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## New Results

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Research assistance: Ursula Glauninger,
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## Abstract

In this short report we present simulations based on an updated version of A-LMM, the Austrian Long-run Macroeconomic Model. In addition to a baseline scenario based on the main population projection of Statistics Austria, we simulate the effects of low and high migration, high life expectancy rates, and high or low growth of labour productivity on the macroeconomic development in Austria till 2070. We also compare the new results with results from the previous update in 2010.

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## 1. Introduction and model overview[1])

The first version of the Austrian Long-run Macroeconomic Model (A-LMM) was developed in 2004 (*Baumgartner et al.*, 2004). The model has been subsequently updated in 2007 (*Hofer et al.*, 2007) and 2010 (*Hofer et al.*, 2010). In this paper we present simulations based on the third update of the model, which differs from the 2010 version in three ways. First, we update the national accounts data (European System of National Accounts, ESA95) and other administrative data to 2012, and recalibrate the model accordingly. Second, the model includes a revised forecast for activity rates for the 22 cohorts (by sex and age) aged 14 and older. Third, we implement new demographic projections by Statistics Austria. The new baseline includes the current main variant of Statistics Austria's demographic projection. Variations from the baseline comprise scenarios with low and high migration and a scenario with high life expectancy. Finally, we present two alternative scenarios, one with higher and another with lower labour productivity growth.

A-LMM is a long-run macroeconomic model for the Austrian economy developed jointly by the Austrian Institute of Economic Research (WIFO) and the Institute for Advanced Studies (IHS). This annual model has been designed to analyse the macroeconomic impact of long-term issues on the Austrian economy, to develop long-term scenarios, and to perform simulation studies. The current version of the model foresees a projection horizon until the year 2070. The model puts an emphasis on financial flows of the social security system.

A-LMM is a model derived from neoclassical theory which replicates the well-known stylised facts about growing market economies summarised by Nicholas Kaldor (recit *Solow*, 2000). These are: (i) the output to labour ratio has been rising at a constant rate, (ii) similarly, the capital stock per employee is rising at a constant rate, (iii) the capital output ratio and (iv) the marginal productivity of capital have been constant. Together, facts (iii) and (iv) imply constant shares of labour and capital income in output. An economy for which all of the above facts hold is said to be growing in steady state.

In A-LMM, the broad picture outlined by Kaldor emerges as a result of optimizing behaviour of two types of private agents: firms and private households. Private agents' behavioural equations are derived from dynamic optimisation principles under constraints and based on perfect foresight. As the third major actor we consider the general government. We assume a constant legal and institutional framework for the whole projection period. The government is constrained by a long-run commitment to a balanced budget, as requirement by the

Stability and Growth Pact and by the Treaty on Stability, Coordination and Governance in the Economic and Monetary Union. The structure of A-LMM is shown in Figure 1.1.

The long-run growth path is determined by supply side factors. Thus, the modelling of firm behaviour becomes decisive for the properties of our model[2]. Firms are assumed to produce goods and services using capital and labour as inputs. It is well known that a constant return to scale production technology under Harrod-neutral technical progress is one of the few specifications consistent with Kaldor's facts. We therefore assume a Cobb-Douglas production function with exogenous Harrod-neutral technical progress.

A Cobb-Douglas production function implies constancy of the income shares of factor inputs in the total value added. These are given by the ratios of the gross operating surplus and wages to GDP at constant prices. Although the labour income share in Austria has been falling since the late seventies, in the longer term it has varied in a narrow range of one standard deviation from the mean of 50.9 (Figure 1.2). For this reason the assumption of long term constancy of the labour income share over a long run is adequate. Factor demand is derived under the assumption of profit maximisation subject to resource constraints and the production technology. Capital accumulation is based on a modified neoclassical investment function with forward looking properties. In particular, the rate of investment depends on the ratio of the market value of new additional investment goods to their replacement costs. This ratio (Tobin's Q) is influenced by expected future profits net of business taxes. Labour demand is derived directly from the first order condition of the firms' profit maximisation problem.

Another feature of Cobb-Douglas technology is that the marginal and the average products of input factors grow at identical rates, their levels differing by the respective factor shares. In the baseline, we assume a constant annual rate of change of labour productivity of 1.6 percent (cf. Figure 3.3.1). This value corresponds to the annual rate of change between 1976 and 2012. The corresponding annual rate of change of total factor productivity $TFP_t$ is 1.6 (1-ALPHA) = 0.8 percent.

Private households' behaviour is derived from intertemporal utility maximisation according to an intertemporal budget constraint. Decisions about consumption and savings (financial wealth accumulation) are formed in a forward looking manner. Consumption depends on discounted expected future disposable income (human wealth) and financial wealth but also on current disposable income since liquidity constraints are binding for some households.

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[2] See, for example, *Allan – Hall* (1997).

