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ÖSTERREICHISCHES INSTITUT FÜR WIRTSCHAFTSFORSCHUNG

Monitoring of Austria's Efforts Within the Europe 2020 Strategy

Update 2014-15

Jürgen Janger, Julia Bock-Schappelwein, Michael Böheim, Ulrike Famira-Mühlberger, Thomas Horvath, Daniela Kletzan-Slamanig, Margit Schratzenstaller (WIFO), Maria M. Hofmarcher-Holzhacker (Health System Intelligence)

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May 2015

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AUSTRIAN INSTITUTE OF ECONOMIC RESEARCH

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Abstract

Following the European Commission's guidelines, WIFO has undertaken a monitoring of the implementation of the Austrian National Reform Programme within the framework of the European 2020 growth strategy. The main components are the development of normative target corridors to assess progress in reaching the five EU 2020 headline goals, the development of a structured analysis for the policy measures, which will be assessed following identical criteria, and a more thorough evaluation of selected policy measures, in particular as regards those targeted at addressing country-specific recommendations. The ultimate objective of the project is to pinpoint Austria's position on its way towards meeting the EU 2020 goals and to assess whether the policies implemented may in principle be sufficient to reach the goals and to address the country-specific recommendations in a satisfactory way.

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Deutsche Kurzfassung

Die Europäische Wachstumsstrategie Europa 2020 versucht, intelligentes, nachhaltiges und integratives Wirtschaftswachstum zu fördern. Österreich hat sich im Rahmen dieser Strategie zur Erreichung von Zielen in fünf Bereichen (Forschung, Bildung, Beschäftigung, Armut und Umwelt) bis zum Jahr 2020 verpflichtet: eine F&E-Quote von 3,76% des BIP, einen Anteil von 38% Hochschulabsolventen an der Bevölkerung im Alter von 30 bis 34 Jahren, einen Anteil der frühen SchulabgängerInnen von weniger als 9,5% an der Bevölkerung im Alter von 18 bis 24, eine Beschäftigungsquote von 77 bis 78% gemessen an der Bevölkerung im Alter von 20 bis 64, eine Reduktion der von Armut betroffenen oder armutsgefährdeten Personen um 235.000, eine Steigerung des Anteils der erneuerbaren Energien auf 34%; sowie eine Reduktion der Treibhausgasemissionen um 16% gegenüber 1990. Das indikative Ziel für Energieeffizienz bis 2020 wurde im „Österreichischen Fortschrittsbericht Energieeffizienz 2013“[1] mit 1.100 PJ Endenergieverbrauch festgelegt.

Österreich befindet sich in allen Bereichen über dem EU-Durchschnitt im Sinn eines besseren Niveaus.[2] Ein Vergleich der vergangenen Wachstumsraten mit jenen, die notwendig sind, um die Ziele in den einzelnen Bereichen zu erreichen, führt zu der in nachfolgender Tabelle zusammengefassten Einschätzung[3]: die F&E-Ausgaben des privaten Sektors und der Endenergieverbrauch befinden sich nicht auf ihrem Zielpfad, während die öffentlichen F&E-Ausgaben, Beschäftigung, Bildung, Treibhausgasemissionen und der Anteil der Erneuerbaren Energien auf ihr Ziel zusteuern bzw. dieses bereits erreicht haben.

Tabelle: Zielerreichung in den fünf Bereichen

Indikator	Ziel	aktueller Wert	Ziel v s. aktueller Wert (Ziel = 100)	Zielprojektion 2020 (Wachstum letztes Jahr)	Zielprojektion 2020 (Wachstum 2000-2014*)	Zielprojektion auf Basis Wachstum 2000-2014 v s. Ziel(Ziel=100)
F&E-Quote in % des BIP	3.76	2.829901028	75	2.93	3.23	86
Hochschulabsolv enten in % der 30-34j. Bev ölkerung	38	39.6	104	50.48	47.48	125
SchulabgängerInnen in % der 18-24j. Bev ölkerung	9.5	7.3	130	5.51	6.03	158
Beschäftigungsquote in% der 20-64j. Bev ölkerung	77-78	75.5	97-98	74.70	79.34	102
Zahl der armutsgefährdeten Personen	-235000	-127000	93**	100000.00	-304800.00	130
Treibhausgasemissionen (in Mio. t CO2)	47.9	49.8	96	46.00	42.90	112
Anteil erneuerbarer Energien (in %)	34	32.5	96	36.07	35.20	104
Energetischer Endv erbrauch (Gesamter Endv erbrauch in PJ)	1050	1117	94	1298.37	1121.90	94

Anm: *Zeitreihe soweit verfügbar; **Das Verhältnis bezieht sich auf die Bestandszahlen im Bereich Armut, nicht auf die Veränderungen (aktuell 1572000 armutsgefährdete Personen, vs. 1464000 Ziel).

[1] https://www.bmwfw.gv.at/EnergieUndBergbau/Energieeffizienz/PublishingImages/Fortschrittsbericht_und_indikative_Zielmeldung_final.pdf

[2] Bei den Hochschulabsolventen erreicht Österreich ein überdurchschnittliches Niveau nur aufgrund der Absolventen der berufsbildenden, maturaführenden Schulen (BHS), die für das Europa 2020-Ziel zu den Hochschulabsolventen gezählt werden.

[3] Die Einschätzung, ob die einzelnen Ziele über oder unter ihrem Zielpfad sind, beruht nicht auf tatsächlichen Prognosen, die im Rahmen dieser Studie nicht durchführbar wären, sondern auf einem Vergleich eines Basisszenarios – alle Entwicklungen gehen gleich weiter wie im Durchschnitt der Jahre 2000-2014 – mit einem Szenario, in dem Ziele erreicht werden. Dadurch lässt sich abschätzen, ob in der Zukunft dynamischere Entwicklungen zur Zielerreichung notwendig sind, die allenfalls weitere politische Interventionen erfordern.

Der Zielfortschritt sollte demnach nicht eng definiert für die Prioritätensetzung innerhalb der österreichischen Europa 2020 Ziele eingesetzt werden, nicht zuletzt wegen des unterschiedlichen Anspruchsniveaus der Zielsetzungen. Anstrengungen im Bereich Umwelt und Wirtschaft sollten vielmehr auf einer umfassenden Einschätzung der Bestimmungsfaktoren von nachhaltigem und sozial integrativem Wirtschaftswachstum beruhen. Die Interpretation der Zielfortschritte sollte darüber hinaus Zielkonflikte und Interdependenzen zwischen den Zielen berücksichtigen.

Beispielsweise kann sich das Ziel der Steigerung der Hochschulabsolventen positiv auf die Erreichung der F&E-Quote auswirken, indem es den Strukturwandel in Richtung forschungsintensivere Sektoren begünstigt. Eine Reduktion der Zahl der frühen SchulabgängerInnen ergänzt sehr gut die Beschäftigungs- und Armutsziele, nachdem Bildungsleistungen sehr wichtig für die Beschäftigung niedrig Qualifizierter und für die Armutsprävention sind.

Österreich hat zusätzlich Empfehlungen zur Reform seiner Wirtschaftspolitik in den nachfolgenden Bereichen erhalten (länderspezifische Empfehlungen, englische Abkürzung CSRs):[4]

2. Pensionen, Gesundheit und Pflege

3. Beschäftigung, inkl. der Auswirkungen der Steuerstruktur, und Bildung

4. Wettbewerb und Regulierung

Die Einschätzung, ob die Maßnahmen im NRP ausreichen, die Ziele zu erreichen und adäquat auf die CSRs einzugehen, beruht auf der Einschätzung durch Experten des WIFO , ob das NRP auf die Hauptansatzpunkte für die Verbesserung in den einzelnen Bereichen eingeht, auf die wesentlichsten Probleme, die einer Verbesserung im Weg stehen.

Hinsichtlich der beiden Zielbereiche, die sich derzeit nicht auf ihren Zielpfaden befinden, wird folgende Einschätzung getroffen: Im Bereich F&E besteht eine umfassende Strategie (FTI Strategie 2020), die fast alle Engpässe berücksichtigt, um sowohl die F&E-Quote als auch intelligentes Wachstum insgesamt zu fördern. Dementsprechend kommt es hier auf die Umsetzung an. Im Bereich Energieeffizienz sind weitere Maßnahmen erforderlich, hier wird es auch stark auf die weitere wirtschaftliche Entwicklung ankommen.

In den anderen Zielbereichen und auch für die CSRs, gibt es in der Regel signifikante Maßnahmen, die auf die Beseitigung wesentlicher Engpässe abzielen. Einige davon werden derzeit aber noch nicht oder nur teilweise adressiert, wie z.B. die frühe Trennung nach Fähigkeiten von Schulkindern im Alter von 10 für das Hochschulabsolventenziel, die Vorverlegung der Pensionsantrittsalterharmonisierung zwischen Männern und Frauen, für das Beschäftigungsziel und Umweltmaßnahmen, die auf einer Veränderung von Preissignalen

[4] Aufgeführt werden nur jene CSR, die in der Studie analysiert wurden, ohne CSR 1 (Fiskalpolitik) und 5 (Finanzmarkt/Bankenstabilisierung).

beruhen, etc. Die Maßnahmen sollten dennoch ausreichend für die Zielerreichung im Bereich Bildung, Armut, Beschäftigung und erneuerbare Energien sein. Auf alle CSRs wird durch entsprechende Maßnahmen zumindest teilweise eingegangen.

Diese Einschätzung sollte mit sehr großer Vorsicht interpretiert werden. Sie beruht nicht auf einer vertiefenden Analyse der Maßnahmen. Zudem könnten externe Ereignisse, wie z.B. eine erneute Krise des Euroraums schwerwiegende Folgen auf die Zielerreichung haben. Selbst wenn Ziele sich auf ihren Zielpfaden befinden, sollte dies daher kein Grund für ein Nachlassen der Anstrengungen darstellen. Die Einschätzung des NRP sollte aber eine breite Orientierung für Maßnahmenrichtungsentscheidungen liefern, im Sinne von welche Hauptansatzpunkte bestehen für Maßnahmen zur Zielerreichung bzw. werden diese Hauptansatzpunkte prinzipiell durch das NRP adressiert.

Insgesamt zeichnen sich Österreichs Anstrengungen, die Europa 2020-Ziele zu erreichen und auf die CSRs einzugehen, durch eine Vielzahl von Maßnahmen aus, auch wenn auf einige Problemfelder bisher nicht eingegangen wurde. Eine Inangriffnahme bisher nicht adressierter Problembereiche könnte in einigen Bereichen sogar zu einer Zielübererfüllung führen, wie im Bereich Bildung. Der Bildungsbereich insgesamt ergänzt sich sehr positiv mit anderen Zielbereichen, wie z.B. F&E, Beschäftigung und Armut, sodass Maßnahmen im Bereich Bildung eine sehr hohe Wirkung entfalten könnten.

Executive Summary

The new European growth strategy Europe 2020 aims to foster smart, sustainable and inclusive growth. Within this strategy, Austria has committed to headline targets in five areas: R&D of 3.76% of GDP, a share of higher education graduates in the population aged 30-34 of 38%, a share of early school leaving of 9.5%, 77-78% employment rate of the population aged 20-64, a reduction of 235.000 individuals living in or at risk of poverty, a share of renewable energies of 34% and a reduction of greenhouse gases by 16%. The target for energy efficiency is set at PJ 1100 of final energy consumption.[5] Overall Austria performs above the EU average in all areas.[6] The analysis of previous trends and the comparison with growth rates required to reach the targets show that private R&D expenditure and final energy consumption (energy efficiency) are not on track, while public R&D expenditure, employment, education, greenhouse gases and the share of renewables are on track. This is not least related to the fact that targets differ in their level of ambition.

Table 1: Austria's progress towards Europe 2020 targets

Indicator	Target	actual	Actual values relative to target (target value = 100)	Target projection 2020 (based on last year's growth)	Target projection 2020 (based on growth rate 2000-2014*)	Target projection based on growth rate 2000-2014 vs. target (target = 100)
R&D ratio	3.76	2.83	75	2.93	3.23	86
Share of population aged 30-34 with tertiary education	38	39.60	104	50.48	47.48	125
Early school leavers	9.5	7.3	130	5.51	6.03	158
Employment rate (20-64)	77-78	75.5	97-98	74.70	79.34	102
Number of individuals living in poverty or at risk of poverty	-235 000	-127 000	93**	100000	-304800	130
GHG emissions in Mio t CO2	47.9	49.8	96	46.00	42.90	112
Renewable Energy Share in %	34	33	96	36.07	35.20	104
Final energy consumption as total final consumption in PJ	1 050	1 117	94	1298.37	1121.90	94

Note: * only for available time series; ** The relationship between actual and target value is calculated using the stock of people at risk of poverty, not the changes in that stock (actual 1572000 people at risk of poverty vs. 1464000 target value).

Progress towards reaching the targets should not be viewed in a narrow sense to merely guide priority-setting in efforts towards reaching Europe 2020 goals and nothing more. Economic and environmental efforts should be based on a comprehensive assessment of the determinants and drivers of smart, sustainable and inclusive growth. Interpretation of targets should take account of conflicts but also areas where targets overlap or indeed complement each other (complementarities, e.g. between education and R&D, poverty, employment).

The European Union has also addressed recommendations to Austria in the following areas:[7]

2. Pensions, health care, and care for the elderly

3. Employment, including the impact of the tax structure, and education

[5] https://www.bmwfw.gv.at/EnergieUndBergbau/Energieeffizienz/PublishingImages/Fortschrittsbericht_und_indikative_Zielmeldung_final.pdf

[6] In higher education, Austria is only above the EU average, when graduates from upper secondary vocational education (Isced 4a) are included, as is the case as regards the Europe 2020 target.

[7] Only the ones analyzed in this study are listed. CSR 1 (fiscal policy) and CSR 5 (financial market stabilization) are not listed.

4. Competition and regulation

Assessing whether the NRP measures are sufficient to reach the targets or address the CSRs is based on an assessment by WIFO experts whether the NRP contains key policy options necessary to reach targets and address the CSRs appropriately. In the two target areas which are not on track, the assessment is as follows: In R&D, there is a comprehensive innovation strategy by the Austrian government in place which addresses almost all key policy options to both increase R&D intensity and to foster smart growth. Hence the focus should be on implementation. As regards energy efficiency, new measures are necessary, in particular when economic growth picks up. In the other areas, there are usually several substantial measures addressing important bottlenecks, but also key policy options left unaddressed, such as e.g. early streaming for the higher education target, no earlier harmonisation of the statutory retirement age between men and women for the employment target, few policies affecting price signals in the environmental domain etc. Currently the envisaged measures should be sufficient in the case of the targets for employment, poverty, education, greenhouse gases and renewables, judging by longer-term trends; should the current negative economic trend continue, employment and poverty targets could be missed. All the CSRs have at least been partially addressed by measures described in the Austrian National Reform Programme.

Of course, such an assessment has to be regarded with extreme caution. First of all, it is not based on an in-depth evaluation of policies. Furthermore, external events such as a renewed euro crisis may at any time knock the current trends off track leaving the target unachievable. Even if efforts are on track, we must guard against complacency. The assessment should merely broadly orientate policy makers in their decisions.

Overall, Austria's efforts to reach the Europe 2020 targets and to address CSRs have led to the implementation of a multitude of measures, even if some key policy options have so far not been used. If addressed, this could lead to going above and beyond the target. Education in general complements and is linked to so many other target areas, such as R&D, employment and poverty, that it should be regarded as a key policy option in itself.

1. Introduction

In March 2010, the European Commission proposed a new European growth strategy called "Europe 2020 – A European strategy for smart, sustainable and inclusive growth", succeeding the Lisbon Strategy which covered the first decade of the new millennium. There are several components – 3 growth priorities, key performance targets in five areas and seven flagship initiatives or core policy initiatives containing policy proposals aimed at reaching the targets.[8]

The three growth priorities qualify the kind of growth the European Union has in mind. First, growth should be smart through investments in education, research and innovation; second, it should be sustainable both from an environmental and a competitiveness point of view; third, it should be inclusive, i.e. lead to rising employment and lower poverty. The targets in five key areas and the flagship initiatives mirror the efforts to achieve these three priorities.

- Smart growth
  - Targets
    - R&D: 3% of the EU's GDP to be invested in R&D
    - Education: at least 40% of 30-34–year-olds completing tertiary education, reducing school drop-out rates below 10%
  - Flagship initiatives
    - Digital agenda for Europe
    - Innovation Union
    - Youth on the move
- Inclusive growth
  - Targets
    - Employment: 75% of the 20-64 year-olds to be employed
    - Poverty: at least 20 million fewer people in or at risk of poverty and social exclusion
  - Flagship initiatives
    - An agenda for new skills and jobs
    - European platform against poverty
- Sustainable growth
  - Targets
    - greenhouse gas emissions 20% lower than 1990 levels
    - 20% of energy from renewables
    - 20% increase in energy efficiency
  - Flagship initiatives

[8] For a comprehensive yet concise presentation of the Europe 2020 strategy see http://ec.europa.eu/europe2020/europe-2020-in-a-nutshell/index_en.htm

- Resource efficient Europe
- An industrial policy for the globalisation era

A key weakness of the Lisbon Strategy, only partially addressed by the mid-term changes in 2005, was the lack of commitment to implement reforms at the national level. As a result, the Europe 2020 strategy is implemented using a much more complex governance model supposed to foster commitment to reforms at the national level. At the outset of the new strategy, the European Commission and the Member States formulated the so-called Integrated Guidelines, or guidelines for overall economic policy coordination. As opposed to the Lisbon Strategy, the Member States choose national adaptations of the European key targets, so that there are national goals for each Member State. These of course are more tailored and take account of the large differences between Member States' economic, social and environmental development. The result is that the targets should also be more realistic and increase commitment at the national level to their achievement, rather than prescribing, e.g. an R&D ratio of 3% of GDP to a country currently featuring a ratio of 0.6% of GDP (Bulgaria) and to a country featuring a ratio of 3.6% (Finland). Average, European-wide targets are too ambitious for some and not ambitious enough for others. As a consequence of the key targets and the other common European components (flagship initiatives, integrated guidelines), the National Reform Programmes remain coordinated, without failing to address national issues.

The yearly governance mechanism is referred to as the European Semester[9]. This starts at the end of each year with the annual growth survey – which doubles up as a progress report on reaching the targets at the European level and as a report outlining reform priorities again at the European level. In April of the following year, the EU Member States submit their plans for sound public finances (Stability or Convergence Programmes SCP) and reforms and measures to make progress towards smart, sustainable and inclusive growth (the National Reform Programmes NRP). In June, the European Commission assesses these programmes and provides country-specific recommendations as and where appropriate. The Council discusses and the European Council endorses the recommendations. Finally, at the end of June or in early July, the Council formally adopts the country-specific recommendations (CSR).

The Europe 2020 strategy has definitely made great progress in comparison with Lisbon 2020: there are a handful of core targets, a vision for the future and at the same time a very detailed governance mechanism outlining possible ways to reach these targets. In recent years, the CSR seem to have somewhat gained in importance over the Europe 2020 targets. The present study looks as a result also more in detail at the CSR. The overall success of the strategy will depend on solving the current financial and debt crisis; and on the Member States' efforts to implement reforms at the national level.

[9] See http://ec.europa.eu/europe2020/europe-2020-in-a-nutshell/priorities/economic-governance/index_en.htm.

In this report, WIFO assesses the implementation of the Austrian National Reform Programmes, i.e. the measures implemented/suggested in order to reach the targets and to address the CSR. The main components of this report are the developing of target paths to assess the progress in reaching the EU 2020 headline goals, key policy options to boost performance in the target areas as well as a detailed analysis of performance and policies in the areas addressed by the CSR. The ultimate objective of the analysis is to pinpoint Austria's position on its way towards meeting the EU2020 goals and to assess whether the policies implemented or proposed are in principle sufficient to reach the goals and to address the CSR, or whether important policies needed to reach the targets or to address the CSR are lacking. As such, the report wants to support Austria's efforts to reach the targets by providing timely information to policy makers on where additional efforts are needed and on where the efforts in place seem to be well on track.

2. Target paths and policies for reaching Austria's national Europe 2020 targets

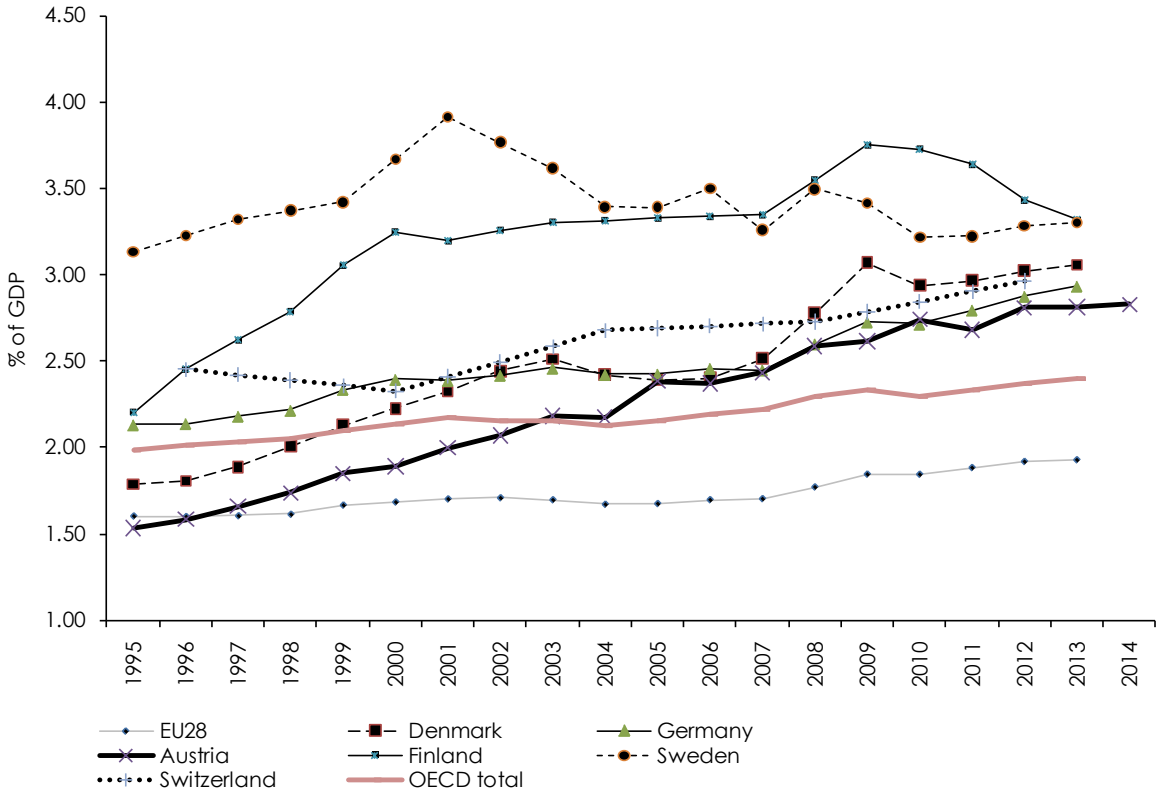
This chapter illustrates the implementation of the European headline targets at the national level. For each target area – R&D, education, employment, poverty and environment – we first outline past trends before we show target paths. These target paths are normative paths based on constant changes, i.e. the distance to the target from the actual value in 2010 shrinks each year by the same relative amount. They are not forecasts of target values, which would be highly questionable given the long time horizon (2020). Their simple purpose is to provide a yardstick against which actual values can be compared. The yearly target values should not be taken as an economic goal per se, what matters is the goal for the year 2020. The yearly comparison between target and actual value however indicates Austria's current position which can inform policy making. The dynamics necessary for reaching the goals will be compared with past trends to assess the probability of reaching the targets. From this analysis, it is in principle possible to prioritise policy areas needed to catch up on targets where current or past performance is well below the required performance. By the same token policies for reaching targets where current performance is on track do not need special emphasis or intensification. Of course, such decisions should not be made only on the basis of the targets but against the background of a comprehensive assessment of the requirements for smart, inclusive and sustainable growth.

2.1 Key target R&D

- Past trends

Austria's share of R&D in GDP has risen substantially over the past 10-15 years, faster than any other EU Member State in terms of percentage points. In the year 2000, it stood at about 1.9%, slightly above the EU-28 average. The latest data shows a share of about 2.8%, well above the European average (Figure 1). Austria has, in terms of its R&D ratio, almost reached the so-called European innovation leaders of Finland, Sweden, Denmark and Germany. This development comes as a result of pronounced efforts to increase public promotion of R&D expenditure by firms, and probably also as a result of Austria's joining the European Union, where firms had to improve their competitiveness facing both sophisticated firms from Germany and Italy, but also increasing competition from firms in the new EU member states to the east of Austria, which have a labour cost advantage. However, the last two years available for international comparison – 2012 and 2013 – show a stagnation of the R&D ratio, while the innovation leader countries with the exception of Finland continued increasing their R&D intensity. Austrian estimates also show a stagnation of R&D intensity in 2014.

Figure 1: R&D ratios in comparison, 1995-2013



Source: OECD, WIFO calculations.

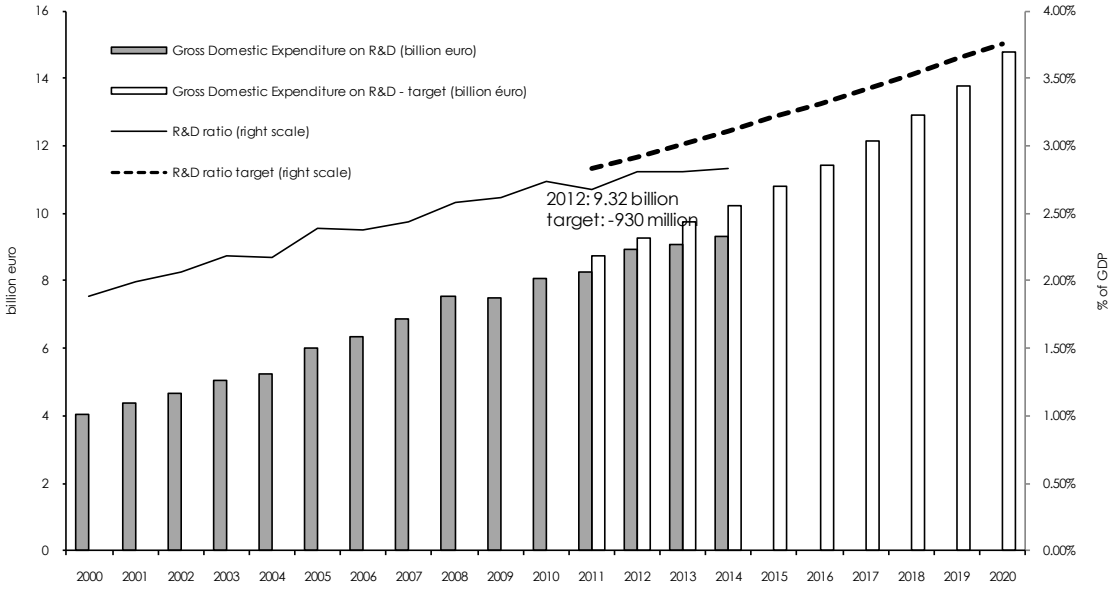
- Target path 2020

Austria intends to repeat its impressive R&D growth performance in the last decade in the current one, to reach the Europe 2020 target, judging from its target of 3.76% which is another percentage point higher than the current level. How do R&D expenditures have to increase to reach this target? Figure 2 and Table 3 show the target path for gross domestic expenditure on R&D. The target path is based on i) the actual R&D ratio in the year 2010, the target value in the year 2020 and the cumulative annual growth rate between those two values. It needs to be mentioned that the R&D ratios from 2012 to 2014 are flagged as actual, whereas they are partly based on estimations by Statistik Austria. However, previous experience shows that the difference between this and the final figure is not large. The corridor is also based on ii) short- and medium-term GDP projections by WIFO up to 2019 (Baumgartner – Kaniovski - Pitlik, 2015); for the years 2019-2020 a nominal GDP growth of 4% per year is assumed according to empirical studies of Austria's real trend growth rate of close to 2% and according to the ECB's inflation target of below, but close to 2% (Gaggl - Janger, 2009). The impact of deviations from this assumption on R&D expenditures is usually limited (see the NRP evaluation 2013, Janger et al., 2013).

Based on these data, Austrian R&D expenditures would have to rise from € 9.3 bn in 2014 to €14.8 bn in 2020. The growth rate of expenditure in 2014-2020 would be slightly higher (8.0%) as during 2000-2010 (7.2%). As is obvious from Figure 2 and Table 3: R&D expenditures and expenditure targets, 2000-2020, Austria is currently not on track to meet this target, as the actual R&D ratio is 0.28 percentage points below the target value for 2014; R&D expenditure is approx. € 0.93bn behind the target.

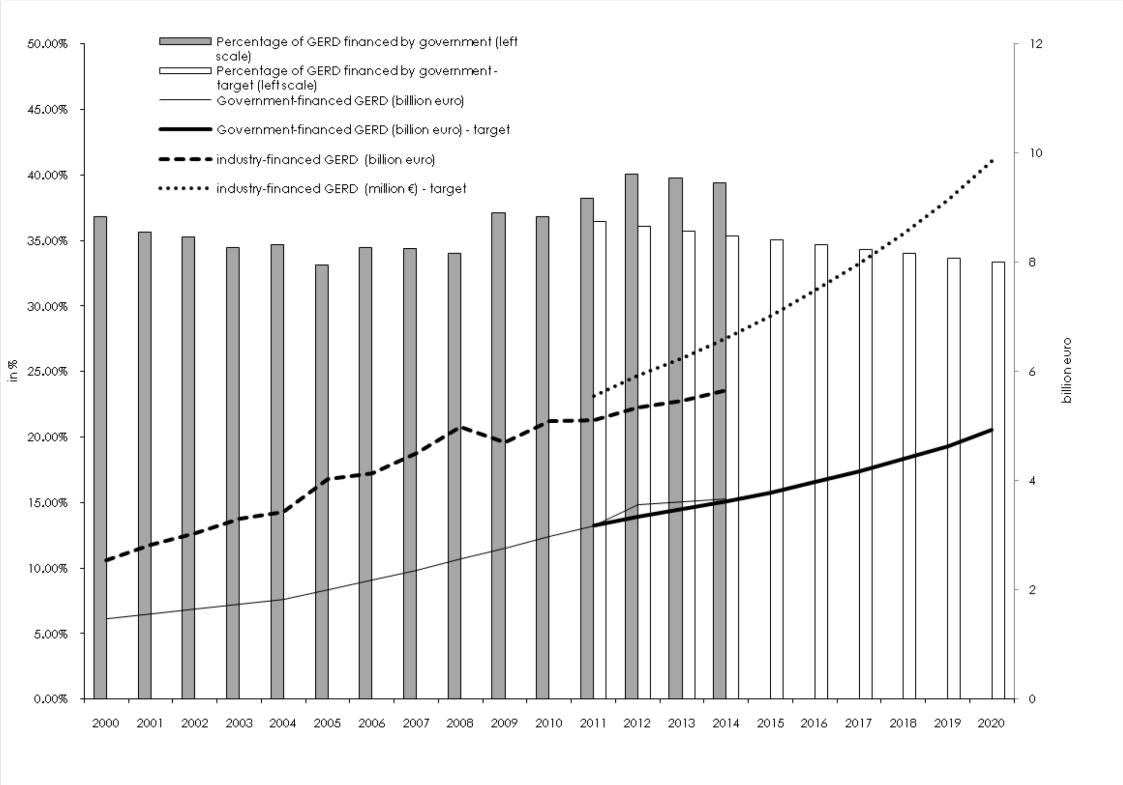
In addition to the target for the R&D ratio which mirrors the European-wide target, the Austrian government has set itself a target for the distribution of R&D expenditure between the public (30-33%) and the private sector (67-70%), inspired by a similar European target during the Lisbon Agenda. Table 3 and Figure 3 show that the reason for R&D expenditure being below target is the private sector. The public sector is actually above target. Public expenditure share is at 39.4% compared with a target value of 35.4% for the year 2014. As is also obvious from Figure 2, the increase in the R&D ratio has significantly slowed down recently. Bringing R&D expenditure back to the target track will be challenging, as public expenditure is already above target and public financing of business R&D is quite high in Austria (see the NRP evaluation 2013 by Janger et al. 2013). In fact, the national targets for the share of public R&D expenditure would imply the much slower growth of public expenditure over the period 2010 to 2020 (5.2%, or 5.0% for the remaining period 2014-2020, rather than 7.2% in 2000-2010), whereas business expenditure growth would have to rise (from 7.2% in 2000-2010, to 9.7% for the remainder of the Europe 2020 timeframe, 2014-2020).

Figure 2: Target path for R&D expenditures, 2010-2020



Source: Statistik Austria, WIFO calculations. R&D ratios 2012-2014 are estimations by Statistik Austria, so may be subject to revisions.

Figure 3: Target path for R&D expenditures, public vs. private financing of R&D, 2010-2020



Source: Statistik Austria, WIFO calculations. R&D ratios 2012-2014 are estimations by Statistik Austria, so may be subject to revisions.

- Past vs. required growth dynamics

Table 2 further documents the extent of the challenge. A "growth" differential between the past period 2000 to 2014 and the remaining period 2014-2020 is calculated to show how past dynamics compare with the dynamics required for reaching the targets ("probability of reaching target"). A negative number indicates that past trends are below the required growth and would point to the need for increasing efforts. Past dynamics are 0.04 percentage points behind the dynamics required; in the next column of table 1, current performance is shown as a comparison between last year's growth of the R&D ratio and required dynamics. This could be useful to pick up more positive recent trends; in this case, current performance is not better. Based on the growth performance of the latest available year and of the period 2000-2014, target forecasts of R&D as a % of GDP amount to 2.93% and 3.23%, respectively.

Table 2: Assessment of growth dynamics and target forecasts based on past trends, in percentage points

Indicator	actual v alue 2014(1)	target v alue 2020 (2)	past growth rate per year 2000-2014(3)	required growth rate per year 2014-2020 (4)	growth last year 2013 (5)	growth differential (3-4): probability of reaching target	growth differential (5-4): actual perform- ance	target forecast 2020 on the basis of (1) und (5)	target forecast 2020 on the basis of (1) und (3)
R&D ratio	2.83	3.76	0.07	0.11	0.02	-0.04	-0.09	2.93	3.23

Source: Statistik Austria, WIFO calculations.

Table 3: R&D expenditures and expenditure targets, 2000-2020

	nominal GDP (million €)	Gross Domestic Expenditure on R&D - GERD (million €)		R&D ratio (of GDP)		Gov ernment-financed GERD (million €)		Percentage of GERD financed by gov ernment		Industry-financed GERD (million €)	
2000	213,196	4,029		1.89%		1,482		36.78%		2,547	
2001	220,096	4,393		2.00%		1,565		35.62%		2,828	
2002	226,303	4,684		2.07%		1,653		35.28%		3,032	
2003	230,999	5,042		2.18%		1,736		34.43%		3,306	
2004	241,505	5,250		2.17%		1,819		34.65%		3,430	
2005	253,009	6,030		2.38%		1,997		33.12%		4,033	
2006	266,478	6,319		2.37%		2,175		34.42%		4,143	
2007	282,347	6,868		2.43%		2,362		34.39%		4,506	
2008	291,930	7,548		2.59%		2,568		34.02%		4,981	
2009	286,188	7,480		2.61%		2,773		37.07%		4,707	
2010	294,208	8,066		2.74%		2,969		36.81%		5,098	
		target	actual	target	actual	target	actual	target	actual	target	actual
2011	308,675	8,735	8,276	2.83%	2.68%	3,183	3,165	36.44%	38.24%	5,551	5,112
2012	317,213	9,264	8,913	2.92%	2.81%	3,343	3,569	36.08%	40.04%	5,921	5,344
2013	322,595	9,724	9,074	3.01%	2.81%	3,474	3,608	35.73%	39.76%	6,250	5,466
2014	329,420	10,248	9,322	3.11%	2.83%	3,625	3,669	35.38%	39.36%	6,623	5,653
2015	336,997	10,820		3.21%		3,790		35.03%		7,030	
2016	345,422	11,447		3.31%		3,970		34.68%		7,477	
2017	355,439	12,156		3.42%		4,174		34.34%		7,982	
2018	366,102	12,923		3.53%		4,394		34.00%		8,529	
2019	378,183	13,778		3.64%		4,638		33.67%		9,139	
2020	393,311	14,788		3.76%		4,929		33.33%		9,859	
growth rate 2000-2010	3.27%	7.19%				7.20%				7.19%	
growth rate 2010-2020		6.25%				5.20%				6.82%	
growth rate 2010-2014	2.87%	3.68%				5.44%				2.62%	
growth rate 2014-2020	3.00%	7.99%				5.04%				9.71%	

Source: Statistik Austria, WIFO calculations.

2.1.2 Policies for reaching the R&D target

Key policy options

Taking a narrow view of the R&D target, efforts should be addressed at raising the R&D ratio and at achieving a split between public and private sector R&D expenditure of around one third – to two thirds. Taking a broader view, the target area contains policies aiming at increasing the innovation performance of firms and the research performance of the science base to foster smart and sustainable growth. We will first discuss the narrow interpretation.

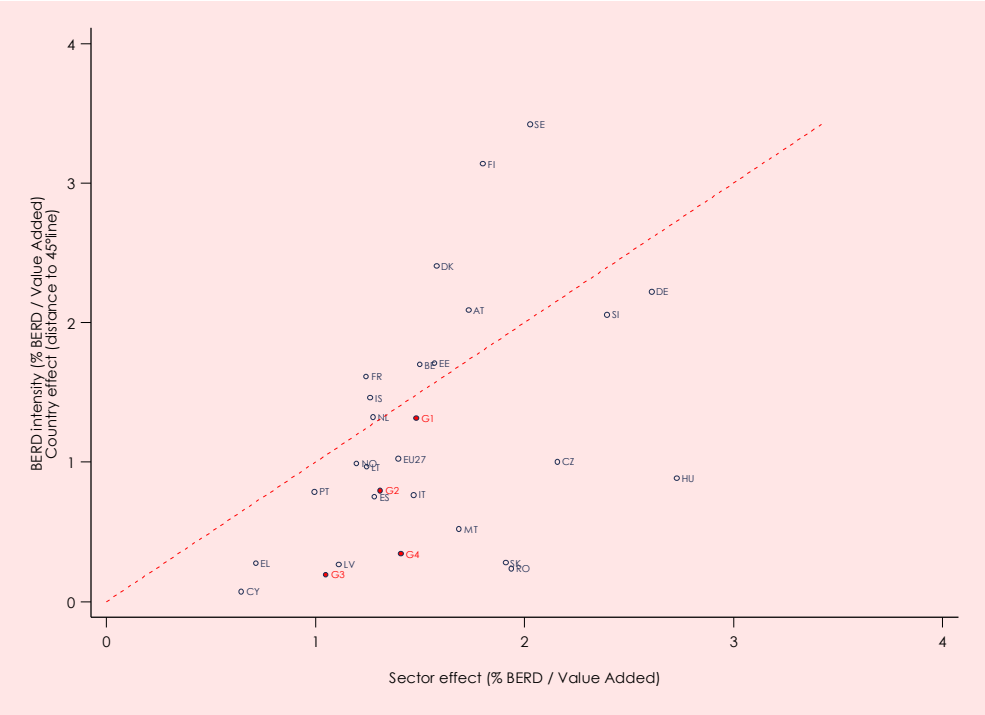
There are basically two main ways to increase R&D intensity. One is to foster structural change towards industries or sectors that are on average more R&D intensive than the industries in which a country is currently specialised. Fostering structural change means simply increasing the share of the industries in total value added or total employment, so that these sectors get a higher economic weight. The second way is to raise R&D intensity in the existing sectors, i.e. there is not much change of shares between industries, but within industries R&D expenditures go up ("sectoral upgrading" as opposed to structural change). In practice, both effects are going to be present. However, so far, the specific Austrian growth performance in R&D intensity has been dominated by sectoral upgrading, raising R&D intensity in the sectors in which Austria is specialised.

Business R&D expenditures (BERD) are heavily influenced by the industrial structure of each country. Industries feature different average R&D intensities required for competitiveness. In pharmaceutics or computers, R&D intensity of production is very high. In metals or wood production, typical R&D intensity is much lower. Countries specialized in industries featuring low typical R&D intensities such as Austria can be "competitive" with much lower R&D intensities than countries specialized in industries characterized by high R&D intensities, ceteris paribus.

Reinstaller - Unterlass (2012) develop a method to compare business sector R&D intensities controlling for varying industry specialization. Figure 4 shows this for a number of OECD countries. The horizontal axis shows expected business sector R&D intensity due to industrial structure – when each industry in a country would feature exactly average R&D intensity (calculated over several countries of the OECD). It can be seen that countries like Denmark or Austria are specialized in industries which are typically not R&D intensive, as they are quite far to the left, whereas countries such as Hungary, Ireland or Korea are far to the right. The vertical axis shows actual R&D intensity of the business sector. The distance to the 45-degree-line is the country-specific R&D intensity. A country above the 45-degree line achieves higher than expected R&D intensity, given its industrial structure. A country below this line achieves lower than expected R&D intensity. It can be seen that Austria is clearly quite R&D intensive given its industrial structure. Indeed, the main story of increasing R&D intensity in the Austrian business sector has been "sectoral upgrading", rising R&D intensity within given sectors. Although there are countries even more R&D intensive given their structure (e.g. Denmark, Sweden), existing firms in Austria may not need to raise R&D intensity much further to maintain

their competitiveness. A boost to R&D intensity may then come mainly from structural change towards more R&D intensive industries.

Figure 4: R&D intensity in the business sector, controlling for industrial structure, 2011



Source: WIFO calculations. Group 1: Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Netherlands, Sweden, United Kingdom. - Group 2: Cyprus, Greece, Italy, Luxembourg, Portugal, Spain.- Group 3: Czech Republic, Hungary, Malta, Poland, Slovakia, Slovenia. - Group 4: Bulgaria, Estonia, Latvia, Lithuania, Romania.

