Investment Promotion

In the equilibrium growth path, capital grows at a rate that keeps the capital ratio constant.³⁰ Thus, the trend growth rate hinges on the growth of labor input and productivity. Even so, investments may deviate from the long-term trend at times: As a case in point, during the Great Moderation, i.e. the period of low inflation and growth fluctuations from 1990 to about 2005, the capital ratio increased as capital costs went down. Austria has a long tradition of investment promotion, for instance through investment subsidies, which have pushed up investment rates together with stable macroeconomic conditions, wage negotiators' focus on em-

ployment, apprenticeship schemes and other factors.

More recently, the international economic policy debate has shifted from subsidizing tangible investment to subsidizing intangible investment, such as research and development. Investment promotion is being seen more and more under the aspect of infrastructure development, not only in the area of road and rail transport, but increasingly also with regard to the telecommunication and energy networks of the future. The development of broadband networks and of smart grids in electricity supply just like the challenges of climate change is going to create important momentum for investment. In this respect it is not necessarily important for public authorities to invest themselves; much rather it is important for them to ensure a long-term planning horizon and to provide for competent regulatory frameworks; at the same time, climate policy regulations might be used to create pressure for investment.³¹ At any rate, sinking capital costs are unlikely to create rising growth contributions of capital; much rather capital costs are likely to rise (Gaggl and Janger, 2009). This makes it even more important to solve financial market problems in order to minimize the permanent increase of the user cost of capital.

3.3 Raising Productivity

Innovation activities are among the key drivers of productivity increases. Spending on research and development as an (input-oriented) measure of innovation activity sharply increased to

³⁰ This ratio is hard to calculate, not least because of the difficulties of pinning down the equilibrium growth path (Gaggl and Janger, 2009).

³¹ A group of 500 large international firms have called upon policymakers to commit themselves to ambitious goals in combating climate change. Everything else would lead to a loss of confidence and crowd out investment in climate-friendly technologies (Corporate Leaders Group on Climate Change, 2009).

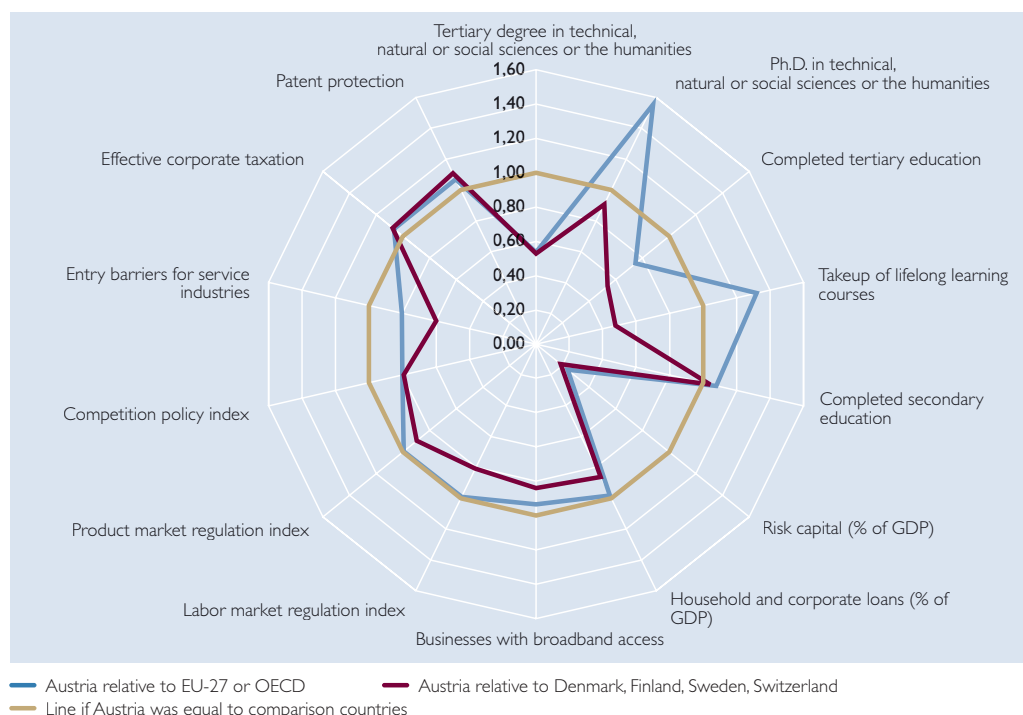
2.6% of GDP in the 1990s, thus outperforming the EU-15 average by 0.7 percentage points, but falling 0.5 percentage points short of the average of Denmark, Finland, Sweden and Switzerland. A number of other innovation indicators confirm this impression that Austria has completed the technological catching-up process and is now moving to a state where growth is driven by output as well as by demand for science, technology and innovation (Janger and Reinstaller, 2009). Two output measures for innovation in the wider sense – productivity growth and structural change – show further po-