Figure 1.1: A-LMM Structure



Note:
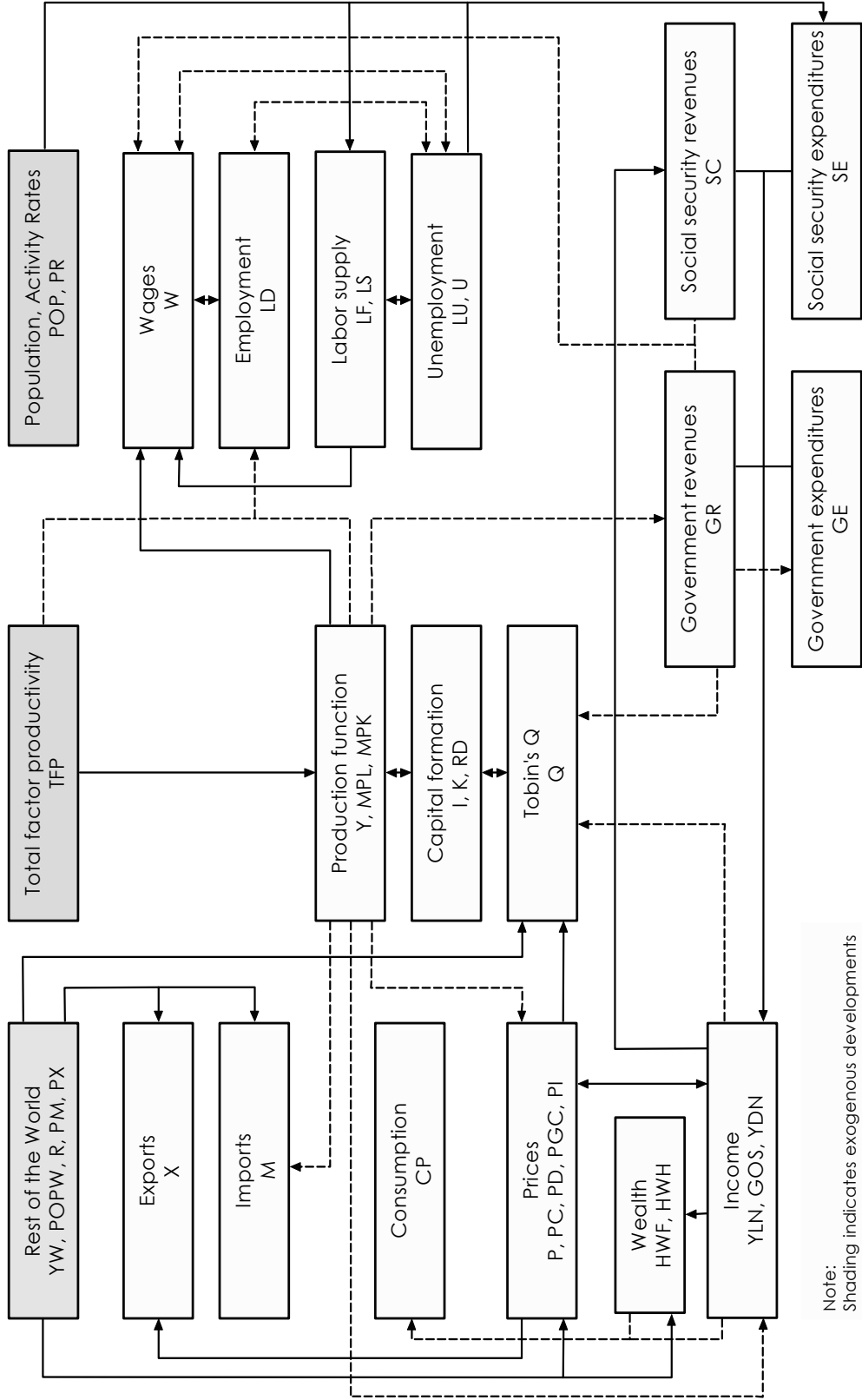Shading indicates exogenous developments

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*Figure 1.2: Labour share in percent of GDP in Austria*
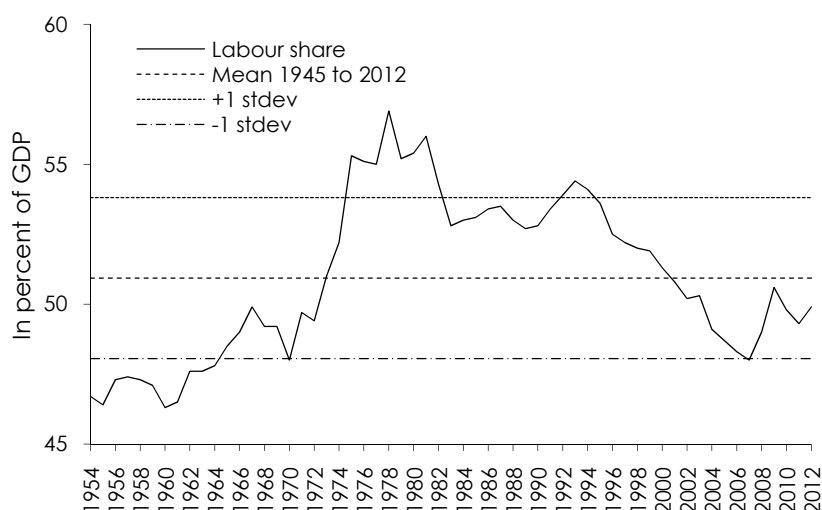


To afford consumption goods, household supply their labour and receive income in return. A special characteristic of A-LMM is the focus on disaggregated labour supply. In general, the labour force can be represented as a product of the size of population and the labour market participation rate. In the model we implement highly disaggregated (by sex and age groups) participation rates. This gives us the opportunity to account for the different behaviour of males and females (where part-time work is a major difference) and young and elderly employees (here early retirement comes into consideration).

For the projection of the number of persons on maternity leave and persons in military service (Karenzgeld- bzw. Kindergeldbezieher und Kindergeldbezieherinnen und Präsenzdiener mit aufrechtem Beschäftigungsverhältnis), we assume a constant relationship to the population aged 0 to 4 years. Employment (in persons) is converted into employment in full-time equivalents using the factor $QLD_t$, cf. *Hofer et al.* (2007) for a detailed description. For the past, $QLD_t$ is calculated as the ratio of full time equivalents to dependent employment. In the baseline we keep $QLD_t$ constant at 0.92, the value for 2011. Furthermore, we account for the expected change in the average working time due to higher female labour market participation. The associated factor, $QWT_t$, is calculated as the weighted sum of average working hours of females and males; the weights being their shares in the total labour force. The average working time for males and females has been taken from the Microcensus. In general, we could simulate the impact of growing part-time work on production by changing average working time of males and females, respectively. Instead, we assume constant working hours for males and females. An increasing share of females in the labour force implies that total average working time will fall.

Another feature of A-LMM is a disaggregated model of the social security system as part of the public sector. We explicitly model the expenditure and revenue side for the pension,

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health and accident, and unemployment insurance, respectively. Additionally, expenditures on long term care are modelled. Demographic developments are important explanatory variables in the social security model. Although, individual branches of the public sector may run permanent deficits, for the public sector as a whole, the long-run balanced-budget condition is enforced.

These features of A-LMM ensure that its long-run behaviour resembles the results of standard neoclassical growth theory and is consistent with Kaldor's facts. That is, the model attains a steady state growth path determined by exogenous growth rates of the labour force and technical progress.