Contrary to the Commission's assessment of the NRP (European Commission, 2014c), this upgrade or this increase in R&D intensity did have palpable economic effects (see the NRP evaluation 2013, Janger et al. 2013). The commission judges economic effects of R&D expenditure on the basis of the newly developed composite innovation output indicator. This indicator is seriously flawed as it neglects the impact of innovation on "sectoral upgrading" – improving existing products and processes. The Commission output indicator strongly relies on indicators of structural change only (share of knowledge-intensive sectors, share of knowledge-intensive services exports etc.). WIFO recalculated Austria's ranking in the subgroup of economic effects indicators in the IUS (see chapter 4.3 in the Austrian Research and Technology Report; BMWF – BMVIT – BMWFJ, 2014), using indicators which capture a broader range of economic effects from innovation. As a result, economic effects of innovation in Austria are now ranked 6th rather than 17th; in the overall ranking, Austria moves from 10th to 6th position, still below the innovation leaders but only one position behind its rank for R&D ratio (5th). For more details on the outcome monitoring of innovative activity see Janger, 2012; Janger et al., 2011; Reinstaller - Sieber, 2012.

While so far innovative activity did have an impact on economic performance, demonstrated by the high quality of exports and good export performance, purely in terms of R&D intensity, Austria will need to more strongly foster structural change towards R&D intensive industries when targets are taken at face value due to its specialisation in medium-tech industries (for an up to date, detailed assessment of Austria's industrial structure, see Bock-Schappelwein - Janger - Reinstaller, 2012). Taking a broader view of policies to foster smart, sustainable and inclusive growth, structural change should at the minimum not be artificially slowed down by e.g. policy or institutional deficits in supplying important ingredients for structural change, such as venture capital, higher education graduates, or a strong science base. At the same time, fostering structural change should not come at the expense of well-working sectors of the economy.

More precisely, policies for structural change should aim at start-ups in R&D intensive sectors and at the above average growth of existing, R&D intensive firms. It is obvious that these policies are not pure R&D policies but contain elements of industrial policy (as in firm growth, firm creation dynamics, both linked to demand and regulation conditions) and education policy (as R&D intensive firms need necessary human resources). Policies for sectoral upgrading should aim at increasing the intensity of R&D in existing firms and at getting traditional firms to innovate/to undertake research activities and are thus more narrow R&D and innovation policies. But of course when the R&D intensity is increasing, so should the share of highly qualified workers which undertake the R&D activity.

Examples for intensity raising policies are the classic direct public R&D promotion schemes (monetary support for research projects), innovation vouchers to motivate firms to engage in innovation activity, fiscal support of contract research and own R&D as well as cooperation between science and business. Here it is noteworthy that the Commission Staff Working Document (European Commission, 2014c) states that cooperation between and publicly funded research and business is low. This is not true anymore. The indicator of public R&D co-financed by private enterprises is significantly biased downwards due to statistical treatment of the "COMET"-centres – which are big research platforms linking universities to business – as business research centres, neglecting the substantial university participation in them. Other cooperation indicators, such as cooperation frequency according to Community Innovation Survey data and private-public co-publication bibliometric data, point to Austria being among the top European nations in terms of business-science links, to the point where some observers call for a stop to further expansion of public funding of business-science cooperation (see e.g. Janger, 2014).

Examples for structural change policies are e.g. improving venture capital availability, improving conditions for firm creation, for spin-offs from universities etc. Education policies usually target both, but education policies targeted at structural change would lean more towards tertiary graduates, while incremental innovation in existing sectors in Austria often also needs upper secondary vocational graduates for innovation activities in the production

process. In practice, there will of course be an overlap between these policies and their effects.

Next to the overall target for the R&D ratio, there is also the national target for the share of public and private sector R&D financing. Here, there are no easy solutions. The main imperative for the public sector is to maximise the leverage of its promotion policies; as the target would, if taken at face value, limit the volume of public financing of R&D. As public financing of business sector R&D expenditure is already quite high, this should not be increased to the detriment of higher education research. On the contrary, fostering the performance of the science base may be an effective way to boost structural change, i.e. a higher share of R&D intensive sectors which would also finance more R&D and take the weight off the public sector's shoulders in the medium-term. Of course such policies take time to bear fruit but the positive effects are then likely to be felt beyond 2020. Also the use of non-R&D subsidy based tools such as e.g. using public procurement to stimulate innovative activity in the private sector may be one way to maximise leverage of public R&D policies.

Finally, when we think about the policies aimed at R&D less from a narrow target perspective and more from a broad growth perspective, we can ask what is the bottleneck or the most binding constraint for a further improvement of innovative performance of firms and of the research performance of the science base. Here, the evaluation of the Austrian innovation system (Aiginger - Falk - Reinstaller, 2009) pinpoints human resources for innovation, higher education and academic research as crucial inputs into the innovation process of firms which can be improved relative to Austria's level of development at the top of European countries.

Measures in the NRP – correspondence with key policy options and bottlenecks

How does the NRP 2014 live up to these challenges, does it address the main issues of the discussion above? The NRP refers mainly to the federal innovation strategy 2020[10] which focuses on five areas (education system, non-business research, business research, governance, financing R&D), outlining e.g. the most important measures addressing the most important bottlenecks, as well as outlining measures to complete the European Research Area, which are part of the Austrian RTI strategy.

In terms of the assessment of which measures are lacking, the plethora of measures announced in the strategy calls for a **focus on implementation**. Although the R&D target is among the ones furthest behind, in terms of measures the innovation strategy is certainly among the most comprehensive with consistent sets of announced measures to reach the Europe 2020 targets. It features a balanced analysis of the most important challenges or bottlenecks for a further improvement of innovation performance, such as human resources, basic research, venture capital, governance of the innovation system and structural change towards more R&D intensive sectors.

[10] See http://era.gv.at/object/document/462.

Points which could be addressed more strongly are non-tertiary human resources for innovation, such as graduates from technical upper secondary vocational schools. But even in the apprenticeship system there is considerable potential to train young people in occupational areas which ensure that innovative activity leads to productive activity, which ultimately leads to the value added justifying the innovative investment. So far, especially among women there is a choice of a few traditional occupations with little innovation potential (e.g. hairdresser, office assistant and salesperson). People from the upper secondary vocational schools ("HTL") are also in sometimes unsatisfied demand.

Furthermore, so far there is little information on how the public share in R&D financing could be lowered without endangering innovation performance. New models for the allocation of public R&D subsidies might be considered, such as auctioneering models; and the direct public promotion of R&D projects may be streamlined, or focused, to account for the importance of the tax premium on R&D activity. Overall, there are many goals relating to higher education in the strategy, such as improving higher education teaching through a formula based unit cost model, improving research through more competitive financing, new organisational structures and doctoral studies, but compared with business sector policies there is less implementation so far.

In summary, based on past trends and on the policies put in place or announced by the government, the R&D target for the public sector is currently on track, while the one for the private sector is not on track. However, in a broader view of going after smart and sustainable growth, the measures announced in the innovation strategy would lead to a considerable improvement of the Austrian innovation system in terms of performance, if fully implemented. Such a full implementation of measures may lead to reaching the R&D target somewhat after 2020; structural change is usually slow. The important issue to keep in mind is that R&D intensity is no performance goal in itself. If the Austrian economy's innovative capability and competitiveness does not decline, not reaching the R&D target by 2020 should not be a major problem.

2.2 Key target education

2.2.1 Target path: 38% higher education graduates and early school leavers at 9.5%

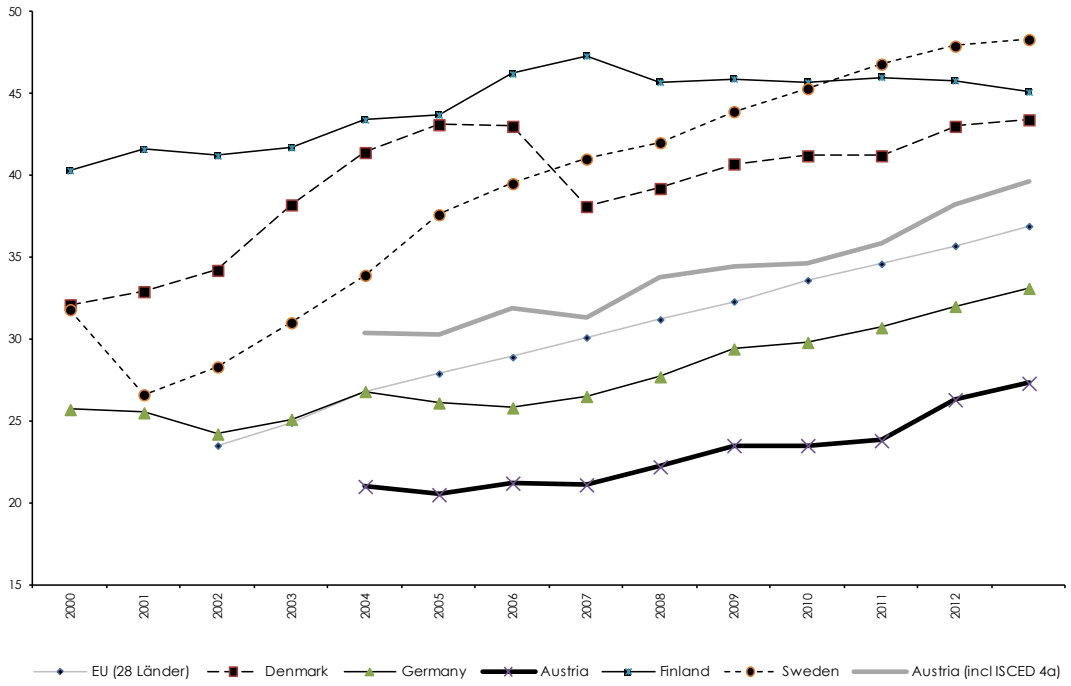
- Past trends

Table 5, Figure 5 and Figure 6 show past trends for higher education and early school leavers. Fewer people obtain a tertiary education qualification in comparison with the EU/OECD average (ISCED 5, 6; Figure 5). When discussing higher education in Austria, one needs to point out Austria's vocational education system which leads to professional qualification early on and a relatively low share of higher education graduates. 63% of 25-64 year olds have an upper secondary qualification (OECD, 2014a)[11] and over 90% with upper secondary

[11] At least upper secondary education: 83% in 2012.

education have a vocational education (ISCED 3, 4). In particular, the Austrian government has often argued that graduates from upper secondary vocational colleges such as HTL, HAK etc. which take five years to complete and lead to A-levels at the age of 19, are equivalent to shorter tertiary studies in other countries. This is why the government (together with Germany) included this qualification level (ISCED 4a/30-34 year olds: 12.3 percentage points in 2013) in its national target.

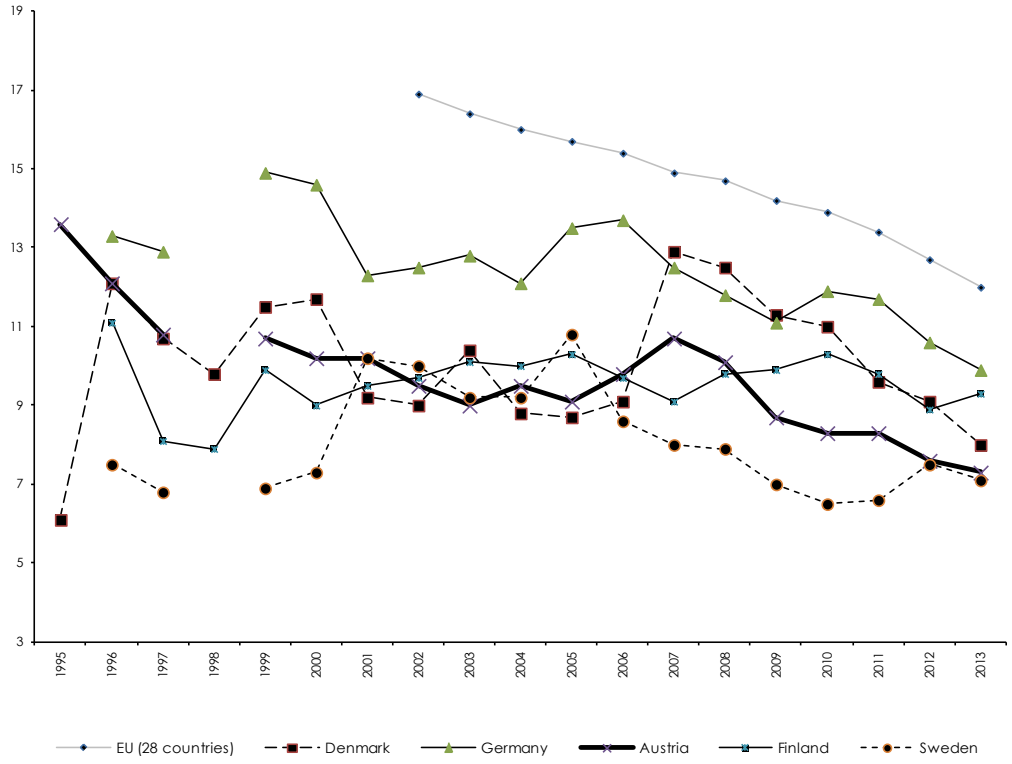
Figure 5: Population aged 30-34 with tertiary educational attainment level, 2000-2013



Source: Eurostat.

As regards early school leavers, between 2000 and 2008, early school leaving (ESL) fluctuated at around 9% to 10% in Austria, but decreased to 7.3% in 2013, well below the EU average (2013: 12.0 % (EU 28); Figure 6). Nevertheless, socio-economic background has a strong influence on achievement in the Austrian education system, and pupils from a disadvantaged background face a much higher risk of dropping out "early" than their peers from more privileged backgrounds.

Figure 6: Early leavers from education and training aged 18-24, 1995-2013



Source: Eurostat.

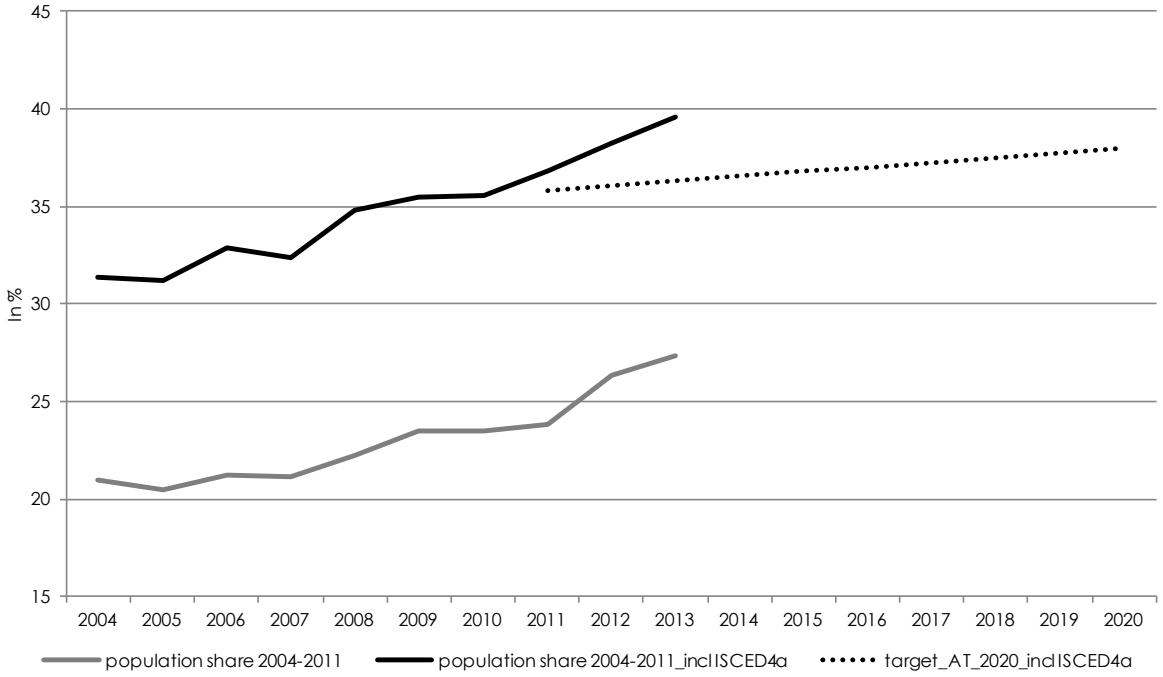
- Target path 2020

Education is one of the five targets of the Europe 2020 Strategy, its aim being to prevent skills bottlenecks in knowledge-intensive economic sectors. The Europe 2020 Strategy set two headline targets for education, one for the highly skilled and one for early school leavers. In the area of higher education, at least 40% of 30-34 year olds should have a tertiary degree or an equivalent qualification in the EU by 2020 to keep up with technological progress and global competition. Another obstacle to economic growth is early school leaving which hampers not only productivity and competitiveness but also leads to fewer job opportunities, higher unemployment risk, poverty and social exclusion. As regards early school leaving, school drop-out rates should be reduced to below 10% by 2020. Translated into national targets Austria has committed itself to increase the share of 30-34 year olds with a tertiary degree or an equivalent qualification to 38% by 2020. The second headline target is to bring down the rate of early school leavers to 9.5% by 2020.

Higher education target

Between 2005 and 2010 the share of the highly skilled population aged 30-34 grew on average by 0.7 percentage points per year. In 2013, the share of the population aged 30-34 having completed a tertiary education or equivalent was 39.6% in Austria (including ISCED 4a), i.e. 1.6 percentage points above the national target for 2020, and a 3.3 percentage points above the target value for the year 2013 which follows from a constant growth approximation to the target value in 2020. Table 5 and Figure 7 show the evolution of the share of the highly skilled population aged 30-34 between 2004 and 2013 with and without ISCED4a, together with the line (ISCED 5/6 plus ISCED 4a) projecting the necessary growth pattern that is needed to achieve the national target of 38% in 2020. It also becomes obvious that the increase in tertiary graduates comes from the ISCED 5 and 6 graduates, i.e. not the people doing 5-year upper secondary vocational schools. The increase is quite substantial.

Figure 7: Population aged 30-34 with tertiary educational attainment level (or equivalent qualification; including ISCED 4a)

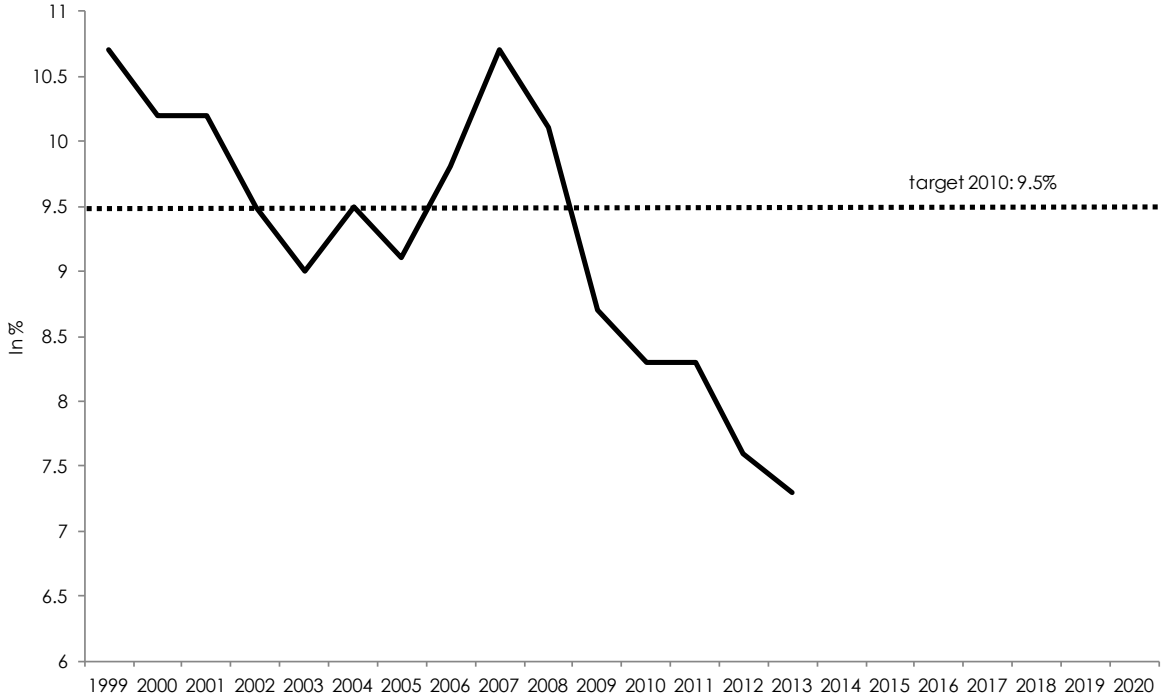


Source: Eurostat, WIFO calculations.

Early school leaving[12]

Between 2000 and 2008, early school leaving (ESL) fluctuated at around 9% to 10% in Austria, but decreased to 7.3% in 2013, well below the EU 28 average (2013: 12.0 %). So Austria has actually already reached the core objective for the drop-out ratio (9.5 per cent). However, data on early school leaving according to migrant status still show very high gaps in Austria; this group is 3.5 times more likely to leave school early than natives (for details see Stadler — Wiedenhofer-Galik, 2012). The next figure shows the changes in the share of early leavers from education and training aged 18-24 since 1999.

Figure 8: Early leavers from education and training in the age cohort 18-24



Source: Eurostat, WIFO calculations

- Past vs. required growth dynamics

For both early school leavers and higher education, targets are already reached, but table 4 shows which target value could be reached if current trends continue. On medium term trends, the share of higher education graduates in the population of 30-34 year olds could

[12] Early leavers from education and training refers to persons aged 18 to 24 fulfilling the following two conditions: first, the highest level of education or training attained is ISCED 0, 1, 2 or 3c short, second, respondents declared not having received any education or training in the four weeks preceding the survey (numerator). The denominator consists of the total population of the same age group, excluding no answers to the questions "highest level of education or training attained" and "participation to education and training". Both the numerators and the denominators come from the EU Labour Force Survey.

reach 47% (including ISECD 4a graduates), while early school leavers could drop to 6%. It remains to be seen whether these positive developments continue.

Table 4: Assessment of growth dynamics and target forecasts based on past trends, in percentage points

Indicator	actual value 2012(1)	target value 2020 (2)	past growth rate per year 2004-2013 (3)	required growth rate per year 2012-2020 (4)	growth last year 2013 (5)	growth differential (3-4): probability of reaching target	growth differential (5-4): current performance	target forecast 2020 on the basis of (1) und (3)	target forecast 2020 on the basis of (1) und (5)
Tertiary education graduates age 30-34	39.60	38.00	2.63	target reached	3.53	target reached	target reached	47.48	50.48
Early School leavers	7.3	9.5	-2.69	target reached	-3.95	target reached	target reached	6.03	5.51

Note: past year growth for ESL 2000-2013

Table 5 and Table 6 show detailed numbers.

Table 5: Share of population aged 30-34 with tertiary education (or equivalent qualification; including ISCED 4a) and qualification targets, 2004-2020

	Population aged 30-34 with ISCED 4a, 5, 6				
	total	with ISCED 4a, 5, 6 (total)		with ISCED 4a, 5, 6 (in%)	
2004	598,036	187,520		31.4	
2005	582,796	181,988		31.2	
2006	566,326	186,037		32.8	
2007	549,559	177,751		32.3	
2008	537,843	187,200		34.8	
2009	530,185	187,953		35.5	
2010	526,024	187,123		35.6	
		target	actual	target	actual
2011	533832	191159	196100	35.8	36.8
2012	547953	197514	209600	36.0	38.3
2013	560029	203204	221800	36.3	39.6
2014	564860	206314		36.5	
2015	569691	209456		36.8	
2016	574522	212631		37.0	
2017	579353	215838		37.3	
2018	584183	219079		37.5	
2019	589014	222353		37.8	
2020	593845	225661		38.0	
	In %			In percentage points	
Growth rate 2004-2010	-2.1	0.0		2.1	
Growth rate 2010-2020	1.2	1.9		0.7	
growth rate 2010-2013	2.1	2.8		3.6	
Growth rate 2013-2020	0.8	1.5		-0.6	

Source: Eurostat, WIFO calculations. Population projections based on Eurostat europop2013.

Table 6: Early leavers from education and training aged 18-24 and targets, 2000-2020

	Population aged 18-24 (January 1)	Early leavers from education and training aged 18-24		Share of early leavers from education and training in % of population 18-24	
1999	663,873	71,034		10.7	
2000	664,649	67,794		10.2	
2001	669,382	68,277		10.2	
2002	678,165	64,426		9.5	
2003	693,482	62,413		9	
2004	706,175	67,087		9.5	
2005	719,227	65,450		9.1	
2006	723,465	70,900		9.8	
2007	719,740	77,012		10.7	
2008	718,785	72,597		10.1	
2009	722,040	62,817		8.7	
2010	725,354	60,204		8.3	
		target	actual	target	actual
2011	729699		60565		8.3
2012	735953		55932		7.6
2013	739756		54002		7.3
2014					
2015					
2016					
2017					
2018					
2019					
2020				9,5	
	In %		In percentage points		
Growth rate 2000-2010	0.81			-2.28	
Growth rate 2010-2020				1.36	
growth rate 2010-2013	0.66			-4.19	
Grwoth rate 2013-2020				3.83	

Source: Eurostat, WIFO calculations. Population projections based on Eurostat europop2013.

2.2.2 Improving educational outcomes

Key policy options

- Higher education

In 2012, Austria has already reached its target of 38% of tertiary education graduation in the population bracket of 30 to 34 year olds, including ISCED 4a graduates (5-year upper secondary vocational schools). However, by comparison with leading European countries (see Figure 5), Austria is 5 to 10 percentage points behind, even accounting for ISCED 4a (the comparison countries figures' do not include ISCED 4a). Hence, having reached the target should not be reason for complacency. Moreover, with a view to the match of qualifications with labour market requirements, there is still an open debate whether ISCED 4a is really equivalent to shorter tertiary studies elsewhere. This should be backed up by more empirical analysis.

To further increase higher education graduation rates excluding ISCED 4a education, two main pathways can be chosen: first, reduce the dropout rate of students taking up higher education; second, increasing the share of pupils gaining entrance right to higher education.

Entry rates into tertiary education are comparably low, not least because the Austrian school system streams pupils at an early stage into a vocational and an academic track. Many pupils enter the labour market after vocational education (ISCED 3 or 4). Nonetheless entry rates into tertiary education have doubled to 53%[13]) (2012, tertiary type A) since the 1990s in Austria, but they are still somewhat below the OECD-average (58%) (EU 21: 56%); almost 10 percentage points of the increase however come from international students studying in Austria (e.g. Germans), which often do not stay; a 2009 survey by the OECD sets the stay rate at only 17%.

Tertiary level dropout and survival rates are useful indicators of the internal efficiency and effectiveness of tertiary education systems. Reasons for leaving tertiary education programmes are varied: students can realize that they have chosen the wrong subject, they cannot fulfil the standards set by the educational institution or they get an attractive job opportunity before completing the educational programme. Unfortunately, timely international comparison of proper drop-out rates is difficult (a proper drop-out rate calculates the share of students who started university in a specific field but failed to finish any field; it may take a long time before it is clear that a student who started tertiary education has not finished it as he may return to university at a later stage). Hence survival rates specific to studies are more commonly used even if only an imperfect proxy. They measure for a specific study field how many students finished given to the total number who started at a given year.

[13] Sum of net entry rates for each year of age.

- Early school leaving

As with the share of tertiary graduates, Austria has already reached its target of early school leavers. Again, a comparison with leading international countries such as Switzerland or Sweden shows that the best performing countries achieve an even lower share of early school leavers, by about 2 percentage points. Hence, there is still room for improvement. Socio-economic background has a strong influence on achievement in the Austrian education system, and pupils from a disadvantaged background face a much higher risk of dropping out than their peers. A particular challenge is to unlock the potential of the young with a migrant background, since achievement gaps compared to native peers are amongst the highest in the EU. Key policy options are improving the overall quality of the education system – from pre-primary education up to the lower secondary system, giving specific advice and coaching to vulnerable students and lower achieving students and making sure pupils get a second chance. Examples of school-level factors that improve the learning process are class size, learning time at school, instruction time, the curriculum or share of instruction in the curriculum by subject (see e.g. OECD, 2015).

Measures in the NRP – correspondence with key policy options and bottlenecks

- Increasing the share of tertiary graduates

Austria's policies to increase the share of tertiary graduates are mainly described in relationship with the CSR on education, as regards further improving the strategic planning in the higher education sector and reducing the drop-outs. To reduce drop outs, increase quality and the quantity of tertiary graduates as well as coordinate the Austrian higher education sector, a mix of measures is proposed: first, more funding, additional 615 million euro for universities for the next performance-based funding period 2016-2018. This sum is about sufficient to keep inflation in check, but does not allow for significant real changes to the quantity or quality of research and teaching. In comparison with a group of European leading countries such as Finland, Sweden, Denmark and Switzerland, Austria's higher education spending per student is below average. The promised 615 million Euro will keep expenditure per student approximately stable (depending on student inflow), but the goal of spending 2% of GDP on higher education from private and public sources becomes increasingly unachievable by 2020 (see Hranyai - Janger, 2014). To reach the 2% goal, a sum of about 3.8 billion Euro would be necessary between 2016-2018, more than six times higher than planned.

i) To reduce drop-outs, more information is provided to study beginners. Some of the programmes are unlikely to increase the share of the highly skilled population in the short run but they could be relevant for the medium or longer run (e.g. Studienchecker or "Studieren probieren", trying out studying). The potential effects on the participation in higher education will probably only be seen beyond 2020. There is also a university introduction and orientation phase now. But universities still lack the right to select applicants (as most international universities can do, and even Austrian universities of applied sciences). In principle, a system

where universities can select applicants may come out of the agreed upon and partly introduced different funding model for teaching ("capacity-based university funding based on enrolment"), which is supposed to link student numbers to teaching capacity by universities, as already practiced in the universities of applied sciences. Its overall impact on drop-outs and the share of tertiary graduates depends on its implementation, which is slow for the time being and it has been put on hold due to funding problems. So far, first implementation steps consist in allowing access restrictions in five fields of study which are in especially high demand and creating 95 additional professorships in these study fields.

If it does lead to lower student-teacher ratios while increasing overall numbers of graduates, it would be a big step forward. Needless to say, lower student teacher ratios need more money, which is currently not planned beyond 2018 (see above). This new funding model is a main part of the "Hochschulplan", the higher education planning exercise, which is supposed to enhance coordination and differentiation of universities, contributing to more efficient spending and also higher teaching quality and international visibility of universities, all of which should also have at least indirect impacts on drop-outs and the share of tertiary graduates.

It remains to be seen however how effective the higher education planning will become in practice. The recent addition of a medical university to the University of Linz was not part of the original version of the higher education plan (www.hochschulplan.at). Medical universities are expensive and it is not clear that increasing the supply of medical graduates rather than improving working conditions for young doctors is the right way forward to safeguard provision of health care services. More generally, the case of the medical university of Linz casts doubt on the practical relevance of the planning exercise for higher education policy and highlights again the difficult governance of policy areas in Austria due to the relations between the federal and the regional level (the Länder).

Moreover, while cooperation on big research infrastructures and new buildings, as planned, can certainly be efficiency-enhancing, it is not entirely clear that the differentiation of universities as regards their research portfolios can be strategically coordinated, due to the information asymmetries inherent between those who do the highly specialised research and those who aim at coordinating universities (see Clark, 1983; Janger, 2013 for a discussion). Aiming at complementary teaching offers and research portfolios by universities may also come at the expense of incentives arising from competition between universities, which in general leads to higher quality of teaching (hence should lead to fewer drop outs) and is particularly strong at the local level. In this regard, setting up the medical university of Linz may have unintended positive consequences.

In terms of broadening access to higher education, or increasing the entry rate into higher education, some measures have been taken. E.g., the Berufsmatura, i.e. an apprenticeship

diploma plus a certificate of secondary education enabling access to tertiary education[14], is an essential measure to broaden access to higher education (for the middle (vocationally) qualified), i.e. to increase the entry rate, but its effect will strongly hinge on the quantitative dimension of the measure, i.e. how many apprentices will choose to take the exam or are able to pass the exams[15].

This in turn is influenced by the quality of the pre-university school system which is a crucial determinant of the entry rate into higher education. One measure relevant here is (high quality) full-day schooling. Recently there have been initiatives to upscale the expansion speed of full-day schooling. As stated, the quality of the pre-university school system is crucial; measures which typically feature in suggestions to improve the quality of schools are autonomy of schools in conjunction with nation-wide standards and evaluation or accountability (see e.g. Wößmann, 2003, 2006, 2008a/b), apart from a high-quality full-day schooling system. The Austrian government is currently setting initiatives in all of these areas, the implementation and success of which cannot be assessed fully yet.

All in all, there is clear progress; just taking the target at face value, efforts could stop here. But thinking more long-term and beyond Europe 2020, more efforts to improve higher education in Austria are clearly commendable.

- Early school leaving

The NRP 2014 lists several measures that aim at improving educational outcome in particular of disadvantaged young people, including by enhancing early education and reducing the negative effects of early tracking, e.g.

- New secondary school
- Further expansion of full-day schooling
- Language support for multilingual pupils in German and their first language
- Supported transition from pre-primary to primary education
- Coaching of youth and apprentices against dropping out

These measures address the challenge of preventing school drop-outs and to reduce the achievement gap between pupils from disadvantaged or immigrant backgrounds and their peers. Most of the listed measures in the NRP 2014 can help to strengthen foundational skills. They are also consistent with the country specific recommendation in 2014/15 to improve educational outcomes, especially of the disadvantaged young. Over the next few years, the 'training guarantee' *(Ausbildungsgarantie)* for those up to the age of 18 and youth coaching should help to keep pupils in the mainstream educational system and thus keep the number of school drop outs below the target of 9.5%. Also the planned shift from "compulsory

[14] In Austria, both apprenticeship programmes and formal schooling are statistically classified as upper secondary education. But only formal schooling diplomas convey the right to enter tertiary education.

[15] In November 2011, 9484 apprentices attended Berufsmatura-related courses.

schooling" to "compulsory education" within the current government programme should work to reduce the number of early school leavers and youth with compulsory education only.

It is important to embed all relevant measures (i.e. not only those listed in the NRP 2014) — from pre-school education to formal education and lifelong learning — into the comprehensive lifelong learning strategy to reduce the number of school drop-outs and the education achievement gap and enhance educational outcomes but also to broaden access to higher education and to facilitate access and participation to lifelong learning. This comprehensive strategy is a prerequisite for labour market and social integration for the whole (working age) population, in particular for pupils, the disadvantaged and older workers. Clear responsibilities and financing structures are unavoidable, as for example in the field of lifelong learning to promote access/participation irrespective of labour market participation.

In conclusion, the NRP 2014 includes a range of measures to prevent school drop-outs and to reduce educational achievement gap whereas measures regarding early tracking or entry rates into higher education are not addressed. There are also no measures to broaden access to higher education for e.g. adult low income earners. Measures to reduce drop outs from higher education could be far reaching, depending on the implementation of the formula based unit cost model. Generally however, the impact of the measures on graduation rates in higher education is not immediately visible and first results are to be expected in the medium term at the earliest (around 2020 and beyond, as the target value is formulated with respect to the population age group of 30-34). This should not be a reason however not to introduce reforms. It is furthermore essential to embed all the above mentioned measures aiming for better educational outcomes, regardless of whether at the pre-primary, primary, secondary or tertiary education or lifelong learning level in one common national strategy.

In summary, the Europe 2020 education targets are already met; regarding early school leavers however, due to the fluctuations in the past complacency is misguided, in particular as Austria shows vulnerable groups such as children with a migration background. The higher education target is also already met. In a broader view of going after smart and inclusive growth, there is no harm involved in trying to go beyond the official target which would have important benefits for the Austrian economy.

2.3 Key target employment

2.3.1 Target path: 77-78% of the population aged 20-64

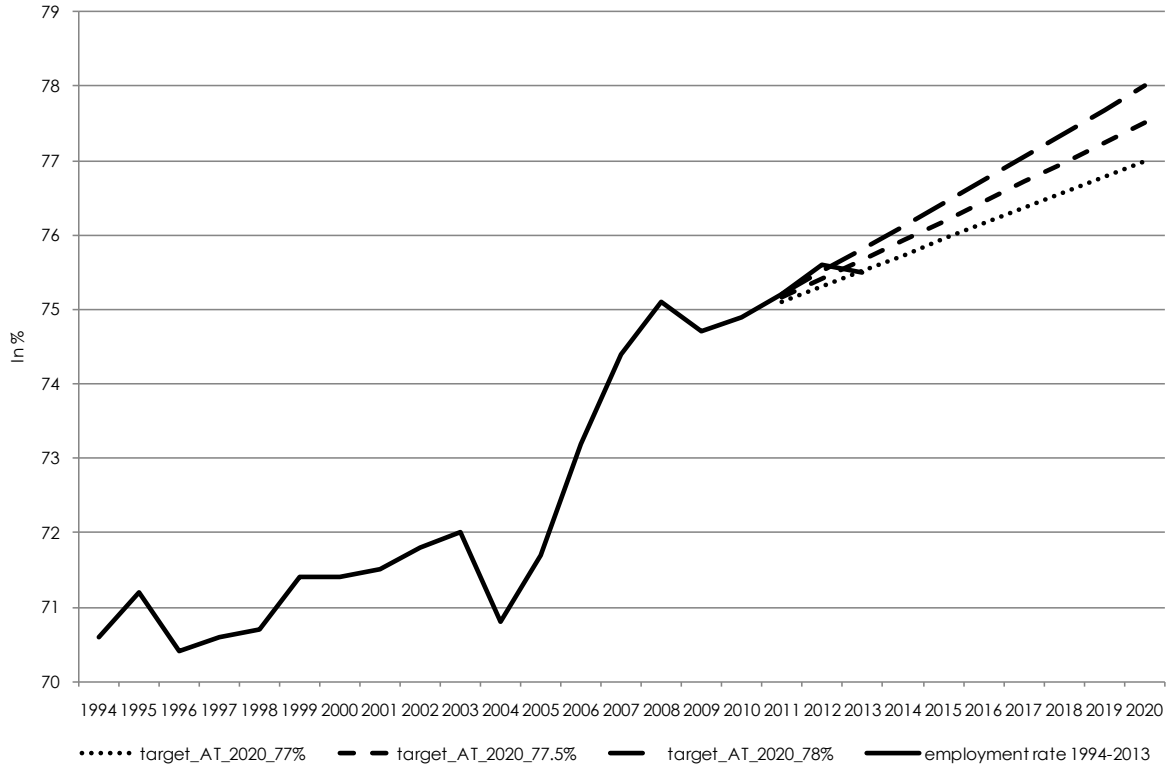
- Target path

The Europe 2020 strategy sets one target in the area of employment: the employment rate of those aged between 20 and 64 should rise to 75% within the European Union. Austria has set itself an even higher target of between 77 and 78% by 2020. In 2013 the employment rate of

the population aged between 20 and 64 in Austria reached 75.5%, thus already exceeding the EU wide target employment rate (75%) but was still 1.5 to 2.5 percentage points below the national target rate (77-78%)

Figure 9 shows the evolution of the employment rate in Austria over the time period from 1994 to 2013 together with projection lines indicating the necessary growth patterns needed to achieve the Europe 2020 target (Table 8). During the period from 1994 to 2003[16]) the employment rate grew at an average rate of 0.22 percentage points and thus was only slightly below the minimum rate needed to reach 77% in 2020 (0.28 percent per year). In the more recent period from 2008 to 2013 the average growth was even slightly higher (0.25 percentage points per year) implying only minor deviations from the growth path necessary to achieve the minimum target level by 2020. As the figure illustrates, recent employment dynamics therefore seem to be on track, even after one year of declining employment rates in the aftermath of the recent financial crisis.

Figure 9: Employment rate of population aged 20 to 64, 1994-2020



Source: Eurostat, WIFO calculations.

- Past vs. required growth dynamics

[16])Notice that there is a break in the time series around 2004 due to changes in the labour force survey structure.

Table 7 shows how the current employment rate relates to the target level for 2020 in more detail. Between 2000 and 2013 the employment rate of those aged 20 to 64 grew on average by 0.48 percentage points per year (column 3). In order to reach the lower limit of the 2020 target an average growth rate of 0.28 percentage points per year is required, while the more ambitious targets require yearly growth rates of 0.37 and 0.47 percentage points respectively (column 4).

Comparing these intended growth rates to last year's employment growth (-0.1 percentage points) shows a negative growth differential: when last year's growth rate is extrapolated the target level in the year 2020 is out of reach[17]. However, transnational commuters are excluded in these numbers, although they play a quite substantial role in employment growth in Austria, why — also when considering longer time trends —, Austria still appears on track in order to achieve the 77%-employment target set by the EU 2020 strategy. The table shows that there remains a positive growth differential (difference between current and required average growth rate) of 0.2 percentage points (column 6). The longer term trend in employment growth of 0.48 percentage points between 2000 and 2012 is also above the required growth rate for the upper limit of the target.

Current economic forecasts imply only small increases in the employment rate for the next years, partly due to a relatively large growth in labour supply and rather weak economic growth. At least the upper target rate might therefore get out of reach.

Table 7: Employment rate: Assessment of growth dynamics and target forecasts based on past trends, in percentage points

Indicator	actual value 2013 (1)	target value 2020 (2)	past growth rate per year 2000-2012(3)	required growth rate per year 2012-2020 (4)	growth last year 2012 (5)	growth differential (3-4): probability of reaching target	growth differential (5-4): current perfor-mance	target forecast 2020 on the basis of (1) and (5)	target forecast 2020 on the basis of (1) and (3)
Employ-ment rate (20-64)	75.5	77.0	0.48	0.28	-0.10	0,2 (171%)	-0,38 (-36%)	74.7	79.3
	75.5	77.5	0.48	0.37	-0.10	0,11 (128%)	-0,47 (-27%)	74.7	79.3
	75.5	78.0	0.48	0.47	-0.10	0,01 (103%)	-0,57 (-21%)	74.7	79.3

Source: Eurostat, WIFO calculations.

[17] The definition of employment rates used by EURO-STAT does not account for transnational commuters, who play a quite substantial role in Austria. When accounting for these commuters, employment rates are actually growing in 2013.