tential for growth. Despite a sharp rise in R&D spending, productivity growth has failed to accelerate; while the diagnosed structure-performance paradox has dissolved (Peneder, 2008),³² and while the gap of the innovation-intensive industries has narrowed, the education-intensive sectors continue to show a significant gap to the EU-15 and the above-mentioned comparison countries despite high growth rates.

Apart from innovation-related reforms,³³ improved incentive patterns and improved input factors for innovation activities beyond innovation policies proper (framework conditions for

Chart 5

Framework Conditions for Innovation: Austria and Selected Comparison Countries



Source: Janger and Reinstaller (2009).

Note: Values below 1 for Austria indicate that framework conditions are more favorable in Austria than in the comparison countries, and vice versa. Data refer to 2008 or to the latest year for which data were available.

³² High output growth with a traditional economic structure but a lack of innovation activities.

³³ See Aiginger et al. (2009) for a summary of the results of the evaluation of the Austrian research promotion and financing system.

innovation) might serve to accelerate structural change and productivity growth. An analysis of these framework conditions shows deficits with regard to competition, innovation financing and above all education, which may be seen as the weak points of the Austrian innovation system (Janger and Reinstaller, 2009; but also other papers such as the WIFO White Paper (Aiginger et al., 2006) and the OECD's economic survey (2007).

Chart 5 summarizes Austria's international position vis-à-vis the EU-27 or OECD averages, depending on the indicator, as well as the above-mentioned comparison countries. Values above 1 indicate that conditions are more favorable in Austria than in the comparison countries, and vice versa.³⁴ Compared with the most innovative economies, Austria is found to lack innovation incentives and innovation inputs in most dimensions; exceptions include effective corporate taxation, patent protection and secondary education. Austria's catching-up needs are highest in the areas of education, competition policies/product market regulation and innovation financing (risk capital intensity). For those three areas, numerous authors have put forth reform blueprints; we are going to limit our analysis – broadly in line with Janger and Reinstaller (2009) – to major reforms.

Education System

In the pre-university education system, valuable progress could be made through the improvement of kindergarten education (as mentioned above), through increasing the autonomy and standards for schools, through a later streaming of students as well as through the introduction of full-day schooling.

The most efficient way to raise the share of tertiary education will be to raise the number of students who qualify for university studies, that is to say by reforming the secondary school system. One way to improve undergraduate university education would be to introduce a place management system, as practiced at the Universities of Applied Sciences, also at universities, with a view to linking capacities with funding.

Academic research is subsumed under the education system in the wider sense in our paper. Numerous empirical studies show that raising the quality of academic research is crucial in many areas for raising productivity growth and for maintaining competitiveness in a knowledge-based economy, among other things through the channels knowledge diffusion, science startups, regional or local spillover effects and through a strengthening of the business environment.³⁵ Even so, policymakers have yet to fully acknowledge the merits of raising the quality of academic research.