A-LMM as a long run model is supply side driven and therefore does not generate business cycle fluctuations. The demand side adjusts in each period to ensure equilibrium in the goods market. The adjustment mechanism runs via disequilibria in the trade balance. The labour market equilibrium is characterised by a time varying natural rate of unemployment. Prices and financial markets are not modelled explicitly; rather we view Austria as a small open economy, so that the real interest and inflation rates coincide with their foreign counterparts. We impose that domestic excess savings correspond to the income balance in the current account.

Because of the long projection horizon and a comparatively short record of comparable economic data for Austria, the parameterisation of the model draws extensively on economic theory[3]). This shifts the focus towards theoretical foundations, economic plausibility, and long-run stability conditions and away from statistical inference. As a consequence, many model parameters are either calibrated or estimated under theory based constraints[4]). A-LMM is developed and implemented in Eviews©. Further details on the specification of the model can be found in *Hofer et al.* (2007).

The report is structured as follows. Section 2 discusses trend projections for the participation rates by age-cohorts and sex. Section 3 contains the simulation results. The baseline scenario is detailed in section 3.1. The results from variations on the main demographic projection by Statistics Austria are summarized in section 3.2.1 through 3.2.3. Finally, section 3.3 describes the effects of higher and lower labour productivity growth on output and employment.

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[3]) For consistency A-LMM relies on the system of national accounts. On the basis of the current European System of National Accounts framework (ESA95), official data are available from 1976, in part only from 1995, onwards. The projection outreaches the estimation period by a factor of three.

[4]) "[S]o called 'calibrated' models [...] are best described as numerical models without a complete and consistent econometric formulation [...]" *Dawkins et al.* (2001, p. 3655). Parameters are usually calibrated so as to reproduce the benchmark data as equilibrium. Typical sources for calibrated parameters are empirical studies unrelated to the model at hand, for example cross section analysis or estimates for other countries, or rules of thumb that guarantee model stability. For a broader introduction and discussion of the variety of approaches subsumed under the term 'calibrated models' see *Hansen – Heckman* (1996), *Watson* (1993) and *Dawkins et al.* (2001).

## 2. Update of (Trend) labour supply scenario

In this section we describe the update of the labour supply projections. We use the cohort method to project the labour force for the period 2013 to 2070. This labour supply scenario shows the outcome of extrapolating recent trends in the labour market behaviour (entry and exit rates) and is not based on an assessment of future changes in working patterns or economic conditions. However, the projection takes the expected effects of the pension reforms since 2000 into account.

The dynamic cohort method (*Scherer,* 2002) is based on a model that calculates the rates of entry and exit in the labour market for each cohort in 2012 and assumes that future lifetime participation profiles are parallel to those observed in the past. Formally, the dynamic projection method is based on the observed distribution of entry and retirement probabilities by age. Let $PR^t_{x,x+4}$ be the activity rate of age group x to x + 4 in period t (e. G., the activity rate of the age group 20 to 24 in 2012). Then the probability $WX^t_{x,x+4}$ of persons aged x to x + 4 to retire before period t and t + 5, respectively, is

$$WX^t_{x,x+4} = 1 - \frac{PR^t_{x+5,x+9}}{PR^{t-5}_{x,x+4}} \geq 0, \tag{1}$$

the probability $WN^t_x$ to enter into the job market is

$$WN^t_{x,x+4} = 1 - \frac{\overline{PR} - PR^t_{x+5,x+9}}{\overline{PR} - PR^{t-5}_{x,x+4}} \geq 0, \tag{2}$$

where $\overline{PR}$ is an upper limit on activity rates (we assume 99 percent for men and 95 percent for women).

We use the male and female activity rates in 5-year age groups for the years 2007 and 2012, respectively, to calculate the entry and retirement probabilities for the year 2012 for men and women separately. Based on the assumption that these probabilities will not change during the projection period 2013 to 2070, the projected activity rates for this period are given by (t = 2013,...,2070):

$$
\begin{aligned}
PR^t_{x+5,x+9} &= PR^{t-5}_{x,x+4}\left(1 - WX^{2012}_{x,x+4}\right), & \text{if } WX^{2012}_{x,x+4} > 0, \\
PR^t_{x+5,x+9} &= \overline{PR} \cdot WN^{2012}_{x,x+4} + PR^{t-5}_{x,x+4}\left(1 - WN^{2012}_{x,x+4}\right) & \text{if } WN^{2012}_{x,x+4} > 0, \\
PR^t_{x+5,x+9} &= PR^{t-5}_{x,x+4}, & \text{otherwise.}
\end{aligned}
\tag{3}
$$

An adjustment mechanism is introduced for the young age cohorts. For the calculation of the participation rates of the age group 20 to 24 we assume a constant participation rate of the age group 15 to 19. A decrease in the participation rate of the age group 15 to 19, which is due to extended duration of full-time education, would imply a mechanical negative consequence for the participation rates of prime-age people over time.

In 2010 the calculation method for dependent employment has been adjusted. The data have been recalculated until 2008 only. The aggregate effects of the reclassification are relatively minor; however, the age structure of employment has been changed markedly. Given the strong increase in participation rates in 2011 and 2012 and the statistical problems just mentioned we apply some adjustments in projecting participation rates. We assume that the participation rates of males aged 30 to 44 remain at their current levels (around 94 percent). For the age group 50 to 54 and 55 to 59 the participation rates are kept constant after 2030. With respect to females the cohort method suggests a drop in the participation rates in the age groups 25 to 29 and 30 to 34. On the other hand the participation rate of 45 to 49 aged would rise despite the already very high level. We keep the participation rate of the age group 25 to 29 fixed at the 2012 level and we assume an increase in the participation rate of 5 percentage points for the age group 30 to 34 years. The entry and exit rates, *WN*, for the age group 45 to 49 are set to zero. This implies that throughout the projection the participation rates of the cohorts 40 to 44 and 45 to 49 are identical.