Table 8: Employment rate, 2012-2020

	Pop. aged 20-64	Total employment aged 20-64						Employment rate aged 20-64					
	In 1000							in %					
1999	4887	3463						71.4					
2000	4909	3470						71.4					
2001	4937	3490						71.5					
2002	4880	3462						71.8					
2003	4985	3553						72.0					
2004	4991	3474						70.8					
2005	5042	3613						71.7					
2006	5054	3699						73.2					
2007	5068	3768						74.4					
2008	5089	3822						75.1					
2009	5101	3811						74.7					
2010	5122	3835						74.9					
		target_77%		target_77.5%		target_78%		target_77%		target_77.5%		target_78%	
		target	act.	target	act.	target	act.	target	act.	target	act.	target	act.
2011	5168	3885	3885	3884	3885	3886	3885	75.1	75.2	75.2	75.2	75.2	75.2
2012	5195	3912	3927	3917	3927	3923	3927	75.3	75.6	75.4	75.6	75.5	75.6
2013	5204	3930	3929	3938	3929	3946	3929	75.5	75.5	75.7	75.7	75.8	75.8
2014	5225	3957		3967		3977		75.7		75.9		76.1	
2015	5259	3994		4007		4020		75.9		76.2		76.4	
2016	5285	4024		4040		4056		76.2		76.4		76.7	
2017	5308	4053		4072		4090		76.4		76.7		77.1	
2018	5335	4086		4107		4128		76.6		77.0		77.4	
2019	5356	4112		4136		4160		76.8		77.2		77.7	
2020	5373	4137		4164		4191		77.0		77.5		78.0	
		in %						in percentage points					
Growth rate 2000-2010	0.4	1.0		1.0		1.0		0.3		0.3		0.3	
Growth rate 2010-2020	0.5	0.7		0.8		0.9		0.2		0.3		0.3	
Growth rate 2010-2014	0.5	0.8		0.8		0.8		0.2		0.2		0.2	
Growth rate 2014-2020	0.4	0.7		0.8		0.9		0.2		0.3		0.3	

Source: Eurostat, WIFO calculations.

2.3.2 Policies for increasing employment

Key policy options

Key policy options can be seen in increasing the employment rate of labour market segments which are clearly below the overall employment rate. In Austria this is the case especially for older people, where the scope of increasing the employment rates is limited on the one hand by labour market constrains (high unemployment rates), health related issues but also by legal constraints (e.g. the lower retirement age for women). At the same time Austria shows very low employment rates of elders with low educational attainment levels.

The Austrian pension system has been characterized by relatively high incentives for early retirement. However, the recent pension reform (becoming active from 2014 onwards) further increases pension deductions (from 4.2 to 5.1% per year) and retirement age for early retirement schemes and from 2014 onward there are new structures for health and job rehabilitation. The measures are supposed to increase participation rates among older workers and will decrease incentives (and possibilities) for early retirement considerably. But at the firm level incentives or compulsory measures to improve working conditions for older workers could be increased.

For women on the other hand, important constraints that hinder (full-time) employment participation are associated with unpaid care activities. Unequal distribution between men and women as well as the infrastructure of care facilities are of particular concern in this context. At the same time differences in statutory retirement age between men and women lead to lower labour market participation rates among older women compared to men. The total tax burden (social security contributions and income tax) for low income earners is high in Austria. Especially the level of social security contributions and effective taxes between mini jobs and low-paid jobs at the margin of social security contributions (see section on the corresponding CSR) can have negative effects on employment, especially for low-income earners.

The main challenges concerning youth employment are individual formal qualification, quality of the education and training system and smooth transition from school to the labour market. Reducing the number of low skilled youth, education drop-outs, NEETs as well as improving the quality of educational institutions is essential for fostering (sustainable) youth employment, especially for disadvantaged youths with migration backgrounds, and for decreasing their comparatively high unemployment rate.

Measures in the NRP – correspondence with key policy options and bottlenecks

A comprehensive strategy to increase labour force participation in Austria can be split into different packages of measures (see Annex), which correspond to the main pathways or bottlenecks to increase the employment rate:

1. Increasing the labour market participation of older persons

2. Increasing the labour market participation of women
3. Increasing the labour market participation of the young, persons with migration backgrounds and low skilled persons

- Increasing the labour market participation of older persons

The Austrian labour market is characterized by low employment rates of older persons compared to other European countries, especially for those with low educational attainment levels. While older workers usually enjoy more stable employment compared to young workers who have higher turnover and more fluctuations their employment prospects decline strongly compared to younger workers, once they get unemployed. Their probability of re-employment is much lower – even more so during phases of economic downturns or stagnation. On the other hand older workers are increasingly remaining in the labour market longer due to reforms in the pension system. At the same time the educational structure changes over time, leading to smaller shares of low qualified within each age group which should improve also older workers' employment prospects[18]. These facts imply that the number of both, unemployed as well as employed older workers is likely to increase over the next few years.

The first policy package aiming at increasing the labour market participation of older workers focuses mainly on three aspects: the legal conditions framing the pathway into early retirement, health aspects of older employees and fostering their rehabilitation and thirdly prevention measures to reduce health related employment drop-outs at an early stage.

The National Reform Programme lists several measures for increasing older persons' labour market participation, e.g.:

- "fit2work"
- "Skilled Labour package"
- "Come back plus" ("Reife Leistung"): target group unemployed and health impaired persons aged 50+
- „Aufstieg": target group unskilled and semiskilled workers with impaired health
- Further pilot projects for people with impaired health
- Commitment to introduce a bonus/malus system for older workers

Most of the measures listed in the National Reform Programme that aim at the labour market participation of older people are unlikely to increase labour market participation in the short run but will be relevant in the medium and longer run. Furthermore the structural changes concerning invalidity pensions (no limited pension for persons born 1964 and later) supposed to increase the labour market participation in the long run. Also the gender difference in statutory retirement ages is not addressed. However, recent reforms in the pension system

[18] Also, higher formal education usually requires workers to postpone labour market entry. Therefore higher educated workers need to remain in the labour market longer, in order to fulfill minimum insurance-time requirements.

concerning early retirement rules came into force with the beginning of 2014. These changes should have an impact on effective retirement ages (e.g. by increasing minimum age requirements of the Hacklerregelung by two years; see CSR 2, section 3.1.1.) and – to some extent, in the case of employment – also on employment rates at older ages.

The current government programme considers the role of active labour market policy for increasing labour market integration of older persons e.g. by extending the funding for unemployed older persons to reintegrate into the labour market by active labour market measures. As recent reforms as well as intended measures will lead to an increase in the number of (older) persons with (multiple) employability obstacles within the labour force it is crucial to permanently evaluate and adapt active labour market instruments, in order ensure their effectiveness (e.g. for "Eingliederungsbeihilfe" the effectiveness for older workers has been evaluated in a recent study[19]). It is therefore very appreciable that the government programme explicitly addresses this issue.

Also the employers' role in older workers' employment prospects is considered explicitly by planning the introduction of a bonus-malus system for firms. However, this system (planned to start from 2017 onwards) will come at the expense of the dissolution payment (Auflösungsabgabe) and may lead only to minor behavioural change if associates costs and benefits are too low. Overall employer-side incentives still remain scarce in this context.

- Increasing the labour market participation of women

Comparing female labour market participation in Austria with other EU countries shows that the female employment rates in Austria are relatively high compared to the EU average (2013: 70.8% compared to an EU average of 62.6%) but still lower than female employment in e.g. Germany (72.3%). Female employment does not, in general, react immediately to economic development as the share of female employment in export oriented sectors is low. The employment rate of male workers, on the other hand, reacts more strongly to downturns since export oriented sectors tend to feel the impact of economic shocks more strongly.

The key policy options are addressed by several measures within this second policy package concerning female labour market participation. The focus lies mainly on addressing the infrastructure for care activities, aspects of the gender specific labour market segmentation as well as implementing direct measures to support female employment.

The National Reform Programme lists several measures that aim at fostering female labour market participation and lowering labour market segmentation/segregation, e.g.:

  - "Women in crafts and engineering" (FiT - Frauen in Handwerk und Technik)
  - "Return to a working life with a future"
  - "Systematic skills"
  - "Vocational centres for women"

[19] Eppel, Mahringer, Weber, Zulehner, „Evaluierung der Eingliederungsbeihilfe", WIFO 2011.

- National action plan for gender equality in the labour market
- Obligation for companies to draw staff income reports
- Further extension of child care facilities
- Fostering male child care participation
- Commitment to spent 50% of PES subsidies for women

In particular, measures regarding the availability of care (especially child care, also for younger school children and the possibility of full-day schooling) are highly relevant in order to foster female employment (and their weekly working hours) and can have direct effects on female employment even in the short run. However, the aim is (or should be) to increase female full-time employment (as stated in the country specific recommendations) which means that the actual quality of the care infrastructure is also of major importance (concerning daily/weekly and yearly opening times etc.).

Most measures aiming at the reduction of gender based labour market segmentation are unlikely to have a large direct impact on female labour market participation in the short run. However, many programmes listed in the NRP address only small areas of the labour market and are therefore quantitatively of limited importance when it comes to effectively reducing labour market segmentation. Further measures that aim at increasing male child care activities would also be useful in this context (such as the "Papamonat" that is mentioned in the current government programme).

- Increasing the labour market participation of the young, persons with migration backgrounds and low skilled persons

The young as well as persons with migration background and low skilled are hit over proportionally by economic developments. During economic downturns less new jobs become available which in turn makes it more difficult for the young to enter the labour market or to find new employment when unemployed.

The National Reform Programme lists several measures that aim at fostering (future) labour market participation of persons with migration background, e.g.:

- Project for recognition of foreign qualifications
- Demand oriented higher qualifications and provision of German language courses
- FIT, systematic skills, youth coaching, production schools and supra-company apprenticeships
- Intensification of cooperation with external consulting and assistance services for migrants with individual difficulties
- "Mentoring for migrants"
- Basic qualifications, German language courses
- PES diversity management
- Interpretation services, mother tongue basic information, etc.

- Specialized counselling offers for highly skilled migrants

The third policy package focuses on advice, education and qualification measures as well as the legal aspects of employment. The youth coaching programme for example intends to systematically catch those youths that are at risk of dropping out of school and automatically leads them to suitable advice and qualification programmes, in order to prevent a total drop out from the education system. One critical aspect of this programme is, that it only targets at youths from their ninth (and therefore last compulsory) schooling year onwards. For those youths which suffer from major disadvantages (e.g. reading proficiency, language skills) a successful (re)integration into the schooling system would require an much earlier intervention.

Measures within the (pre-)education system fostering language skills (as well as numeracy and literacy skills) are incredibly important when it comes to increasing the labour market prospects of persons with irrespective of their background.

Programmes that directly address persons with migration backgrounds within the NRP appear not to have a great (direct) impact on employment rates, in particular in the short run. While some measures aim at attracting qualified migrants, labour market prospects of already resident persons with migration background must be addressed more (e.g. for second generation migrants). Simplifying the recognition of foreign qualifications is important for reducing labour market disadvantages but do not remove e.g. difference in education participation (inheritance of education; early school tracking). Tackling disadvantages with respect to e.g. language skills from early childhood on is one important step in this context, e.g. via the introduction of a second cost-free year of kindergarten, which is planned in the current government programme.

In conclusion, the national reform programme addresses employment participation from different angles. Although many measures – especially those aiming at older workers - will not increase employment strongly in the short run, they are structurally important and will affect labour market participation in the longer run. In particular measures that improve the care infrastructure have the potential to increase female labour market participation not only in the long run. But here some measures that directly foster female full-time employment are missing, such as opening times of child care.

In summary, based on past trends and on the policies put in place or announced by the government, the Europe 2020 employment targets are on track to be met, even though some key policy options are currently not addressed in the NRP. It should be noted also that the labour force survey used to assess the employment target does not account for cross border commuters which play an important role in the Austrian labour market even if the total number of cross border commuters is small relative to the total number of employees (in 2014 2,2% of all employees in Austria were cross border commuters according to Social security

data which accounts for a larger share of total labour market inflows). Therefore parts of the current employment growth are not reflected in these statistics which masks actual employment dynamics.

2.4 Key target poverty

2.4.1 Target path: Number of individuals living in or at risk of poverty -235.000

- Target path

Poverty and social exclusion occur in a variety of situations throughout the EU. 24.5% (2013) of the EU's population is considered to be at risk of poverty or social exclusion. This means that they are affected by at least one of the three indicators used to define the EU poverty and exclusion headline target. These indicators are the "at risk-of-poverty rate", the "severe material deprivation rate" and the "share of people living in households with very low work intensity". They reflect the many factors underlying poverty and social exclusion, as well as the diversity of challenges for Member States. Austria is well below the European average, at 18.8% population at risk of poverty or social exclusion in the EU (2013), in line with countries such as Sweden or Finland[20].

The fifth headline target for the EU in 2020 is to measure the progress in meeting the Europe 2020 goals of reducing poverty and social exclusion. In 2020, at least 20 million fewer people should be in or at risk of poverty and social exclusion in all EU member countries. Austria has set itself the target to reduce the number of individuals living in poverty or at risk of poverty by at least 235,000 until 2020.

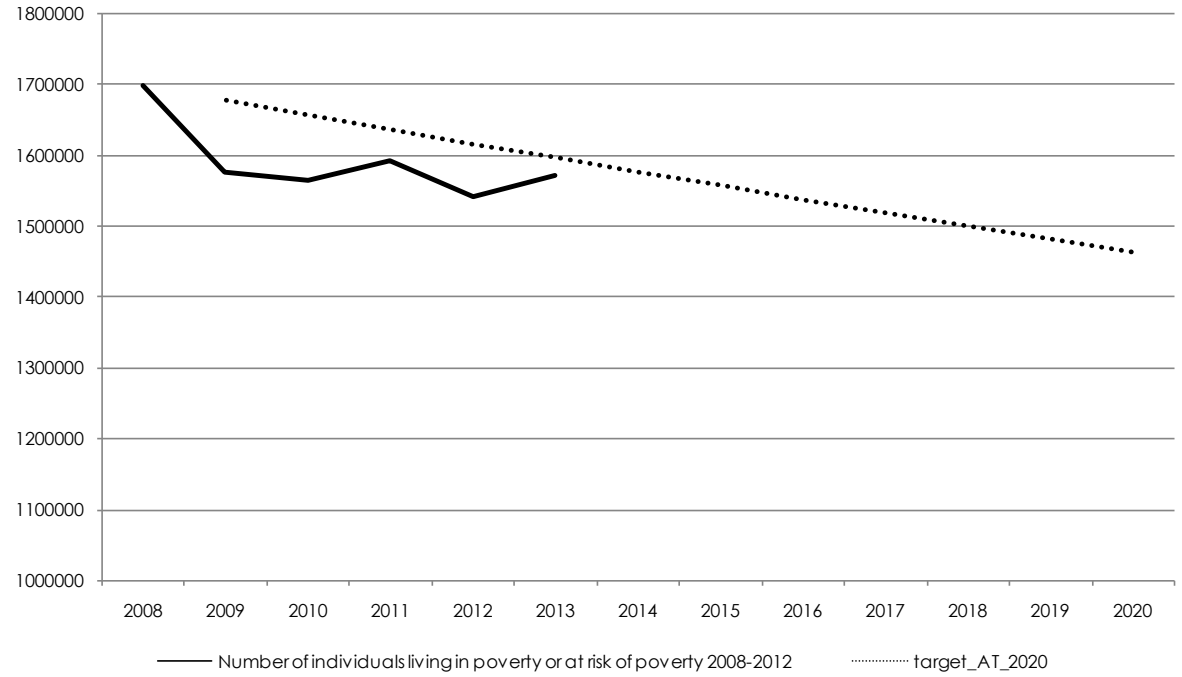
In 2013, the population at risk of poverty, meaning they live in a household with an income below 60% of the national median income after social transfers, comprised of 1.203,000 people in Austria (i.e. 14.4% of the total population). 355,000 are severely materially deprived. The population that lives in households with very low work intensity amounted to 496,000. In total, in 2013, 1.572,000 (2012: 1.542 million) or 18.8% (2012: 18.5%) of the Austrian population is at risk of poverty or social exclusion. The target path in the following Figure 10 shows that Austria is currently close to its target path although the number of people at risk of poverty has increased in 2013 by 30.000.

Overall, Austria has reduced the number of people living in poverty by 127.000 between 2008 and 2013, a little bit more than one half of the target value for 2020. As such, the target for poverty seems on track, even though it should be noted, that the potential of substantial upward risks in poverty dynamics are also possible, especially as Austria faced a strong increase in the unemployment rate throughout the years 2013 and 2014 which is forecasted to increase further in 2015 and will remain at historically high levels over the next years. It is

[20] Notice that there has been a change in the survey method used to analyze poverty issues. This change leads to a break in the time series for Austria's poverty. EUROSTAT has revised all poverty indicators for Austria back to 2008 which allows for comparing trends in Austrian poverty rates between 2008 and the recent year even if the actual numbers are not directly comparable to previous versions of this report.

therefore possible that poverty rates will develop less favourably over the next years. Taking a closer look at the trends in poverty risk-rates reveals that the largest decrease took place between 2008 and 2009 while almost no reduction is apparent since 2009.

Figure 10: Population at risk of poverty or social exclusion in Austria, 2008-2020



Source: Eurostat, WIFO calculations.

- Past vs. required growth dynamics

To achieve the goal of 235,000 fewer individuals living in poverty or at risk of poverty in 2020, an average annual decrease of -1.0% is required between 2013 and 2020 (see Table 9), in absolute terms approx. 19.000 people per year on average (column 4).

Over the time period between 2008 and 2013, the number of people living in poverty or being at risk of poverty declined on average by 25.400 (-1.5%) per year which corresponds well to the required future dynamics in order to achieve the target level in 2020. This development masks a relatively volatile pattern with large decreases between 2008 and 2009 (-122.000) and an increase between 2010 and 2011 (+27.000) as well as between 2012 and 2013 (+30.000). If we compare last year's increase in the number of people at risk of poverty or social exclusion (+30.000 or +1.9%) with the rate necessary to achieve the desired reduction by 2020, a large growth differential of 3.0% occurs which would imply that this goal is not met: projecting last year's increase to 2020 would result in an increase in the number of people at risk of poverty of social exclusion by 100.000 (column 8). Taking a longer term trend (2008 to 2013) as a baseline seems more appropriate however, since the poverty time series shows rather large year-to-year variation. The average decline in poverty of -1.5% per year

(column 3) shows now a growth differential of -0.5 percentage points - implying that the recent dynamics are in line with the intended path in the number of people at risk of poverty or social exclusion. As stated above, there are, however also upward risks due to recent unemployment dynamics and rather weak progress in poverty reduction during the last years. Also the measurement of poverty risks is partly based on self-assessment which may vary from year to year. Overall the year-to-year patterns of the poverty risk measure shows relatively large fluctuations which complicate the assessment of the target path.

Due the rather large year-to-year fluctuations, these short time trends that are shown in the table should not be taken at face value. It remains to be seen whether poverty figures will follow the positive 2008-2013 trend with an average yearly reduction of more than 25.000 people, well above the required 19.000 people per year. This will depend not only on the overall economic trends but also on the measures put in place in the National Reform Programme (see below).

Table 9: Number of individuals living in poverty or at risk of poverty: Assessment of growth dynamics and target forecasts based on past trends

Indicator	actual value 2013(1)	target value 2020 (2)	past growth rate per year 2008-2013 (3)	required growth rate per year 2013-2020 (4)	growth last year 2013 (5)	growth differential (3-4): probability of reaching target	growth differential (5-4): current perform-ance	target forecast on the basis of (1) and (5)	target forecast on the basis of (1) and (3)
Inidv iduals liv ing in pov erty or at risk of pov erty	1572000	1464000	-1.5	-1.01	1.9	-0.5	3.0	1799000	1410000
	-127000	-235000	-25400	-19000	30000	-6000	49000	100000	-304800

Source: Eurostat, WIFO calculations.

Table 10: Individuals in or at risk of poverty, 2008-2020

	Number of individuals living in poverty or at risk of poverty		yearly changes in absolut values		Yearly change in absolute values (cum. Values)	
2008	1699000					
	target	actual	target	actual	target	actual
2009	1,678,053	1577000	-20,947	-122,000	-20,947	-122,000
2010	1,657,364	1566000	-20,689	-11,000	-41,636	-133,000
2011	1,636,931	1593000	-20,434	27,000	-62,069	-106,000
2012	1,616,749	1542000	-20,182	-51,000	-82,251	-157,000
2013	1,596,816	1572000	-19,933	30,000	-102,184	-127,000
2014	1,577,129		-19,687		-121,871	
2015	1,557,685		-19,444		-141,315	
2016	1,538,480		-19,205		-160,520	
2017	1,519,512		-18,968		-179,488	
2018	1,500,778		-18,734		-198,222	
2019	1,482,275		-18,503		-216,725	
2020	1,464,000		-18,275		-235,000	
	In %	Absolut				
Growth rate 2008-2013	-1.5	-25,400				
Groth rate 2014-2020	-1.0	-19,000				

Source: Eurostat, WIFO calculations.

2.4.2 Policies to reduce poverty

Key policy options

An integrated approach to fight poverty should always combine measures to foster the overall economic situation and growth with specific measures addressed at vulnerable target groups. Bottlenecks or key options for reducing poverty risks may be regrouped into such of prevention or avoidance on the one hand, and corrective action on the other.

a) Poverty prevention

- A comprehensive and high-quality network of professional care facilities, in particular for children below 3 years of age (see above labour force participation)
- The reform of the tax and social security contribution system (reduction of non-wage labour cost, especially for low wages)
- The promotion of social mobility via the education system (to avoid "inheritance" of poverty)
- Combating long-term unemployment
- Fostering health prevention

b) Fight against poverty

- The introduction of a means-tested basic income is one, albeit not perfect, way to fight poverty, inter alia via national minimum standards, closer integration of groups outside the labour market, the abolition of discriminatory elements for recipients of social assistance, such as earmarked health insurance vouchers or recourse claims.
- Unemployment, sickness and disability increase the risk of poverty. The same is true for the low qualified or persons in low-wage employment or households with only low labour market attachment. Fighting poverty is therefore highly interacted with the employment and education goals.
- Labour force participation is of crucial importance for avoiding the risk of poverty. People who are not, or for too short time or only marginally, in gainful employment, be it that they are ill, handicapped, poorly qualified or obliged to take care of others, are often without sufficient means and to a much higher degree threatened by poverty.

Measures in the NRP – correspondence with key policy options and bottlenecks

The Austrian strategy to fight against poverty and social exclusion can be summarized in five sub-goals to achieve this core goal of 235,000 fewer individuals living in poverty or being at risk of poverty in 2020:

1. Combating long-term unemployment by improving the participation in the labour market of working-age groups at risk of poverty and exclusion
2. Introducing measures preventing health risks at the workplace and increased labour market integration of individuals with impaired health and individuals with a disability
3. Reduction of women-specific disadvantages in income and employment issues
4. Introducing measures to combat child and youth poverty, and inherited poverty
5. Reconciliation of family and working life

- Combating long-term unemployment by improving the participation in the labour market of working-age groups at risk of poverty and exclusion

Since long-term unemployment considerably increases the risk of poverty, combating long-term unemployment is of major importance in order to reduce the number of persons at risk of poverty. This first policy package extends measures that address persons with a relatively low labour market attachment using wage subsidies and employment subsidies (for older workers) and by introducing a needs-based minimum benefits system in 2011.

The National Reform Programme list several measures for poverty reduction, e.g.:

- Guaranteeing adequate minimum standards for low income households (BMS)
- Improved employment possibilities for recipients of the BMS through activating initiatives and integration into active labour market programmes of the PES

- Additional unemployment assistance and diverse active labour market instruments (job coaching, work assistance, etc.)
- Qualification measures for low-skilled or unskilled workers ("Fachkräftestipendium")

The current government programme aims at harmonizing the standard of the BMS and a stronger integration of BMS recipients with active labour market measures, which is generally positive.

- Measures preventing health risks at the workplace and increased labour market integration of individuals with impaired health and individuals with a disability

The second policy package focuses on programmes to prevent health risks at the workplace and to increase labour market integration of individuals with impaired health and individuals with a disability.

The National Reform Programme list several measures, e.g.:

- Prolongation of the long-term care fund (see chapter 3.3 on CSR "Health and Care")
- National action plan on disability
- Measures for health prevention and rehabilitation (fit2work, Healthroad, ect.)

- Reduction of women-specific disadvantages in income and employment issues

The high level of labour market segmentation in Austria engenders a higher risk of poverty for women as they are more often employed in low wage jobs, work part time and therefore build up lower pension entitlements. The unequal distribution of unpaid care work between women and men also leads to lower labour market attachment and longer career gaps which negatively affect future income prospects and once again increase poverty risks (see section on employment above). Reducing female income disadvantages is therefore essential to reducing the risk of poverty among women. This is closely linked to measures that increase male childcare participation, reduces unpaid female care work (by improving the quantity and quality of the care infrastructure) but also embodies addressing education and career choices.

The National Reform Programme list several measures, e.g.:

- Increase of family benefits
- Improvement of (child) care facilities

The third policy package lists measures to reduce women-specific disadvantages in income and employment issues (see above). In addition to the above-mentioned measures, it is also important to influence the choices of career paths and education for women as these are the key to better paid jobs. Such career and education advisory programmes are unlikely to reduce female disadvantages in the labour market in the short run but they are more relevant and indeed highly necessary in the medium or longer run (e.g. when they become

role models for other (young) women). The measures listed above respond partly to the country specific recommendations to improve labour market prospects of women, notably through the provision of additional care services for dependants.

- Combating poverty of children and the youth, and inherited poverty

The fourth package extends measures to combat the poverty of children and the young, and inherited poverty. All the programmes are aimed at preventing inherited poverty. There are too few measures especially targeting the young with multidimensional risks (e.g. drug abuse, debts, mental health problems, low skilled, NEET, early school leaver etc.). Early streaming of children can reduce social mobility. Nonetheless these measures are in line with the country specific recommendations to improve educational outcomes, especially of the disadvantaged youth.

The National Reform Programme list several measures, e.g.:

  - Increase of family benefits
  - Expansion/improvement of child care facilities /obligatory free year of kindergarten
  - Youth coaching; Training guarantee for young people and supra-company apprenticeship training

Education is one fundamental aspect of fighting poverty of young persons (see below). The already implemented training guarantee is a big step forward in creating more equal opportunities for youths with different socio-economic backgrounds.

- Reconciliation of family and working life

Within the fifth package the compatibility of family and career is addressed by improving the care infrastructure. Here, as above, the quality of the infrastructure must also be considered and assured, as much as any improvement in terms of quantity (such as daily/yearly opening hours, distance between the home, the care facility and work, costs of care). A quantitative extension alone will not be sufficient to foster female employment and more female full-time employment. The listed measures correspond partly to the country specific recommendations to reduce the high gender pay gap and enhance full-time employment opportunities for women, notably through the provision of additional care services for dependants.

The National Reform Programme lists:

  - Improvement of (child) care facilities; Mandatory year at kindergarten free of charge

Improving childcare – especially the quality (e.g. daily opening hours) - is extremely important in improving the reconciliation of family and working life. This is a key factor in fostering female employment and therefore reducing poverty risks.

In summary, based on past trends, policies put in place or announced by the government and current unemployment growth, it is difficult to assess whether Europe 2020 poverty targets will be reached. However, there is now a balanced approach in place which combines an overall economic growth strategy (Europe 2020) with specific measures to address vulnerable groups addressing many of the key policy options. Within those specific measures (some of them are also relevant in the fields of employment and education), some are lacking, such as labour taxation of low income earners, etc. i.e. by and large mostly specific measures for marginalised persons.

2.5 Key target environment

2.5.1 Target path: The 20-20-20 Targets

In the area of climate protection, energy and the environment the European Union defined three targets in its Climate and Energy Package in 2009[21] that were subsequently integrated into Europe 2020 as headline targets:

a) Reducing greenhouse gas (GHG) emissions by 10% as compared with the 2005 levels in sectors not subject to the European Emissions Trading Scheme (EU ETS)
b) Generating 20 % of gross final energy consumption from renewable energy resources
c) Improving energy efficiency by 20%[22]

The 20-20-20 targets represent an integrated European approach to climate and energy policy that aims at mitigating climate change, increase the EU's energy security and strengthen its competitiveness.

The European targets were translated into national targets for the Member States. According to the effort sharing decision the European target of -10% GHG emissions for non-ETS sources implies an emission reduction of 16% until 2020 (relative to 2005).

Regarding renewable energy sources, Austria's 2020 target is a share of 34% in gross final energy consumption.

As for the energy efficiency target, the energy efficiency law implementing the Energy Efficiency Directive at the national level was adopted on 9 July 2014. Accordingly, Austria's final energy consumption in 2020 shall be reduced to a maximum of 1,050 PJ[23].

[21] Comprising Directive 2009/29/EC to improve and extend the greenhouse gas emission allowance trading scheme of the Community; Decision 406/2009/EC on the effort of Member States to reduce their greenhouse gas emissions to meet the Community's greenhouse gas emission reduction commitments up to 2020 ("Effort Sharing Decision") and Directive 2009/28/EC on the promotion of the use of energy from renewable sources.

[22] The climate and energy package does not address the energy efficiency target directly. This is specifically treated in the 2011 Energy Efficiency Plan and the Energy Efficiency Directive that entered into force on 4 December 2012 (Commission Directive 2012/27/EU).

[23] As Austria's National Reform Programme (Bundeskanzleramt, 2014) was published before the energy efficiency law came into effect, it states an energy efficiency target of stabilizing final energy demand at 2005 levels, i.e. 1,100 PJ.

- Past trends – greenhouse gas emissions[24]

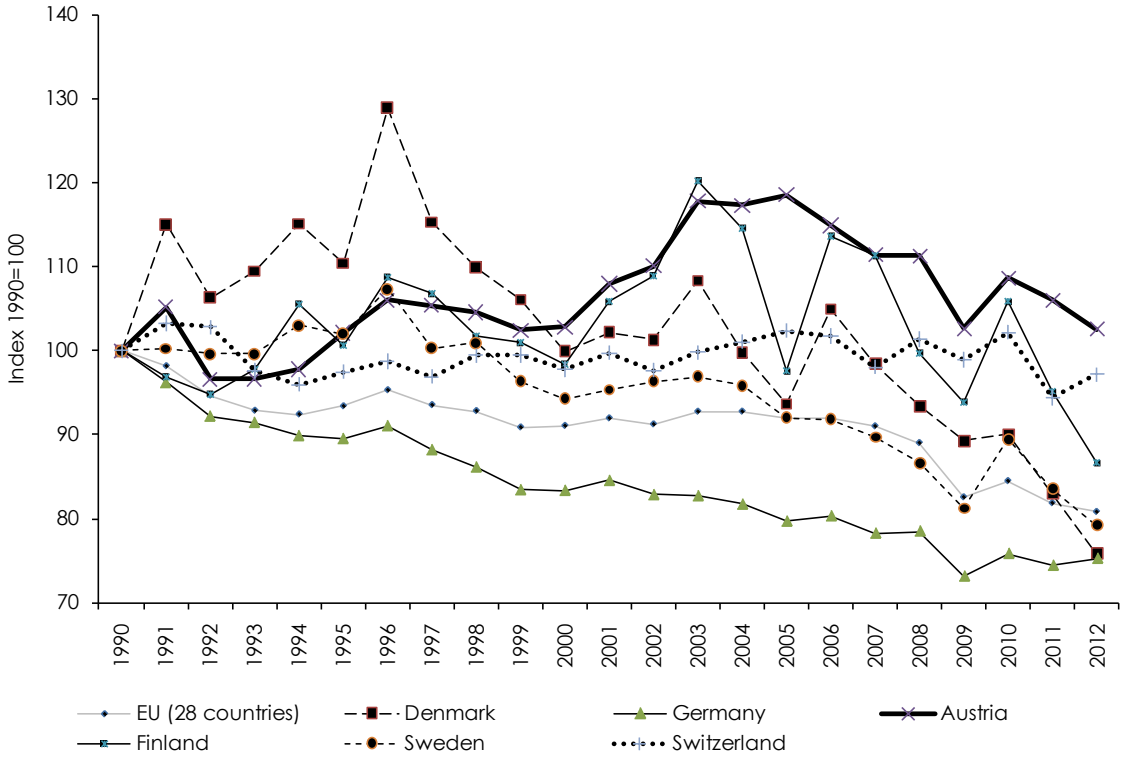
Between 1990 and 2012 Austria's GHG emissions grew by 2.5% in total (Figure 11). In contrast, GHG emissions in the EU 28 were reduced by 19.2%. Germany and Denmark decreased their GHG emissions by more than 24% in the same period of time. In particular, the GHG emissions trajectory of Austria is characterized by three periods: stagnating to slightly growing GHG emissions between 1990 and 2000, noticeable emissions growth until 2005 when emissions reached a peak (+18.6% relative to 1990[25]) from where they continually declined until 2009. The year 2010 is marked by a rebound of GHG emissions related to the economic recovery after the financial downturn of 2008/09. In 2011 and 2012 emissions again declined to some extent, totalling 80 million tons of CO_2 equivalents in 2012 (-3.3% relative to 2011).

While the development of GHG emissions following the financial crisis constitutes a uniform pattern throughout Europe, the emission growth in Austria between 2000 and 2005 is striking. In this period climate policy in Austria did not sufficiently tackle the challenge of climate change and emissions showed a development contrary to the general European trend. However, the last seven years showed continuously declining emissions (except for 2010) which points at continued changes beyond the effects of the economic crisis, especially the increased use of renewable energy sources and energy efficiency measures (UBA, 2013). However, as the National Reform Programme (Bundeskanzleramt, 2014) emphasizes, increased effort is required to reduce GHG emissions from transport that increased by 55% between 1990 and 2012.

[24] For the comparison of EU countries data from Eurostat are used. These are currently available for 2012.

[25] Reaching 92.6 million tons of CO_2 equivalents.

Figure 11: Greenhouse gas emissions, 1990-2012, 1990=100



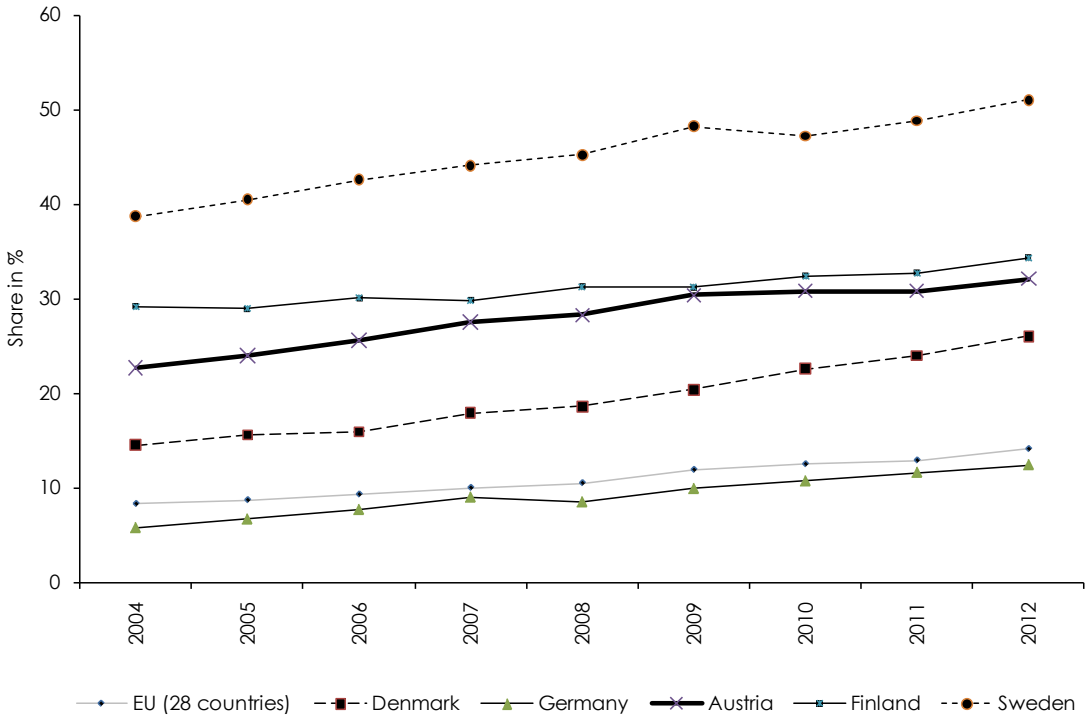
Source: Eurostat database, WIFO .

- Past trends – renewable energy[26]

Austria's share of renewable energy in gross final energy consumption rose from 22.7% in 2004 to 32.1% in 2012 (Figure 12). This share is significantly higher than the European average (14.1% in 2012) and among the highest of all Member States (Finland 34.3%, Sweden 51%). Austria's growth dynamic in comparison is rather low with a rise of 41% between 2004 and 2012 compared to e.g. the EU 28 (70%), Denmark (79%) and Germany (114%). This is however due to the already rather high initial level in 2004. Other countries with high shares of renewables in gross final energy consumption like Finland and Sweden exhibit even lower growth rates.

[26] For the comparison of EU countries data from Eurostat are used.

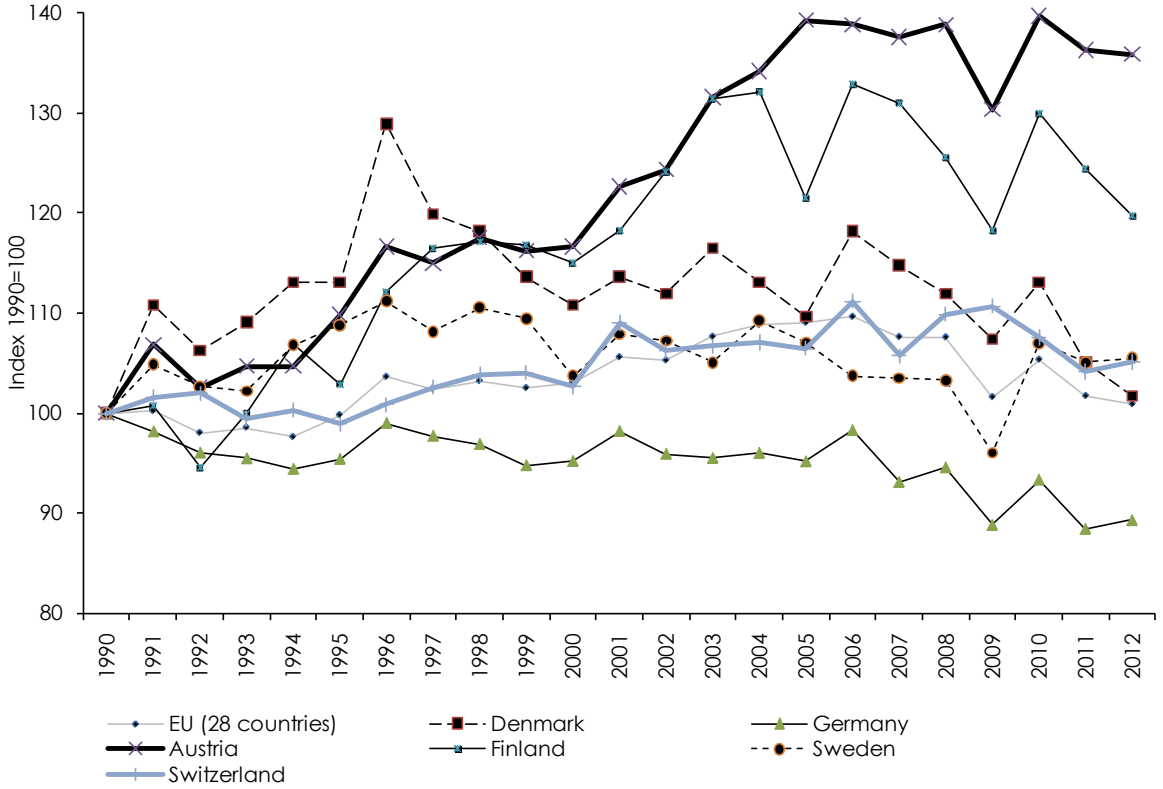
Figure 12: Share of renewable energy in gross final energy consumption, 2004-2012



Source: Eurostat, Europe 2020 Headline indicators; WIFO calculations.

With an increase of 35.9% between 1990 and 2012 primary energy consumption in Austria grew faster than the EU average (Figure 13) – for the EU 28 aggregate primary energy consumption in 2012 corresponds largely to 1990 levels. Denmark and Sweden showed an increase of 5% over the period while Germany achieved a decrease in primary energy consumption of 11%.

Figure 13: Primary Energy Consumption, tonnes of oil equivalent (TOE), 1990-2012, 1990=100

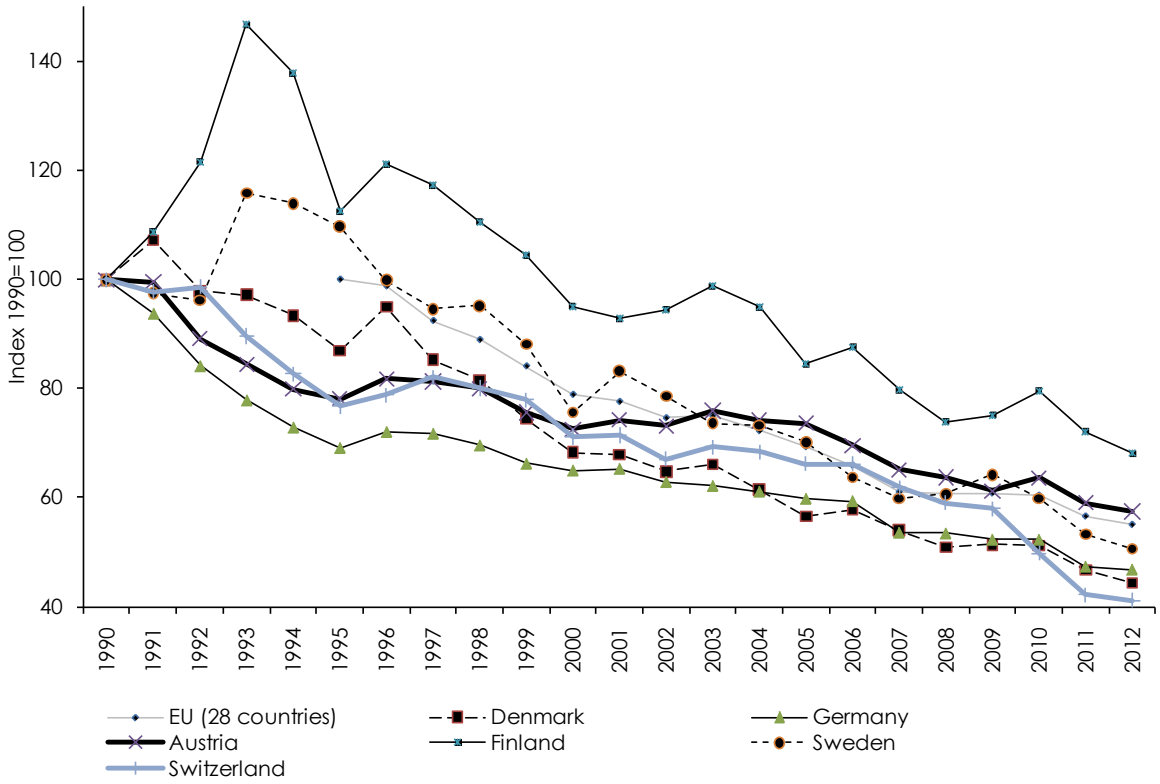


Source: Eurostat, Europe 2020 Headline indicators; WIFO calculations.