In this respect, too, Austria would be in a position to take relatively simple measures to exploit its high potential, especially through reforming academic research funding and through organizational changes. For detailed recommendations, see e.g. Janger and Reinstaller (2009).

Competition and Product Market Regulation

Regulation indicators as well as measures of actual competition intensity show that Austria has got the potential to intensify competition in a number of services sectors, whereas competition is already high in many manufacturing industries owing to the international tradability of goods. Policy areas for in-

³⁴ For a detailed description of all framework conditions and indicators, see Janger (2009).

³⁵ For a short overview, see Janger (2009).

tensifying competition include a reform of competition regulation (including more and better resources, a reversal of the burden of proof of abuse of a dominant position), the reform of a number of frameworks regulating startups, professionals and contractors, etc. as well as measures to increase price transparency in a number of services industries.

Innovation Financing: Risk Capital Intensity

Risk capital intensity as a measure for the quality of innovation financing in Austria continues to be very low, possibly owing to a mix of supply-side (lack of funds) and demand-side reasons (lack of promising projects). Raising risk capital intensity by providing more funding may take the form of new legal structures for risk capital funds,³⁶ a fund-of-funds initiative and provisions favoring investment of life insurance and pension fund plans in risk capital funds. Corporate demand for risk capital might be fueled for instance by improving the framework conditions discussed above (for detailed recommendations see Janger and Reinstaller, 2009).

To conclude, Austria has a number of untapped reserves that may be mobilized in order to increase (potential) growth. The gap between Austria and the top performers is even good news, as the comparison countries Sweden, Finland, Denmark and Switzerland have in fact hit a plateau in many areas. Apart from the recommendations made above, Austria's medium-term growth perspectives will also depend on the successful completion of an international climate agreement and global greenhouse gas emission trading under such an agreement. Such a price signal will be crucial for creating incentives

for innovation and investment. Moreover, Austria is, of course, an integral part of the world economy, and above all of the EU. Continuing the EU's structural strategy – the Lisbon strategy – was put on the agenda in the fall of 2009 and is also going to influence the Austrian perspectives. Finally, purely conventional growth raising strategies will not suffice in the medium and long term; in view of the crisis, a small, open economy must also consider strategies to increase its shock resilience (Aiginger, 2009b).

4 Conclusions

A permanent loss in potential output following the crisis and the permanent nature of many discretionary stabilization measures have created a need for adjustment that goes significantly beyond the need to finance the economic stimulus packages *ex post*. The repercussions of the crisis on public finances are going to be exacerbated in the medium term also by the implications of demographic change.

In view of the anticipated negative effects on the real economy, policymakers should coordinate their measures internationally (and are, indeed, obliged to do so within the EU by the Stability and Growth Pact) and should not phase out any measures until the economic recovery has become self-sustaining. At the same time, they would be well advised to develop consolidation programs even now, in order to ensure rapid implementation during the next recovery stage and in order to secure public confidence in the sustainability of public finances. Consolidation should focus on spending cuts, while avoiding conflicts with other economic policy goals (e.g. in the research and

³⁶ Such a law was under consultation in the fall of 2009; yet it remains to be seen whether the new regulations may solve the problem effectively.

education areas). Any revenue-side measures should dampen growth as little as possible, which would speak for an increase in taxes on immovable property.

An analysis of the medium-term growth components labor, capital and productivity shows that, notwithstanding its good general performance, Austria has got potential in numerous areas to support fiscal consolidation through an acceleration of growth. This potential might be exploited by adjusting employment, education and competition

policies and by reforming innovation funding with a view to improving the medium-term growth perspectives. In this respect, the gap between Austria and the top performers Denmark, Finland, Sweden and Switzerland is actually good news, as those countries have already hit a plateau. History might confirm for Austria what previous crisis episodes have shown, namely that economic policymakers have indeed got the power to significantly influence the medium-term growth scenario after an economic crisis.

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