So far the results of efforts to increase the actual retirement age have been modest. For example, *Stefanits – Hollarek* (2007) estimate that the actual retirement age increased by 7 months. Between 2005 and 2011 the demographic adjusted actual retirement age increased by one year (*Büro der Kommission zur langfristigen Pensionssicherung*, 2012). In the recent past, however, labour market attachment of the elderly increased considerably. The participation rate of persons aged 55 to 64 rose from 30.7 percent in 2005 (42.1 percent male, 19.9 percent female) to 40 percent in 2012 (50 percent male, 30.5 percent female). Moreover, eligibility criteria for early retirement have been tightened. The pension due to long term insurance without deductions is phased-out. The pension reform from 2012 tightens eligibility for early retirement further. The number of contribution years necessary to retire before the statutory retirement age has been increased from 37.5 to 40 years. The deductions in accrued benefits in case of early retirement rose from 4.2 to 5.1 percent. Access to disability pension has been restricted by strengthening "fit2work", an initiative to maintain and improve the employability and the ability of citizens to work. The eligibility for job protection within the same business sector ("Berufsschutz") has been increased from 57 to 60 years. The temporary disability pension (befristete Invaliditätspension) will be gradually abolished.

Against this background we assume the following impact of the post-2000 pension reforms on the labour market attachment of elderly workers. We project an increase in the participation rate of males in the age group 60 to 64 by 23 percentage points until 2048. The participation rates of females in the age group 55 to 59 will rise by 21 percentage points until 2033. In the period 2024 to 2033 the statutory retirement age for females will be lifted from 60 to 65. We assume that the participation rate in the age group 60 to 64 will rise by 32 percentage points until 2044.

Additionally, we model the impact of abolishing temporary disability pensions and the increase of the eligibility for job protection (see Table 2.1). The share of temporary disability pensions (stocks) amounts to almost 20 percent in 2011 and decreases with age. We assume

a return to work (labour force) ratio of 40 percent for the stock of temporary disability pensions[5]). We estimate that rehabilitation measures will increase the labour force attachment in the age group 50 to 64 of all persons currently in temporary disability pension by 40 percent in the long run. We assess the impact of job protection using spikes in the inflow to disability pension at the age of 57. We assume that 50 percent of these spikes could be reduced by tightening the criteria for job protection. This implies an increase in the participation rate of the 55 to 59 age group of 1.23 percent (male) and 0.34 percent (female), respectively.

*Table 2.1: The impact of abolishing temporary disability pensions and tightening eligibility for job protection on participation rates*

| Age group | Disability pension | | Job protection | |
|---|---|---|---|---|
| | Males | Females | Males | Females |
| | | In percent | | |
| 15 to 19 years | 0.00 | 0.00 | | |
| 20 to 24 years | 0.05 | 0.03 | | |
| 25 to 29 years | 0.13 | 0.10 | | |
| 30 to 34 years | 0.18 | 0.16 | | |
| 35 to 39 years | 0.20 | 0.24 | | |
| 40 to 44 years | 0.26 | 0.34 | | |
| 45 to 49 years | 0.39 | 0.46 | | |
| 50 to 54 years | 2.32 | 2.77 | | |
| 55 to 59 years | 1.78 | 1.61 | 1.23 | 0.34 |
| 60 to 64 years | 0.48 | 0.21 | | |

Table 2.2 provides a comparison with our 2010 projections and the projections of the ageing report of the European Commission. In this report, we project a stronger impact of the pension reforms on the participation rates of older workers. In 2010 we expected an increase in the participation rate of persons aged 55 to 64 of 15 percentage points. According to the current projection the participation rate will increase by 20 percentage points. This is slightly above the results of the ageing report of the *European Commission* (2011, 2012), which projects an increase of 14 percentage points.

Several reasons support the expectation of a stronger impact of pension reforms on participation rates. The most recent pension reform implies stronger financial discounts for

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[5]) In the literature a huge range for return-to-work rates is found. Beal (2007) reports that return-to-work closures represent 29 percent of all claim closures of the reporting U.S. disability carriers and 42 percent of all closures excluding claims closed due to death or the end of the maximum benefit period. Recent evidence shows that providing financial incentives could encourage disability benefit recipients to increase their labour supply (see e.g. Campolieti and Riddell 2012). Kostol and Mogstad (2013) use a disability reform in Norway and estimate elasticities of labour-force non-participation in the range of 0.13-0.30.

early retirement and strengthens eligibility criteria. Measures to reduce the inflow into disability pensions are introduced. Decoupling rehabilitation from disability pension benefits and linking it with employment services could help to prolong working lives. Recent econometric studies for Austria (*Raab*, 2011; *Hanappi,* 2012) find a robust relationship between financial incentives and retirement behaviour. In the past Austrian pension regulations were characterised by a considerable degree of diversity. This complexity, combined with the uncertainty of future reforms, made it more difficult for Austrian individuals to form rational expectations about their future entitlements. As the individual pension account (Pensionskonto) improves the transparency of the Austrian pension system, it is to be expected that incentives to remain employed will increase. Of course we assume that no new channel into early retirement will be introduced.

*Table 2.2: The impact of pension reforms on participation rates in 2070*

| | Projections | |
| --- | --- | --- |
| | 2010[1]) | 2013[2]) |
| | Percentage points | |
| Females 55 to 59 years | 10 | 12 |
| Females 60 to 64 years | 18 | 25 |
| Males 55 to 59 years | 0 | 3 |
| Males 60 to 64 years | 9 | 19 |
| Total 55 to 64 years | 15 | 20 |
| | | |
| | Ageing Report 2012[3]) | |
| Females 55 to 64 years | | 18 |
| Males 55 to 64 years | | 10 |
| Total 55 to 64 years | | 14 |

Notes: Numbers are differences in the year 2070 to the projection based on the cohort method. - 1) Hofer et al. (2009). - 2) Own calculations. - 3) European Commission (2011, 2012).