However, Austria's energy intensity, i.e. primary energy consumption per million € of GDP (Figure 14) decreased by 42.6%. Austria's improvements in energy efficiency are thus slightly below average (EU 28: -44.9% in the period 1995 – 2012). Denmark reduced its primary energy use per unit of GDP by 55% between 1990 and 2012, Germany by 53% and Sweden by 49%.

This comparison shows that while energy use relative to GDP in absolute terms in Austria (103.6 TOE/million €) is below the European average (122.2 TOE/million €) and also below other Member States like Sweden (117.7 TOE/million €) and Germany (111.6 TOE/million €), Austria's improvements in energy efficiency over time remain below the other countries'.

Figure 14: Primary Energy Consumption, tonnes of oil equivalent (TOE) per million € GDP, 1990-2012, 1990=100



Source: Eurostat, Europe 2020 Headline indicators; WIFO calculations.

Target a: Reducing Greenhouse Gas Emissions

The EU ETS, covering emissions from energy supply and manufacturing, represents 50% of the EU's greenhouse gas emissions. The ETS is the key instrument of European climate policy. It is administered on a European level by the Emission Trading Directive and is not subject to the National Reform Programme.

Within the EU climate and energy package, the Effort Sharing Decision (Decision 406/2009/EC) establishes binding annual GHG emissions targets for member states for the period 2013-2020. The target relates to emissions from sectors not included in the EU Emissions Trading System (EU ETS) including transport (except aviation), buildings, agriculture, waste management, fluorinated gases and non-ETS energy and industry.

By 2020 GHG emissions from the non-ETS sectors in the EU 28, i.e. emissions under the Effort Sharing Decision, are to be reduced by 10% relative to 2005. Together with a 21% cut in GHG emissions covered by the EU ETS, this will accomplish the overall emission reduction goal of the climate and energy package of GHG emissions 20% below 1990 levels by 2020.

Emission targets within the Effort Sharing Decision have been allocated at the national level on the basis of Member States' relative wealth (measured by Gross Domestic Product per capita). National targets for 2020 are expressed as percentage changes from 2005 levels. For Austria, GHG emissions are to be reduced by 16%. The national target was implemented via the Austrian Climate Protection Act (KSG; Federal Law Gazette No. 106/2011). The KSG[27] also defines the maximum permissible quantities of greenhouse gas emissions for each sector for the period 2013 - 2020 in accordance with the effort sharing decision.

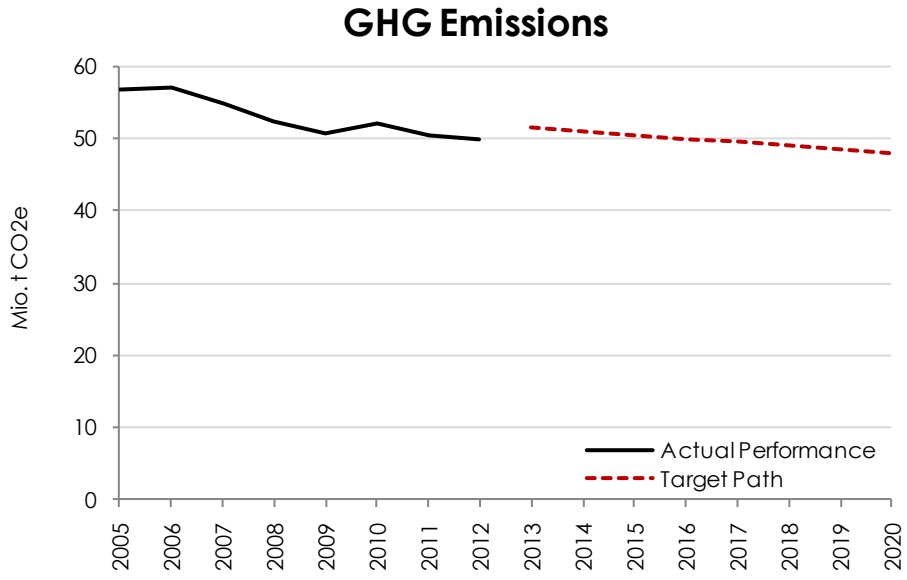
The sectoral emission limits and actual emissions 2012 are summarized in Table 11, the linear target path until 2020 is depicted in Figure 15.

Table 11: Greenhouse gas emissions limits in Austria per sector according to the KSG (Climate Protection Act)

	Greenhouse gas inventory (OLI system)	Maximum annual quantity under the KSG (in millions of tons of CO_2 equivalents)							
	2012	2013	2014	2015	2016	2017	2018	2019	2020
Energy and industry (non-ETS)	6,8	6,7	6,7	6,6	6,6	6,6	6,6	6,5	6,5
Transport	21,2	21,9	21,7	21,5	21,2	21,0	20,8	20,6	20,4
Buildings	8,6	10,0	9,8	9,6	9,4	9,2	9,0	8,8	8,7
Agriculture	8,3	8,7	8,6	8,6	8,6	8,6	8,5	8,5	8,5
Waste management	3,0	2,7	2,7	2,6	2,6	2,5	2,5	2,5	2,4
Fluorinated gases	1,8	1,6	1,6	1,6	1,5	1,5	1,5	1,5	1,5
Total (non-ETS)	49,8	51,6	51,0	50,5	50,0	49,5	48,9	48,4	47,9

Source: Umweltbundesamt.

Figure 15: GHG Emissions in Austria



Source: Umweltbundesamt, WIFO calculations, 2013 starting value of target path.

[27] As amended by Federal Law Gazette No. 94/2013.

The data available for 2012 (UBA, 2014) show emissions of 49.8 million tons CO_2 equivalent from the KSG sectors, which is below the 2013 target value (51.6 Mt CO_2e)[28].

The further decline in total emissions in Austria in 2012 (relative to 2011) suggests that emissions from the KSG sectors continue their reduction trend, and thus would also be below the 2013 target value.

It has to be noted that the stringency or ambitiousness of the climate policy target has to be assessed taking into account the general economic framework conditions. In general the economic crisis contributed to putting the EU on track for reaching the 2020 emission target. GHG emissions are strongly correlated with economic performance, as could be seen in 2010. Although the forecasted moderate economic growth supports the reaching of climate policy targets[29], the ambitious medium to long term goals still require continued efforts in climate and energy policy. Ambitious measures need to be enacted and enforced in order to decouple GHG emissions from economic growth and to provide technological innovations for the required de-carbonisation of Europe's economies.

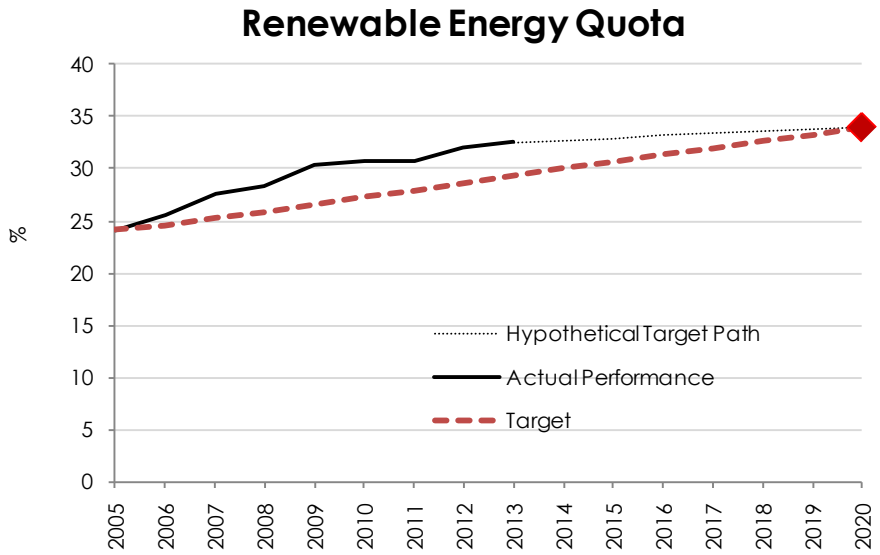
Target b: Enhancing the Renewable Energy Share

The Austrian target regarding the share of renewable energy sources in gross final energy consumption in 2020 is 34% (European Commission, 2009). In order to support the renewable energy objective, each member state is requested to submit a national renewable energy action plan (NREAP) detailing how they will reach their individual targets (Karner et al., 2010). Austria's NREAP indicates target paths for energy use and renewable energy deployment as a result of sector-specific policy measures (Figure 16).

[28] GHG emissions data have a time lag of 2 years. In addition, the calculation methods for international reporting have been adapted, further delaying the publication of emission figures. Thus, the evaluation whether the actual emissions in 2013 matched the target value can only be carried out in the second quarter of 2015.

[29] This refers to the 2030 framework for climate and energy policies presented by the European Commission on 22 January 2014, including the target to reduce EU greenhouse gas emissions by 40% below the 1990 level, as a milestone on the track towards meeting the objective of cutting emissions by at least 80% by 2050. In addition, the share of renewable energy will have to be increased to at least 27% of the EU's energy consumption by 2030.

Figure 16: Austria's Renewable Energy Share, 2005-2020*



Source: Energy Balance 2013, Statistik Austria, WIFO calculations, *renewable energy as share of gross final energy consumption

Figure 16 shows the actually achieved share of renewable energy until 2013 (solid line) compared to the target trajectory (dotted line[30]). The comparison shows that Austria's share of renewable energy currently exceeds the calculated target and it is expected that Austria will comply with the 2020 target. In fact, if observed growth rates are continued, the target will be exceeded (see Table 12).

But still, in order to achieve the set 2020 target, proactive policy measures that promote a constant additional supply of renewable energy on the one hand and instruments targeted at increasing energy efficiency on the other hand should be pursued further, also with a view to beyond 2020, as the climate targets will certainly continue then and become even more challenging.

As the current data show, after stagnating between 2009 and 2011[31] the share of renewables has restarted to increase in 2012, reaching 32.5% in 2013. However, in the light of long-term decarbonisation plans of the EU the deployment of renewable energy sources need to be strengthened.

Target c: Improving the Energy Efficiency

The EU's Energy Efficiency Directive (European Commission, 2011) set the target of reducing energy consumption by 20% by the year 2020. This corresponds to 368 Mtoe (million tonnes of

[30] As a linear interpolation between the target in 2020 and the 2005 reference data.

[31] Ranging between 30.4% and 30.7%. This was due to the economic uptake and the correlated rise in energy consumption after the economic slump of 2008/09. Primary energy demand in 2010 grew by 6.1% while renewable energy supply (including combustible waste) increased by only 3.2% (Kettner et al., 2012).

oil equivalent) less energy use in 2020 to be achieved by the EU as a whole relative to the baseline development.

Energy efficiency is one of the main aspects of the Europe 2020 flagship initiative for a resource-efficient Europe (European Commission, 2011b). Increasing EU energy imports and rising energy prices pose a potential risk to Europe's energy security and economic growth. According to the European Commission, energy efficiency is the most cost-effective way to increase the security of supply and, at the same time, to reduce greenhouse gas emissions (cf. target a). Any reductions in energy consumption also contribute to meeting the target regarding the share of renewable energy sources set by the Renewable Energy Directive (European Commission, 2009; cf. target b). Finally, producing more with less energy input should on the one hand improve the competitiveness of industries and on the other hand allow a lead in the global markets for energy efficiency technologies. Making the economy more energy efficient will therefore generate positive impacts in terms of economic growth and job creation. For these reasons, the European Energy Strategy 2020 identified energy efficiency as one of the key priorities of EU energy policy for the coming years (European Commission, 2011).

Given this political framework, member states have committed to achieving 2020 targets for energy efficiency. Member States are obliged to set indicative national energy efficiency targets and subsequently achieve certain amounts of final energy savings over the obligation period (2014 – 2020). On July 9 2014 Austria's Energy Efficiency Act was enacted (Federal Law Gazette no. 72/2014) implementing the EU Energy Efficiency Directive (2012/27/EU). According to the new law final energy demand in 2020 shall to amount to a maximum of 1,050 PJ[32]. A cumulative reduction on energy demand of 310 PJ[33] shall be accomplished by additional eligible energy efficiency measures. The consumption reduction requirements will particularly apply to energy providers, large companies, and government agencies.

Figure 17 compares Austria's actual performance in terms of final energy consumption with the target path until 2020. This comparison shows that the economic slump in 2008/09 was responsible for the 3.4% decline in final energy consumption in 2009. Final energy consumption rose again quickly with the recovery of the economy in 2010 and declining again somewhat in the following years. In 2011 and 2012 final energy demand stabilized at around 1,100 PJ. In 2013 final energy rose to 1,119 PJ.

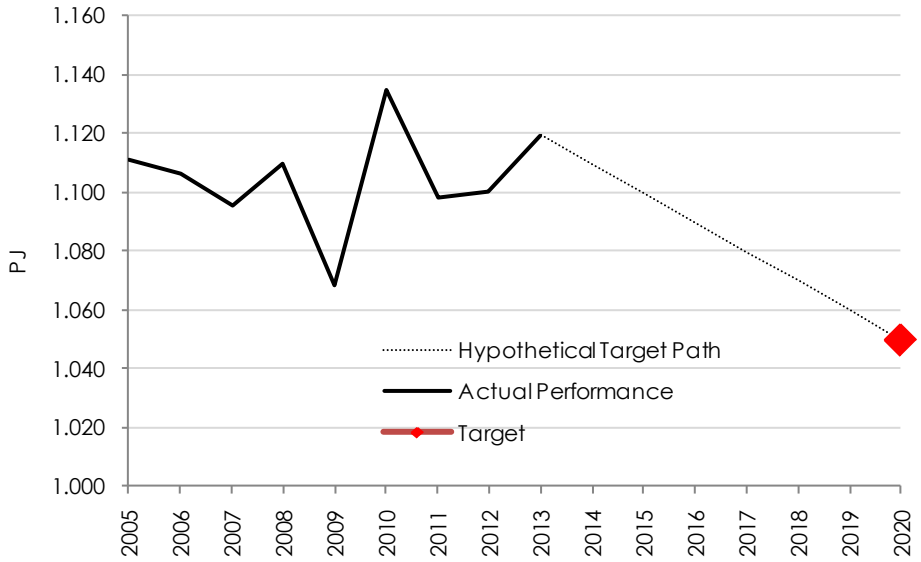
It has to be taken into account – as also noted in the previous paragraphs – that the weak economic growth and other influencing factors (e.g. warm winters etc.) contributed to positively affected final energy demand in 2011 and 2012. However, 2013 showed an renewed significant increase of 1.9% relative to 2012 while a decrease of 0.9% would be required in order to reach the 2020 target (Table 12).

[32] This new target value is lower than the ones previously defined and reported as in the National Renewable Energy Action Plan 2010 (BMWFJ, 2010) and the National Energy Efficiency Action Plan(BMWFW, 2014) which contained a target of 1,100 PJ final energy demand in 2020.

[33] Of these 159 PJ are to be realized by energy suppliers and 151 PJ by implementing strategic measures.

The future progress in energy efficiency or in reducing energy consumption will depend on various determinants, above all future economic performance, the development of heating degree days, i.e. whether strong winters will drive energy demand for heating or not, and last but not least on the implementation of measures to improve the energy efficiency of the economy as stipulated in the Energy Efficiency Act. This relates to energy efficiency investments in the energy consuming capital stock of the economy such as in the building, transport and industry sectors. But policies must also address the behavioural side of energy consumption because energy efficiency improvements are often offset by rebound-effects, i.e. higher (energy service) demand manifests itself as a result of lower energy service prices from efficiency improvements.

Figure 17: Final Energy Consumption in Austria, 2005-2020



Source: Energy Balance 2013, Statistik Austria, WIFO calculations.

- Past vs. Required growth dynamics

In recent years greenhouse gas emissions in Austria showed a continuous decline (apart from the year 2010 in which the economic recovery caused a pronounced rise in emissions) as depicted in Table 12, which includes a comparison of past growth in percentage points with the growth in percentage points required for reaching the target in 2020. On average the annual rate of change for greenhouse gas emissions was -1.9% (2005 – 2012; -1% in 2012). A continuation of these observed rates of change until 2020 would suffice for meeting the set target, resulting in emissions between 43 and 46 Mt CO_2e. However, compliance for the non-ETS sectors in 2020 still requires effort, especially if economic growth increases.

As outlined above, Austria is well on track for meeting the national 2020 target for renewable energy. This is also illustrated by Table 12. On average the annual rate of change of the share of renewable energies was 1 percentage point (2005 – 2013; 0.4% in 2013). Given the target value of a 34% share, an annual rate of change of 0. 3 percentage points between 2013 and 2020 would suffice to meet the target. If the past rates of change (0.4 or 1 percentage points) would be maintained, the share of renewables in gross final energy consumption would rise to a share between 35 and 36% respectively.

Austria's final energy consumption rose by 0.1% p.a. on average between 2005 and 2013 (again with the exception of 2010). In 2013 the rate of change amounted to 1.9%[34]. Compliance with the newly defined energy efficiency target will depend on contributing factors like economic performance, climatic conditions as well as whether structural and behavioural changes are actually achieved. However, meeting the 1.050 PJ target requires increased effort as it corresponds to a reduction of final energy demand even below 2009 levels and a continuation of observed rates of change would lead to a further growth of final energy demand.

Table 12: GHG emissions, share of renewable energies, energy efficiency: Assessment of growth dynamics and target forecasts based on past trends

Indicator	actual value 2013(1)	target value 2020 (2)	past growth rate per year 2005-2013 (3)	required growth rate per year 2013-2020 (4)	growth last year 2013 (5)	growth differential (3-4): probability of reaching target	growth differential (5-4): current performance	target forecast 2020 on the basis of (1) und (5)	target forecast 2020 on the basis of (1) und (3)
Share of renewables	33	34	1,0	0,3	0,4	0,7	0,1	36	35
Energy effiency	1.117	1.050	0,1	-0,9	1,9	-0,9	2,8	1.298	1.122

Indicator	actual value 2012(1)	target value 2020 (2)	past growth rate per year 2005-2012 (3)	required growth rate per year 2012-2020 (4)	growth last year 2012 (5)	growth differential (3-4): probability of reaching target	growth differential (5-4): current performance	target forecast 2020 on the basis of (1) und (5)	target forecast 2020 on the basis of (1) und (3)
GHG Emissions	49,8	47,9	-1,9	-0,5	-1,0	-1,4	-0,5	46,0	42,9

Source: WIFO calculations.

Summary of results

Table 13 summarizes the data on the actual and target trajectories with respect to the three discussed Europe 2020 climate and energy goals.

While GHG emissions have been reduced by 12.3% between 2005 and 2012, they need to be cut by a further 4% until 2020. The share of renewable energy consumption has been increased to 32,5% by 2013 and must be increased by further 1.9%-points from 2013 to 2020. Final energy consumption in contrast has increased by 0.7% between 2005 and 2013 but

[34] In 2012 the increase relative to 2011 was 0.7%; in 2011 final energy demand declined by 3.2% relative to 2010.

cannot be allowed to grow further until 2020; a reduction of 6.2% is required in order to reach the 2020 target.

Table 13: Climate and Energy Data, actual vs. target trajectory, 2005 - 2020

	GHG emissions in Mio. t CO_{2e}		Renewable Energy Share in %		Energy Efficiency as Final Energy Consumption in PJ	
2005	56.8		24.2		1,111	
2006	56.9		25.6		1,106	
2007	54.8		27.5		1,095	
2008	52.4		28.3		1,109	
2009	50.8		30.4		1,068	
2010	52.1		30.7		1,135	
	target	actual	target	actual	target	actual
2011		50.3	27.9	30.7		1,098
2012		49.8	28.6	32.1		1,100
2013	51.6		29.3	32.5	1,119	1,119
2014	51.0		30.0		1,109	
2015	50.5		30.6		1,099	
2016	50.0		31.3		1,090	
2017	49.5		32.0		1,080	
2018	48.9		32.7		1,070	
2019	48.4		33.3		1,060	
2020	47.9		34.0		1,050	
growth rate 2005-2010		-1.7		1.3		0.4
growth rate 2010-2020		-0.8		0.3		-0.8
growth rate 2010-2013*		-2.2		0.9		-1.5
growth rate 2013-2020*		-0.5		0.3		-0.9

Source: Umweltbundesamt, Statistik Austria, WIFO calculations. * GHG emissions 2012.

2.5.2 Policies for reaching the climate targets

Key policy options

Key policy options for reaching the climate targets must address all energy-relevant sectors of the economy, namely manufacturing industries and construction, with a share in Austria's GHG emissions of 30.9% (2012), transport (27.1%), energy industries (15.5%), space heating (13.6%), agriculture (9.4%) and waste management (2.1%) (Umweltbundesamt, 2014). The challenge for the design of measures to combat climate change and reduce energy use consists in securing the generation of the necessary energy supply (e.g. for heating, lighting, mobility, production) with significantly lower primary energy input and lower emission intensity (CO_2 per energy unit). This requires higher energy efficiency for end-use and transformation technologies as well as a more widespread use of renewable energy. Climate and energy policies play a key role in the EU2020 strategy because they must ensure that any growth in GDP is sustainable, i.e. does not lead to increased energy use and emissions of greenhouse

gases. Moreover, they must achieve the (absolute) decoupling of economic growth from (fossil) energy use and GHG emissions. Sectoral policies are effective as they address sector specific technological and behavioural aspects of energy intensity, energy use behaviour and emissions. Some important starting points or key policy options to be addressed in the design of future climate and energy policies are briefly summarized below.

Manufacturing industries

There is a large potential for higher energy efficiency in those areas of manufacturing industries that require heat because heat generation is predisposed for the use of highly efficient industrial co-generation. The sector is characterized by a trend shift towards a higher consumption of electricity while the share of renewable energy input is rather small. There are specific requirements for R&D investments in the energy-intensive iron and steel industries and the cement industry etc. that are characterized by specific process engineering and production functions responsible for the bottlenecks in energy efficiency improvements. Other aspects of consideration relate to structural changes within the manufacturing industries. The main tool for climate policy in this area is however the EU ETS, which is not in the realm of national policy making.

Transport

The reliance on fossil fuels for transport services and the growth dynamics in demand for both passenger and freight transport is responsible for the high and growing share of transport related GHG emissions. There is an overall need for a fundamental reconsideration of transport service demand. Three main strategies may guide the way: avoid, shift, and improve. Additional transport demand needs to be avoided; transport demand should be satisfied by more energy-efficient modes and thus requires policies that shift demand for transport services, e.g. from individual motorized transport to more efficient modes such as public transport; and transport services need to improve its energy efficiency, e.g. by substituting traditional combustion engines for alternative propulsion systems (hybrid electric, natural gas) and alternative fuels (biofuels, electricity from renewable resources).

Energy industries

In principle, the share of renewable energy sources must increase as to decarbonise the energy sector. The transformation technologies and the distribution networks must be restructured in order to become more energy efficient, e.g. the combined supply via highly efficient co-generation technologies is particularly relevant for this sector. In addition, new challenges arise from the increased use of renewable energy which has a fluctuating supply, new producer-consumer structures, e.g. de-centralized energy production, and new demand segments from e.g. e-mobility. As with manufacturing, the key climate policy instrument for energy generation is the EU ETS. However, for this sector also national policies, especially the support scheme for electricity generated from renewable energy sources (feed-in tariffs) are relevant.

Buildings

The building sector (other sectors) plays a key role in climate and energy policy. Efforts to raise energy efficiency have long been supported mainly by new construction. Energy saving investments into the existing stock of buildings offers a large potential for improvement, notably for single and double family homes, which according to the 2001 census of buildings and dwellings ("Gebäude- und Wohnungszählung") make up around 75 per cent of the total stock. A significant increase in the share of insulated buildings is indispensable for an increase in energy efficiency. Since 2009 increased efforts are made concerning thermal refurbishment of the building stock. The support started as part of the economic recovery package in 2009 and is since continued as "Sanierungsoffensive".

Public investments and research for clean energy

Market studies anticipate strong advances in climate and energy technologies by 2020. While Austria's environmental and clean energy technology providers have over two decades proven to be very innovative and successful also on foreign markets (Köppl et al., 2013), the industry's growth potential will not only depend on the implementation of respective climate and energy policy instruments but also on research and investments in this area. According to Austria's "Forschungs- und Technologiebericht 2013" (BMWF – BMVIT – BMWFJ, 2013), public expenditure on energy research accounts for 2 per cent of total public research expenditure. This share has remained rather stable over the period 1997 – 2013. Another 3% are generally spent on research for environmental protection. Even if the share is constant, in recent years expenditures in energy related research have gained in momentum. The introduction of the "Klima- und Energiefonds" contributed to the increase in available support for energy related research in Austria. In the period 2010 – 2013 annual expenditures amounted to around 124.6 million € (Indinger – Katzenschlager, 2014).

However, in comparable countries such as Finland, Denmark, Sweden, Switzerland, the share of energy related research in total research expenditures share is substantially higher. Thus, energy research is a priority area for public support which also serves the EU 2020 goals.

Measures in the NRP – correspondence with key policy options and bottlenecks

Political measures that address the 20-20-20 targets of reducing GHG emissions, augmenting the share of renewable energy production and improving energy efficiency are taken from the national reform programme of 2014. Listed measures address the national level only and thus the display of measures is not exhaustive. Each of these measures is assigned to a single main target (target a) to c)) accordingly. In fact, most measures serve different purposes at the same time (see the column "qualitative assessment of proposed measure"). In addition, policy measures are not systemized according to their relative role and value in achieving the main targets. Such systematization would require a profound and comprehensive analysis of the impacts of each measure on GHG emissions reduction, energy use and renewable energy growth. This, however, was not the objective of the present study. Furthermore, the measures are not clearly hierarchically defined as some measures overlap with others, e.g. the Climate and Energy Fund (KLIEN).

From these measures it can be concluded that a strong focus on funding activities (deployment of low carbon and energy efficient technologies) prevails. Complementary policies that address price signals, i.e. carbon taxes, and thereby the demand side of energy use, including the subject of rebound effects from energy efficiency, are lacking in most sectors with the exception of the transport sector (e.g. car registration tax). In fact it seems as if a coherent and comprehensive approach to a climate and energy policy aiming at achieving the 20-20-20 targets has not yet been conceived despite the very fundamental funding schemes and policy initiatives that have been set.

Hereafter, the selected measures are briefly analyzed along the lines of the analytic grid. However, assessing the potential contribution of the measures to reaching the targets is, in most cases beyond the scope of this project.

The **Climate Policy Package** (KSG-Maßnahmenprogramm) was developed jointly by Federal Ministries and Länder in order to ensure the compliance with the targets defined in the Climate Protection Act. The Package 2013/2014 includes measures in the sectors agriculture, buildings, energy & industry (non-ETS), fluorinated gases, transport and waste management.

The climate initiative „**klima:aktiv**" was founded by the Austrian Ministry of Agriculture, Forestry, Environment and Water Management in 2004 and is part of the Austrian climate strategy. The primary objective of "klima:aktiv" is to introduce and promote the rapid diffusion of climate friendly technologies and services on the market. The initiative is managed by the Austrian Energy Agency and deals with 4 areas: transport, energy saving, buildings and refurbishment, renewable energies. The first programme period ran until the end of 2012 and offered services in the field of vocational training and education (green skills), quality assurance measures, promoting standards, information, consulting and awareness raising, the market introduction and deployment of low carbon and energy efficient technologies with private partners and the federal states. The programme also comprises electro mobility model regions. After an evaluation in 2012 the programme has been extended until 2020. In addition, „**klima:aktiv mobil**"is specifically targeted towards reducing CO2 emissions from transport related activities and promotes mobility management, alternative fuels and vehicles, e-mobility, eco-driving and cycling.

The programmes' activities correspond to the key policy options described above. The impact of "klima:aktiv" is potentially high as to the yearly monitoring of its GHG emissions reductions achieved.

Other measures regarding transport and reducing related emissions are set out in the national "**Implementation plan for E-Mobility in and from Austria**" and the **Masterplan Cycling**.

The **Green Electricity Act** is a key element of Austria's energy and climate policy legislation and addresses the sector of energy generation (key policy option). The objective of the Green Electricity Act is to raise the amount of renewable in electricity production by 10.5 TWh

until 2020[35]. Due to the higher cost of electricity produced on a renewable basis funding is required in order to promote green electricity. The support is granted via feed-in tariffs over a certain period or via investment support. The tariffs vary according to technology used.

The potential contribution of the Green Electricity Act to raise the share of renewable energy is high but actual effects depend upon the design of the Act. The legislation has been amended several times with respect to the level and duration of the technology specific tariffs. These amendments also contributed to uncertainty with respect to long term planning security of investments. The Green Electricity Act was evaluated by E-Control Austria in 2007, analysing the development of green electricity in terms of quantities and costs as well as additional potentials and barriers for further expansion.

Several funding programmes have been established that relate to different sectors of the economy (key policy options), such as the support programme for thermal housing refurbishment ("**Sanierungsoffensive**" 2011-2016) for residential and commercial buildings and the environmental support programme in Austria (**UFI**) that supports emission reduction measures (energy efficiency, renewable, etc.) in the business sector. These programmes are generally contributing to the main 20-20-20 targets.

Originally, the funding programme for thermal housing refurbishments was developed as a measure of economic recovery following the economic crisis in 2008/09. The economic effects related to this measure and other support areas of the federal environmental support scheme (UFI) were analysed in Kletzan-Slamanig – Steininger (2010). In addition, the federal environmental support scheme is evaluated on a regular basis regarding the ecological-technical aspects, organisational issues and economic effects (see e.g. BMLFUW, 2014).

The Climate and Energy Fund (**KLIEN**) was established in 2007 by the Austrian Federal Government in order to support the realization of the Austrian climate strategy and is part of Austria's environmental legislation (Climate and Energy Fund Act). The Climate and Energy Fund Act aims at the research and development of sustainable energy technologies and on climate change with particular emphasis on public transport in passenger and freight transport. The potential contribution of the programme to the key policy options for reaching the main targets is considered to be high but depends on the rate of implementation and diffusion of research results, either in the form of technological demonstration projects or contributing to achieving behavioural changes. The programme has yet not been evaluated.

[35] This objective is further broken down to technology specific targets (see Ökostromgesetz 2012 §4). §4(2) further clarifies that "*Bis zum Jahr 2015 ist die Neuerrichtung und Erweiterung von Anlagen in einem solchen Ausmaß zu unterstützen, dass durch Anlagen mit Kontrahierungspflicht durch die Ökostromabwicklungsstelle und durch Anlagen mit Anspruch auf Investitionszuschuss ein Gesamtstromanteil von 15%, gemessen an der Abgabemenge an Endverbraucher aus öffentlichen Netzen, erzeugt wird*."

3. An overview of policies addressing the Country Specific Recommendations

3.1 CSR relating to pensions, health care and long-term care

3.1.1 Pensions

"Improve the long-term sustainability of the pension system, in particular by bringing forward the harmonisation of the statutory retirement age for men and women, by increasing the effective retirement age and by aligning the retirement age to changes in life expectancy. Monitor the implementation of recent reforms restricting access to early retirement…"

Background: is the CSR appropriate?

The average effective retirement age in Austria is low compared to other European countries. One reasons for this is the gap in statutory retirement ages between men and women (65 for men and 60 for women) which implies lower average effective retirement ages for women. But also the high share of persons leaving the labour market via different forms of early retirement schemes works to considerably reduce average retirement age.

The European Commission recommends that Austrian policy should aim at:

1. Harmonizing female and male statutory retirement age sooner than planned
2. Increasing effective retirement age by aligning retirement age to changes in life expectancy
3. Monitor the implementation of recent pension reforms

We discuss these recommendations in turn. The Austrian government does currently not aim at harmonizing the statutory retirement age sooner than planned. This recommendation is at the moment not seen as a key policy option in the Austrian pension system, as given the large share of workers leaving the labour market via early retirement schemes, there is a large gap between effective and statutory retirement age as well as a large gap between age at employment exit and age at retirement entry (Horvath – Url, 2013). Harmonising the statutory retirement age would hence not produce substantial short-term benefits. The gap between the age at employment exit and the age at retirement entry highlights the significance of unemployment, sickness or out of labour force periods prior to retirement. Therefore reducing early retirement rates is highly relevant in the Austrian context and already led to pension reforms that came into effect recently and should work to decrease early retirement rates considerably (see below and chapter 2.3. "Increasing the labour market participation of older persons").

The recommendation to adapt the financing principles of the pension system by aligning retirement age or benefits to changes in life expectancy may appear attractive at first glance since it dispenses future governments from stepwise adapting pension rules

(pensionable age or level of benefits) which may be difficult in practice. Therefore a pension system which comprises of such automatic demographic adaption mechanisms may seem convenient. On the other hand such correction factors may also lead to successive benefit reductions, resulting in increasing numbers of minimum pensioners (AusgleichszulagenbezieherInnen) or old age poverty rates if implied deductions of benefits are large. As life expectancy increases, automatic increases in the statutory retirement age also entail the problem that such an increase will only partly translate into increasing employment rates because a large share of pensioners enter the pension system via unemployment, sick leave or other forms of "out of labour force" (Horvath – Url, 2013). Increasing the statutory retirement age in times of weak economic performance therefore bears the risk of mainly shifting large parts of older people into unemployment or the health care system rather than effectively keeping them in employment longer (and therefore financially relieving the pension system).

Increases in retirement age should be accompanied by committed labour market measures (including health measures such as rehabilitation) and also take into account the current labour market situation of older people as well as the role of employers for the time of retirement. The recent increase in unemployment that was particularly large among older people as well as the large gap between employment exit and entering retirement reveal the need to prepare the labour market for the structural changes implied by future demographic trends.

Overall increasing statutory retirement age (either by harmonizing retirement age for males and females sooner or by aligning retirement age to changes in life expectancy) does not seem to be of top priority given the large gap in effective and statutory retirement age, recent unemployment developments as well as the already prevailing gap between exit from the labour market and entry into retirement. Tackling these gaps and improving workers' employability on the other hand are highly relevant aspects for Austria in order to raise effective retirement ages and employment rates of older workers.

Key policy options

Policy options mentioned in the CSR are only partly relevant for the Austrian case, as described above. Other key policy options in the context of pensions mainly concern health prevention at the work place, rehabilitation for those with health issues and educational measures that increase employment prospects especially for those with low education levels as well as employment support programmes that ease older workers' transition from unemployment to employment. Measures in this context are highly relevant given the low employment rates especially among older workers with low education levels as well as the large share of workers leaving the labour force early due to impaired health conditions or unemployment.

At the same time incentives for employers to invest in health prevention measures and to (re)employ older workers are important policy options that foster older workers' employability (compare section 2.3 "Increasing the labour market participation of older persons").

Correspondence of measures in NRP with key policy options and CSR

- Harmonisation of pensionable age for men and women

This recommendation is not directly addressed by NRP and the current government programme also does not include any reforms that aim at harmonising the pensionable age for men and women ahead of the planed schedule. Thus, the current path of harmonisation that increases female pensionable age by six months each year between 2024 and 2033 will be retained.

- Increasing effective retirement age by aligning retirement age or pension benefits to changes in life expectancy

No measures aim at the inclusion of an automatic demographic factor into the calculation of pension allowance or pensionable age. On the other hand the Austrian government has passed resolutions that lead to marked changes in the access to early retirement. These changes that are contained in the National Reform Programme concern:

  - Changes in early retirement due to long time insurance (Hacklerregelung)
  - Changes in invalidity pension ("IP-NEU")
  - Amendment of the corridor pension
  - Pension account

- Monitor the recent reforms restricting access to early retirement

The Austrian government has passed resolutions that lead to marked changes in the access to early retirement. There is a monitoring process planned which supposed to include (a) a labour market monitor (for the target employment rates within the government-agreement), (b) a reform-monitor (to evaluate the labour market and pension reforms) and (c) a retirement-age-monitor. Up to now there is the retirement-age-monitor, including the developments in the first half of 2014[36].

The retirement scheme for the long time insured (Hacklerregelung) has been reformed in the past. The most important change in this respect, came into force from 2014 onwards, concerns an increase in the minimum pensionable age by two years from 60 to 62 for men and from 55 to 57 for women. For men/woman born after 1954/1959 there are deductions for

[36] The monitoring report is available online: http://www.sozialministerium.at/cms/site/attachments/2/5/6/CH3129/CMS1406032649589/pensionsmonitoring_langfassung_jahresbericht_2014.pdf

each year of early retirement. Additionally, for paid substitute periods for time spent in education (Ausbildungsersatzzeiten) are no longer recognized as an insurance period which implies that the minimum insurance period will be much harder to fulfil for most workers. Also, the pensionable age for women will gradually increase to 62 from 2016 on. Also the entitlement of early retirement via the "Corridor Pension" will be stepwise increased to 40 years by 2017. Changes in the invalidity pension scheme imply that from 2014 onward, people born later than 1963 are no longer able to temporarily retire due to disability or health conditions but will receive medical and vocational training rehabilitation and rehabilitation benefits instead. This measure aims at preventing people from completely withdrawing from the labour market early since temporary invalidity pensioners only rarely re-enter the labour market. These reforms should in sum have considerable effects on the number of workers transiting to early retirement, although especially the latter measure will results in prolonged unemployment spells for older unemployed workers as long as prospects for re-employment remain low for older workers.

Given the large share of people entering the pension system via unemployment, sickness or other forms of "out of labour force" implies that improving workers' employability is crucial for raising the effective retirement age. However employability is not solely a worker related topic. Employment prospects (especially for older workers) heavily depend on workplace conditions and the willingness of employers to invest in their workers' health and safety as well as employing older workers. In general the employer side of the economy is underrepresented in this context, even if first steps towards employer side incentive measures are planned in the current government programme (bonus-malus system).

The current government programme also lists several measures that aim at increasing effective retirement age and sets itself ambitious targets: by 2018, the average retirement age of males and females should increase from 58.4 (2012) to 60.1 years. In order to achieve this goal the government plans to:

- Consistently implement the doctrine of prevention, rehabilitation and labour market integration of older people
- Increase incentives to remain in the labour market longer than the minimum pensionable age (by introduction a partial pension (Teilpension) and increasing the "postponing bonus" (Aufschubbonus) from 4,2 to 5,1%)
- Intensifying the efforts to permanently reintegrate older, unemployed persons (e.g. via a "hiring bonus" for firms employing older unemployed persons)
- Extending and stabilising employment of older workers (e.g. by introducing a bonus-malus system)
- Permanently monitoring measures to increase retirement age

These measures together with recent changes in the pension system (IP-NEW, Hacklerregelung and Corridor-Pension; see above), should increase labour force/employment rates of older people and lead to an increase in the average retirement

age. On the positive side, further steps to increase incentives for prolonging working life are intended (e.g. increasing "postponing bonus") but it must be noted, that these measures suffer from an insider-outsider problem, as such measures only affect those in employment. Thus, for those who enter the pension system from e.g. unemployment these measures will have no effect other than prolonging their unemployment periods. In how far employer side incentive measures will affect firms' behaviour will depend to a large extent on the size of costs and benefits involved.

All in all, only parts of the CRS are addressed in the NRP and the current government programme. Pensionable age between males and females will not be harmonized faster than already planned and there are no plans for aligning retirement age or pension benefits automatically to changes in life expectancy. Given the large gap between effective and statutory retirement age and current increases in unemployment such measures are not of top priority and would lead for large parts of concerned workers to prolonged unemployment or sickness periods rather than prolonged working careers.

Policies however focus on closing the gap between effective and statutory retirement age by fostering older workers' employability and monitoring the effectiveness of already enacted pension reform.

3.1.2 Health care

"..Further improve the cost effectiveness and sustainability of healthcare.. "

Background

Health reform 2013 envisages significant changes in healthcare, introducing a more evidence-based and coordinated approach to the planning and delivery of services. It is expected that the reform will lead to a substantial shift from in-patient to out-patient and ambulatory care through targets. Reiterated in the 2013 government coalition programme Health reform 2013 introduced a global budget cap for public spending on health aiming at (1) leveraging the achievement of supply targets and (2) supporting consolidation (Gesundheitsreformgesetz, 2013; Hofmarcher, 2014). The budget cap defines a ceiling on public health spending that should not exceed predicted annual GDP growth. This should be achieved by adherence to the limits stipulated in the 2011 federal budgetary framework. It is expected that with this measure the health sector will contain spending growth in the order of about 3.4 billion Euros until 2016, for details see Janger et al. 2014, Table 14. Targets agreed to date are likely not sufficiently ambitious to achieve reform goals. Both adjustments of the current federal budgetary framework as well as enhanced supply targets are likely needed. Thus, the CRS is appropriate.

A monitoring scheme has been set up with biannual reporting obligations. In June 2014 the first monitoring report was published which details the degree of target achievements related to 1) supply and outcome performance and 2) financial performance of the health system (Gesundheit Österreich GmbH, 2014). In February 2015 the second monitoring report was

available. Financial performance is monitored by comparing public expenditure on health excluding public spending on long-term care, calculated according to the OECD System of Health Accounts standards with expenditure caps for all payers' involved.

- Public health expenditure was projected using average growth rates over a period of 10 years, which has been 5 percent on average annually.
- Spending caps were defined by employing upper spending limits as stated in the federal financial framework legislation (Bundesfinanzrahmengesetz 2011)[37]. These caps are used for monitoring the achievement of spending targets of social health insurance and of federal states ("Länder") separately[38].

Overall in 2012 public health expenditure costs were below caps by 133 Mio. Euro. Consolidated across payers cost containment could be realized in the order of 284 Mio. Euro (Gesundheit Österreich GmbH, 2014 and 2015), which is about double the amount foreseen in projections (155 Mio. Euro), see also Figure 22 in Janger et al. 2014. The below target performance was achieved fairly equal by federal states as well as within social health insurance. Also financial targets appear to be achieved in 2013 (Gesundheit Österreich GmbH 2015). Year on year nominal public health spending growth was at 1,4 % while nominal GDP growth was at 1,7 % (Statistik Austria 2015).

While these results are promising to meet the CSR they may not hold when up-dated benchmarks are applied. First, the economy has been growing more slowly than expected in 2011. Second, the government has reinforced the commitment to achieve a balanced budget in 2016. Third, upper expenditure limits as applied have become unsustainable in light of retarded economic conditions. Finally, in the near future the health system is faced with both cost-push factors, e.g. increased wage cost and demand pull factors e.g. high price drugs and chronic care needs.

The aim of this section is (1) to provide an overview of expenditure growth scenarios by employing recently published expenditure caps including a simulation of the distance between expenditure caps and current GDP growth projections until 2018 and (2) to give an overview of the target achievement for key areas proposed by the health reform 2013[39].

Cost effectiveness has improved but sustainability is at risk

Figure 18 shows the development of public health expenditure (excluding long-term care) for the period 2014 to 2018, see Table 14 for assumptions. The health system has met spending

[37] This legislation foresees spending caps for total public expenditure of the federal government and is regularly up-dated by adjusting these caps on the basis of medium term economic forecasts (Mittelfristige Prognosen).

[38] For this exercise health reform legislation defines accounting standards for federal states and social health insurance separately on the basis of current sources. This implies that certain expenditure items are excluded so that total public health spending across payers is somewhat lower than public health expenditure as reported according to the System of Health Accounts methodology; see Figure 2.2 in GÖG 2014.

[39] This overview is restricted to measures, which are subject to impact assessment in 2017, see Table 15. For more details on measures employed by the health reform and target achievement see GÖG 2014 and 2015.

targets in 2013 and likely meets 2014 targets as stipulated in the health reform legislation 2013. In particular, spending targets appear in line with an adjusted path, which applies recently published growth rates of the social insurance budget in the health system throughout 2016. However, this path is quite optimistic as it was derived from the social insurance budget which is only about half of total public expenditure on health. Officially published spending figures of hospital care on the level of the "Länder" for the year 2014 will only become available at the end of February 2016[40]. However, preliminary results presented in the second monitoring report point to an above target achievement in 2014 (Gesundheit Österreich GmbH 2015).

Table 14: Scenarios for public health expenditure growth, % nominal change

		2014	2015	2016	2017	2018
Expected	Status quo#, no reform	5,2	5,2	4,6	4,5	4,5
Likely	Status quo, adjusted*	4,9	5,4	4,1	4,3	4,3
Bench-marks	1) Federal budgetary framework§	4,1	3,9	4,5+	3,7	2,5
	2) GDP forecast&	2,2	2,3	2,5	2,9	3,0
	3) Public expenditure forecast&	5,6	1,5	2,3	2,4	2,5

+ this figure is derived from average annual change of total federal spending as the corresponding figure in the chapter "Health" is biased (+9,1%) in 2016. In this year additional federal monies for a dental health funds will be phased in (BMF 2014, WKÖ 2014).
Sources:
Gesundheitsreformgesetz 2013; 2017-2018: Health System Intelligence estimates
* Hauptverband der Sozialversicherungsträger: 2014: final; 2015-2016: forecasts; 2017-2018: Health System Intelligence estimates
§2013-2015: Bundesfinanzrahmen 2013; 2016-2018: Bundesfinanzrahmen 2014: Gesundheit
& Mittelfristige Prognose WIFO -Monatsberichte, 1/2015: 2014-2019

Scenarios were built to 1) present expenditure growth assumptions as stated in the legislation 2013 ("expected") and 2) to take more recent developments into account ("likely"). Both Scenarios are compared with three benchmark forecasts (1) "Federal budgetary framework " (2)"GDP growth" and (3) "public expenditure growth". The benchmark "Federal budgetary framework" uses up-dated growth assumptions of the framework 2013 for the years 2014 and 2015. For the years 2016 to 2018 it uses predicted developments of the federal budget as it was stated in 2014 in the chapter health. Figure 18 shows the evolution of the public spending on health in these two scenarios. In addition it displays the development until 2018 when benchmark growth rates are applied.

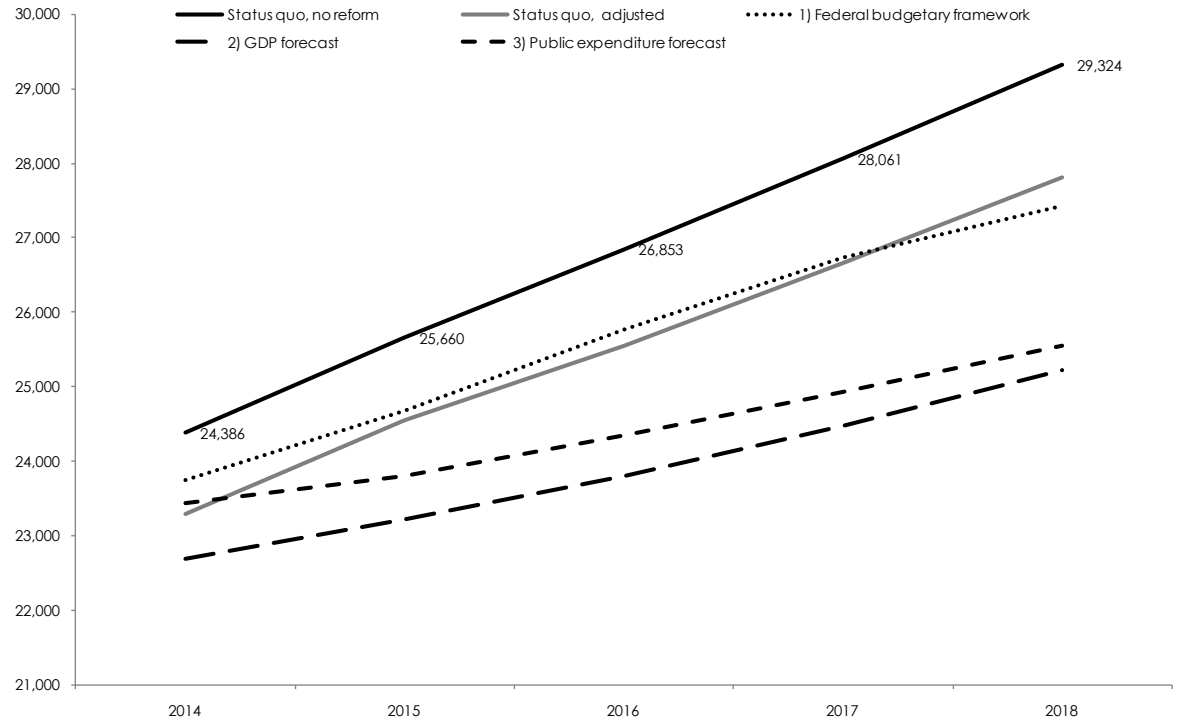
Figure 19 uses scenarios as developed in Table 14 and shows spending gaps until 2018 (excluding the benchmark "public expenditure forecast") by estimating in both scenarios the difference between the cost containment path and the evolution of public expenditure on health if they followed GDP growth forecasts. For example, in 2014 the health system may have not only met spending targets as requested but may also out-perform targets (-455 Mio. Euro). As a consequence the health system would have contained cost in the order of about

[40] Currently the Ministry of Health has an agreement with Statistik Austria to report health expenditure with a delay of 2 years, i.e. in February 2015 expenditure data of 2013 have been reported. In the future it will be essential to close this reporting gap. In particular as health reform 2013 foresees bi-annual monitoring of financial performance. Health expenditure reporting and the monitoring of target achievement are not aligned.

1 billion Euros, i.e. 638 Mio. Euros as foreseen ("Expected": blue bar) and 455 Mio. Euros in excess to this amount ("Likely": green bar).

Health reform 2013 anticipates the gradual adjustment of public health spending performance to GDP growth through adherence to the spending path stipulated in the federal budgetary framework. However, when taking recent GDP forecasts into account the gap between the health sector cost containment paths and GDP growth is widening (Table 14). This implies that permitted expenditure growth stipulated in the current federal budgetary framework is a rather soft benchmark and would need to be adjusted to weaker than expected economic performance in 2011.

Figure 18: Scenarios of the development of public health expenditure (without long-term care), in 1000 Euros.



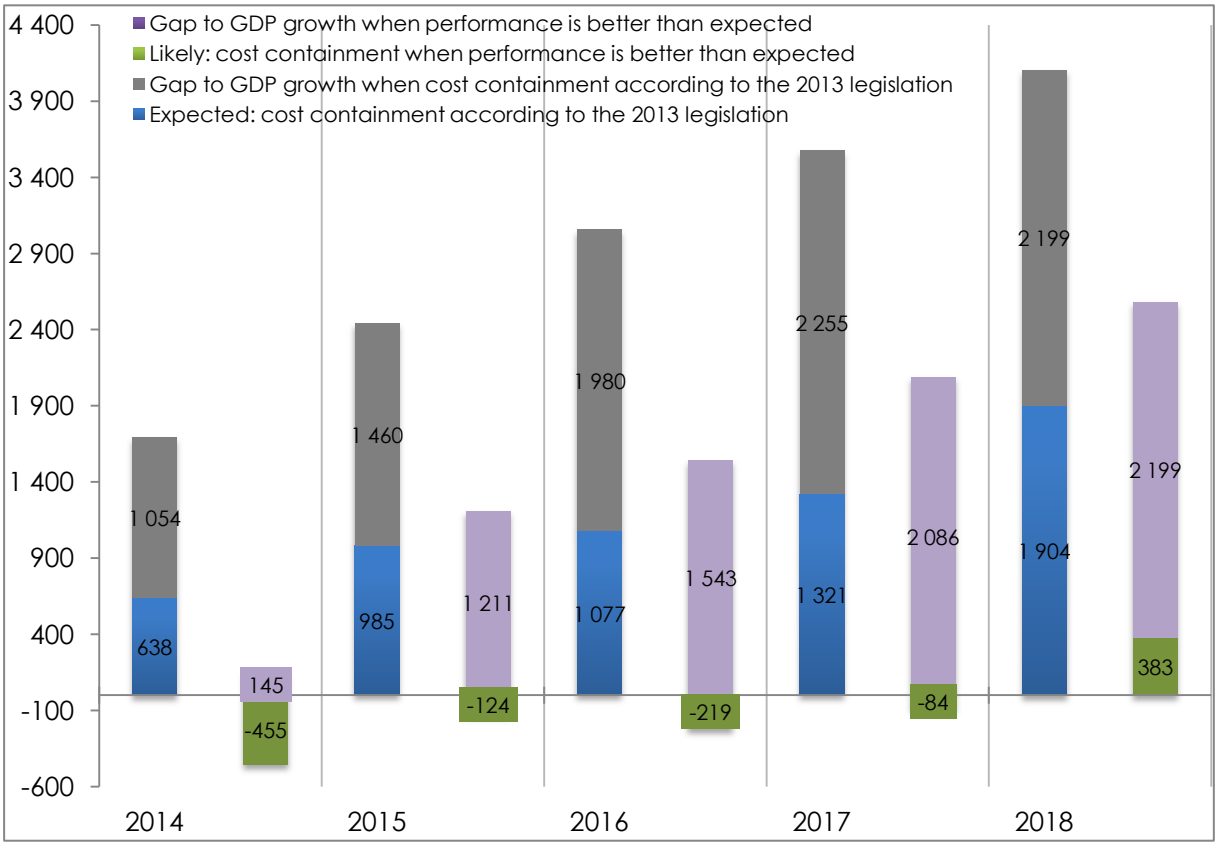
Source: Health System Intelligence compilation, see Table 14 for details.

For example, in 2014 the health sector is requested to contain spending growth by about 640 Mio. Euro when it performs according to the path stipulated in the legislation ("Expected"). If the health sector grew in line with GDP performance in 2014 an additional amount of about 1 billion Euros would be required. By looking at the scenario "likely" simulations show that the health sector would have additional cost containment requirements in the order of 145 Mio. Euro if it grew according to predicted GDP performance.

While the scenario „likely" clearly points to a favourable financal performance of the health systems when compared to the status quo („expected") it is visible that in both scenarios cost

containment requirements intensify. For example, in 2016 the health sector may achieve spending limits but has increasing pressure from the benchmark GDP growth. Additional cost contaiment would be necessary in the order of 1.5 and 2 billion Euros even though spending targets according to the benchmark "federal budgetary framework" are likely met. This implies that on average the health sector would need to curb an additional amount of about 1,7 billion Euros in 2016 if GDP growth was the benchmark. In 2017 cost containment requirements may rise to about 2,1 billion Euros, in 2018 to 2,6 billion on average.

Figure 19: The spending gap is increasing but likely less strong than expected, in 1000 Euros



Source: Health System Intelligence compilation, see Table 14 for details.

Supply performance has somewhat improved

Table 15 summarizes measures proposed by health reform 2013 which are subject to impact assessment in 2017 (Gesundheitsreformgesetz 2013). Expert assessment is made to estimate the likelyhood of target achievement. Targets for 3 out of 6 measures will be likely achieved in 2017. Notably, hospitals likely perform more cost effectively by increasing day care according to targets but also by reducing bed-days. However targets for reduced average length of stay may not be reached. This is probably caused by high and increasing demand (admissions) while at the same time bed-days have been declining but at a lower pace than a rise in admissions occurred. While this development reflects productivity improvements in

this area it also points to the lack of adequate capacity outside acute hospital care. Such capacities are needed to absorb patients in intermediary settings or horizontally integrated ambulatory care entities in hospitals with broader and higher skill mix. In this area health reform appears slow and targets set are insufficient. The robust growth of health labor everywhere requires to enhance the productivity of this incrasing work force in particular through structural change of delivey models (Hofmarcher et al, 2015).

Also, better coordinated pharmaceutical care failed thus far, see Table 15. In light of an increasing number of effective but high price drugs on the market it would be essential to improve coordination in this area. Coordination is key to safeguard equal access to such drugs for all patients in need and to ensure sustainablitiy of drugs spending through renewed reimbursement schemes for high price drugs.

Sustainability risks need to be addressed

Even though the performance of the health system seems to have improved in recent years and likely out-performs targets maybe well into 2016 in some important areas sustainability is somewhat at risk.

- First, the health system will be faced with higher labour costs through renewed wage settlements of hospital doctors across the country in response to the implemenation of the EU-working time directive. Close monitoring of cost increases is required. In this context the timing of publically available health expenditure reporting needs to become more adequate, and aligned with monitoring requirements of financial performance. Further, rolling adjustments of the spending limits to overall economic conditions is required. In particular, spending limits of the federal budgetary framework used for the evaluation of the financial performance of the health sector may need to become more strict.
- Second, demand for high price drugs will increase. This is also reflected in recent forecasts of this spending item (Hauptverband, 2014). In concert with yet unmet chronic care needs drug costs likely accelerate. Health reform failed to implement a commission to better oversee the use of high priced drugs across care sectors. Drug cost management likely needs improvment.
- Third, progress in structural change of care delivery to improve primary care capacity is slow even though supply performance has improved in important areas of hosptial care. Targets in this area need to be made more ambitious to speed-up capacity building outside hospitals or transformed hospitals. This includes more efforts to implement electronic health records as foreseen.
- Finally structural reform of the institutional make-up of the health system is not (yet) adequately addressed (Baumgartner – Pitlik – Kaniovski, 2015). While this is largely a matter of adminstrative reform of the state it should involve the governance model of the health system, e.g. consolidation of the social health insurance landscape. Further improvements are needed on the level of pooling funds to make purchasing of services

across care sectors more effective, e.g. joint pooling and purchasing of ambulatory care (Janger et. al, 2014; Hofmarcher, 2014).

Table 15: Summary of measures proposed by health reform 2013 which are subject to impact assessment in 2017

	Measures	Likelihood of achievement in 2017	Remarks
Measure 1	Ensure best point of service		
	· Increase day care 4.2 pp. to 25 per cent of all hospital admission	****	Average length of stay targets expected to be failed
	· Reduce bed-days	****	
Measure 2	Build capacity for innovative, multidisciplinary care models		
	· Increase the number of such models	**	Target is conservative: 1% of the population should be cared in such models
	· Make existing ambulatory care more responsive to patient needs, e.g. opening hours		
Measure 3	Enhance targeted health promotion and prevention		
	· Definition of unified principals for newly established funds on the regional level	**	Funds will operate in parallel with other funding and governance sources
	· 150 Mio. Euros between 2013-2022		
Measure 4	Enhance quality with focus on outcome quality		
	· Establish outcome measurement comparable across sectors by 2014	--	Largely devolved to the regional level
Measure 5	Establish a monitoring system to enable evaluation of objectives and to promote transparency		
	· Establish a monitoring framework in 2013	****	1. Monitoring report: June 2014; 2. Monitoring report: February 2015.
	· Provide annual monitoring reports per „Land“, first 2014 for the year 2013		
Measure 6	Warrant effective and efficient use of drugs		
	· Establish a commission in 2013 which recommends the use of high price drugs used across sectors and recommend which reimbursement mode is to apply	--	Will not be implemented

Note , *low likelihood, *****very high likelihood, expert assessment

Source: Gesundheitsreformgesetz 2013, Gesundheit Österreich GmbH 2014, Health System Intelligence compilation

3.1.3 Long-term care

".. and long-term care services."

Long-term care – is the CSR appropriate?

In Austria, the responsibility for long-term care is divided between the federal government, the nine federal provinces (Bundesländer) and the persons concerned, including their families. Calculations have shown that the costs of long-term care are roughly equally distributed between the persons concerned (and their families) and the public sector (Mühlberger et al., 2008b). The federal government provides long-term care allowance (cash benefits) to persons that are in need of constant (at least 65 hours per month) long-term care for at least 6 months.[41] At the end of 2013, more than 450.000 (i.e. 5.3 per cent of the Austrian population) received (non-means-tested) cash benefits in Austria (between 154 and 1,656 Euro per month depending on the level of care needed (7 categories). In 2013, the public expenditures for long-term care allowance were 2.48 bn Euro (including administrative costs). The federal provinces and the local authorities, in contrast, are responsible for providing mobile, semi-residential and residential care services that are mainly contracted out to social organisations and social funds.

Projections of long-term care costs of the public sector until 2030 show substantial increases (Firgo – Famira-Mühlberger, 2014; Mühlberger et al., 2008a). For instance, projections of long-term care allowance recipients show an increase of more than 40 per cent between 2012 and 2030. Even higher increases are to be expected between 2030 and 2050 when the baby boomer generation of the 1960s interacts with low fertility rates since the mid-1970s. This increase of elderly people goes along with a decrease of informal care by family members as female labour force participation is expected to increase and household structures are changing towards smaller households. As a consequence, the demand for formal care and thus the demand for care personnel will increase.

Main challenges in the area of long-term care concern firstly the rising public costs and secondly the labour market conditions in the long-term care sector. There is a high fluctuation of personnel within the care sector since labour market conditions are problematic (e.g. low wages, long working hours, psychological stress). Thus, the questions of how to increase the supply of qualified care workers by improving the working conditions and wages has to be addressed. While the question of financing long-term care has been included in the country specific recommendations, the problem of the shortage of care workers has not.

[41] The minimum amount of hours was recently raised from 60 to 65 hours per month (category 1). In order to become eligible for category 2 one has to proof a minimum of 95 hours of care per month (before the amendment: 85 hours) (Amendment of the Long-term Care Allowance Act *(BGBl. I Nr. 40/2014)*. This amendment intends to secure financial resources in order to increase long-term care allowance by 2% in 2016.

3.1.2 Key policy options

Key policy options to tackle the challenge of increasing costs are to further finance long-term care through general taxes and to prolong the period of financial commitments for the recently installed care fund in order to increase the planning reliability for the federal provinces to provide care services.

Key policy options to improve the labour market conditions of the care sector in order to increase labour supply refer to higher wages through collective agreements, improvements in training, measures to qualify more people to work in the care sector (including migrant workers, unemployed people, men) and measures to give care service workers more possibilities to move to higher qualified jobs by further training.

3.1.3 Correspondence of measures in NRP with CSR

The following discusses recent legal developments in the care sector and evaluates whether these measures are appropriately responding to the CSR aimed at developing a financially sustainable model for the provision of long-term care and at putting a stronger focus on prevention, rehabilitation and independent living.

Long-Term Care Allowance Reform Act (Pflegegeldreformgesetz 2012 BGBl. Nr. 58/2011)

Prior to this reform long-term care allowance was granted by more than 300 different administrative bodies both at the level of the federal provinces and at federal level on the basis of the Federal Long-term Care Allowance Act and nine long-term care allowance acts by the federal provinces. This led to heterogeneous results in terms of the duration of long-term care allowance proceedings as well as medical assessment procedures. The Long-Term Care Allowance Reform Act 2012 simplified the long-term care allowance system in Austria, reducing the number of administrative bodies to 7 and transferring the executive and legislative powers from the federal provinces to the federal level. Moreover, the act contributed to unifying the administration of long-term care allowances across Austria. Since the beginning of January 2012 a single form of assessment is used for all cases in Austria, for instance. The Amendment to the Labour Law Act 2013 (Arbeitsrechts-Änderungsgesetz 2013, BGBl. I Nr. 138/2013) further reduced the administrative bodies to 5 (effective from 1/1/2014).

Care Fund Act (Pflegefondsgesetz BGBl. I Nr. 57/2011)

The recommendations of a reform working group on long-term care in 2007 and 2008 led to the establishment of a care fund in 2011. The working group criticized the lack of a medium-term financial framework for the federal provinces to provide and expand care services as well as the lack of transparency of care service costs of the federal provinces. The Care Fund Act established an administrative fund aimed at financing care benefits in kind and at further developing the supply of care arrangements of municipalities and the federal provinces. The financial endowment – two thirds of which are paid by the federal level and one third by the

federal provinces – was negotiated with the federal provinces and calibrated with forecasts of care costs. The Care Fund's main goal is to ensure the supply of affordable care services according to the need of an aging society, but also to support the existing care services such as mobile, semi-residential, residential long-term and short-term care services, alternative living arrangements and case- and care management. However, there is priority given to measures outside residential long-term care services. The Care Fund Act furthermore defines common quality criteria to pursue the goal to gradually harmonize the quality of care services across Austria. The care fund has been endowed with 685 Mio Euro for the years 2011 to 2014 and additional 650 Mio Euro for 2015 and 2016 (the latter on the basis of the amendment to the care fund act (BGBl. I Nr. 173/2013). The amendment also brought some changes on substance: for instance, it facilitates innovative projects and care quality control measures. Furthermore, it introduced a common supply rate for care services across Austria. The supply rate is the rate of persons that receive care services in a federal province out of all persons that receive care allowance in the respective federal province. Between 2014 and 2016 there is the target to increase the supply rate to 55 per cent in each federal province (2013: roughly 50 per cent), although the actual care arrangements follow regional needs. Finally, the amendment to the Care Fund Act increased the federal provinces' flexibility of using the fund.

Care Services Statistics Regulation 2012 (Pflegedienstleistungsstatistik-Verordnung 2012, PDStV, BGBl. II Nr. 302/2012)

Until recently, there was a significant problem with obtaining comparable data on long-term care services across Austria: Every federal province followed its own definitions, classifications and specifications of long-term care services. The Care Services Statistics Regulation aims at a harmonization of collected data, generating valid data in the form of a "care services database" (Pflegedienstleistungsdatenbank). This database establishes common definitions and classifications of various care services, increasing comparability and transparency of care services across Austria. However, the quality of data is still very heterogeneous. Furthermore, there are still different definitions of specific cost categories, so there are still limitations when comparing the costs of the Länder.

Amendment to the Labour Law Act 2013 (Arbeitsrechts-Änderungsgesetz 2013, BGBl. I Nr. 138/2013)

From January 2014 onwards, caring relatives have the possibility to take a (one to three months long) leave of absence or work part-time and receive a (part-time) allowance (Pflegekarenzgeld) that equals unemployment benefits (55 per cent of last daily net income, but at least the amount of the marginal earnings threshold (2014: 395,31 Euro). For the duration of the allowance beneficiaries enjoy increased employment protection. Insurance contributions to pension and health are paid by the public authority and employees who receive the allowance are entitled to severance payments. Relatives that engage in hospice care also have the possibility to take leave of absence and receive care allowance up to

three months with the possibility to prolong for another three months (up to five months plus 4 months prolongation for hospice care if the relative is a child).

Results of the reform working group "Care" (Reformarbeitsgruppe Pflege)

In 2012, the Federal Ministry of Labour, Social Affairs and Consumer Protection (BMASK) installed the reform working group on long-term care. Participants from the BMASK, interest organizations, medical associations, social insurance institutions, the Ministry of Health, senior citizens associations, care providers, care workers and employers produced a list of recommendations that are the basis for future decisions on long-term care policy. These recommendations focus on following issues: (1) the further development of long-term care provisions, (2) improvements for caring family members and (3) human resource development. Main points of the recommendations are:

- further developments to harmonize long-term care across Austria
- stronger focus on ambulant and mobile care
- implementation of quality control measures
- comprehensive case-care management
- further development of hospice and palliative care (especially for children)
- early detection of dementia
- development of tools to increase the mental fitness of patients with dementia
- prevention and rehabilitation to prevent or delay the entry into a nursing home and to increase health among patients in nursing homes
- increasing employment protection of caring relatives
- subsidies for age related renovation work for apartments and houses
- further development of the concept of "Ambient Assisted Living"
- measures to qualify more people to work in the care sector, to increase the quality of the training and the willingness and ability to work in the care sector.

There is a broad agreement to continue to finance care expenditure by general taxes (in contrast to long-term care insurance contributions).

The government programme 2013-2018 which was released in mid-December 2013 includes many of the measures recommended by the reform working group of long-term care. It puts a strong focus on mobile and day care, promoting a life at home as long as possible. Another focus concerns prevention and rehabilitation: a "dementia strategy", which ought to be developed until the end of 2014, but is still not introduced, shall increase the rate of early diagnosis and support caring relatives. A "comprehensive rehabilitation strategy" shall insure that social insurance includes rehabilitation measures for the elderly. However, the government programme does not give details on how to ensure a financially sustainable model for the provision of long-term care. On the other hand, the coalition government

confirms its resolution to continue to finance expenditures for long-term care through general taxes.

To conclude, recent developments in long-term care policy and the plan of the new government in Austria go in the right direction towards the recommendations made by the European Commission. However, in order to better promote prevention, rehabilitation and independent living the two separated political areas "health" and "long-term care" need better coordination in order to create positive spill-over effects. Austria's demographic development causes the cost of long-term care to increase. In that respect, financing long-term care through general taxes is economically advisable. However, in order to increase the planning reliability for the federal provinces to provide care services, financial commitments have to be made for longer intervals than is actually the case. Still too little attention is paid to improve the working conditions in the care sector to attract more people willing to work in the sector. Finally, the regional differences of care services across Austria will have to be addressed by the public authorities.

Long-term care measures in the government programme 2013-2017

- Vorrang mobiler vor stationärer Betreuung: Der Pflegefonds setzt Schwerpunkte zum flächendeckenden Ausbau von mobilen Diensten und der Tagesbetreuung sowie Maßnahmen zur Beratung und Entlastung pflegender Angehöriger; (+)
- Ausbau der Hausbesuche bei Pflegegeldempfängern zur Beratung pflegender Angehöriger; (+)
- neuer Förderschwerpunkt für barrierefreies Sanieren ab 2014 unabhängig vom Gebäudealter; (+)
- Ausbau von anwendungsorientierten Ambient Assisted Living Programmen (Technologien, Produkte und Dienstleistungen) mit dem Fokus auf deren nachhaltige Implementierung; (+)
- Verlängerung und Weiterentwicklung der 24-Stunden-Betreuung aufgrund der bisherigen Erfahrungen in Hinblick auf Nachhaltigkeit, Verwaltungsökonomie und Qualitätssicherung: (+)
    - Ab 2015 gewerberechtliche Trennung von BetreuerInnen und Vermittlungsagenturen;
    - Implementierung in den Pflegefonds (einschließlich Mittelübertragung).

- In einer »Demenzstrategie« sollen bis Ende 2014 klare Empfehlungen für die notwendige öffentliche Bewusstseinsbildung, Versorgungsstrukturen, Prävention und Früherkennung sowie Schulung und Unterstützung von pflegenden Angehörigen erarbeitet werden; (0)
- Entwicklung eines Aktivitäten-Katalogs, der Prävention im Alltag umsetzbar macht; (0)
- Zur Vermeidung von Pflegebedürftigkeit muss im Rahmen einer Rehabilitations-Gesamtstrategie sichergestellt werden, dass ab 2015 Rehabilitation für alle SeniorInnen von der Pensionsversicherung angeboten wird.(-)

- Harmonisierung der Sozial- und Gesundheitsberufe durch Schaffung einer Bundeskompetenz zur gesamthaften Abstimmung mit den Pflegeberufen; (0)
- modulare österreichweit einheitliche Ausbildung quer durch sämtliche Gesundheits- und Sozialberufe mit horizontaler und vertikaler Durchlässigkeit, auch hinsichtlich der Karriereplanung; (0)
- Anbindung an das Regelbildungswesen; (0)
- verbesserte Anerkennung von Qualifikationen und Vereinfachung von Nostrifizierungsverfahren; (0)
- stärkere Anpassung von Kompetenzen und Ausbildung an die Erfordernisse des Langzeitpflegebereichs; (0)
- um das Ziel einer gesicherten Verfügbarkeit von mobiler und stationärer Hospizbetreuung, auch für Kinder, zu erreichen, soll entsprechend der Bedarfserhebung des österreichischen Bundesinstitutes für Gesundheit (ÖBIG) eine gemeinsame Finanzierung durch Bund, Länder und Sozialversicherungen entwickelt werden; (+)
- Entwicklung eines modernen interaktiven Informationsportals über Pflegeleistungsangebote zur Information für Pflegebedürftige und deren Angehörige über Angebote, Leistungen, Qualität und Kosten. (0)

•Verbesserung der Erreichbarkeit und Verfügbarkeit von (haus)ärztlichen, therapeutischen und krankenpflegerischen Leistungen im gesamten Pflegebereich zur Vermeidung von unnötigen Spitalsaufenthalten. (Erweiterung der Rezepturrechte Pflegeheime); (-)
•ab Mitte 2014 Ermöglichung des Bezugs von Arzneimitteln beim Großhandel, deren »Verblisterung« und Bevorratung von Arzneimitteln durch Wohn- und Pflegeeinrichtungen unter Berücksichtigung der Arzneimittelsicherheit und unter Einbeziehung der Kompetenz der Akteure in der Arzneimittel-Wertschöpfungskette; (-)
•kritische Überprüfung bestehender Qualitäts- und Strukturvorgaben, Dokumentations- und Abrechnungsvorschriften unter Interessensabwägung zwischen Aufwand und Betreuungsqualität (z.B. im Hinblick auf Verbesserungen im Arzneimittelmanagement). Dies soll mit dem Instrument des Pflegefonds unterstützt werden. (-)

•Das Pflegegeld und der Pflegefonds werden als zentrale Säulen der Pflegefinanzierung durch den Bund beibehalten und weiterentwickelt; (0)
•beim Pflegegeld wird der Fokus auf Fälle höherer Pflegebedürftigkeit und Bedarfsgerechtigkeit gerichtet. (-)

3.2 CSR relating to employment and education

3.2.1 Changing the tax structure to foster employment

"Reduce the high tax wedge on labour for low-income earners by shifting taxation to sources less detrimental to growth, such as recurrent taxes on immovable property, including updating the tax base."

Background: taxation and growth – is the CSR appropriate?

Early work on the influence of taxes on growth focused primarily on the level of taxation, hypothesizing a negative relationship between the tax ratio (revenues from taxes and social security contributions in relation to GDP) and economic growth. Meanwhile, however, ample empirical evidence has accumulated that a relatively high tax ratio does not necessarily impact negatively on economic growth (see e.g. Arnold, 2008, Myles, 2009, European Commission, 2008 and 2010): not least because the explanatory power of the existing empirical studies is limited by endogeneity problems, the neglect of growth-enhancing expenditures financed by tax revenues, statistic/ conceptual problems in defining the tax ratio, and the disregard of taxation structures (Pitlik - Schratzenstaller, 2011).

Recently, the last of these numerous points of criticism has inspired several empirical analyses examining the relationship between growth and the tax structure as a whole. Of these, one study conducted under the roof of the OECD (Arnold et al., 2011) and another one by IMF economists (Acosta-Ormaechea - Yoo, 2012) have drawn particular attention in tax theory as well as tax policy. In contrast to most previous studies focusing on growth effects of specific taxes in a more or less isolated perspective they study the growth impact of different tax categories in a comparative perspective. Their result of a "tax-and-growth-hierarchy" (see Figure 20) ranking the various types of taxes according to their growth-friendliness has been influencing also recent analyses (e.g. Prammer, 2011) and tax policy recommendations by the European Commission (as, for example, in Annual Growth Surveys 2014 and 2015; see European Commission, 2013a and 2014a, or in Wöhlbier - Astarita - Mourre, 2014) in general. And it is obviously one of the pillars the indicator-based screening of tax systems of member

states conducted by the European Commission as one element of the analyses carried out within the European Semester (European Commission, 2014c) as well as the latest country-specific recommendations in the realm of tax policy are based on.

Figure 20: Tax-and-growth-hierarchy

Growth-compatibility	Arnold et al. (2011)	Acosta-Ormaechea – Yoo (2012)
High ↓	**Property-based taxes** Notably inheritance and gift tax, net wealth tax, real estate tax; less taxes on capital transfers	**Property-based taxes** Notably inheritance and gift tax, net wealth tax; less real estate tax
	Consumption taxes Notably environmental taxes	**Consumption taxes** Notably VAT (value added taxes)
	Personal income tax, social security contributions and payroll taxes	**Corporate tax**
Low	**Corporate tax**	**Personal income tax, social security contributions and payroll taxes**

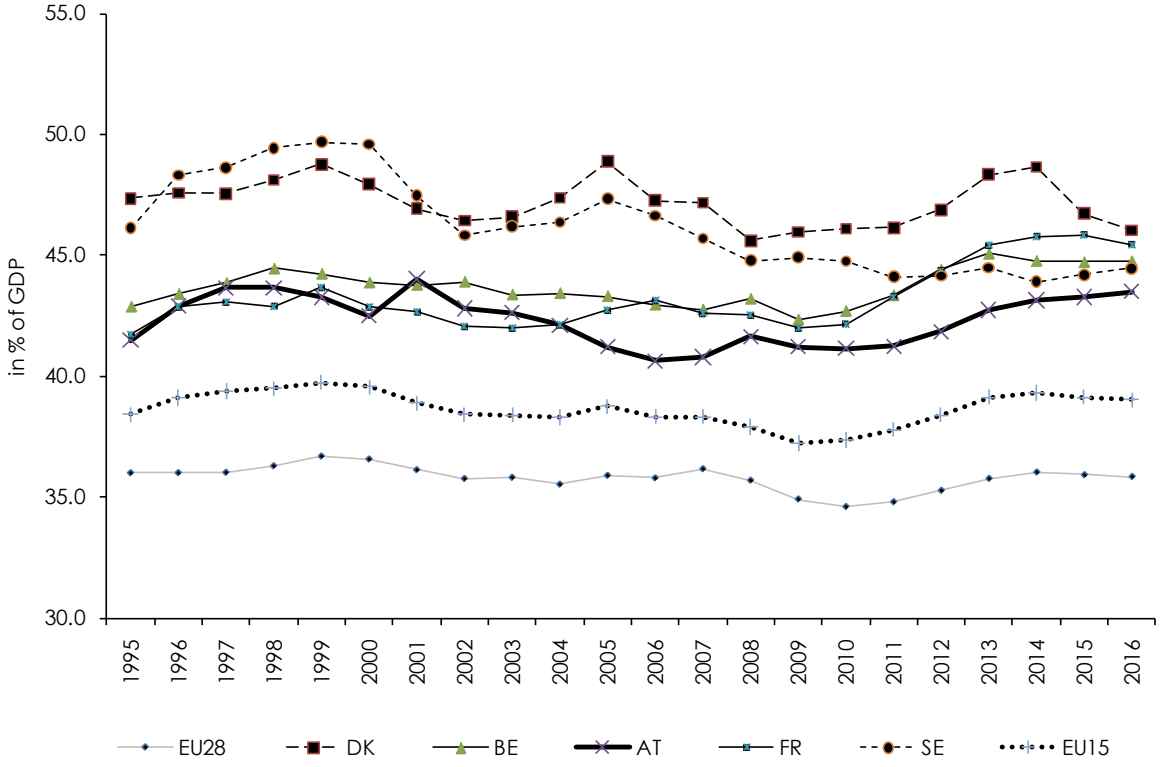
Source: *Arnold et al.*, 2011; *Acosta-Ormachea – Yoo,* 2012)

According to this tax-and-growth-hierarchy, property taxes and consumption taxes (including environmental taxes and other "sin taxes") can be classified as rather growth-friendly, while the personal income tax (including social security contributions and payroll taxes) and the corporate tax can be expected to be rather detrimental for growth. Thus the very general conclusion may be drawn that tax systems relying more on property and consumption taxes are more growth-friendly than those drawing heavily on personal and corporate income taxes.

In Austria the tax-to-GDP-ratio (total tax burden[42]) has been exceeding the European average in every single year since the mid-nineties, as figure 19 shows. In 2013, the Austrian tax-to-GDP-ratio reached 42.7 percent (EU28 average: 35.8 percent, EU15 average: 39.1 percent), the seventh highest level among EU countries.

[42] The total tax burden includes tax revenues and social security contributions.

Figure 21: Tax-to-GDP-ratios (total tax burden) in Austria and the EU, 1995 to 2016

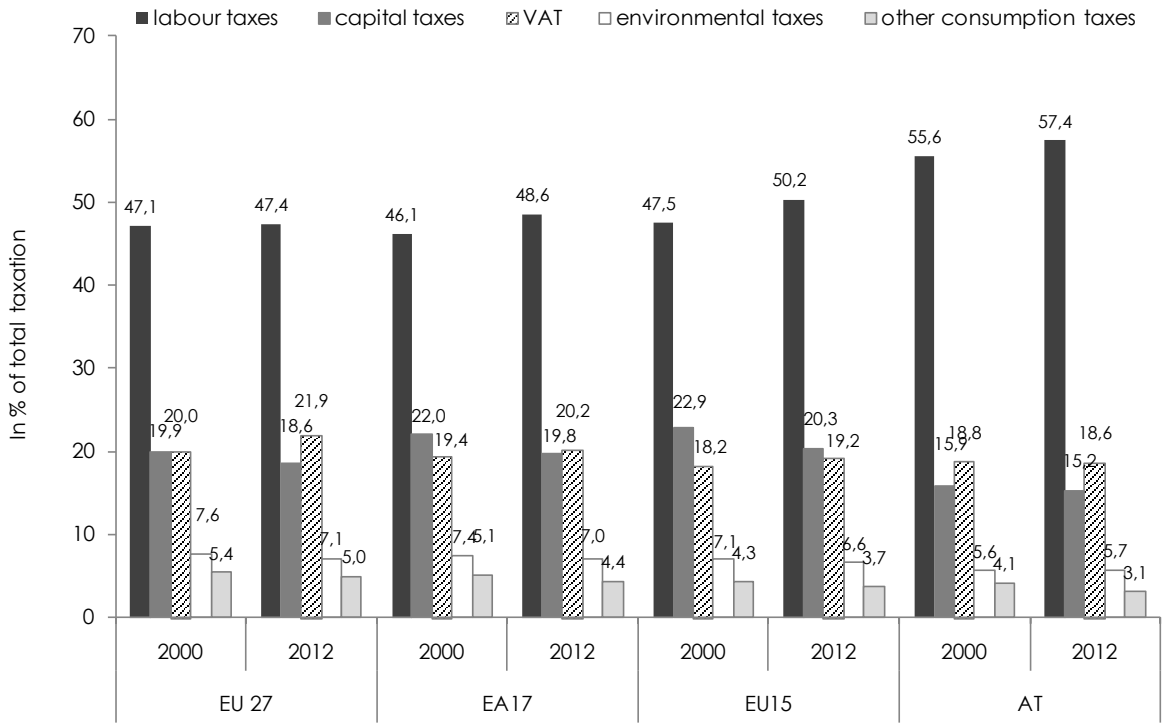


Source: *European Commission* (2015). EU15 and EU28 arithmetic mean.

According to the most recent projections by the European Commission (economic forecast winter 2015), Austria's tax ratio will reach 43.3 of GDP percent in 2016 (EU28 average: 35.9 percent, EU15 average: 39.2 percent) and will thus rank 6th among EU countries. Figure 21 also shows that the group of countries with even higher tax ratios includes countries with good economic performance (Denmark, Sweden) as well as economically less successful countries (Belgium, France). These descriptive data support the econometric evidence of the absence of a clear-cut relationship between the level of the total tax burden and economic performance.

A first look at Austria's tax structure shows the (in European comparison) remarkable predominance of the share of labour taxes in overall tax revenues as the most striking feature (see Figure 22). Not surprisingly, almost other tax categories – environmental taxes and other consumption taxes as well as taxes on capital – contribute less than EU average to overall tax revenues.

Figure 22: Tax structure in Austria and the EU



Source: *European Commission* (2014b). - [1]) Computed as the ratio of total tax revenues of the category to a proxy of the potential tax base in %. Energy taxes (deflated, base year 2000), in Euro per tons of oil equivalent (TOE).