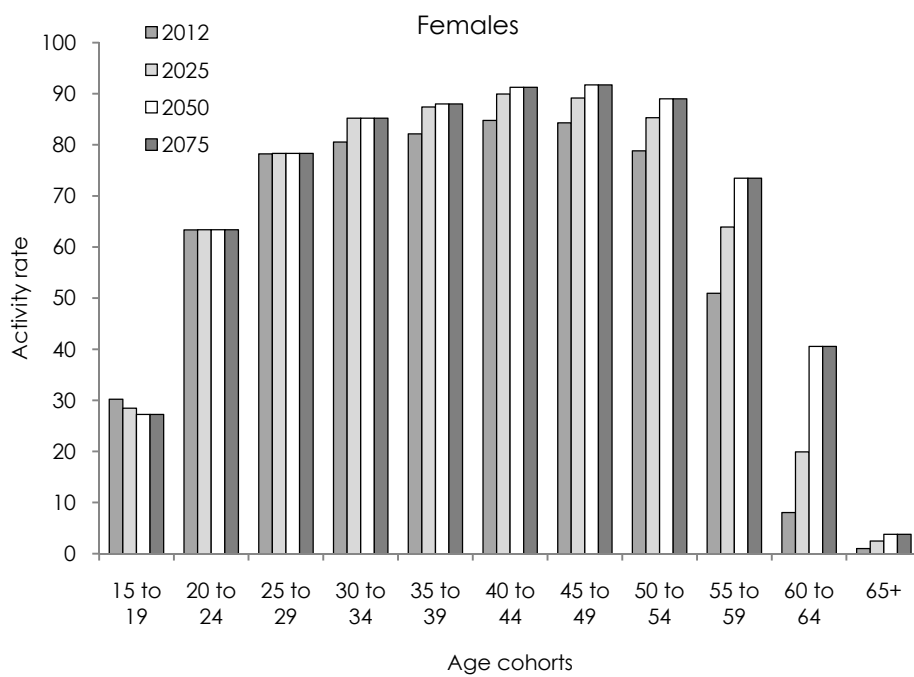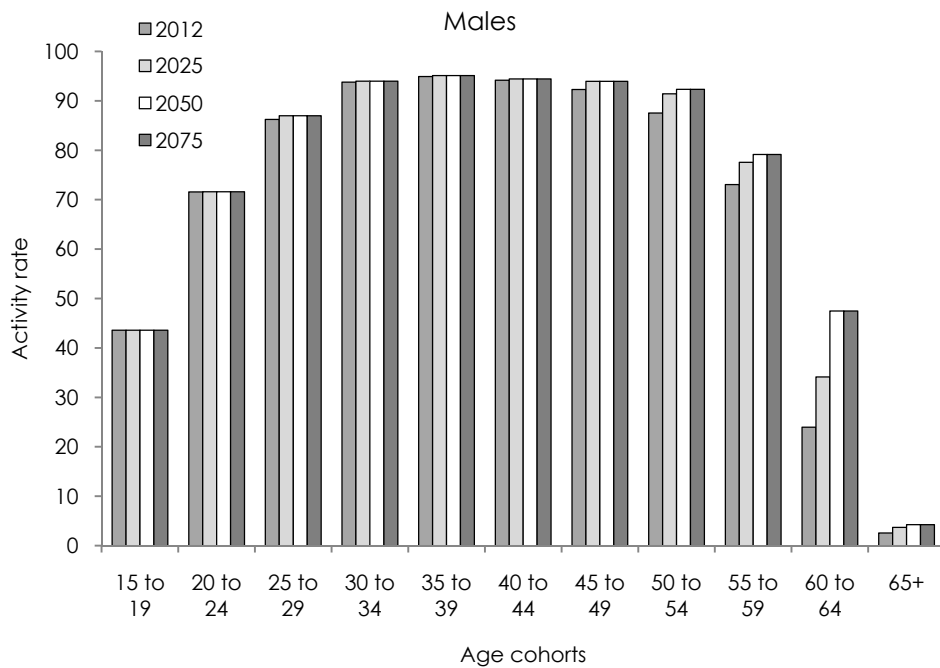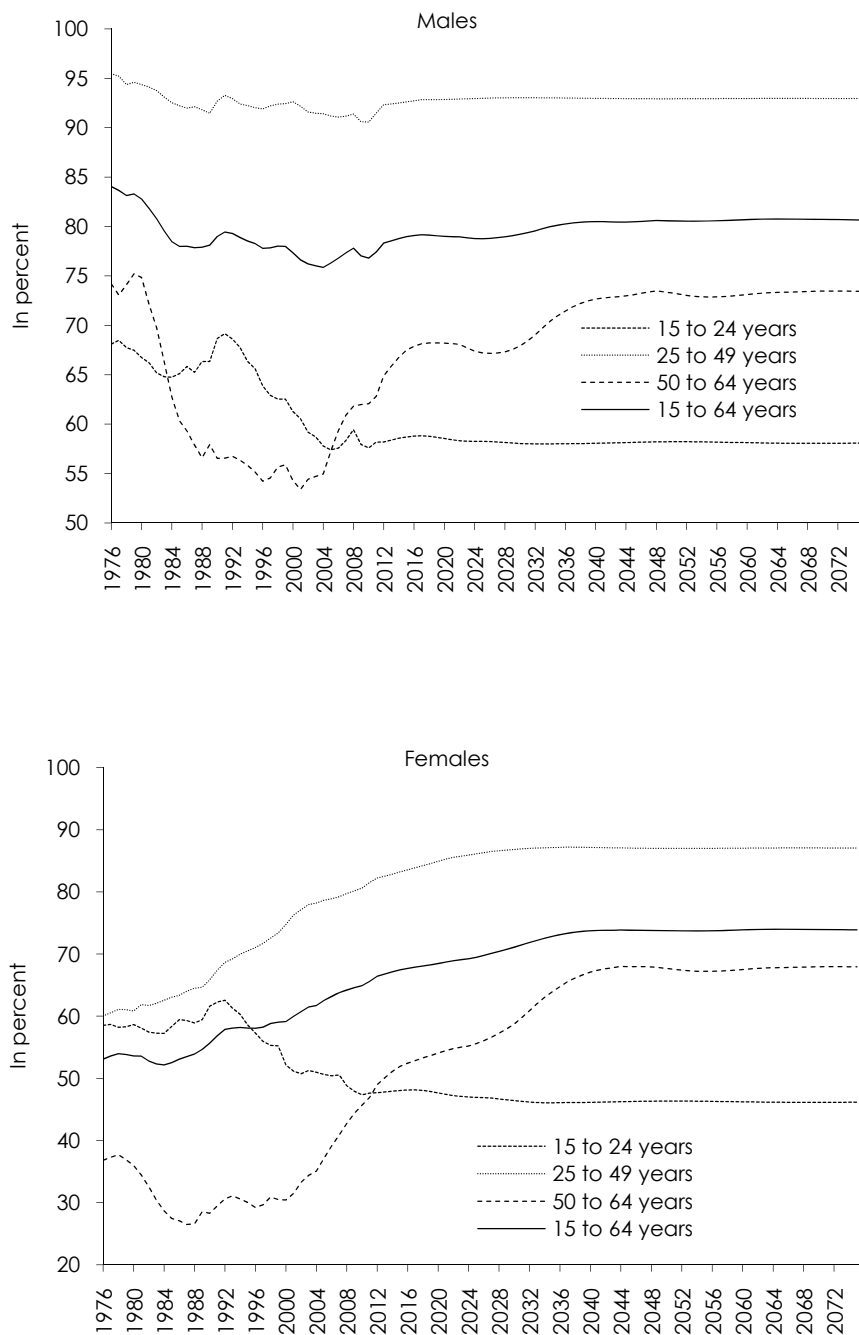*Figure 2.1: Labour Force Activity Rates across age groups and sexes*