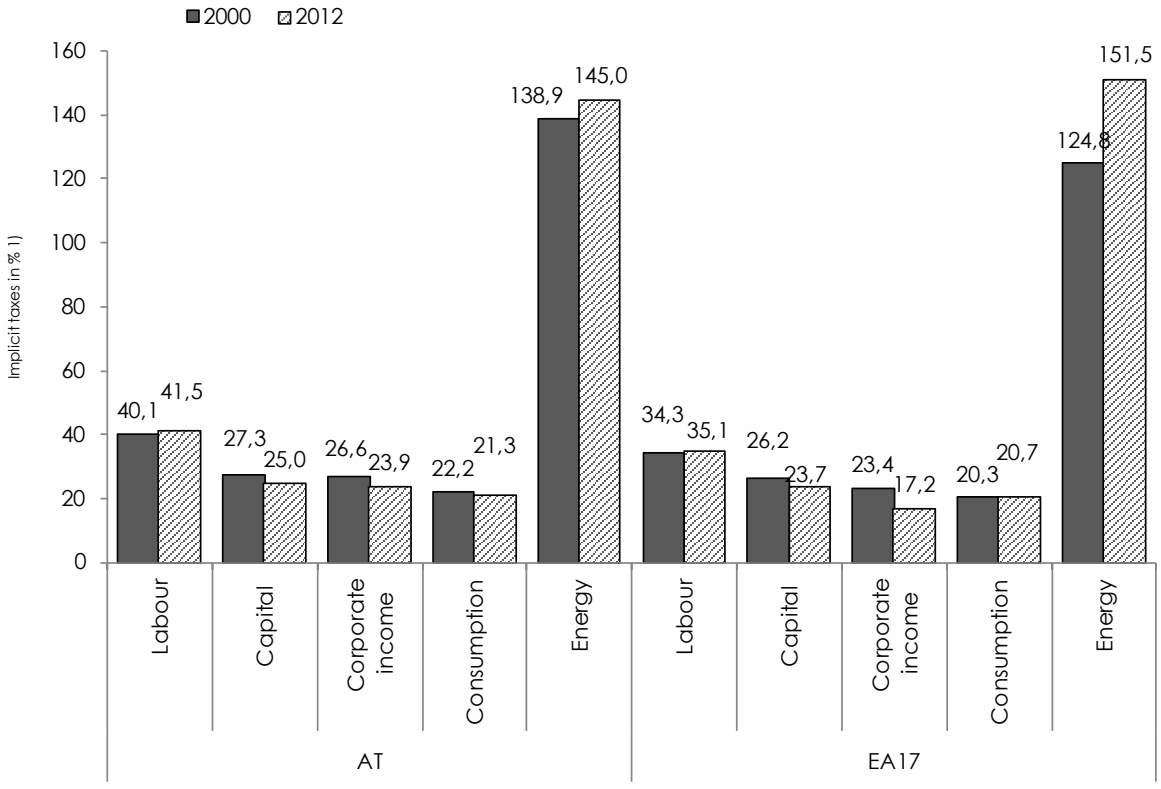
The share of property taxes, which are not recorded separately in Eurostat tax data, according to OECD statistics is significantly below EU15 average (1.3 percent of overall tax revenues in Austria versus 5.3 percent on EU15[43]) average in 2012). In contrast to the increasing share of property taxes in the EU15, their share has more than halved in Austria since 1990 (*OECD*, 2014b). This development is the result of the stepwise elimination of most property-related taxes within the last 20 years: the net wealth tax (1994) and the inheritance and gift tax (2008) as the most important ones in quantitative terms. Meanwhile, the only substantial revenues from property-related taxes stem from the real estate tax and the real estate transfer tax.

For a detailed and well-founded assessment of the growth- and employment-friendliness of a country's tax system, however, a look at its overall tax structure – i.e. the shares of different tax categories in total tax revenues – can only be the starting point. In a next step, macro-economic tax burden indicators are to be examined, as they convey a more meaningful picture of the distribution of the total tax burden across the various tax bases (whole groups

[43]) As not all EU28 countries are OECD members, average values based on OECD tax data are not available for the EU28.

of tax payers or aggregate taxable activities, respectively). Implicit tax rates relate total revenues stemming from the various tax categories to the corresponding tax bases and thus reflect the effective macroeconomic tax burdens on individual tax bases. Figure 23 shows the effective macroeconomic tax rates – or implicit tax rates – on consumption, labour, energy and capital for Austria and the Eurozone (EA17), as calculated by Eurostat in their yearly publication "Taxation Trends in the European Union". Between 2000 and 2012, implicit tax rates on labour and energy increased in Austria, while the implicit capital tax rate (including taxes on property as well as on capital income) as well as the implicit tax rate on corporate income and consumption fell. In the same period, implicit tax rates on capital and corporate income decreased even more markedly in the EU17 average, while the implicit tax rate on energy increased significantly and is now above the Austrian level. Also labour and consumption are bearing a slightly higher effective tax burden in 2012 compared to 2000.

Figure 23: Implicit tax rates in Austria and the EU



Source: *European Commission* (2014b). - [1]) Computed as the ratio of total tax revenues of the category to a proxy of the potential tax base in percent. Energy taxes (deflated, base year: 2000) in Euro per tons of oil equivalent (TOE). EA17: Implicit tax rates for capital and corporate income: data 2011.

To identify incentive effects of taxes, micro-economic (marginal and average) tax rates influencing individual behaviour of private households and individuals, respectively, are of interest. In addition, existing empirical studies focusing on the growth impact of individual tax

categories can provide deeper insights into the concrete channels via which these may directly or indirectly influence economic growth. In the context of this evaluation, analyses studying the influence of labour taxes on individual labour supply are of particular relevance.

Labour taxes can be assumed to influence various individual decisions shaping the quality and quantity of labour supply: employment in the shadow economy or in non-taxed sectors of the economy (particularly in the household sector), investment in human capital, occupational choices, individual work effort and productivity, etc. Their impact on labour market participation (which is influenced by average tax rates) and hours worked (which are influenced by marginal tax rates), however, has been examined most intensely. The numerous empirical studies dedicated to the relationship between (variations of) the net wage rate (influenced by labour taxes) or (variations of) labour taxes on the one hand and labour supply on the other hand have produced the most robust and clear-cut empirical results, which can be summarised briefly as follows:[44])

- Labour taxes influence individual demographic groups and educational levels differently, as these differ in wages elasticities of labour supply.
- Labour taxes have a strong impact on the decision about participation and hours worked for some groups, e.g. mothers with young children.
- Lone mothers and men with low qualifications display a rather tax-sensitive participation decision.
- Labour tax variations have only very limited effects on participation and hours worked by men in general and by highly-qualified men in particular.

Empirical studies for Austria show, that the participation elasticity for married women has been falling in the long-run but is still rather high, while married women's elasticity of weekly hours has reached a rather low level[45]). Thus average tax rates on labour income appear the more important policy variable compared to marginal tax rates.

Nominal personal income tax rates and social security contribution rates are the most simple microeconomic marginal tax rates. These are rather high in Austria, with a personal income tax rate (wage tax rate) of effectively (considering the reduced rate for holiday and Christmas bonuses) 32.1 percent for the lowest income tax bracket and a social security contribution rate for employees of 15.07 percent for low incomes, and a top income tax rate of effectively 43.7 percent and a social security contribution rate of 18.07 percent[46]) for gross incomes exceeding € 1,530 per month in 2014 (2015: € 1,571 p.m.). To assess the incentive effects of labour taxes with regard to labour supply – in particular with regard to the number of hours worked –, the combined effect of personal incomes tax rates and social security

[44]) See the extensive literature review by Meghir - Phillips (2010).

[45]) See for an overview of empirical studies for Austria Schratzenstaller (2012b).

[46]) Above an upper limit of 63,420 € gross yearly income (2014; 65,100 € in 2015, respectively), the marginal social security contribution rate is zero.

contribution rates (which in Austria are applied on different tax bases) needs to be determined for different levels of incomes.

The resulting microeconomic marginal effective tax rates as calculated regularly by the OECD (in their yearly publication "Taxing Wages") based on a uniform framework for all OECD countries are shown in Table 16. Compared to the EU15 average, microeconomic marginal effective tax rates are considerably higher in Austria for the most recent available year 2013, and particularly so for lower and average labour incomes, while for an income level of 133% of average labour income they are slightly above average only. For an income level of 167% of average labour income marginal effective tax rates are remarkably below the EU15 average, and most remarkably also more than 11 percentage points lower that the marginal effective tax rate for income levels of 100% and 133% of the average labour income, respectively. This regressive combined effect of wage tax and social security contributions results from the upper limit for the latter ones.

Since 2000, Austrian marginal effective tax rates increased especially at the (particularly tax sensitive) low and average income level, while they changed only marginally for above-average labour incomes. Thus, also the development of marginal effective tax rates stands in contrast to the general trend in the EU15, where marginal effective tax rates hardly changed across all the income levels considered.

Table 16: Microeconomic marginal tax rates (personal income tax and employees' social security contributions) for different labour income levels, Austria and EU15

	Marginal personal tax burden on gross labour income 2013							
	In % of average wage							
	67%	100%	133%	167%	67%	100%	133%	167%
	Tax burden (taxes and social security contributions) in % of gross labour income[1])				Difference 2000/2013 in percentage points			
Belgium	54,9	59,4	59,4	59,8	+ 0,9	+ 3,9	– 1,1	– 3,1
Denmark	40,3	42,5	56,2	56,2	– 10,4	– 8,2	– 7,1	– 7,1
Germany	46,9	52,2	52,6	44,3	– 6,0	– 7,0	– 5,3	– 7,1
Greece	34,9	35,7	36,5	44,9	+ 19,0	+ 7,2	+ 8,0	+ 3,8
Spain	29,5	34,4	34,4	40,0	– 3,6	+ 5,6	+ 1,6	+ 11,7
France	31,9	43,6	42,4	42,4	– 1,6	+ 4,3	+ 6,2	+ 0,1
Ireland	31,0	31,0	52,0	52,0	+ 2,5	– 19,5	+ 5,3	+ 5,6
Italy	39,3	39,4	49,3	49,9	+ 6,2	– 1,0	+ 8,9	+ 3,4
Luxembourg	39,1	49,6	49,6	49,6	+ 1,8	+ 1,2	– 2,4	– 2,4
Netherlands	39,8	43,6	53,1	49,3	– 6,0	– 9,5	+ 3,1	– 0,7
Austria	44,4	49,1	49,1	37,9	+ 3,9	+ 7,9	+ 1,1	– 0,5
Portugal	43,0	43,0	43,0	51,5	+ 17,0	+ 7,0	+ 7,0	+ 5,5
Finland	43,1	48,0	48,0	48,0	+ 0,8	– 0,1	– 5,7	– 5,7
Sweden	28,7	31,7	51,7	56,7	– 9,6	– 21,3	+ 1,4	+ 1,4
United Kingdom	32,0	32,0	42,0	42,0	+ 0,0	– 0,0	+ 2,0	+ 2,0
EU 15	38,6	42,3	48,0	48,3	+ 1,0	– 2,0	+ 1,5	+ 0,4

Source: *OECD,* 2014b. -□) Average wage (average annual gross wage earnings of adult, full-time manual and non-manual workers in industry).

For an evaluation of incentive effects of labour taxes, a focus on marginal effective tax rates is too narrow, however. While these are important for decisions on the number of hours worked, the participation decision is influenced by average tax rates accounting for nominal tax rates and the rules to determine the tax base. Table 17 displays microeconomic average tax rates (personal income tax and employees' social security contributions) for different levels of gross labour incomes for Austria and the EU15 countries. For Austria, these are above EU15 average for all income levels considered. While they fell on EU15 average since 2000 for all income levels regarded except for 167 percent of average income, they went up throughout in Austria.

Table 17: Microeconomic average tax rates (personal income tax and employees' social security contributions) for different labour income levels, Austria and EU15

	Average personal tax burden on gross labour income 2013							
	In % of average wage							
	67%	100%	133%	167%	67%	100%	133%	167%
	Tax burden (taxes and social security contributions) in % of gross labour income[1])				Difference 2000/2013 in percentage points			
Belgium	36,1	42,6	46,8	49,4	+ 0,4	– 0,4	– 0,5	– 0,7
Denmark	37,1	38,6	41,3	44,3	– 3,8	– 5,6	– 7,2	– 7,2
Germany	34,6	39,6	42,2	43,7	– 2,2	– 3,6	– 4,7	– 5,0
Greece	19,6	25,5	31,1	35,3	+ 3,7	+ 8,5	+ 11,2	+ 13,1
Spain	18,4	22,9	25,8	28,5	+ 3,5	+ 3,1	+ 3,1	+ 4,1
France	26,4	28,4	31,9	34,0	+ 0,7	– 0,4	+ 1,2	+ 1,5
Ireland	12,6	18,7	26,8	31,9	– 6,1	– 8,7	– 5,9	– 1,8
Italy	27,0	31,0	35,4	38,2	+ 2,8	+ 2,2	+ 3,4	+ 3,9
Luxembourg	21,2	29,3	34,3	37,4	– 0,7	+ 0,5	– 0,1	– 0,6
Netherlands	26,1	31,2	35,1	38,4	– 6,5	– 2,1	– 2,8	– 2,0
Austria	28,3	34,3	38,0	39,0	+ 2,7	+ 3,3	+ 3,2	+ 2,7
Portugal	19,3	27,2	31,1	34,9	+ 1,9	+ 4,7	+ 5,3	+ 6,3
Finland	23,3	30,2	34,6	37,3	– 4,8	– 4,1	– 3,7	– 4,1
Sweden	22,2	25,0	30,4	35,0	– 9,4	– 8,7	– 7,8	– 6,1
United Kingdom	20,1	24,1	27,3	30,2	– 2,6	– 1,7	+ 1,3	+ 1,5
EU 15	24,8	29,9	34,1	37,2	– 1,4	– 0,9	– 0,3	+ 0,4

Source: *OECD*, 2014b. -□) Average wage (average annual gross wage earnings of adult, full-time manual and non-manual workers in industry).

Also employers are confronted with a high tax burden on labour, i.e. high non-wage labour costs. Table 18 presents marginal total tax wedges, i.e. wage tax as well as employees' and employers' social security contributions and other non-wage labour costs related to labour costs (gross wages plus employers' social security contributions and other non-wage labour costs) for the EU15 countries.

Table 18: Microeconomic marginal total tax wedge (income tax, employers´ and employees' social security contributions) for different labour income levels, Austria and EU

	Total marginal tax wedge on labour cost 2013 In % of average wage							
	67%	100%	133%	167%	67%	100%	133%	167%
	Total tax wedge (taxes and employee and employer social security contributions) in % of labour cost[1])				Difference 2000/2013 in percentage points			
Belgium	66,3	69,7	68,2	68,5	+ 0,4	+ 2,7	– 2,5	– 4,0
Denmark	40,3	42,5	56,2	56,2	– 10,4	– 8,2	– 7,1	– 7,1
Germany	55,5	60,0	57,3	44,3	– 5,5	– 6,2	– 5,5	– 7,1
Greece	48,9	49,6	50,2	56,8	+ 14,6	+ 5,4	+ 6,1	+ 2,8
Spain	45,7	49,5	49,5	40,0	– 3,1	+ 4,0	+ 0,9	+ 11,7
France	62,9	59,7	59,8	59,8	+ 10,0	+ 2,7	+ 6,2	+ 1,8
Ireland	37,7	37,7	56,7	56,7	+ 1,5	– 18,1	+ 4,3	+ 10,2
Italy	54,1	54,1	61,6	62,0	+ 3,9	– 1,4	+ 6,0	+ 2,0
Luxembourg	45,8	55,1	55,1	55,1	+ 0,8	+ 0,5	– 2,8	– 2,8
Netherlands	45,1	48,5	53,1	49,3	– 9,2	– 9,6	+ 3,1	– 0,7
Austria	56,9	60,6	60,6	42,2	+ 2,3	+ 5,5	+ 0,3	– 0,5
Portugal	53,9	53,9	53,9	60,8	+ 13,7	+ 5,7	+ 5,7	+ 4,4
Finland	53,7	57,6	57,6	57,6	– 0,6	– 1,1	– 5,6	– 5,6
Sweden	45,8	48,1	63,3	67,1	– 7,8	– 16,6	+ 0,6	+ 0,6
United Kingdom	40,2	40,2	49,0	49,0	+ 0,9	+ 0,9	+ 2,5	+ 2,5
EU 15	50,2	52,5	56,8	55,0	+ 0,8	– 2,3	+ 0,8	+ 0,6

Source: *OECD,* 2014b. - [1]) Gross wages plus employers' social security contributions.

The marginal tax wedge amounts to 60.6 percent for an average gross wage as well as for 133 percent of an average gross wage – this is considerably above the EU15 average (52.5 percent and 56.8 percent, respectively). For 67 percent of an average gross wage the marginal tax wedge in Austria is 6.7 percentage points above the EU15 average. However, for 167 percent of an average wage it is (due to the upper limit for the social security contributions) below the EU15 average by 12.8 percentage points: Here the marginal tax wedge reaches 42.2 percent and is thus almost 20 percentage points lower compared to an average gross wage.

For all incomes considered here, the average total tax wedge is remarkably above EU15 average, and particularly so, again, for lower and medium incomes (see Table 19).

Table 19: Microeconomic average total tax wedge (income tax, employers´ and employees' social security contributions) for different labour income levels, Austria and EU15

	Total average tax wedge on labour cost 2013 In % of average wage							
	67%	100%	133%	167%	67%	100%	133%	167%
	Total tax wedge (taxes and employee and employer social security contributions) in % of labour cost[1])				Difference 2000/2013 in percentage points			
Belgium	50,1	55,8	59,1	60,9	– 1,2	– 1,3	– 1,4	– 1,7
Denmark	37,1	38,6	41,3	44,3	– 3,7	– 5,5	– 7,1	– 7,1
Germany	45,1	49,3	50,8	51,2	– 2,4	– 3,5	– 4,8	– 5,0
Greece	36,9	41,6	45,9	49,2	+ 2,6	+ 6,4	+ 8,5	+ 10,0
Spain	37,2	40,7	42,9	44,3	+ 2,4	+ 2,0	+ 2,1	+ 3,2
France	45,6	48,9	52,7	54,1	– 1,8	– 0,6	+ 2,1	+ 2,4
Ireland	21,0	26,6	33,9	38,5	– 6,3	– 8,6	– 6,0	– 2,1
Italy	44,7	47,8	51,1	53,2	+ 1,3	+ 0,8	+ 1,8	+ 2,2
Luxembourg	29,9	37,0	41,5	44,3	– 1,6	– 0,5	– 0,9	– 1,3
Netherlands	32,1	36,9	39,7	41,9	– 9,8	– 2,7	– 4,0	– 2,9
Austria	44,5	49,1	52,0	51,9	+ 1,3	+ 1,8	+ 1,8	+ 1,5
Portugal	34,7	41,1	44,3	47,4	+ 1,6	+ 3,8	+ 4,3	+ 5,1
Finland	37,6	43,1	46,7	48,9	– 5,4	– 4,7	– 4,3	– 4,5
Sweden	40,8	42,9	47,0	50,6	– 7,8	– 7,2	– 6,5	– 5,1
United Kingdom	26,9	31,5	34,8	37,7	– 2,2	– 1,1	+ 1,8	+ 1,9
EU 15	37,6	42,1	45,6	47,9	– 2,2	– 1,4	– 0,8	– 0,2

Source: *OECD*, 2014b. - [1]) Gross wages plus employers' social security contributions.

For an average gross wage, wage tax, social security contributions and other non-wage labour costs make up for almost half of total labour costs (49.1 percent). For 133 percent and 167 percent of an average gross wage, the average total tax wedge amounts to about 52 percent, for 67 percent of an average gross wage to 44.5 percent.

To summarise, from a growth and employment perspective, the Austrian tax system in its current design relies too heavily on labour-related taxes, particularly for lower and average labour incomes. At the same time there is some scope to increase taxes which are less detrimental for growth and employment. Specifically, certain property-related taxes (real estate tax, inheritance and gift tax) and environmental taxes (mineral oil tax, energy taxes, carbon tax) could be increased or newly introduced, along to the elimination of (ecologically counterproductive) tax exemptions in income tax and value added tax to shift the tax burden away from labour taxes with a focus on lower and medium incomes. Such a revenue-neutral reform of the tax structure would increase the overall growth- and employment-friendliness of the Austrian tax system, without endangering the medium-term budgetary path aiming at reducing budget deficits and debt (and thus without compromising CSR 1).

Key policy options

Within the group of environmental taxes, there are various "candidates" which could be increased or newly introduced to intensify the "greening" of the Austrian tax system without

endangering international competitiveness too much. One option is to raise the mineral oil tax for diesel to align it to the one applied to petrol. Another possibility would be to increase the electricity tax rate and to introduce a carbon tax (a fiscal consolidation measure implemented by several EU Member States in the last few years; see *European Commission*, 2013B). The existing tax rebates for energy-intensive firms would prevent a significant deterioration of international competitiveness. In addition, existing environmentally harmful tax exemptions should be decreased further: in particular, there is the need of a more environmentally-friendly re-design of the tax exemption for commuters (Pendlerpauschale) as well as for the limitation and "greening" of the tax relieves for company cars, which is rather generous individually and incurs significant budgetary costs.

To strengthen property taxation, in particular two measures offer themselves in Austria[47]). The first option is the increase of the real estate tax by basing the tax base more on real property values (market values) instead of the currently used outdated unit values, which capture only a (decreasing) fraction of market values. The resulting increase in real estate revenues for municipalities would create scope for the federal government to reduce personal income tax, as the municipalities' share in income tax revenues could be decreased accordingly. The second option is the re-introduction of a reformed inheritance and gift tax, which in its original design must not be applied in Austria any more since August 2008, because it was ruled unconstitutional by the Constitutional Court due to the undervaluation of real estate compared to other assets.

Measures in the NRP – correspondence with key policy options and bottlenecks

On October 15, 2014, the Austrian Ministry of Finance delivered the Austrian Draft Budgetary Plan 2015 to the European Commission and the Eurogroup, as required as one element of the European Semester by all Eurogroup Members. In this budgetary forecast, measures decided or entered into effect after April 29, 2014 (submission of the Stability Programme 2013-2018) and April 8, 2014 (submission of the National Reform Programme 2014), respectively, are specified for most country-specific recommendations issued in July 2014[48]). With regard to the country-specific recommendation to reduce the tax wedge on labour for low-income earners no concrete measures are mentioned, as no additional measures were decided after April 2014. However, the Draft Budgetary Plan mentions the appointment of a Commission for Tax Reform whose mandate it is, inter alia, to specify measures to decrease the high tax burden for lower incomes.

The Austrian National Reform Programme issued in April 2014 answers to the country-specific recommendations for Austria issued by the European Commission in 2013. Point 3a of these recommended with regard to taxation to "Reduce the effective tax and social security

[47]) For more details, see *Aiginger et al.* (2010).

[48]) See Table 19 in the Annex to the Draft Budgetary Plan 2015.

burden on labour for low-income earners in a budget-neutral way by relying more on other sources of taxation less detrimental to growth, such as recurrent property taxes."

Thus, the CSR 2013 is rather similar to the CSR 2014, with one exception: The latter does not explicitly mention the potential of a revenue-neutral tax reform by shifting labour taxes towards recurrent taxes on property, the additional proceeds of which could be used to compensate for revenue losses from cutting labour taxes for low-income earners. The CSR 2012 ("Take steps to reduce the effective tax and social security burden on labour especially for low income earners with a view to increasing employment rates for older persons and women given the need to counteract the impact of demographic change on the working population. Shift the tax burden in a budgetary neutral way, towards real estate taxes, and environmental taxes.") had even suggested to increase environmental taxes as an alternative tax source when addressing the tax structure. Considering the existing imbalances in the Austrian tax system, the wider scope of the CSR 2012, which considers also environmental taxes, in any case seems appropriate. On the other hand, the CSR 2014 specifies – by using the term "tax wedge" – the required scope of a labour tax reduction; as the tax wedge explicitly does not only comprise labour taxes and employees' social security contributions, but also employees' non-wage labour costs. This specification is appropriate in face of the high labour tax burden for employees and employers. Table 20 contains the measures related to this recommendation according to the Austrian National Reform Programme 2014.

Table 20: Taxation-related measures taken according to the National Reform Programme 2014

Number and short title of the measure	main policy objectives and relevance for CSR	description of the measure
Measure 1: Reduction of non-wage labour costs	Reduction of non-wage labour costs	In order to reduce non-wage labour costs the Parliament voted in a cut the employers' contribution to the accident insurance by 0.1% to 1.3% as of July 2014. The employers' contribution to the IEF (Insolvenzentgeltsfonds; Insolvency Remuneration Fund) was lowered as well from 0.55% to 0.45% as of January 2015.

Source: *Austrian Federal Chancellery* (2014), annex 1: table 1: Reporting table for the assessment of CSRs and key macrostructural reforms.

Additionally, the National Reform Programme 2014 lists two tax-related groups of measures taken in the last few years to support the implementation of the Flagship Initiative Resource Efficiency: Firstly, measures to reduce environmentally harmful subsidies (abolition of reimbursement of energy taxes to companies in the services sector; phasing-out of the reimbursement of the mineral oil tax on so-called "Agro-Diesel" used in agriculture and forestry and of the tax exemption of local public transport from the tax on liquid gas; reimbursement of the mineral oil tax on diesel fuel used by trains of the Austrian Federal Railways; and reduction of the tax bonus for cars given as a payment in kind to employees - *Dienstwagenbesteuerung*). And secondly measures to adjust taxes with environmental

impact (new tariff of car registration tax – *Normverbrauchsabgabe* – with higher taxes on purchases of cars and motorcycles with high CO_2 emissions; raise of the tax on the holding of cars and motorcycles – *motorbezogene Versicherungssteuer*: higher tax burden on the holding of cars with higher engine power (kW)).

It appears of limited use to exclusively assess the measures included in the National Reform Programme 2014 and the Draft Budgetary Plan 2015 without putting them into the context of the overall tax policy measures implemented by the Austrian government within the last few years[49]).

As one significant element of the two stimulus packages (also in quantitative terms) which were implemented to cushion the recession following the outbreak of the financial market crisis in 2008, Austria enacted a tax reform mainly aiming at cutting personal income taxes at all income levels and at introducing tax reliefs for families. Specifically with regard to low-income earners, this tax reform included the reduction of the tax rate for the lowest income bracket from effectively 33.7 percent to 32.1 percent[50]) and the raise of the tax-free personal allowance from 10,000 € to 11,000 € yearly taxable income. This measure, taking effect in 2009, accompanied the reduction of the unemployment insurance contribution for employees by 3 percentage points for low-income earners from 3 percent to 0 percent as of 2009. In 2008, employees' as well as employers' unemployment contribution rates for elder employees were abolished. Finally, as of 2013, the commuter allowance (*Pendlerpauschale*) was increased for all income groups and a commuter subsidy (*Pendlereuro*) was introduced; particularly easing the tax burden for low-income earners.

The tax increases within the three fiscal consolidation packages introduced since 2011 contain a few measures (albeit rather small ones with respect to their budgetary impact) which increase the tax burden on labour: Notably the solidarity contribution for very high-income earners[51]) and the marked increase of the upper limit for social security contributions (beyond regular inflation adjustment). These measures, however, burden high-income earners only, whose tax responsiveness accordingly to the vast majority of empirical studies is rather limited.

As part of the three fiscal consolidation packages, also various environmental taxes were increased from 2011 on. The mineral oil tax and the car registration tax were increased and a flight tax was introduced (however, the latter was reduced as of 2013). Moreover, as already mentioned above, several environmentally harmful tax exemptions were abolished (tax exemption for liquefied petroleum gas in local passenger transport, fuel tax rebate on diesel used in rail transport and in the agricultural sector, tax rebate for energy-intensive firms other

[49]) For details see Schratzenstaller (2009; 2011; 2012a; 2014).

[50]) This effective basic income tax rate includes the tax relief for the 13th and 14th bonus payments; the nominal basic income tax rate amounts to 36.5 percent.

[51]) The reduced rate for the 13th and 14th bonus payments is not granted for very high incomes; this measure which originally was introduced as temporary for the period from 2013 to 2016 will be extended for an indefinite period according to the most recent consolidation package, which will enter into force on March 1, 2014).

than in the manufacturing sector). As of March 2014, as part of the third fiscal consolidation package, the car registration tax and the motor-related insurance tax were increased (again), and more ecological elements were introduced, as already mentioned above.

Also the tobacco tax has been increased in several steps since 2011, and will be increased further in three steps between 2014 and 2016, as one element of the 2014 fiscal consolidation package. This latest fiscal consolidation package introduced as of March 2014 also includes the increase of additional "sin taxes", specifically the alcohol tax and the tax on sparkling wine. As mentioned above, together with the third fiscal consolidation package non-wage labour costs for employers were slightly reduced by cutting the contribution rates for the accident insurance and the Insolvency Remuneration Fund by 0.1 percentage points each; whereby the budgetary impact of these two measures at about € 200 million p.a. is rather limited.

None of the altogether three fiscal consolidation packages included the increase or re-introduction of property taxes in a narrow sense. However, existing loopholes were closed in the taxation of capital gains from the sale of financial assets and real estate, by taxing these independent of the length of the holding period at a uniform tax rate of 25 percent, analogous to all other capital incomes.

Overall, the latest tax reform 2009/10 as well as the tax measures already taken and still planned within the three fiscal consolidation packages eased the high tax burden on low-income earners slightly, contributed somewhat to the "greening" of the tax system, raised the tax burden on harmful consumption of alcohol and tobacco, as well as the tax taxation of property incomes by closing various loopholes. The taxation of property remained unchanged. However, the tax changes of the last few years were not embedded into a systematic approach to re-design and re-structure the Austrian tax system in a more growth-friendly way. The tax increases implemented since 2011 were not part of a methodical approach to systematically change the structure of the Austrian tax system, but were primarily motivated by the existing – and increasing – fiscal consolidation needs, which is reflected in the continuous increase of the tax- ratio.

While it has to be acknowledged that the tax measures implemented with the various fiscal consolidation packages were mainly designed in a rather growth- and employment-friendly way, it also has to be stated that a fundamental structural reform – including a substantial decrease of labour taxes particularly for low- and medium-income earners – is still on the agenda. Considering the current lack of fiscal scope to substantially reduce labour taxes without compensating for the resulting revenue loss, the tax system should be subject to a fundamental budget-neutral structural reform, as sketched above, to be consistent with CSR 1. Such a revenue-neutral structural reform of the overall tax system could and should be implemented at the earliest possible time. The time frame as envisaged in the coalition agreement of December 2013 and confirmed by the coalition parties in summer 2014 – namely to enact a tax reform in 2016 only – does not appear as sufficiently ambitious, and if implemented in a budget-neutral way, labour tax cuts for lower incomes could be realised

before reaching an almost balanced budget in structural terms, as planned for 2016. Moreover, the scope of the envisaged tax reform appears too narrow: according to the coalition agreement it appears to be limited to a substantial cut of the income tax rate for the lowest tax rate and additional tax exemptions for families, but makes no mention at all of the obvious need to reduce social security contributions if labour taxes are to be lowered for low-income earners, considering the fact that more than almost 30 percent of dependently employed do not pay any personal income taxes as their taxable incomes are below the tax-free personal allowance. Moreover, neither environmental nor property taxes are addressed as possible sources to finance revenue losses from reducing personal income taxation and social security contributions in the coalition agreement and to thus make the overall tax system more growth- and employment-friendly and ecologically effective at the same time. The report of the Commission for Tax Reform submitted in December 2014 is based on a similarly narrow perspective with respect to those proposals the experts delegated by both coalition partners agree on: namely the reduction of the basic income tax rate from currently 36.5 percent to 25 percent and the review of tax exemptions within personal income tax (with a view to cutting them back), including the "greening" of the commuters' tax exemptions and company car taxation. Beyond this, the report does not make any mention of environmental taxes or the real estate tax. On other proposals, which could contribute to a structural tax reform making the Austrian tax system more employment- and growth-friendly, the experts delegated from the two coalition partners could not agree: namely reduce non-wage labour costs for employers and social security contributions for employees, increase the negative income tax for low wage earners, or re-introduce the inheritance and gift tax.

To sum up, the tax measures taken up to now (decrease of the personal income tax burden for low income earners, increase of certain environmental and other "sin taxes" and of taxes on capital income, closing of loopholes) are not sufficient to implement the CSR. There still is the urgent need to lower personal income tax further and to also reduce social security contributions for lower incomes as well as non-wage labour costs for firms, and to increase certain environmental taxes as well as certain property-related taxes (real estate tax, inheritance and gift tax) to compensate for the resulting losses in tax revenues and to make further steps towards a long-term shift of the tax structure necessary to cope with long-term challenges as making the tax system more growth- and employment friendly and transparent, contributing to environmental goals and to limiting the increase in income and wealth inequality.

3.2.2 Labour market participation of women and people with a migrant background

"Reinforce measures to improve labour market prospects of people with a migrant background, women and older workers. This includes further improving childcare and long-term care services and the recognition of migrants' qualifications."

Background: is the CSR appropriate?

This CSR addresses crucial issues, as especially female full-time employment is still low in Austria. At the same time the high level of segmentation on the labour market as well as within the education system are core factors that drive the large gender pay gap in Austria. Since care activities are still largely provided by women, improving the quality and quantity of care infrastructure is of high importance in fostering female labour market participation.

Foreign born are also disadvantaged in the Austrian labour market. Easing the recognition of foreign qualifications certainly addresses this issue but is not sufficient in order to overcome the disadvantages of foreign born which reveal themselves e.g. by lower educational attainment rates or higher shares of persons with migration background working in jobs for which they are formally over-qualified (Vogtenhuber, 2011; Stadler and Wiedenhofer-Galik, 2011). Witting or unwitting discrimination of persons with migration background should not be underestimated as well as the degree of labour market segmentation that negatively affect employment prospects and may lead to persons with migration background being employed below their qualification levels more often (Biffl – Pferrer – Skrivanek, 2012). Addressing educational outcomes of foreign born (as well as second and third generation migrants) from an early stage on is extremely important in order to improve their labour market outcomes.

Low labour market participation rates and the large share of people entering the pension system via unemployment, sickness or other forms of "out of labour force" implies that improving workers' employability is crucial in Austria.

This CSR is therefore of high relevance in Austria and coincides to a large extent with parts of the EU 2020 target of increasing the employment of those aged 20 to 64 (see section 2.3).

Key policy options

Key policy options to increase labour market participation of women concern the compatibility of family and work (quantity and quality of care infrastructure; opening hours) since important constraints that hinder (full-time) employment participation of women are associated with unpaid care activities. Especially the unequal distribution of unpaid care activities between men and women implies lower (full-time) employment rates among women. At the same time the strong labour market and occupational segmentation as well as the large gender pay gaps are of particular concern. Increasing the share of females in non-traditional occupations and fostering male participation in care-activities are two important policy options in fostering female employment and earnings (see section 2.3.2).

Fostering the use of the labour market potential of people with migrant background requires measures that reduce educational and occupational disadvantages. Removing barriers that hinder people with migrant background from making full use of their qualifications by easing their recognition can improve labour market outcomes. At the same time educational disadvantages and language abilities must be addressed from early childhood on.

Employment prospects for older workers depend on individual retirement incentives, but also on workplace conditions and the willingness of employers to invest in their workers' health and safety as well as employing older workers. Older workers employability is therefore not solely a worker related topic but requires a wide range of measures in order to increase older workers employment rates.

Correspondence of measures in NRP with key policy options and CSR

- Labour market participation among women by further improving child care and long-term care services

The National Reform Programme lists several measures that aim at fostering female labour market participation mainly by improving the infrastructure of care activities, the reduction of gender specific labour market segmentation as well as direct measures to support female employment (see section 2.3). By the continuation of the "National Action Plan Gender Equality" females labour market position shall be further improved e.g. via further extension of child care facilities for children under 3 years and by installing a nationwide quality framework for child care facilities.

The current government programme addresses female employment, mainly by extending child care facilities, social services and improving support programmes for women after maternity leave. Some improvements are intended concerning child care activities by increasing the flexibility of child care benefits and further extension of childcare places, but the incentives for men to go on parental leave remain low.

Measures should also aim at increasing incentive for a more equal split of parent part-time work. One important aspect concerning care-work is addressed in the programme by the introduction of a care-leave (Pflegekarenz) and a care-part-time scheme that helps concerned persons (mostly women) to take care of their relatives (for a maximum of three months) without completely withdrawing from the labour market.

- Labour market potential of people with a migrant background

The National Reform Programme lists several measures that aim at fostering labour market participation educational disadvantaged persons that are relevant also for persons with migration background. These measures aim at increasing educational attainment levels of youth (training guarantee, supra-company apprenticeship training, youth coaching). For persons with migrant background special measures aim at easing the recognition of foreign qualifications for better labour market integration/qualified employment or improving language skills. A programme for easier recognition of foreign education/occupation qualifications has already been introduced. Also the National Reform Programme aims at improving the transition of asylum seekers to legal (seasonal employment). In general the career entry of persons with migrant background shall be improved. For highly qualified the

motivation to stay in Austria shall be increased and the "welcoming culture" shall be improved ("sustainable integration").

The current government programme lists some additional measures in order to foster migrants' labour market integration, aiming e.g. at the reduction of NEETs by introducing a compulsory occupational and education coaching system. From 2016 onwards "compulsory schooling" (Schulpflicht) shall be extended to "compulsory education" (Ausbildungspflicht) in order to prevent youths from leaving the school system with no formal degree which should improve labour market prospects for concerned youths. In order to foster labour market prospects of educationally disadvantaged young persons (with migration background) the government plans to introduce a second cost-free year of kindergarten, which is generally appreciable. It is however important to extend the quantity and quality of childcare places at the same time, in order to avoid "crowding out" effects. Thus, extending free childcare from one to two years should not come at an expense of childcare places for younger children. Improving language skills in early childhood is definitively an important issue; however, they should not serve as an exclusion criterion from the schooling system ("German before schooling").

- Labour market potential of older people

This part of the CSR corresponds to a large extent to the national employment target. The National Reform Program lists several measures that aim at increasing employment rates of older workers (see section 2.3).

The current government programme also lists several measures that aim at increasing effective retirement age and sets itself ambitious targets: by 2018, the average retirement age of males and females should increase from 58.4 (2012) to 60.1 years. In order to achieve this goal the government plans to:

  - Consistently implement the doctrine of prevention, rehabilitation and labour market integration of older people
  - Increase incentives to remain in the labour market longer than the minimum pensionable age (by introduction a partial pension (Teilpension) and increasing the "postponing bonus" (Aufschubbonus) from 4,2 to 5,1%)
  - Intensifying the efforts to permanently reintegrate older, unemployed persons (e.g. via a "hiring bonus" for firms employing older unemployed persons)
  - Extending and stabilising employment of older workers (e.g. by introducing a bonus-malus system)
    Permanently monitoring measures to increase retirement age

Recent changes in the pension system (IP-NEW, Hacklerregelung and Corridor-Pension), should increase labour force/employment rates of older people and lead to an increase in the average retirement age. On the positive side, further steps to increase incentive for prolonging working life are intended (e.g. increasing "postponing bonus") but it must be

noted, that these measures suffer from an insider-outsider problem, as such measures only affect those in employment. Thus, for those who enter the pension system from e.g. unemployment these measures will have no effect other than prolonging their unemployment periods. In how far employer side incentive measures will affect firms' behaviour will depend to a large extent on the size of costs and benefits involved.

Overall the NRP takes some important steps in order to foster female labour market participation but more incentives for male child-care participation would be appreciable. Labour market segmentation and the large gender pay gaps remain core issues that need further improvement. Programmes that directly address persons with migration backgrounds appear not to have a great direct impact on employment rates. Simplifying the recognition of foreign qualifications is important for reducing labour market disadvantages but do not remove e.g. differences in educational participation (inheritance of education; early school tracking). These issues must be addressed more. Different measures address older workers employability, although more emphasis should be given on employer side incentives to (re)employ older workers as well as investing in workplace design and health care prevention. While some measures (such as investing in active labour market programmes addressed to elders) are likely to have positive employment effects, it remains to be seen how the introduction of e.g. a bonus malus system will affect firms' employment policies and therefore older persons' employment prospects.

3.2.3 Primary and secondary education

„*Improve educational outcomes in particular for disadvantaged young people including those with a migrant background, by enhancing early childhood education and reducing the negative effects of early tracking.*"

Background: is the CSR appropriate?

Although Austria has already reached the EU-2020 target concerning early school leavers a closer look reveals that especially students with migration background show much higher drop-out rates than other students. Fostering participation of children from disadvantaged backgrounds in pre-primary education and care is very important here. Language learning must be boosted from early ages on in order to help diverse student populations to successfully start school career and remain in the schooling system successfully and improve educational outcomes and to reduce the achievement gap. Thus, the CSR 2014/15 addresses a very important issue of social integration that should be taken seriously.

Key policy options

As regards early school leaving, socio-economic background has a strong influence on achievement in the Austrian education system, and pupils from a disadvantaged or immigrant background face a much higher risk of dropping out or having poorer literacy or

numeracy skills than their peers. A particular challenge is to unlock the potential of the young with a migrant background, since achievement gaps compared to native peers are amongst the highest in the EU. Key policy options are improving the overall quality and equity of the education system – from pre-primary education up to the lower secondary system, giving specific advice and coaching to vulnerable students and lower achieving students and making sure pupils get a second chance. Examples of school-level factors that improve the learning process are class size, learning time at school, instruction time, the curriculum or share of instruction in the curriculum by subject, etc. (see e.g. OECD, 2015).

Correspondence of measures in NRP with key policy options and CSR

The CSR 2014/15 is related to improve educational outcomes in particular for disadvantaged young people including those with a migrant background, by enhancing early childhood education and reducing the negative effects of early tracking. This corresponds with the national target to reduce the number of early school leavers.

The NRP 2014 also addresses measures to support transition from pre-primary education and primary education, to support language learning and to reduce the achievement gap and school drop-outs. No specific measure is mentioned which aims at reducing the negative effects of early tracking. This is very regrettable since the negative effects of early tracking are well established and therefore should be one key aspect of a well designed education policy.

3.2.4 Higher education

"Further improve strategic planning in higher education and enhance measures to reduce dropouts."

Background: is the CSR appropriate?

Most of this has already been discussed in section 2.2.2. In principle, improving the Austrian higher education sector can certainly be seen as a problem to be tackled in priority by the Austrian authorities. Both issues of quantity and quality, regarding teaching and research, hold Austria back relative to its potential and relative to some of Austria's peers such as Sweden or Switzerland. However, it is not entirely clear to which underlying economic problem the CSR refers, as the strategic planning exercise for the higher education sector is a multi-faceted process. One problem is certainly drop-outs and high student-teacher ratios, which the higher education planning exercise is addressing through the implementation of capacity-based university funding based on actual student enrolment. If the CSR refers to this, it is certainly appropriate. However, the strategic planning exercise also includes elements which may not be of high priority and which may not contribute to improving higher education in Austria, such as the strategic coordination of research and teaching portfolios which may diminish competitive incentives for increasing quality. There is thus a clear need for the European institutions to clarify their CSR as regards the strategic planning.

Key policy options

Key policy options have been discussed in terms of increased funding and reducing drop-outs from university. Giving universities basically the same rights as the Austrian universities of applied sciences (Fachhochschulen), i.e. the right to select students and to select only as many as are compatible with high teaching quality, while overall increasing the number of graduates, would certainly be a major step forward. This is currently being discussed at a political level between coalition partners. Once universities can select a limited number of students, relations between universities and students could fundamentally change, allowing for more tailored and targeted coaching of students so as to avoid drop outs. Moreover, students from socially disadvantaged backgrounds could be specifically targeted in such a system, explicitly addressing concerns in Austria that such a system would lead to fewer students from poorer backgrounds. Note that the current system of open access in most study fields has however not led to a marked increase of poorer students, mostly because the Austrian school system performs a selection at the age of 10 into a vocational and an academic track. However, open access also does not allow for specific targeting of potential students (akin to "affirmative action").

Measures in the NRP – correspondence with key policy options and bottlenecks

As already discussed, a new funding model is implemented at the moment which would address key policy options. The funding model will be implemented over several years and it remains to be seen whether it leads to a fundamental change in the number of drop outs and to an increased share of tertiary graduates. Moreover, current funding plans for higher education, again as discussed in section 2.2.2, make it unlikely that student-teacher ratios will be substantially lower, while at the same time internationally competitive research is also a goal of universities. Only slightly increasing funding (615 million Euros for universities over the period 2016-2018) will make it difficult to achieve major changes, including approaching the 2% goal for expenditure on higher education. Smaller changes adopted include a revised allocation of funding for universities, which now rewards the number of students making palpable progress in their studies (rather than just being inscribed without following courses). All in all, this CSR is currently partially addressed.

3.3 Competition and Regulation

3.3.1 Background – Is the CSR appropriate?

Competition and regulation are covered by the European Commission in the country specific recommendation (CSR) 4 by suggesting to "*remove excessive barriers for services providers, including as regards legal form and shareholding requirements and with respect to setting up interdisciplinary services companies. Review whether restrictions on entry into and conduct in regulated professions are proportionate and justified by general interest. Identify the reasons*

behind the low value of public contracts open to procurement under EU legislation. Substantially strengthen the resources of the Federal Competition Authority."

According to the Council Recommendation Austria is one of the Member States that would see most benefit (in GDP) from reduced barriers to cross-border service provision. However, there are still significant barriers to market entry and to effective competition. These barriers are especially pronounced in the business service sector.

Cost efficient and high quality services are vital for trade exposed manufacturing, especially in small open economies like Austria where the OECD-WTO Trade in Value-Added (TIVA) indicators confirm that service inputs account already for 50% of the gross value added of Austrian exports. Since professional services play an important role in the business service markets, accounting for 10 % of GDP and 11 % of total employment, adapting service sectors to a more competitive environment is an important prerequisite for economic success in the future of a globalized world economy. Despite some improvements restrictions on gaining access to and practicing professions in the services sector, e.g. as regards legal form and shareholding requirements, persist. There is a strong case for assessing just whether these restrictions are justified and if the same public interest objectives cannot be reached with lighter regulatory regimes. While past changes in competition law will strengthen the powers of the Austrian competition authority, its financial and human resources are still below the levels observed in economies of a similar or even smaller size.

The sheltered character of service sectors in Austria and its negative impacts on productivity is well documented (OECD 2007, 2009, 2013C). More recent analyses further emphasised the links between market structures and service productivity in neighbouring Germany (Coricelli – Wörgötter 2012) and the same indicators confirm that this type of gaps exist in Austria. Services are less exposed to international competition than manufacturing (with the exception of specific sectors such as tourism and financial services) and many service activities have long been regulated in competition unfriendly ways (OECD 2007, Janger – Schmidt-Dengler, 2010). Despite regular explicit recommendations to converge regulatory framework for services with pro-competitive international best practices (OECD, 2013), only limited concrete progress has been achieved in recent years. The adoption of a "Services Act" (Bundesgesetz über die Erbringung von Dienstleistungen, 2015)to implement the EU Services Directive in Austria five years after EU legislation has become effective, is a delayed but nevertheless still an important leap forward to a more competition friendly environment for the provision of services. Whether the intended outcomes will become manifested, has to be monitored.

3.3.2 Key policy options

The policy area competition and regulation is not among the core target areas of Europe 2020. Austria has, however, included this area in its NRP due to its longstanding weaknesses in this area. There are no quantitative targets and the overall goals are formulated very broadly. As explicit goals are not formulated, key policy options cannot easily be derived. Hence we

concentrate on the key challenges concerning competition and regulation as stated in the CSR 4.

Competition intensity is usually found to be comparably low in Austria, especially in sheltered services sectors, whereas the manufacturing sector faces tough international competition in many industries (see e.g. Janger – Schmidt-Dengler, 2010; Janger, 2008). The NRP 2014 concentrates mainly on a reformed competition law and a reformed federal competition authority and mentions initiatives for increasing transparency in the regulation of professional services.

By several consecutive amendments to the antitrust and competition legislation in the years 2002, 2005 and 2013, the structure and competences of Austria's competition institutions was approximated to European standards, however not without maintaining some specific Austrian peculiarities.

More than a decade of practical application of the "new" legislative framework have revealed considerable opportunities for optimization and continuing development of Austrian competition and regulation policy, which have let to the identification of the following key policy options for reform.

• **Policy option 1** − Continue to relax restrictive rules in regulated trades and liberal profession to allow for more competition by removing excessive barriers for service providers including inter alia legal form and shareholding requirements and restrictions with respect to setting up interdisciplinary services companies. As a first step a comprehensive review whether existing restrictions on entry and conduct in regulated trades and professions are justified by general interest is necessary. The participation in the transparency initiative according to the recently modernized Directive on professional qualifications (2005/36/EC; 2013/55/EC) as mentioned in the NRP 2014 is an important step in this respect.

• **Policy option 2** – Make more use of competitive tendering in public procurement by increasing the value of public contracts open for bidders from other EU member states. The value of calls for tenders published by Austrian authorities and entities under EU procurement legislation is well below the EU average thereby creating considerable additional costs for the Austrian public sector. Austria has not taken significant measures to address this issue.

• **Policy option 3** − Substantially strengthen the public resources dedicated to antitrust activities, foremost regarding the Federal Competition Authority (FCA) which is understaffed in comparison to its peer institutions in other EU member states, but also concerning the Competition Commission (CC) which should be repositioned as an (really) independent policy advisory panel following the example of the German monopoly commission.

3.3.3 Correspondence of measures in NRP with key policy options

Service sector

Fostering competition in the service sector is a long-running topic for Austrian competition policy. After the adoption of the "Services Act" (Bundesgesetz über die Erbringung von

Dienstleistungen, 2015) to implement the EU Services Directive of 2006 in Austria in 2011 only small steps toward more competition in the service sector have been realized in 2013 by amendments to the Trade Act ("Gewerbeordnung") (Cf. Janger et al., 2014, Section 3.5 for more details).

The consequence of this reluctance concerning deregulation in the service sector is the prevalence of significant regulatory barriers continuing to prevent companies and individual professionals from offering their services in Austria (European Commission, 2014c).

Legislation regulating specific professions limits the forms of company that can be set up and imposes shareholding requirements. At the same time, access to individual professions is subject to certain professional qualifications. The combination of these requirements, relating respectively to the legal form of companies, shareholding and professional qualifications, creates barriers to entering the market and offering professional services, which significantly limits competition. The assessment of the peer review on legal form, shareholding and tariff requirements under the Services Directive shows that Austria has the strictest legal form and shareholding requirements of all Member States for the professions assessed. Setting up interdisciplinary services companies remains very difficult in Austria – despite surveys showing demand for such services. Especially concerning the inter-professional cooperation between liberal and commercial professions there seems to be substantial scope for the elimination of regulations that protect established suppliers from competition thereby slowing down the positive development of consumer welfare, productivity, employment and economic growth (Böheim, 2011). The Austrian government has agreed in principle to allow such companies to be established (Bundeskanzleramt 2013, 9), but no concrete action has been taken to date.

In contrast to the hesitant reform efforts of the past the NRP 2014 mentions three important measures for a more competition oriented climate in the service sector. First, the Trade register is now under complete reconstruction (time target 2015) which will lead to much improved functioning and improved possibilities of electronic application and procedures. Second, outcome oriented impact assessments have been enacted for all Austrian laws. This assessment gives outcome information for laws, ordinances, other legal frameworks and major projects. This comprises a problem analysis, objectives and measures including indicators as well as an assessment of impacts on enterprises, citizens and in several other aspects including financial consequences. This assessment is also applied for all new trade law legislative acts thereby increasing the knowledge on the impact of regulations on employment and growth which is an important pillar for discussing regulatory reforms.

And finally third (and most important) Austria is participating in the transparency initiative according to the recently modernized Directive on professional qualifications (2005/36/EC; 2013/55/EC). This initiative covers all sectors concerning regulated professions (i.e. professions with qualification requirements). At present the "mapping" of the professions is taking place, which means that all regulated professions are being listed and described. On the basis of this exercise exact analyses of the justifications as well as mutual evaluations will take place. To date, no justification has been provided for this kind of regulatory measures, in terms of

public interest or consumer protection, and Austria has not provided evidence to show that legitimate public interest objectives could not be met with a less restrictive regulation (European Commission, 2014c). By providing a comprehensive database of regulations in professional services the intended mapping is designed to give policy makers a sound basis for regulatory reform in areas where an overregulation of qualifications exists in Austria.

Public procurement

Efficient and competitive public procurement is appraised as an intelligent method for the allocation of scarce resources under tight budgetary constraints. Throughout the Austrian public sector the obvious economic benefits resulting from competitive tendering have only been realised to a small extent compared to other EU member states. The value of calls for tenders published by Austrian authorities and entities under EU procurement legislation was 1.5 % of GDP and 6.6 % of total public expenditure on works, goods and services in 2012, well below the EU averages of 3.4 % and 17.7 % respectively (European Commission, 2014c). Cross-border publication of public tenders has consistently stayed among the lowest in the EU, a situation that cannot be explained by Austria's federal structure, as comparisons with other Member States show. This situation creates considerable costs for the Austrian public sector which could easily be avoided. So far Austria has not taken significant measures to address this issue.

Federal Competition Authority (FCA)

The amendment of the Cartel Act and the Competition Act ("Kartell- und Wettbewerbsrechts-Änderungsgesetz 2012"; Federal Law Gazette I No. 13/2103) brought several substantial enhancements concerning the powers of the federal competition authority by 1st January 2013 by implementing …

- … stronger rules on abuse of market power (collective dominance);
- … a comprehensive approach to the punishment of cartels by eliminating the exemption of punishment for small cartels with only adverse effects on competition on the regional and/or local level;
- … more effective enforcement tools for the FCA by adopting the European standard of leniency programs as well as allowing for self-contained measures in market investigations directly applied by the FCA without the need to embed the Cartel Court;
- the obligation to publish decision by the Cartel Court in order to foster transparency and consistency of case law

Furthermore the amendment to the Competition Act provides the legal groundwork for competition monitoring as an additional responsibility to be performed by the FCA. Legislators have, however, been sparing in prescribing any specific design leaving the operationally responsible FCA without any concrete default options concerning the design of the competition monitoring. Such leeway may be used in order to implement, by way of a uniform top-down approach in quantitative terms, competition monitoring as a pro-active ex

ante detection device which allows the FCA to identify markets which due to their restrictions on competition justify an in-depth investigation (Böheim et. al., 2006, Böheim, 2013).

Compared with these substantial improvements in the last year(s) the two measures mentioned in the NRP 2014 are comparably small, but nevertheless important. First, on the operational level the adaption of the statutory period of limitation ("Verjährungsfrist") is designed to avoid that competition law infringements become time-barred during investigatory measures of the FCA. Second, the obligation to publish detailed explanatory statements in adjudgements (not only, but also when there is a waiver to file an appeal to the cartel court) is an important and overdue commitment to increasing the transparency of antitrust proceedings thereby (hopefully) ending once and for all the "dark age" where settlements have been arranged by the FCA behind closed doors (Böheim, 2002).

All these measures further strengthen the powers and the effectiveness of the FCA. Despite the fact that the FCA has now twice as much staff in comparison to the year of its inception (2002), it remains substantially under-staffed in comparison to other competition authorities in the European Union. This severe shortage in human resources was further complicated by the transfer of some senior staff members to newly established Administrative Courts by the end of the year 2013 leaving the FCA with the challenge to fill vacant positions with qualified staff very quickly. Due to missing career perspectives and restrictive public salary schemes it is very difficult for the FCA to attract and keep senior staff with substantial experience in competition law and economics. Comparable institutions like the electricity regulator (E-Control) and the telecommunication and media regulator (RTR) as well as the financial market authority (FMA) have much more budgetary room for offering market-oriented compensation packages.

The recent reform of the Austrian cartel and competition law was another small but important step in the right direction, but much more steps have to follow to establish a truly credible and powerful competition policy regime. As long as the Federal Competition Authority is substantially understaffed (in both qualitative and quantitative terms) most of the above mentioned tasks will not be completed due to scarce resources. The current institutional setting looks good on paper but is at present still to a large extent a "Potemkin's village" (Böheim, 2002) where behind the surface there is (still) too little substance. If there is no willingness from the politically responsible persons to change this awkward situation at short notice – which implies in our opinion at least to double the budget (2013: approx. 2.9 Mio. €) of the FCA over five years allowing for competitive remuneration packages for senior staff – the new competition policy regime will lose its laurels faster than some would expect.

Overall assessment

A lack of competition due to "regulatory overkill" has resulted in a bottleneck in economic growth in Austria (Ederer – Janger, 2010). An intensification of competition and a reduction of overshooting regulations would substantially foster economic growth. Independent national measures to foster competition and deregulation to supplement EU-level requirements are necessary. The scope for an Austrian competition and regulatory policy that fosters

economic growth is comparably large and could be carried out with little impact on the fiscal budget (Böheim 2013b).

In 2013, Austria received a CSR on barriers to service providers, in particular relating to restrictions in regulated professions, competition in the railway sector, and the powers and resources of the Federal Competition Authority. Austria has made only limited progress in addressing this CSR so far (European Commission, 2014c).

Most of the implemented measures of the NRP 2014 are small but nevertheless important steps in the right direction of fostering competition on both the horizontal level as well as on the sectoral level of business related services. What was, however, lacking in the past, was a bold and comprehensive approach to systematically comb through the "jungle" of competition restrictive regulations for business – especially concerning "self-overregulation" in the liberal professions as well as prevailing anti-competitive restrictions in the trade act.

For policy makers it is necessary to be able to distinguish between necessary regulations to guarantee a certain quality and security level on the one hand and competition restrictions which just keep prices for services high and thus are just promoted by certain interest groups to enhance (or at least keep) their monopoly rents on the other hand. In this respect the single most important measure in the NRP 2014 is participation of Austria in the transparency initiative according to the recently modernized Directive on professional qualifications (2005/36/EC; 2013/55/EC) by delivering a comprehensive database of regulations in professional services on the basis of a detailed screening and mapping of regulated trades and professions.

With this "regulatory mapping" the foundations are laid for a comprehensive and rigorous evaluation whether existing restrictions on entry and conduct in regulated trades and profession are justified by general interest. Since (the intention of) such a comprehensive evaluation of competition restricting regulations is finally included in the NRP 2014 the signs seem to be as good as never before that the efforts of the Austrian government in improving the competitive environment in the service sector have finally been built on a sound pillar. The regulatory mapping has to provide policy makers with a comprehensive picture of restrictions to competition that are not in the public interest, but only in favour of particular groups. On the basis of this regulatory mapping bold and concrete steps towards regulatory reform could be developed already in next year's NRP.

Without the necessary comprehensive fact base about restrictive regulations in trades and business services concrete advice is hardly possible. Since the regulatory mapping is still "under construction" we here just point briefly to the most obvious restrictions that can be found in liberal profession where despite the small steps of deregulation there is still substantial scope for leveraging competition intensity to increase productivity, e.g. fore and foremost concerning notaries and pharmacies which remained rather untouched by competition enhancing deregulation so far (Böheim – Pichler, 2011).

Despite this undeniable progress concerning the development of competition law and its application to concrete cases by the competition authorities, human resources the FCA could still profit from a higher number of competent senior staff with substantial experience in competition law and economics to effectively handle its increasing workload. To master this challenge it will be certainly not sufficient to just take steps "*to modernize the organizational structures of the FCA*" as mentioned in the working program of the new federal government of Austria for the years 2013 to 2018. What is needed in this respect is the development of a comprehensive master plan for human resources for the FCA including competitive remuneration and career perspectives for staff members. Cost increases referring to this matter should be covered by the federal budget which had received cartel fines of approx. 123 Mio. € since 2002[52] –- making up the equivalent of more than 40 times the actual annual budget of the FCA. In terms of competition advocacy the dedication of cartel fines for the FCA – a small fraction would be sufficient for the improvement of salary structures – is a superior measure to the devotement for consumer organizations as mentioned in the recent governmental working program.

The Introduction of a reversal of the burden of proof in antitrust proceedings against energy suppliers is included as a declaration of intent in the working program of the new federal government of Austria for the years 2013 to 2018. This is a reasonable and important step towards a more effective antitrust regime for the energy sector taking the German legislation as an international best practice (Böheim, 2008).

Another absent measure is a pro-active competition strategy which also looks at competition from the consumer side, by examining determinants of switching rates between suppliers (such as price transparency, consumer information etc., cf. e.g. Böheim, 2013a, 2013b, Janger, 2010; Böheim et.al., 2006). A repositioned Competition Commission that serves as a politically and an institutionally independent expert panel following the example of the German monopoly commission could build the anchor and act as a credible promoter of this pro-active competition strategy.

Overall concerning competition and regulation the prevailing CSR is partially addressed by the Austrian NRP 2014 with important steps in the right direction concerning e.g. the mapping of regulated professions on the one hand as a necessary fact base for regulatory reform, but also with substantial gaps by ignoring the recommendations concerning the intensification of competition in the fields of public procurement and railways (Cf. CSR from 2013).

[52] http://www.bwb.gv.at/Documents/Geldbussen%20gesamt%20Stand_12_2014.pdf

4 Summary

4.1 Overview of all targets

This chapter provides an assessment of Austria's progress towards all key targets based on statistical trends only, without taking into account the measures of the NRP. Section 4.1 summarises the target values and normalises current values according to their distance to the target value. As outlined in the individual discussions of the targets, early school leavers and the share of tertiary graduates (including ISCED 4a, upper secondary, 5-year vocational schools) have already reached their target. Employment, poverty, greenhouse gases and renewable energies are on track to meet their targets judged by long-term trends; if current (last year-) negative economic trends continue, the employment and poverty target would not be reached. The R&D target is furthest away from its target value and unlikely to meet it, either. This is due to private funding of R&D lagging behind target, whereas public funding is on track. For energy efficiency (final energy consumption), long-term growth trends are not favourable. Should economic growth also pick up again, energy efficiency is unlikely to reach its target. Energy efficiency relates to an indicative target; it is also different to the others, in that it should stay at the same level rather than increase. Of course, these target projections may change due to severe economic crisis, in particular as regards poverty and employment.

Table 21: Overview of all targets: actual values relative to target and target forecasts based on past growth trends

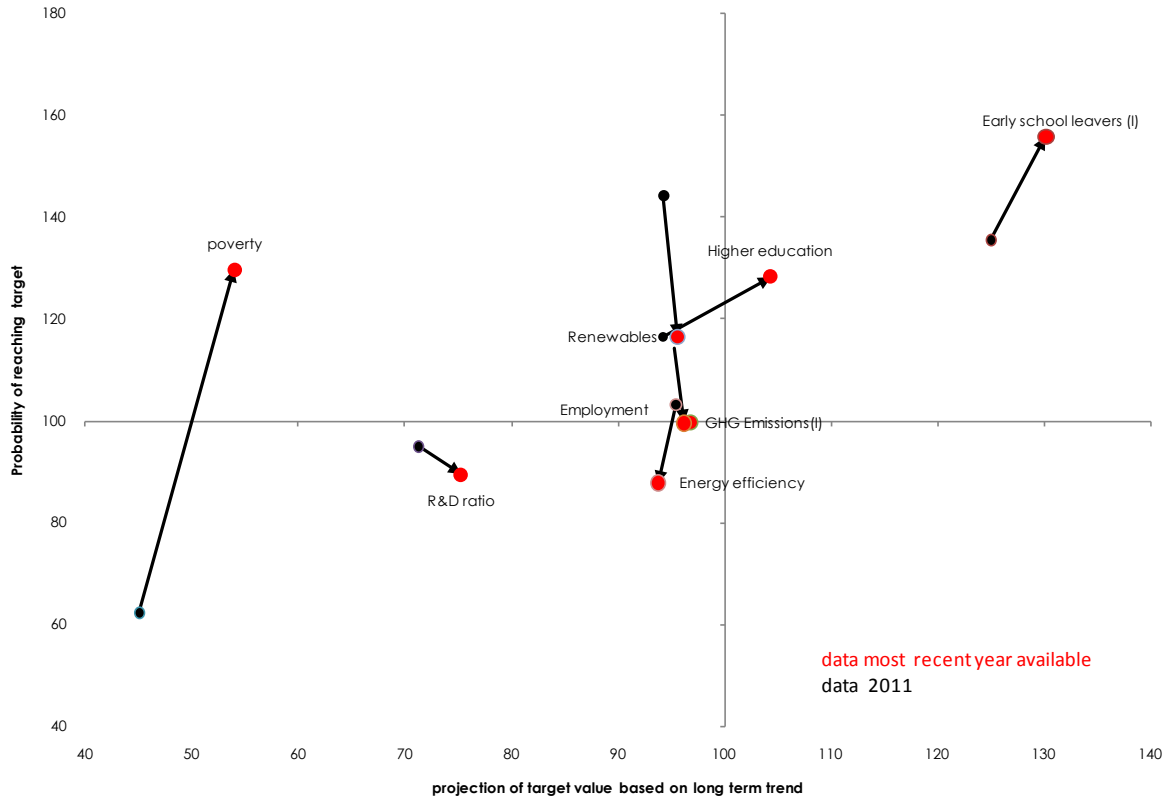
Indicator	Target	actual	Actual values relative to target (target value = 100)	Target projection 2020 (based on last year's growth)	Target projection 2020 (based on growth rate 2000-2014*)	Target projection based on growth rate 2000-2014 vs. target (target = 100)
R&D ratio	3.76	2.83	75	2.93	3.23	86
Share of population aged 30-34 with tertiary education	38	39.60	104	50.48	47.48	125
Early school leavers	9.5	7.3	130	5.51	6.03	158
Employment rate (20-64)	77-78	75.5	97-98	74.70	79.34	102
Number of individuals living in poverty or at risk of poverty	-235 000	-127 000	93**	100000	-304800	130
GHG emissions in Mio t CO2	47.9	49.8	96	46.00	42.90	112
Renewable Energy Share in %	34	33	96	36.07	35.20	104
Final energy consumption as total final consumption in PJ	1 050	1 117	94	1298.37	1121.90	94

Source: WIFO calculations. *Growth rates are based on 2000-2014 or according to data availability, see the discussion of the individual targets. ** The relationship between actual and target value is calculated using the stock of people at risk of poverty, not the changes in that stock (actual 1572000 people at risk of pverty vs. 1464000 target value).

Figure 24 provides a graphical illustration of the distance to target shown on the horizontal axis and of the probability of reaching the target shown on the vertical axis. Basically, all points to the left of 100 have not met their target yet (relationship between actual value and target value), while all points to the right have already met their target. All points above 100 show growth dynamics which will lead to reaching the target by 2020; all points below 100 show growth dynamics which do not lead to the target by 2020. The figure can be split in four parts, with bottom left one the worst in terms of performance: R&D and energy efficiency are

both below the target and do not show the necessary dynamics to reach the goal. The top left part shows areas where the target has not been met yet, but growth dynamics are favourable: renewable, greenhouse gases, poverty and employment. The bottom right part shows areas which are currently above target, but where growth dynamics are deteriorating, so that the indicator may be below target by 2020 (currently none). The top right part shows areas both above the target and improving further, such as higher education and early school leavers.

Figure 24: Overview of all targets: distance to target vs. probability of reaching target



Source: WIFO calculations. Horizontal axis: Distance to target (>100 = target met). Vertical axis: probability of reaching target (>100: reaching target is likely judging by past growth patterns).

The simple purpose of target paths is to provide a yardstick against which actual values can be compared. The analysis of target paths yields rather clear-cut results concerning areas where efforts should be intensified. However, it is important not to set economic and environmental strategies solely bearing in mind the Europe 2020 key targets. In particular, progress towards targets should not be the only gauge of Austria's economic performance. Rather, a broader perspective on the overall target of smart, inclusive and sustainable growth should be adopted. While focusing on a few important targets helps policy coordination and strategy formulation across the EU Member States, caveats should be outlined where

necessary, not least because target setting is always against a backdrop of uncertainty. If targets are not reached there needs to be a sober analysis of why this is the case, with the benefit of hindsight. This analysis may pinpoint factors that prevent targets from being reached even though they may be compatible – or not - with favourable growth perspectives.

4.2 Target conflicts and complementarities

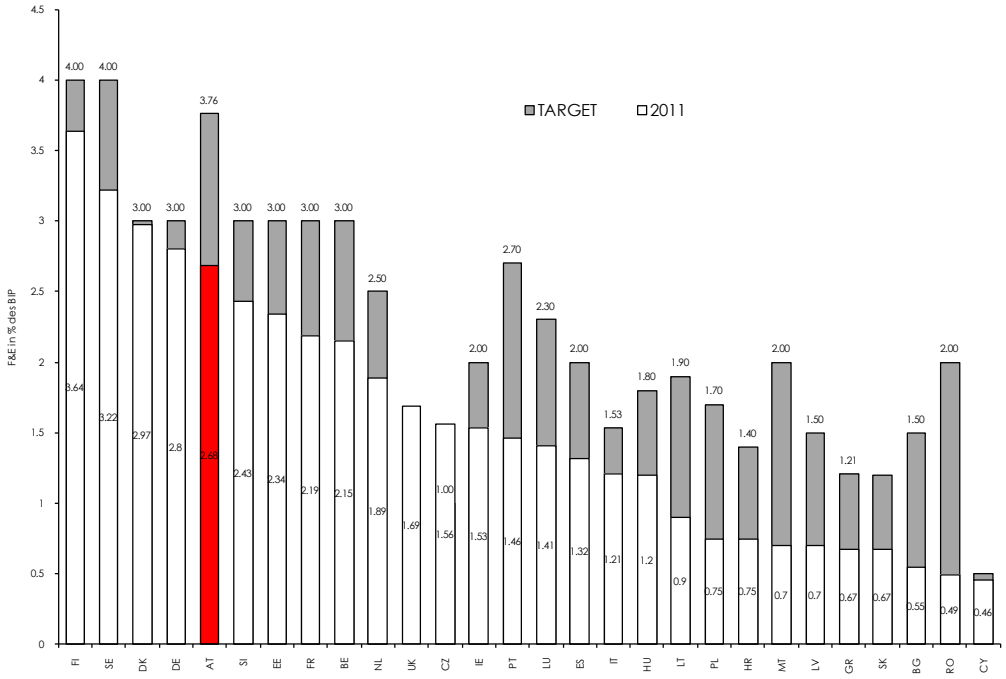
Targets are not independent from each other. There are or there may be target conflicts and complementarities, i.e. situations where progress on one target may be accompanied by a lack of progress on another target (conflict), or situations where progress on one target helps the progress of another (complementarity). Several examples are relevant here.

First, a clear example of complementarity is between R&D and higher education. It has already been shown that the R&D target is ambitious, not least because business sector expenditure dynamics are much weaker than required. On current trends, the R&D target is unlikely to be met. At the same time, the higher education target is likely to be met. Now this on its own should not lead to decreasing or stagnating public expenditure for higher education (research), and increasing public support of business R&D. Targets are not "tradable". The public financing of business R&D is already quite high, as shown above. There may also be structural reasons why Austria's business sector does not markedly increase its R&D intensity: it is specialised in industries featuring average R&D intensities (where average R&D intensities are sufficient for international competitiveness). R&D intensive industries have usually a much higher intensity of tertiary educated workers. Here the higher education target comes into play. Figure 25 and Figure 26 compare the R&D and higher education targets of the EU Member States. It is obvious that while in R&D, Austria aims at the top, in higher education – and that is including ISCED 4a, upper secondary vocational schools – Austria only aims at the European average.

Hence, prioritising the higher education target – and actually going further beyond that target – may actually indirectly contribute to also reaching the R&D target, by fostering structural change towards R&D intensive industries. Additional R&D expenditure would primarily come from business, not from the public sector, also contributing to reaching the R&D expenditure distribution goal.[53] This is just an example of course to show that targets should be examined for potential interdependencies and to caution against a narrow view of the targets guiding policy making.

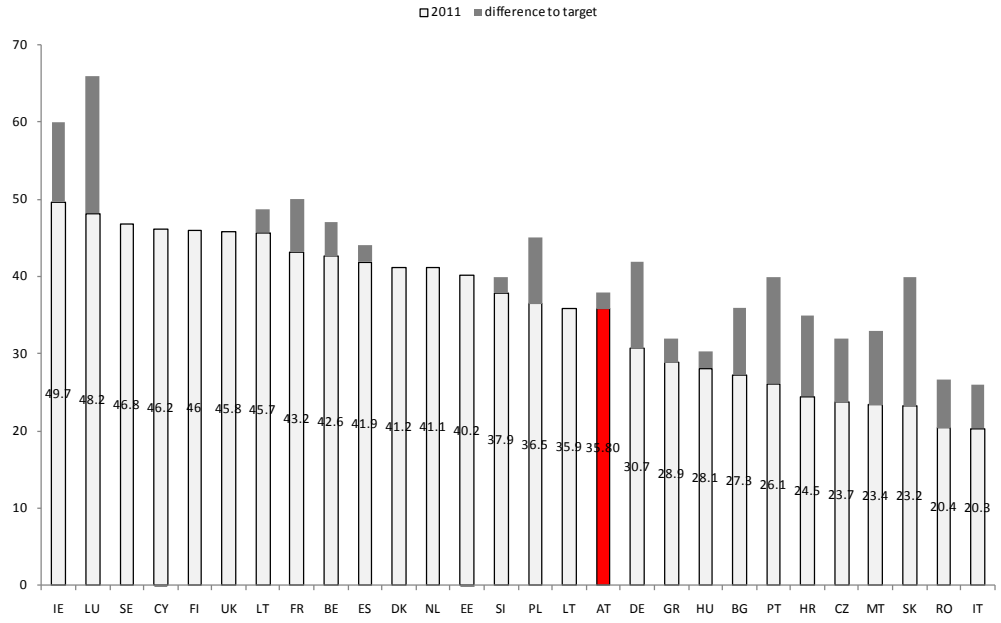
[53] "Provided effective technology transfer systems are put in place, academic research is probably the most effective source of new ideas, which in turn induce further research for the business sector." (Van Pottelsberghe De La Potterie, 2008, p. 7)

Figure 25: Europe 2020 R&D target and starting values 2011 in the EU



Source: Eurostat.

Figure 26: Europe 2020 higher education target and starting values 2011



Source: Eurostat. *Finland, Denmark, Netherlands, Lithuania, and Sweden are "above target" as they use narrower national target definitions (but their narrower actual values are not shown here).

Another example only very briefly mentioned here is the potential conflict between the economic performance goals, or goals which influence economic performance, such as R&D, employment and education, – and the environmental sustainability goals. A more successful R&D and employment performance will very likely go hand in hand with higher GDP growth, which could make reaching the environmental goals harder, as outlined above. In this case though, the policy direction is clear: environmental efforts have to be stepped up significantly to ensure the compatibility of economic and environmental performance. There can be complementarity between R&D and the environmental targets though if R&D is more strongly directed at finding solutions for the climate challenge. In fact several papers argue for stronger directed technical change in terms of specific research subsidies to combat climate change (see e.g. Acemoglu et al., 2009). Finally, education is very clearly complementary with R&D as illustrated above, but also of course with employment and poverty. The unemployment rate of people with low qualifications in Austria was about 18% in mid-2012, of people with tertiary qualification below 3%. Education may thus always be regarded as another policy package to foster R&D and employment and to reduce poverty, and not only as a target in its own right.

4.3 Summary assessment of targets and CSRs

In this section, we try to provide a summary assessment of i) the target areas, giving hints as to whether target areas are on or off track, based on both the target paths outlined above and the measures announced by the Government to reach the targets; and of ii) the CSRs. The summary assessments must be interpreted with caution, as they are not based on an in-depth evaluation of policies.

4.3.1 Progress towards Europe 2020 targets

Generally, with the exception of R&D, targets are on track; even though in several cases bottlenecks are not addressed, or not all key policy options are being used. This is however also related to the level of ambition in some areas. In higher education, the Austrian target including the ISCED 4a graduates is still below the European average, whereas in R&D, Austria aims at the top. In the case of private sector R&D expenditure, which is the main reason why the overall R&D target is not on track, a comprehensive set of measures has been announced in the form of a far reaching strategy. Even if all measures of the innovation strategy are implemented, it is still unlikely that the target will be met as structural change takes time and as the target was set very ambitiously.

This assessment is of course highly dependent on external circumstances such as a resolution of the euro area economic problems. Target forecasts are only meant to help make the impact of a continuation of current trends more tangible and hence inform policy makers as to where efforts might need stepping up. Yet again one must stress that measures should not be set with a narrow target focus in mind, but with a focus on the broader requirements of fostering smart, inclusive and sustainable growth.

Table 22: Summary of achievements in target areas

Target area	Bottlenecks/main subtargets	Bottlenecks/key policy options not addressed/measures lacking	Overall assessment of progress in target area: measures announced/implemented and past trends
R&D 3.76%; public sector share 30-33%	Structural change Sectoral upgrading Leverage effect of public policies	In principle, all bottlenecks addressed, implementation should now be the focus, in particular as regards leverage effect of public policies and academic research.	R&D target forecast based on past trends is approx. 3.2%. The innovation strategy is comprehensive, but even if everything is implemented, it is unlikely that the target will be met by 2020 due to the long time lag of policies; however, smart and sustainable growth will have been well addressed.
Education: 38% higher education graduates	Higher-education drop-outs Entry rate into tertiary education	Impact of formula-based unit cost model will depend on implementation; funding for 2016-2018 will make implementation difficult. Early streaming only partially addressed Broadening access measures e.g. for adults, low-income students	Target already reached; however, in education Austria aims only at the average EU level, while it given its economic situation it should aim at the top. Target forecast is 48.7%; but future trends may hinge on future spending increases, currently budgets beyond 2015 are increasing only slightly, making it difficult to implement capacity-driven funding models. Universities should be given the right to select their applicants.
Education: 9.5% early school leavers	Quality of education system Education and training guarantee (Compulsory) advice, coaching Support for migrants	Comprehensive national qualification strategy Systematically capture people that are at risk of dropping out of the education system and direct those people automatically to suitable advice and qualification programmes.	The target has currently already been reached, but given the past fluctuations this should not lead to complacency; also some countries reach even lower rates. Especially children with migrant or disadvantaged socio-economic background face much higher drop-out rates.
Employment: 77-78%	Employment of the elderly Employment of women Employment of young, low-qualified and migrants	Gender difference in statutory retirement ages Employer incentives older workers Quality of childcare (e.g. opening times) Labour taxation low income earners	Target forecast is 74.7-79.3%. Even though some potential measures addressing bottlenecks are currently not planned, employment is on track. However, employment is also closely associated with the business cycle; employment performance in 2013 was lacklustre, with unemployment rising.
Poverty: -235.000	Long-term unemployment Prevention of health risks Quality, availability, costs of care infrastructure Quality of education system (mobility) Labour taxation low income earners	access of BMS recipients to ALM measures Quality of childcare Specific measures for marginalised persons See above education and employment measures	Target forecast is around -304.800. There is now a balanced approach in place which combines an overall economic growth strategy (Europe 2020) with specific measures to address vulnerable groups. Within those specific measures, some are lacking, for others, their effectiveness remains to be assessed, such as e.g. the means-tested basic income. Addressing all key policy options in the coming NRPs and effectively implementing announced measures or increasing the effectiveness of existing ones should lead to a favourable outlook for reaching the target by 2020.

	See also bottlenecks education/employment		
Environment: Greenhouse gases -16% in non-ETS	Manufacturing industries (main instrument EU ETS ETS) Transport Energy generation Buildings Public R&D expenditure on clean energy	Policies that address price signals, i.e. carbon taxes, and thereby the demand side of energy use are lacking in most sectors or do not show strong enough incentives as in the transport sector. "Avoid" and "shift" in transport demand.	Greenhouse gases seem to be on track. Austria's GHG intensity levels are quite good and emission reductions were achieved in recent years, actual emissions from non-ETS sectors are currently below the target path. However, efforts will have to be intensified when economic growth increases.
Environment: Share of renewable energy 34%	Green Electricity Act		Target forecast is around 35%, well on track, provided that overall energy consumption does not rise too much.
Environment: Energy efficiency	See GHG	The problem of rebound in energy demand is not yet addressed and could as well be dealt with by carbon taxes.	Target for final energy demand requires intensified efforts. While Austrian energy intensity levels are quite good, the growth dynamics have not been favourable recently. The recently adopted energy efficiency act defines quantitative sectoral targets as well as eligible measures.

Based on Table 23, we suggest a set of outcome monitoring indicators for the Austrian EU 2020 strategy, including of course the key targets themselves but also performance indicators for the bottlenecks/main subsidiary targets. We suggest an additional number of indicators to facilitate policy analysis, i.e. to identify more quickly the key drivers behind the developments in the headline targets.

Table 23: Outcome monitoring indicators for the Austrian Europe 2020 strategy

Target area	**Outcome Indicator**
R&D	R&D as a % of GDP Share of public financing of R&D expenditure Share of knowledge-, research-intensive sectors (structural change) Share of high-quality exports in technology-oriented sectors (sectoral upgrading) Industry-adjusted R&D intensity of business sector (sectoral upgrading)
Education – Higher Education	Higher education graduates in pop. 30-34 Entry rate into higher education/Share of A-levels in pop. Drop-out rate (or rather success rate) in higher education S&E-graduates per 1.000 population
Education – Early school leavers	Early school leavers as a % of 18-24 year olds Share of pupils not reaching competence level 2 in PISA
Employment	Employment rate 20-64 Employment rate 55-64 Employment rate women Employment rate young, low-qualified, migrants
Poverty	Number of individuals in or at risk of poverty
Environment	GHG overall and by sector Share of renewable energies Energy efficiency Decoupling of GHG emissions from economic growth (GDP)

Source: WIFO calculations.

4.3.2 Progress towards CSRs

Next, we list the CSRs and assess whether they are appropriate and have been addressed by the measures proposed (Not addressed – Partially addressed – Fully addressed), based on the discussion in section 3.

Out of the four broad recommendations within the scope of this report, all are partially addressed. In CSR 2, the harmonisation of the statutory retirement age between men and women has not been brought forward; the statutory retirement age has not been linked to life expectancy. In CSR 3, there were no substantial measures shifting the tax burden from low income earners towards environmental taxes; in CSR 3, early streaming has only been partially addressed; other reforms to improve educational outcomes are under way (e.g. as regards standards), but their effectiveness must be evaluated once implemented. In CSR 4, some barriers to competition in specific sectors of the service sector as well as in liberal professions remain.

Table 24: Summary assessment of CSR

CSR	CSR appropriate?	Assessment	Key policy options lacking
3.1.1. Pensions Bring forward the harmonisation of pensionable age for men and women, increasing the effective retirement age by aligning retirement age or pension benefits to changes in life expectancy, implement and monitor the recent reforms restricting access to early retirement and further improve older workers' employability in order to raise the effective retirement age and the employment rate of older workers.	Partially appropriate	Partially addressed	• Harmonisation of pensionable age for men and women is not directly addressed • No measures aim at the inclusion of an automatic demographic factor into the calculation of pension allowance or pensionable age.
3.1.2. Health care Effectively implement the recent reforms of the health care system to make sure that the expected cost efficiency gains materialise.	Appropriate	Partially addressed	• Improve cross-stakeholder pooling of funds for better contracting governance and effective purchasing across care settings, • Address overcapacity and fragmentation also within social security.
3.1.3. Long-term care for the elderly Develop a financially sustainable model for the provision of long-term care and put a stronger focus on prevention, rehabilitation and independent living.	Partially Appropriate	Partially addressed	• The CSR does not address the labour market in the care sector: Key policy options to improve the labour market conditions of the care sector in order to increase labour supply refer to higher wages, improvements in training, measures to qualify more people to work in the care sector (including migrant workers, unemployed people, men) and measures to enable care service workers to move to higher qualified jobs by further training.
3.2.1. Employment Reduce the effective tax and social security burden on labour for low-income earners in a budget-neutral way by relying more on other sources of taxation less detrimental to growth, such as recurrent property taxes.	Appropriate	Partially addressed	• Reduce social security contributions for low-income earners • Increase recurrent property taxes by reforming tax base (currently undervaluation due to use of outdated unit values) • re-introduce growth- and employment-friendly inheritance and gift tax • abolish tax exemptions in personal income and value added tax to compensate for revenue losses from cutting personal income tax and social security contributions for low-income earners
3.2.2. Employment Take new measures to increase the labour market participation of women, namely by further improving child care and long-term care services and address the high gender pay and pension gaps. Fully use the labour market potential of people with a migrant background by continuing to improve the recognition of their qualifications and their education outcomes.	Appropriate	Partially addressed	• Some important steps in order to foster female labour market participation are taken but more incentives for male child-care participation would be appreciable. Labour market segmentation and the large gender pay gaps remain core issues that need further improvement. • Simplifying the recognition of foreign qualifications is important for reducing labour market disadvantages but do not remove e.g. difference in education

			participation (inheritance of education; early school tracking). These issues must be addressed more forcefully.
3.2.3. Education Improve educational outcomes, in particular of disadvantaged young people, including by enhancing early childhood education and reducing the negative effects of early tracking.	Appropriate	Partially addressed	• Expansion of full day school forms and educational standards are important aspect in improving educational outcomes. However early tracking – a key bottleneck in the Austrian School System is not addressed.
3.2.4. Education Further improve strategic planning in higher education and enhance measures to reduce dropouts.	Partially appropriate	Partially addressed	• Implementation of unit-cost based funding model on hold due to insufficient funding. Universities should get right to select applicants. • Higher education planning may be ineffective when not adhered to (e.g., new medical university Linz)
4. Competition and regulation Remove excessive barriers for services providers, including as regards legal form and shareholding requirements and with respect to setting up interdisciplinary services companies. Review whether restrictions on entry into and conduct in regulated professions are proportionate and justified by general interest. Identify the reasons behind the low value of public contracts open to procurement under EU legislation. Substantially strengthen the resources of the Federal Competition Authority."	Appropriate	Partially addressed	• Continue to relax restrictive rules in regulated trades and liberal profession to allow for more competition by removing excessive barriers for service providers including inter alia legal form and shareholding requirements and restrictions with respect to setting up interdisciplinary services companies. • Make more use of competitive tendering in public procurement by increasing the value of public contracts open for bidders from other EU member states. • Substantially strengthen the public resources dedicated to antitrust activities, foremost regarding the Federal Competition Authority (FCA) which is understaffed in comparison to its peer institutions in other EU member states, but also concerning the Competition Commission (CC) which should be repositioned as an (really) independent policy advisory panel following the example of the German monopoly commission.