*Figure 2.2: History and long-run projections of participation rates*

## 3. Simulations with A-LMM

The adjustment mechanisms in A-LMM are slow and stability of the model is not fully visible in the base scenario up to 2070, which represents the end of our main projection horizon. In the very long run the model tends to a steady state solution with a stable ratio of net foreign assets to nominal output. In the following, we first discuss a baseline scenario using the main variant of the latest Austrian population forecast (*Hanika et al.,* 2012). The baseline scenario has been created for comparison. We then consider two alternative scenarios based on (1) a low migration and (2) a high life expectancy scenario of the population forecast by Statistics Austria.

The population forecast by Statistics Austria extends to 2070 and is exogenous to the model. Since the model is intended for projections up to 2070, the population forecast horizon is too short for computing the forward looking part of A-LMM. Therefore, we use an extended population forecast going up to 2150 by assuming constant fertility and mortality rates. The extension is provided by Statistics Austria and enables us to obtain a forward looking solution until 2075. Forward looking terms appear in private consumption and investment functions.

### 3.1 Baseline scenario with the main variant of the population projection

The baseline scenario uses the main variant of the population forecast for Austria (*Hanika et al.,* 2012). Changes in the demographic assumptions are minor compared to the variant used in the previous update of the A-LMM model (*Hofer et al.,* 2010). The current forecast assumes lower immigration to Austria and a smaller increase in life expectancy. In the aggregate the picture for the demographic forecast remains unchanged: population in Austria will grow to 9 million persons in 2030 and will increase to 9.3 million in 2050. The population growth will be accompanied by a dramatic change in the age structure. The old age dependency ratio (persons aged 65 and older relative to persons aged 15 to 64) will climb from 26.5 percent in 2012 to 50.4 percent in 2070. The increase is larger than in the previous model update (2070: 47.8 percent).

The outlook for the development of the working age population is more pessimistic compared to the previous model update, implying a decrease in the working age population by 0.1 percent annually between 2012 and 2070. The economically active population will nearly stagnate. The slightly improved outlook for the labour force is due to upward revisions for participation rates. The total participation rate will increase from 72.8 percent in 2012 to 79.3 percent in 2070. Compared to the previous model update, the participation rate in 2070 is higher by nearly 3 percentage points. The brighter outlook for participation rates is due to higher starting values in the base year of the model simulation. Furthermore, the pension reform of spring 2012 increased monetary penalties for early retirement and made it more difficult to obtain a permanent disability pension (mandatory rehabilitation). Significantly higher participation rates are assumed for both sexes (Table 3.1).

*Table 3.1: Baseline*

| | 2012 | 2013 | 2020 | 2030 | 2040 | 2050 | 2060 | 2070 | Avg. change (in %) 2012/2070 | Cum. change (in % points) 2012/2070 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1,000 persons | | | | | |
| Working Age Population (15-64) | 5,720.7 | 5,723.7 | 5,753.5 | 5,554.9 | 5,428.9 | 5,427.8 | 5,374.6 | 5,391.5 | -0.1 | |
| Economically active population (Labour force) | 4,165.5 | 4,186.0 | 4,272.1 | 4,248.9 | 4,280.6 | 4,290.0 | 4,261.9 | 4,278.0 | 0.0 | |
| Economically active employees in full time equivalents | 3,095.3 | 3,105.9 | 3,163.0 | 3,146.0 | 3,176.3 | 3,187.4 | 3,165.6 | 3,179.0 | 0.0 | |
| Number of pensions | 2,260.4 | 2,269.8 | 2,436.4 | 2,804.1 | 3,007.9 | 3,127.8 | 3,189.6 | 3,191.4 | 0.6 | |
| | | | | | In percent | | | | | |
| Participation rate, total | 72.8 | 73.1 | 74.3 | 76.5 | 78.8 | 79.0 | 79.3 | 79.3 | 0.1 | 6.5 |
| Women | 66.7 | 67.1 | 68.8 | 72.5 | 75.5 | 75.7 | 75.9 | 76.0 | 0.2 | 9.3 |
| Men | 78.9 | 79.1 | 79.7 | 80.5 | 82.1 | 82.4 | 82.6 | 82.7 | 0.1 | 3.8 |
| Unemployment rate | 7.0 | 7.1 | 7.1 | 6.9 | 6.7 | 6.5 | 6.5 | 6.5 | -0.1 | -0.5 |
| Old age dependency ratio | 26.5 | 27.0 | 29.9 | 38.9 | 46.2 | 48.5 | 50.4 | 50.4 | 1.1 | 23.9 |
| Pensions relative to insured persons | 61.5 | 61.5 | 64.7 | 74.8 | 79.7 | 82.7 | 84.9 | 84.6 | 0.6 | 23.1 |
| Pensions relative to population aged 65+ | 149.2 | 146.8 | 141.7 | 129.7 | 120.0 | 118.8 | 117.8 | 117.5 | -0.4 | -31.6 |
| | | | | | Bill. € | | | | | |
| Gross domestic product at constant 2005 prices | 271.8 | 274.4 | 309.5 | 362.0 | 427.5 | 502.7 | 587.7 | 691.9 | 1.6 | |
| Gross domestic product at current prices | 309.9 | 319.1 | 413.4 | 589.4 | 848.5 | 1,216.3 | 1,733.4 | 2,487.7 | 3.7 | |
| | | | | | 1,000 € | | | | | |
| Real GDP per capita | 32.1 | 32.3 | 35.5 | 40.2 | 46.4 | 53.9 | 62.7 | 73.5 | 1.4 | |
| | | | | | 2012 = 100 | | | | | |
| Real wage per capita, in full time equivalents (MPL) | 100.0 | 100.5 | 111.6 | 131.4 | 153.5 | 180.2 | 212.0 | 248.3 | 1.6 | |
| | | | | | Percentage change against previous year | | | | | |
| Gross domestic product at constant 2005 prices | 0.8 | 1.0 | 1.7 | 1.6 | 1.7 | 1.6 | 1.6 | 1.7 | 1.6 | |
| Compensation to employees, at current prices | 4.3 | 2.9 | 3.7 | 3.6 | 3.7 | 3.6 | 3.6 | 3.7 | 3.7 | |
| Real wage per employee | 0.6 | 0.5 | 1.5 | 1.6 | 1.6 | 1.7 | 1.6 | 1.6 | 1.6 | |
| GDP deflator | 2.2 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | |
| | | | | | Ratio | | | | | |
| Marginal product of capital | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 | 0.0 | |
| Capital-output-ratio | 3.77 | 3.79 | 3.75 | 3.76 | 3.75 | 3.74 | 3.75 | 3.75 | 0.0 | 0.0 |

The consequences of the recent financial and economic crisis have been accounted for in the baseline scenario. The crisis resulted in the most severe economic recession in Austria for decades and a loss of real output by 3.8 percent in 2009. The baseline scenario implies that the economic crisis shifts the level of output permanently downwards, leaving the growth rate following the level shift unchanged. Annual labour productivity growth (in full time equivalents) will thus amount to 1.6 percent, corresponding to the value assumed in the previous model update. No long term impact of the crisis is assumed for labour demand. The unemployment rate, however, will decline only gradually to 6.9 percent until 2030, decreasing further to 6.5 percent in 2070. This implies an upward revision of the steady state unemployment rate by 0.3 percentage points. It is assumed that the substantial increase in unemployment during the economic crisis will result in permanently higher unemployment rates in Austria due to hysteresis effects.

The inflation rate showed relatively high volatility – related to the consequences of the economic crisis – in the most recent past. In the meantime inflation has stabilized. The baseline scenario foresees no fundamental change in the long-term perspectives for consumer price inflation. Price increases are assumed to follow the target set at 2 percent by the European Central Bank. Real GDP and real per capita wage grow at an annual growth rate of 1.6 percent. Economic growth will thus be slightly lower compared to the annual growth rate of 1.7 percent implied by the previous model update. Together this leads to a substantial downward revision of output for 2070. The previous model update led to an increase in real output of 165 percent between 2012 and 2070. In the current baseline scenario real output in 2070 is higher by 155 percent compared to the year 2012.

The development of key parameters for the public pension system is slightly improved in the current scenario compared to the previous model update. The upward revision of the employment rates for older persons dampens the annual growth of the number of pensions to 0.6 percent (compared to 0.7 percent in previous simulations)[6]. Together with the slightly higher old age dependency ratio in the current population forecast this implies that the increase in the number of pensions relative to the number of insured persons will be 23 percentage points between 2012 and 2070 compared to 26.6 percentage points in the model update in *Hofer et al.* (2010). The number of pensions relative to the population aged 65+ decreases by 31.6 percentage points due to higher participation rates in the cohorts younger than the legal pension entry age of 65 coupled with fewer disability and survivor's pensions. At the same time, the ratio of pensioners older than 65 to the respective population group will stay constant.

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[6] For details on modeling the social security system in general and the pension system in particular, cf. *Hofer et al.* (2007).

## 3.2 Alternative demographic scenarios

The main variant of Statistic Austria's population projection foresees an increase in Austria's working age population until 2019. Between 2020 and 2038, the working age population will decline, reaching a through at 5.4 million. After this decline, the working age population will temporarily increase and peters out at 5.4 million persons in 2070 (Table 3.1). The main variant assumes a net immigration between 25,000 and 29,000 persons per year.

Compared to the previous population forecast in *Hanika et al.* (2009), the current forecast assumes lower immigration to Austria and a smaller increase in life expectancy, whereas assumptions about the fertility rates remain essentially the same. Therefore we present our results for the low and high immigration scenarios and for the scenario with a higher life expectancy. These scenarios show the effects of demographic trends on Austria's economy in the long run.

Low and high migration scenarios represent symmetric deviations that arise due to different assumptions about immigration, while emigration is assumed constant. The difference between the main population scenario and alternative migration scenarios is ±7.000 persons in the beginning of the projection period. Around 2030, the difference between the alternative and the main scenario becomes ±15,000 persons. This results in a deviation of the working age population from the main scenario of ±157,000 persons in 2030 and ±356,000 persons in 2050. The low migration scenario projects a decrease in the working age population by 0.3 percent per year to 4.9 million in 2070. The high migration scenario projects a nearly constant working age population. Before presenting the simulation results, we briefly discuss the effects of migration on output and employment.

The main scenario projects increasing life expectancy rates at birth. The life expectancy of males increases from 78.1 years in 2011 to 87.3 years in 2060, that of females from 83.4 years in 2011 to 90.6 in 2060. In an alternative higher life expectancy scenario, Statistics Austria assumes an even stronger increase in life expectancy at birth due to lower mortality rates. The effect of higher expectancy on the population dynamics is considerably smaller than those of migration and fertility. The overall effect amounts to an increase in population of 2 percent relative to the main scenario in 2050, which is concentrated in the higher age cohorts.

In the coming decades, low fertility, continuous increases in life expectancy and immigration will transform Austria's population. Demographic change influences overall economic performance through different transmission channels (see e.g. *Carone* (2005) for a literature review). Population aging will have a direct impact on GDP growth and employment. Aging leads to a decline in the size of the working age population and has an adverse impact on potential labour input. Additionally, to the factors and parameters of the production function, labour productivity depends on the quality of workers in terms of their skills. Higher migration will increase the working age population and can potentially stimulate growth. A precondition for this is that the skills of the migrants broadly match the economic needs of

Austria. This section focuses on the potential impact of migration on economic growth and employment.