Source: WIFO, European Commission.

5 Conclusions

The European Union has embarked on a new growth strategy called "Europe 2020" which should deliver smart, sustainable and inclusive growth by the year 2020. Within this growth strategy, Austria has committed itself to reaching headline targets in five areas: R&D, Education (higher education, early school leaving), Employment, Poverty and Environment (greenhouse gases, renewable and energy efficiency). In addition, the European Union addresses recommendations to reform economic policy (CSRs). Reaching these targets and addressing these CSRs should boost smart, sustainable and inclusive growth.

A detailed analysis of the previous trends in these headline targets and the growth now necessary to reach them reveals a rather clear-cut picture. Austria shows good performance (above the EU average) levels in all target areas (R&D, employment, early school leavers, higher education and the environmental goals (greenhouse gas emissions' intensity, energy efficiency, share of renewables). Targets were set with varying levels of ambition. The targets for the share of tertiary graduates and of early school leavers have already been reached. The employment and poverty, greenhouse gas and share of renewables targets look on track as growth trends required are well in line with past longer term growth trends. However, should current negative economic trends continue, the employment and poverty targets could be missed. By contrast, the growth rates required for reaching the R&D target in the remaining period 2015-2020 of the strategy are considerably above past trends and the actual value in 2014 is quite far off the required value in terms of a linear target path. In addition, the longer-term trend in energy efficiency or final energy consumption does not suggest that the target will be met. This will also depend on economic growth – the higher, the more difficult it will be to reach this target.

Before any interpretation of progress towards the targets, a few words of caution are necessary. First, yearly target values are not a goal per se, they just serve as a yardstick to assess distance to target. The target that matters is the target value 2020. Furthermore, it is important not to set any economic and environmental strategies solely focusing on the narrow Europe 2020 key targets. In particular, progress towards targets should not be the only gauge of Austria's economic performance. Rather, the wider picture needs to be kept in mind, namely that of achieving smart, inclusive and sustainable growth. Moreover, targets are not independent of each other. There are or there may be target conflicts and complementarities, i.e. situations where progress in one target may be accompanied by lack of progress in another target (conflict – e.g. environment and growth), or situations where progress on one target helps progress on another (complementarity – e.g. education and R&D, poverty and employment).

Our yardstick when assessing the potential contribution of the measures in the NRP to reaching the main or subsidiary targets, or appropriately addressing the CSRs, is whether they are addressing the key policy options to improve performance.

In R&D, there is a comprehensive innovation strategy by the Austrian government which addresses almost all key policy options to both increase R&D intensity and to foster smart growth, hence the focus should be on implementation. In the other areas, as well as regarding the CSRs, there are usually several substantial measures addressing important bottlenecks, but also key policy options left unaddressed, such as e.g. early streaming for the higher education target, no earlier harmonisation of the statutory retirement age between men and women for the employment target, and few policies affecting price signals in the environmental domain etc.

Of course, such an assessment has to be regarded with extreme caution. First of all, it is not based on an in-depth evaluation of policies. Furthermore, the past is not necessarily a good guide to the future, external events such as a deepening euro crisis may at any time knock the trend off the track towards the target. Even if efforts are on track, there should be no complacency. As mid-term of the Europe 2020 strategy has not been reached yet, the assessment of whether any key policy options are not addressed by the measures announced will naturally be at the core of this monitoring process; towards the end of the strategy, the monitoring will of course be able to and indeed must focus more strongly on the actual implementation of the measures announced. The assessment should merely provide broad orientation for the choice of policy decisions, in the sense of which are the key policy options for reaching the targets and addressing the CSRs, and does the NRP address these options.

Overall, Austria's efforts to reach the Europe 2020 targets and address the CSRs are characterised by a multitude of measures. In the case of R&D, which is not on track, there is a well-balanced policy package in place; for energy efficiency, the case is less clear and there may be a need for further measures, especially when growth picks up. Where targets are on track there are a couple of key policy options which have not been addressed which, if addressed, could actually lead to going beyond target, as in higher education. Education in general features important complementarities with other target areas, such as R&D, employment and poverty, so that it can be regarded as a key policy option in itself.

6 References

Acemoglu, D., Aghion, P., Bursztyn, L., Hemous, D., "The Environment and Directed Technical Change", National Bureau of Economic Research Working Paper Series, 2009, No. 15451, http://www.nber.org/papers/w15451.

Acosta-Ormaechea, S., Yoo, J., "Tax Composition and Growth: A Broad Cross-Country Perspective", International Monetary Fund, Working Paper, 2012, (WP/12/257). http://www.imf.org/external/pubs/ft/wp/2012/wp12257.pdf.

Aiginger, K., Böheim, M., Budimir, K., Gruber, N., Pitlik, H., Schratzenstaller, M., Walterskirchen, E., "Optionen zur Konsolidierung der öffentlichen Haushalte in Österreich", WIFO , Wien, 2010, http://www.wifo.ac.at/wwa/pubid/38441.

Aiginger, K., Falk, R., Reinstaller, A., "Evaluation of Government Funding in RTDI from a Systems Perspective in Austria. Synthesis Report", WIFO - convelop cooperative knowledge design gmbh - Austrian Institute for SME Research - Prognos, Vienna, 2009, http://www.wifo.ac.at/wwa/pubid/36402.

Arnold, J. M., Brys, B., Heady, C., Johansson, Å., Schwellnus, C., Vartia, L., "Tax Policy for Economic Recovery and Growth", The Economic Journal, 2011, 121(550), pp. 59-80.

Arnold, J., "Do Tax Structures Affect Aggregate Economic Growth?", OECD Economics Department Working Paper, 2008, (ECO/WKP(2008)51).

Austrian Federal Chancellery, Austrian National Reform Programme 2013, Vienna, 2013.

Baumgartner, J., Kaniovski, S., Pitlik, H., "Wirtschaftswachstum weiterhin verhalten, Arbeitslosigkeit bleibt hoch. Mittelfristige Prognose der österreichischen Wirtschaft bis 2019", WIFO -Monatsberichte, 2015, 88(1), pp. 51–66.

Biffl, G., Pfeffer, T., Skrivanek, I., Anerkennung ausländischer Qualifikationen und informeller Kompetenzen in Österreich; Donau Universität Krems, 2012.

BGBLA 2014_I_37: Bundesgesetz, mit dem das Bundesfinanzrahmengesetz 2014 bis 2017 geändert und das Bundesfinanzrahmengesetz 2015 bis 2018 erlassen wird, 2014.

BMLFUW, Evaluierung der Umweltförderung des Bundes 2011 – 2013, Wien, 2014.

BMWF, BMVIT, BMWFJ, Österreichischer Forschungs- und Technologiebericht 2014. Bericht der Bundesregierung an den Nationalrat gem. § 8 (1) FOG über die Lage und Bedürfnisse von Forschung, Technologie und Innovation in Österreich. 2014.

BMWF, BMVIT, BMWFJ, Österreichischer Forschungs- und Technologiebericht 2013. Bericht der Bundesregierung an den Nationalrat gem. § 8 (1) FOG über die Lage und Bedürfnisse von Forschung, Technologie und Innovation in Österreich. 2013.

BMWFW, NEEAP: Erster Nationaler Energieeffizienzaktionsplan der Republik Österreich 2014 gemäß Energieeffizienzrichtlinie 2012/27/EU, Wien, 2014.

Bock-Schappelwein, J., Janger, J., Reinstaller, A., Bildung 2025 – Die Rolle von Bildung in der österreichischen Wirtschaft, WIFO , Wien, 2012, http://www.wifo.ac.at/wwa/pubid/45200.

Böheim, M., "Wettbewerbsmonitoring im Spannungsfeld zwischen ökonomischen Gestaltungmöglichkeiten und wettbewerbspolitischen Erwartungen", WIFO -Monatsberichte, 2013a, 86(3), pp. 225–236.

Böheim, M., "Überregulierung" als Hemmnis für Wettbewerb und Wirtschaftswachstum", Wirtschaftspolitische Blätter, 2013b 4/2013, 604-620.

Böheim, M., "Deregulierungsspielräume betreffend die interdisziplinäre Zusammenarbeit von freien und gewerblichen Berufen", Wirtschaftspolitische Blätter, 2011, 1/2011,pp. 559-576.

Böheim, M., "Reformoptionen zur Wettbewerbspolitik in Österreich", WIFO -Monatsberichte, 2008, 81(6), pp. 449-459.

Böheim, M., "Austrian Competition Policy: Quo vadis?", Austrian Economic Quarterly, 2002, 4/2002, pp. 176-190.

Böheim, M., Friesenbichler, K., Sieber, S., WIFO -Weißbuch: Mehr Beschäftigung durch Wachstum auf Basis von Innovation und Qualifikation. Teilstudie 19: Wettbewerb und Regulierung, WIFO , Wien, 2006.

Böheim, M., Pichler, E., "Der österreichische Selbstmedikationsmarkt: Marktperformance und Deregulierungsspielräume", Wirtschaftspolitische Blätter, 2/2011, 347-368.

Bundeskanzleramt, Arbeitsprogrammem der österreichischen Bundesregierung 2013-2018, Wien, 2013.

Bundeskanzleramt, Bundesgesetz über die Erbringung von Dienstleistungen (Dienstleistungsgesetz – DLG) BGBl. I Nr. 100/2011, Wien, 2015.

Bundeskanzleramt, Nationales Reformprogramm, Wien, 2014.

Bundesministerium für Wirtschaft, Familie und Jugend (BMWFJ): Nationaler Aktionsplan 2010 für erneuerbare Energie für Österreich (NREAP-AT) gemäß der Richtlinie 2009/28/EG des Europäischen Parlaments und des Rates. Wien, 2010.

Clark, B., The Higher Education System: Academic Organization in Cross-National Perspective, University of California Press, Berkeley, CA 94720, 1983.

Coricelli, F., Wörgötter, A., "Structural Change and the Current Account: The Case of Germany", OECD Economics Department Working Papers No. 940, Paris, 2012.

Ederer, St., Janger, J., Growth Bottlenecks – Engpässe für Wachstum und Beschäftigung in Österreich im Rahmen der Strategie "Europa 2020", Studie des WIFO im Auftrag des Bundeskanzleramtes, Wien, 2010.

Eppel, R., Mahringer, H., Weber, A., Zulehner, C., Evaluierung der Eingliederungsbeihilfe, WIFO , Wien, 2011, http://www.wifo.ac.at/wwa/pubid/42771.

European Commission, Winter forecast, Brussels, 2015 (AMECO database, download feb 5th, 2015).

European Commission, Annual Growth Survey 2015, Brussels, 2014a.

European Commission, Autumn Forecast, Brussels, 2014b (AMECO database, download nov 4th, 2014).

European Commission, Commission Staff Working Document, Assessment of the 2014 national reform programme and stability programme for Austria, 2014c, SWD(2014) 421 final.

European Commission, Taxation Trends in the European Union, Brussels, 2014d.

European Commission, Annual Growth Survey 2014, Brussels, 2013a.

European Commission, Proposal for a DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on energy efficiency and repealing Directives 2004/8/EC and 2006/32/EC; {SEC(2011) 779 final, SEC(2011) 780 final}; COM(2011) 370 final, Brussels, 22.6.2011.

European Commission, COM(2011) 21 COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONSA resource-efficient Europe – Flagship initiative under the Europe 2020 Strategy, 2011b.

European Commission, Public Finances in EMU 2010, Brussels, 2010.

European Commission: Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC, 2009.

European Commission, Public Finances in EMU 2008, Brussels, 2008.

Firgo, M., Famira-Mühlberger, U., Ausbau der stationären Pflege in den Bundesländern. Quantitative und qualitative Effekte des öffentlichen Einsatzes öffentlicher Mittel im Vergleich zur mobilen Pflege, Wien, 2014.

Gaggl, P., Janger, J., "Will the Great Recession Lead to a Lasting Impact on Potential Output in Austria?", Monetary Policy & the Economy, 2009, 3, pp. 26–52.

Gesundheit Österreich GmbH(GÖG), Monitoring nach Vereinbarung gem. Art. 15a B-VG Zielsteuerung-Gesundheit und Bundes-Zielsteuerungsvertrag, I/2014, Wien, 2014.

Gesundheitsrefromgesetz 2013: http://www.parlament.gv.at/PAKT/VHG/XXIV/I/I_02243/index.shtml

Harrison, R., Jaumandreu, J., Mairesse, J., Peters, B., "Does innovation stimulate employment? A firm-level analysis using comparable micro-data from four European countries", NBER Working Paper, 2008, 14216, http://www.nber.org/papers/w14216.

Hauptverband der Österreichischen Sozialversicherungsträger: Aktualisierte Voranschläge Krankenversicherung 2014 und Gebarungsvorschaurechnung Krankenversicherung 2015/2016, Wien, 2014.

Hofmarcher M., "The Austrian health reform 2013 is promising but requires continuous political ambition", Health Policy, 2014, Volume 118/1, pp. 8–13, http://dx.doi.org/10.1016/j.healthpol.2014.09.001

Hofmarcher, M., L. Tarver, E. Festl, On health employment growth and structural change in care delivery, submitted to Health Policy, 2015.

Horvath, T., Url T., Bridging-Renten als Überbrückung für Einkommensausfälle vor dem Pensionsantritt, WIFO , Wien, 2013, http://www.wifo.ac.at/wwa/pubid/46684.

Hranyai, K., Janger, J., Forschungsquotenziele 2020. Aktualisierung 2014, WIFO , Wien, 2014, http://www.wifo.ac.at/wwa/pubid/47492.

Indinger, A., Katzenschlager, M., Energieforschungserhebung 2013 - Ausgaben der öffentlichen Hand in Österreich, Erhebung für die IEA, Wien, 2014.

Janger, J., Was leistet Grundlagenforschung im Innovationsprozess, Keynote Club Research, 4.6., 2014, http://www.clubresearch.at/p-76396.html

Janger, J., "Hochschulsteuerung im Kontext der Autonomie der Universitäten", WIFO -Monatsberichte, 2013, 86(2), pp. 159–171.

Janger, J., "Strukturwandel und Wettbewerbsfähigkeit in der EU", WIFO -Monatsberichte, 2012, 85(8), pp. 625–640.

Janger, J., "Bestimmungsgründe sektoraler Preisvergleichs- und Anbieterwechselraten in Österreich", Geldpolitik und Wirtschaft, 2010, (Q1/10),pp. 70-91.

Janger, J., "Supply-Side Triggers for Inflation in Austria", Monetary Policy & the Economy, 2008, 2, pp. 34–69.

Janger, J., Bock-Schappelwein, J., Böheim, M., Famira-Mühlberger, U., Horvath, T., Kletzan-Slamanig, D., Schönfelder, S., Schratzenstaller, M., Hofmarcher-Holzhacker, M. M., Monitoring of Austria's Efforts Within the Europe 2020 Strategy. Update 2013-14, WIFO - Health System Intelligence, Vienna, 2014, http://www.wifo.ac.at/wwa/pubid/47415.

Janger, J., Bock-Schappelwein, J., Böheim, M., Famira-Mühlberger, U., Horvath, T., Kletzan-Slamanig, D., Schönfelder, S., Schratzenstaller-Altzinger, M., Hofmarcher-Holzhacker, M., (2014), Monitoring of Austria's Efforts Within the Europe 2020 Strategy Update 2014-15, WIFO , Vienna

Janger, J., Bock-Schappelwein, J., Horvath, T., Meyer, I., Monitoring Austria's Efforts Within the Europe 2020 Strategy, WIFO , Vienna, 2013, http://www.wifo.ac.at/wwa/pubid/46950.

Janger, J., Hölzl, W., Kaniovski, S., Kutsam, J., Peneder, M., Reinstaller, A., Sieber, S., Stadler, I., Unterlass, F., Structural Change and the Competitiveness of EU Member States, WIFO , Vienna, 2011, http://www.wifo.ac.at/wwa/pubid/42956.

Janger, J., Schmidt-Dengler, P., "The Relationship between competition and inflation", Monetary Policy and the Economy, No. 1, Oesterreichische Nationalbank, Vienna, 2010.

Karner A., Koller S.-Ch., Kettner C., Kletzan-Slamanig D., Köppl A., Leopold A., Lang R., Nakicenovic N., Reinsberger K., Resch G., Schleicher St., Schnitzer H. und Steininger K., Nationaler Aktionsplan 2010 für erneuerbare Energien für Österreich, 30. Juni 2010; http://www.igwindkraft.at/redsystem/mmedia/2011.02.02/1296653537.pdf

Kettner, C.; Köppl, A.; Kratena, K.; Meyer, I.; Sinabell, F. (2012), "Schlüsselindikatoren zu Klimawandel und Energiewirtschaft und der "Energiefahrplan 2050" der EU", WIFO -Monatsberichte, 7/2012, pp. 581-596.

Kletzan-Slamanig, D., Steininger, K, Gesamtwirtschaftliche Effekte der klimarelevanten Maßnahmen im Rahmen der Umweltförderung im Inland 2009, Vienna, 2010.

Köppl, A., Kletzan-Slamanig, D., Köberl, K., Österreichische Umwelttechnikindustrie. Export und Wettbewerbsfähigkeit, WIFO , Wien, 2013, http://www.wifo.ac.at/wwa/pubid/46461.

Lachenmaier, S., Rottmann, H., "Effects of innovation on employment: A dynamic panel analysis", International Journal of Industrial Organization, 2011, 29(2), pp. 210–220.

Meghir, C., Phillips, D., "Labour Supply and Taxes", in: Mirrlees, J., Adam, S., Besley, T., Blundell, R., Bond, S., Chote, R., Gammie, M., Johnson, P., Myles, G., Poterba, J. (eds): Dimensions of Tax Design: The Mirrlees Review, Oxford, 2010.

Mühlberger, U.; Knittler, K. und Guger, A., Mittel- und langfristige Finanzierung der Pflegevorsorge, WIFO , Vienna, 2008a.

Mühlberger, U., Guger, A., Knittler, K., Schratzenstaller, M., Alternative Finanzierungsformen der Pflegevorsorge, Vienna, 2008b.

Myles, G., Economic Growth and the Role of Taxation – Aggregate Data, OECD Economics Department Working Paper, 2009, (ECO/WKP(2009)714).

OCED, Education Policy Outlook 2015: Making reforms Happen, 2015, Paris.

OECD, Education at a Glance, Paris, 2014a.

OECD, Revenue Statistics, Paris, 2014b.

OECD, Taxing Wages, Paris, 2014c.

OECD, OECD Economic Survey of Austria 2013, Paris.

OECD, OECD Economic Survey of Austria 2009, Paris, 2009.

OECD, OECD Economic Survey of Austria 2007, Paris, 2007.

Pitlik, H., Schratzenstaller, M., Growth Implications of Structure and Size of Public Sectors, WIFO Working Paper, 2011, (381).

Prammer, D., Quality of Taxation and the Crisis: Tax Shifts from a Growth Perspective, European Commission Taxation Paper, 2011, (29).

Reinstaller, A., Sieber, S., "Veränderung der Exportstruktur in Österreich und der EU", WIFO -Monatsberichte, 2012, 85(8), pp. 657–668.

Reinstaller, A., Unterlass, F., "Comparing business R&D across countries over time: a decomposition exercise using data for the EU 27", Applied Economics Letters, 2012, 19, pp. 1143–1148.

Schratzenstaller, M., "Kurz- und mittelfristige Perspektiven der Budgetpolitik. Bundesvoranschlag 2014/15 und Bundesfinanzrahmen 2015 bis 2018", WIFO -Monatsberichte, 2014, 87(10), pp. 711–726.

Schratzenstaller, M., "Zwischen Konsolidierung und Wachstum. Bundesfinanzrahmen 2013-2016, "Konsolidierungspaket II" und Stabilitätsprogramm", WIFO -Monatsberichte, 2012a, 85(5), pp. 361–380.

Schratzenstaller, M., Gender Budgeting im Steuersystem, WIFO , Wien, 2012b,

http://www.wifo.ac.at/wwa/pubid/45759.

Schratzenstaller, M., "Bundesvoranschlag 2011 setzt erste Konsolidierungsschritte", WIFO -Monatsberichte, 2011, 84(1), pp. 63-64.

Schratzenstaller, M., "Steuerreform 2009/10", WIFO -Monatsberichte, 2009, 82(9), pp. 687–702.

Stadler, B., & Wiedenhofer-Galik, B., „Dequalifizierung von Migrantinnen und Migranten am österreichischen Arbeitsmarkt, Mikrozensus Arbeitskräfteerhebung. Statistische Nachrichten, 5/2011, pp. 383-399.

Stadler, B., Wiedenhofer-Galik, *B.*, "Bildungs- und Erwerbspartizipation junger Menschen in Österreich unter besonderer Berücksichtigung des Migrationshintergrundes", Statistische Nachrichten 2012, 12/2012, pp. 957-975.

Umweltbundesamt(UBA), Klimaschutzbericht 2014, Wien, 2014.

Van Pottelsberghe De La Potterie, B., "Europe's R&D: Missing the wrong targets?", Intereconomics, 2008, 43(4), pp. 220–225.

Vogtenhuber, S. "Effekte von Unter-und Überqualifikation auf die berufliche Weiterbildungsaktivität", in: Markowitsch et al. (ed.): pp. 252-275. in J. Markowitsch, E. Gruber, L. Lassnigg, & D. Moser (eds.), Turbulenzen auf Arbeitsmärkten und in Bildungssystemen. Beiträge zur Berufsbildungsforschung. Innsbruck, Wien, Bozen: Studien Verlag, 2011.

Wöhlbier, F., Astarita, C., Mourre, G., "Consolidation on the Revenue Side and Growth-friendly Tax Structures: An Indicator Based Approach", European Economy Economic Papers, 2014 (513).

Wößmann, L., "Efficiency and Equity of European Education and Training Policies", International Tax and Public Finance, 2008a, 15(2), pp. 199-230.

Wößmann, L., "How Equal Are Educational Opportunities? Family Background and Student Achievement in Europe and the United States", Zeitschrift für Betriebswirtschaft, 2008b, 78(1), pp. 45-70.

Wößmann, L., "Bildungspolitische Lehren aus den internationalen Schülertests: Wettbewerb, Autonomie und externe Leistungsüberprüfung", Perspektiven der Wirtschaftspolitik, 2006, 7(3), pp. 417-444.

Wößmann, L., "Zentrale Prüfungen als Währung" des Bildungssystems: Zur Komplementarität von Schulautonomie und Zentralprüfungen", Vierteljahreshefte zur Wirtschaftsforschung 72 (2003), DIW, Berlin, 2003, pp. 220-237.

7 Annex: Analytic grid for assessment of measures in the NRP

				Potential contribution of measure						
Subsidiary Target	**Indicator**	**Proposed Measure**	**Assessment possible**	**to reaching main target**	**to reaching subsidiary target**	**to address CSR**	**Qualitative assessment of proposed measure**	**Measures lacking to reach target?**	**State of progress**	**Impact evaluation of measure?**
R&D	**Main target: 3.76% of GDP**									
Increase overall R&D intensity, become innovation leader		Implementation of Austrian RTI-Strategy 2020	Yes	3	3		Very comprehensive list of measures, focus needs to be on implementation	The strategy is very comprehensive; if anything it does not address the issue of human resources for innovation in a broad sense (i.e. not just researchers and tertiary S&T graduates, but also skilled workers with upper secondary vocational degrees)	1,5	
Boosting innovation capabilities of the business sector	Number of R&D-active or innovative firms, R&D intensity BERD controlling for industrial structure	Indirect research funding: • Increasing research premium from 8% to 10% for intrinsically company research and contract research. • Raising the ceiling for contract research from 100,000 € to 1,000,000 €. • Integration of the Austrian Research Promotion Agency as technical consultant for the tax office.	Yes	2	2		A micro-data based evaluation is lacking to assess the effectiveness of this measure		3	
		The services initiative (Dienstleistungsinitiative DL-I) serves to promote innovative service projects which were up to now not in the focus of public R&D and innovation promotion system.	yes	1	2				3	
		Building research capacity in industry with a focus on SMEs ("Forschungskompetenz für die Wirtschaft")	Yes	1	2				3	
		Comet Centres	Yes	3	3		The programme has been running for some time but is substantial in nature.		3	
		National contact point for IP affairs (strengthen academic transfer)	Yes	1	2				3	
		Research studios Austria	Yes	1	1		Very small budget.		3	

				Potential contribution of measure						
Subsidiary Target	**Indicator**	**Proposed Measure**	**Assessment possible**	**to reaching main target**	**to reaching subsidiary target**	**to address CSR**	**Qualitative assessment of proposed measure**	**Measures lacking to reach target?**	**State of progress**	**Impact evaluation of measure?**
		"Frontrunner Initiative": specific R&D grants and loans for companies with significant R&D activities in a leading market position worldwide	Yes	2	2		Needs more details to be fully assessed.		3	
		"Austrian Electric Mobility Flagship Projects programme": national research-, development- and demonstration programme	Yes	1	1				3	
Strengthening the science base	Publication quality	Further expansion of IST Austria-Institute of Science and Technology Austria	Yes	3	3				2	
		Expansion Vienna Biocenter (research infrastructure, post gradual life science); Competence Centre for Disease Modelling within the IMBA	Yes	2	2					
Human resources/motivation to do science	Student enrolment in MINT courses at tertiary institutions	Expansion of the Young Science – Network- and Service Centre (2011 – 2014)	Yes	2	2		This and the programme below may motivate more students to choose science-related studies; however, this cannot replace structural changes to the way science is taught in schools.		3	
		Programme Sparkling Science 2007 – 2017	Yes	2	2				3	
Education	**Main target: The share of early school leavers should be 9.5% and at least 38% of 30-34 years old should have completed a tertiary or equivalent education (including ISCED 4a) CSR: Improve strategic planning and reduce drop-outs**									
Improve strategic planning		Hochschulplan (mapping process of Austrian higher education sector, coordination of research and teaching, infrastructure)	yes	3	3	3			2	
Reduce drop-outs, increase share of tertiary graduates	Completion/survival rates, tertiary graduation rates	Introduction of capacity based-funding model	yes	3	3	3	3 only when unit cost model will be fully rolled out		1	

				Potential contribution of measure						
Subsidiary Target	**Indicator**	**Proposed Measure**	**Assessment possible**	**to reaching main target**	**to reaching subsidiary target**	**to address CSR**	**Qualitative assessment of proposed measure**	**Measures lacking to reach target?**	**State of progress**	**Impact evaluation of measure?**
		Reform of teacher education (PaedagogInnenbildung NEU)	yes	1	1	1	The reform of teacher education may have indirect effects on the share of tertiary graduates.		2	
		Increasing the global budget of the Universities	yes	2	2	2	More funding is welcome but the increase is limited (615 million Euro rather than 3.8, necessary to reach the 2% goal, over the period 2016-2018).		2	
		Increasing number of places at Universities of Applied Sciences	yes	1	1	1	Small numbers involved (approx. 1.000 2012-2014)		2	
		New allocation of funds, rewarding universities for students making progress in their studies	yes	1	1	1	Means of universities are limited as long as capacity-based funding model has not been introduced.		2	
		Studienchecker, Studieren probieren (Trying out studying)/Introduction and orientation phase	yes	2	2	2			3	
Education	**Main target: The share of early school leavers should be 9.5% and at least 38% of 30-34 years old should have completed a tertiary or equivalent education (including ISCED 4a)**									
Increasing the number of individuals participating in education, preparing for university studies, and increasing mobility in the tertiary sector	Population share aged 25-34 with ISCED 4a/5/6; entry/graduation rates higher education	Hochschulplan (overarching concept for higher education sector) - formula based unit cost model	yes	3	3	3	3 only when unit cost model will be fully rolled out		1	
		Reform of teacher education (PaedagogInnenbildung NEU)	yes	1	1	1	The reform of teacher education may have indirect effects on the share of tertiary graduates.		2	
		Increasing the global budget of the Universities, as well as further funding ("offensivmittel")	yes	2	2	2	More funding is welcome but the increase is limited (up to year 2015).		2	

				Potential contribution of measure						
Subsidiary Target	**Indicator**	**Proposed Measure**	**Assessment possible**	**to reaching main target**	**to reaching subsidiary target**	**to address CSR**	**Qualitative assessment of proposed measure**	**Measures lacking to reach target?**	**State of progress**	**Impact evaluation of measure?**
	Population share aged 25-34 with ISCED 4a/5/6; entry/graduation rates higher education									
		Neue Mittelschule - new secondary school	yes	3	3	3	due to individualisation	Roll out of Neue Mittelschule does barely include academically oriented lower secondary schools	3	
		Measures for pupils with another first language than German: language, teachers	yes	3	3	3	focus on language skills support		3	
		Further expansion of full-day school forms								
		Improvement of school entry-phase	yes	3	3	3				
		National strategy for life-long learning	no				taskforce LLL might contribute, but no concrete measures yet, therefore only indirect contribution			
		new school-leaving and diploma examination	yes	3	3	3			3	
		youth and apprentices coaching	yes	3	3	3		necessary to embed this measure in a broad strategy to reduce early school-leavers	3	
Poverty	**Main target: reduction of the number of people at risk of poverty and social exclusion by 235,000 by 2020**									
Measures combating long-term unemployment by improving the labour market participation of working-age groups at risk of poverty and exclusion	rate of long-term unemployed to total unemployment	Improve employment opportunities for receipients of a needs-based minimum benefits system; social inclusion of long-term unemployed risk groups	yes	3	3			no nation-wide implementation of step-to-job, liability under 15a agreement not enforceable, questions concerning housing not solved, even for special needs no clear decision (no enabling provision), performance catalogue not clearly formulated, lack of offers for people with low labour market attachment	3	

				Potential contribution of measure						
Subsidiary Target	**Indicator**	**Proposed Measure**	**Assessment possible**	**to reaching main target**	**to reaching subsidiary target**	**to address CSR**	**Qualitative assessment of proposed measure**	**Measures lacking to reach target?**	**State of progress**	**Impact evaluation of measure?**
		Measures for health prevention	no	3	3	3				
		Part-time work for educational purposes and grants for the purpose of gaining skilled worker qualifications		3	3	3			3	
		Measures that offer qualification possibilities; improvement of quality of work	no							
Measures preventing health risks at the workplace and increased labour market integration of individuals with impaired health and individuals with a disability	share of individuals with a disability as % of workforce	National Action Plan on Disability	no	3	3	3			3	
		career rehabilitation paid for by AMS starting 2014	yes	1	3	3				
		measures of health prevention and rehabilitation	yes	3	3	3				
Reduction of women-specific disadvantages in income and employment issues	median income women/men (full time)	increase of income transparency	yes	2	3	3	awareness campaign, influence on female career decisions		3	
		improvement of care infrastructure for children and for dependants.	yes	3	2	2	quality and structure important			
		support of paternity leave	yes	1	2	1				
Combating poverty of children and youth, and inherited poverty	poverty rate of age groups in %	active measures to decrease the rate of early school leavers	yes	3	3	3		quality of degrees is important	2 partly introduced	
		early language training for children with migration background	yes	3	3	3			3	

				Potential contribution of measure						
Subsidiary Target	**Indicator**	**Proposed Measure**	**Assessment possible**	**to reaching main target**	**to reaching subsidiary target**	**to address CSR**	**Qualitative assessment of proposed measure**	**Measures lacking to reach target?**	**State of progress**	**Impact evaluation of measure?**
Combating poverty of children and youth, and inherited poverty	poverty rate of age groups in %	training guarantee	yes	3	3	3		measures focus on the prevention of inherited poverty, not on reducing child poverty	3	
		youth coaching	yes	3	3	3		inclusion of child welfare bureau	3	
Reconciliation of family and working life	employment rates of women with children (e.g. children under 10/14 years)/women without children	mandatory year at the kindergarten free of charge	yes	2	2	3			3	
		improvement of care infrastructure for children and outpatient nursing infrastructure	yes	3	3	3		reform of private insolvency is not listed	1	
		extension of full-day childcare at schools	yes	3	3	3			1	
Employment	**Main target: increase employment rate to 77-78%**									
labour market participation of older employees	retirement age depending on date of birth, age on exiting employment; employment rate 50-54, 55-59, 60-64 by sex; share of new pensioners, share of I-pensions in population of same age	Summary of all measures		3	-	3	Most measures dealing with the increase of the employment participation of older persons will only have significant impact in the longer run, but address important structural points.	lack of measures at the employer level		
		comeback plus, Ausfstieg, other programs for people with impaired health	yes	3	3	3	though the measure will only impact in the longer run, it is structurally important			
		Fit2work	yes	3	3	3			2	
		skilled labour package	yes	3	3	3	even though the measure will only impact in the longer run, it is structurally important		3	

				Potential contribution of measure						
Subsidiary Target	**Indicator**	**Proposed Measure**	**Assessment possible**	**to reaching main target**	**to reaching subsidiary target**	**to address CSR**	**Qualitative assessment of proposed measure**	**Measures lacking to reach target?**	**State of progress**	**Impact evaluation of measure?**
Labour market participation of women	employment rates of women (total, with children 0-2, with children 3-6)	Summary of all measures		2	-	3	the improvement in care infrastructure for children (qualitatively and quantitatively) is particularly important to increase the labour market participation of women, some measures that are less important for labour market participation address important aspects of gender equality			
		support re-entry of women into employment (counselling)	yes	2	2	2		focus on counselling not on qualifications measures for target group	3	
		women in technical and craft-orientated jobs, vocational centres for women and other measures to increase share of women in non-traditional occupations	yes	1	2	2	measure of minor importance for the increase of labour market participation	Topic needs to be broadened, e.g.. Choice of subjects/apprenticeship, FiT only one aspect	3	
		extension of child care facilities		3	3	3				
		national action plan gender equality	yes	3	3	3			2	
		income staff reports	yes	1	1	1	measure of minor importance for the increase of labour market participation		3	
		mandatory year at the kindergarten	yes	1	1	1			3	
		improvement in quality of care infrastructure for children	yes	3	3	2			2	
		national action scheme for gender equality in the labour market	no	3	3	3	set of different measures (e.g. introduction of an income calculator)		2	
		paid month of paternal leave in civil service ("Papamonat")	yes	1	1	1			3	
		quota for women's participation on supervisory boards of state-owned companies	yes	1	1	1	measure of minor importance for the increase of labour market participation		2	
		paternity leave	yes	3	3	3			2	

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labor market participation of youths, people from a migrant background and low skilled persons	youth: rate of youth neither employed nor in education, number of drop outs from education	Summary of all measures		2	-	2	harness the unused potential of people from a migrant background; structural improvements have a potentially high impact	systematic registration of target groups necessary, identification of target groups should be main goal, see "Gesundheitsstraße"		
		Ausbildungsgarantie - Überbetriebliche Lehrausbildung training guarantee	yes	3	3	3	no replacement for structural weaknesses of the dual education system		3	
		Aktion Zukunft Jugend	yes	3	3	3			3	
		Jugendstiftung (JUST neu)	yes	3	3	3			3	
		Produktionsschulen	yes	3	3	3	people from a migrant background are overrepresented in production schools		3	
		Integrationsoffensive	yes	2	2	3	Support of language skills		3	
		recognition of foreign qualifications	yes	3	3	3			2	
		Mentoring for migrants		3	3	3				
		Improving language skills		3	3	3				
		Youth, Apprentice coaching	yes	3	3	3				
Environment										
EU Target: Reducing GHG emissions by 20% in 2020 with respect to 1990. National Target: Reducing Austria's GHG emissions by 16% with respect to 2005	GHG emissions in Mio.t CO_{2e}	Continuation of the Subsidies programme for thermal renovation of buildings (residential and business) started in 2009; € 130.6 million funding provided in 2013. This programme simultaneously promotes investments, jobs and saving energy. Continuation until 2016 is intented. (Contributes also to energy efficiency target).	yes	potentially high (3)			Reducing the energy demand for heating (and cooling) in the stock of residential and commercial buildings and thus reducing CO2 emissions constitutes a relevant measure. The support scheme is well accepted. It demands certain thresholds of energy efficiency to be fulfilled by the renovation measures and the level of support depends on the ambitiousness. However, it is still possible to get single measures (e.g. changing windows) subsidised. The climate policy effect would increase if only comprehensive renovations were funded.		3	Annual reports about potential CO2 reductions by Kommunalkredit Public Consulting. Comprehensive evaluation of the program years 2011 – 2013 completed in 2014.

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EU Target: Reducing GHG emissions by 20% in 2020 with respect to 1990. National Target: Reducing Austria's GHG emissions by 16% with respect to 2005	GHG emissions in Mio.t CO_{2e}	Climate initiative "klima:aktiv"	yes	potentially high (3)			The climate initiative "klima:aktiv" constitutes a vast programme tackling different energy-relevant sectors (transport, buildings, renewable energies). Judging upon the degree of contribution to the main target requests an evaluation of the programme. "klima:aktiv". This measure also serves target b) and c)		3	Yearly monitoring of CO_{2e} reduction potential in the different areas ot the "klima:aktiv" programme through annual reports. External evaluation of the programme for 2011/2012.
		Climate and Energy Fund (KLIEN)		potentially high (3)			The Climate and Energy Fonds funds climate protection and energy projects with a research, mobility and market penetration focus. It thus comprises a vast array of activities in climate change and low-carbon technologies and potentially contributes to targets a) and b).		ongoing	Annual activity reports; the potential impact of the programme years 2008-2010 on energy demand and emissions was evaluated in 2012 (assessment of cumulative effects until 2030) - concluding that under optimal conditions a significant contribution can be made. Especially market introduction and diffusion of research results have to be intensified.
		Environmental Support in Austria (Umweltförderung im Inland, UFI)		potentially high (3)			The UFI Environmental support programme is a key environmental policy instrument and is focused towards funding of climate and energy relevant projects and contributes to targets a) and b)		ongoing	Has been evaluated in economic terms (Kletzan-Slamanig - Steininger, 2010). Ecological and economic evaluation for 2011-2014 published.
		Transport related mesasures (electromobility, Masterplan Cycling, Fuel Act, klima:aktiv mobil)					These measures can contribute to mitigating the climate effects of transport. However, the use of additional economic instruments (taxation) in combination with regulatory and infrastructural approaches should be deliberated in order to accelerate changes in mobility patterns and transport demand.			

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Deployment of renewable energy sources in order to increase the share to 34%	share of renewable energy, in % of gross final energy consumption	Green electricity act (Ökostromgesetz) 2012	yes	potentially high (3)			Several amendments of the Green Electricity Act were carried out, altering especially the level and duration of technology-specific feed-in tariffs. This lead to some insecurity over the long-term situations of investors. However, currently the support scheme contributes to augmenting the deployment of renewable based electricity generation. This measure also serves target a).		3	Evaluation report by E-Control
Improving energy efficiency	reduction of primary energy consumption (in PJ)	A bundle of measures which can be divided into the categories industrial buildings, production and services as well as trade and small-scale consumption, mobility, energy provision, security of energy supply and general measures have already started (for further details see also Second National Energy Efficiency Action Plan of the Republic of Austria 2011). The Energy Efficiency Act to implement the Energy Efficiency Directive was enacted in July 2014.					In order to meet the 2020 targets for energy efficiency (contributing also to the other climate and energy policy objectives) increased effort via a comprehensive and integrated approach is required given the upward trend in energy consumption.			
Competition and entrepreneurial environment										
Support of entrepreneurship/ Establishment of enterprises		funds for SMEs	yes	2	1		No direct effect on the dynamic of establishment of enterprises expected, possibly more influence on growth dynamics of ambitious SMEs		3	
		common action scheme for SMEs (of BMWFJ together with the WIFI of the Austrian Chamber of Commerce) for 2011/12 (accompanying and implementation program additionally to "Small Business Act)	no	2	2		target groups are established SMEs - little impact on dynamics of establishing companies		3	
		reorganization of the young entrepreneurs aid of the Austria Wirtschaftsservice GmbH	no							

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Support of entrepreneurship/ Establishment of enterprises		SME fitness package	yes	2	3				3	the already existing program "Innovation cheque" has been evaluated positively.
		Equity and Venture Capital	yes	2	3		Focus on ambitious establishments and young enterprises in high technology sector (except SME funds)	Improvement of legal framework for risk capital (especially VC)	3	
		service portal for companies	yes	2	2		Centralisation of all e-government offers of the federal government in one online portal. Reduction of information and transaction costs particularly relevant for SMEs and establishments	Monitoring of the costs and duration of time for "Betriebsanlagengenehmigungen"(operation plant licence?)	2	
		initative for the reduction of administration costs for companies	yes	3	2		Reform dynamics decreased during the previous two years. Reform of the GmbH and simplification of trade regulations (Gewerbeordnung) has been announced for next year.	In the course of the reform of trade regulations (GewO) qualification certificates and regulations should be checked (particularly the recognition of foreign qualifications)	2	administration costs have been lowered by 564 million Euros by 2010, by end of 2012 one billion Euros of reduction of administration costs should be achieved.
Fostering competition		Strengthening the federal competition authority (reform of competition law)	yes	3	3	3		Increasing the number of competent staff in the federal competition authority to effectively handle the workload	2	na

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Fostering competition		Participation of Austria in the transparency initiative according to EU Directive on professional qualifications (2005/36/EC; 2013/55/EC)	yes	3	3	3	The participation in the transpareny initiative is an important precondition for the establishment of a regulatory mapping covering all regulated professions. By providing a comprehensive database of regulations in professional services the intended mapping is designed to give policy makers a sound basis for regulatory reform in areas where an overregulation of qualifications exists in Austria.		1	na