One has to differentiate between long-run economic consequences of migration and transitional impacts. In the short run immigration of people of working age increases the supply of labour without any corresponding adjustment in the stock of capital. The Stolper-Samuelson theorem provides a basic tool to analyse such an effect (*Riley – Weale*, 2006). It suggests that when different factors of production (e.g. capital, labour) are used in the production process, a cet. Par. Increase in the supply of one factor of production (e.g. labour) will in the short-run reduce the price of that factor. Other factors, which are close substitutes for it, may also fall in price, while complements are likely to rise in price. An increase in labour supply due to immigration implies that the wage rate should fall and the return on capital should rise. In a small open economy with high capital mobility, the higher return on capital should trigger inflows of capital, as well as higher long-term saving, and the capital stock will increase. This process will continue until a new equilibrium is reached. Unless there are specific reasons (e.g. limited migrant skills), productivity and hence wage per person hour will return to their original values.

The impact of migration depends on the skill-mix of the migrants. Migration of workers with low human capital implies falling wages in low-skilled jobs. The outcome for high-skilled workers depends on the ease of replacing high-skill with low-skill occupations. If the replacement is difficult, wages in skilled occupations may rise like the return on capital. The pressure is concentrated among the poorest part of the working population. This effect may unwind over time only if immigrants eventually take up higher-skilled jobs. Riley and Weale mention two further potential effects. If migrants take up jobs whose skill requirements are below their skill levels, their productivity in these jobs may be higher than that of low-skilled workers doing the same job. On the other hand, migrants filling medium and high skill positions may reduce the incentive for employers to offer training to indigenous workers. To sum up, if the occupational pattern of migrants matches that of the indigenous population and the capital stock rises in line with employment, then GDP will rise in line with the extra labour supply.

The discussion above assumes full employment and that wages adjust to clear the labour market. If wages are downward sticky, it is likely that migration will lead to an increase in unemployment. Immigrating young workers in low-skilled jobs with minimum wage agreements are an example. In this case the minimum wage prevents the fall in pay rates necessary to clear the labour market. On the other hand, if migrants fill bottlenecks, immigration may result in an increase in employment exceeding the number of migrants. The simulations of *Riley – Weale* (2006) for the UK suggest that a one percent unanticipated increase in the labour force leads to a 0.5 percentage point increase in unemployment in the first year, with unemployment gradually disappearing as wages adjust. Note, however, that if the mix of jobs desired by employees is permanently affected, so too will be wage differentials and unemployment. *Riley – Young* (2007) develop a model to establish how

relative wages and unemployment are affected by changes in the skill structure of the population. *Riley – Weale* (2006) use the model of Riley and Young to estimate the effects of a 0.5 percent increase of the labour force, concentrated on low-skill workers relative to an increase matching the existing population structure. They report small relative effects, output growth is 0.2 percent lower and unemployment is increased by 0.1 percent in the low-skilled case. These effects are only permanent, if the occupational structure of recent migrants does not adjust towards that of the indigenous population.

*Barrell et al.* (2006) use the macroeconomic model NIGEM to assess the effect of increased migration from Poland on output and unemployment in Great Britain and Germany. Overall, immigration tends to have negative transitory impacts on unemployment, but positive permanent effects on the long-run level of output. The mechanics can be explained as follows. At first, labour demand does not change because of unanticipated migration. Therefore, new migrants displace existing workers or add to labour supply. Consequently, negotiated wages drop, and the labour demand as well as employment increase. Moreover, lower wages dampen inflation temporarily and may induce monetary authorities to reduce interest rates. Migration has also an impact on output and the capital stock. Initially productivity falls as labour becomes cheaper (relative to capital), so that, for a given level of output, firms hire more workers. As result of higher levels of utilisation, the rate of return on existing capital rises. As the rise in employment overcompensates for the initial decline in wages, household income goes up and therefore also consumption. In line with higher consumption and profitability of capital, companies build up their capital stock. This increase in the capital stock restores productivity to its original level or to a new steady state. Whether the effect of migration on productivity is permanent or transitory depends on adjustments in the labour-capital ratio, the elasticity of substitution, the rate of technical progress, or the average level of skills.

The impact of new migrants on unemployment in Germany and the UK is similar. Initially, unemployment goes up as only half of the migrants find a job within the first year. Output will rise in both countries and the increase in the labour force can only be partly absorbed. In the long run, both countries settle to new equilibriums with higher output and the same unemployment rate. In both countries output rises marginally less than employment, because of the assumption that the adjustment of the public capital stock and the housing stock is not completely in line with the higher labour force.

Economic theory suggests that in the long-run, immigration causes a permanently higher level of output and employment. However, the economic impact could be less favourable if the skill distribution of new migrants does not align with the need of the host country. The pattern of migration in Austria can be described in the following way. In 2012 16 percent of the inhabitants of Austria were foreign born. The share of persons with migration background is according to Statistic Austria 19 percent.

Between 2002 and 2011, the average immigration per year has been 112,500 persons per year. Migration is an important source of population growth in Austria. A-LMM does not

distinguish between natives and migrants. In the following we discuss differences in human capital endowment and labour supply behaviour between natives and migrants in Austria. The data also indicate low educational mobility for migrants. Overall, natives on average are better educated and are more likely to work in high-skilled jobs (*Felderer et al.*, 2004). Furthermore, there is considerable variation depending on the country of origin. Migrants from former Yugoslavia and particularly from Turkey have very low education levels and are more likely to work in elementary jobs.

*Biffl* (2006) investigates the relationship between labour force participation and country of birth. There are some differences in labour force attachment and skills with respect to the country of birth. For prime age males the participation rates are relatively similar for all groups. Young males from former Yugoslavia, Turkey and Austria have relatively high participation rates compared to people from other regions. With respect to the older working age population the participation rates of people from other regions are considerably higher. Overall, the labour force attachment of males is hardly depending on the country of birth, especially in their prime working age. The participation rates among females show more variability. In the age group 20 to 35 Austrian females have the highest participation rates. In the age group above 30 the participation rates of females born in (former) Yugoslavia or in the new EU member countries are higher than the rates of their Austrian counterparts. Turkish females have the lowest rates in the prime and older age groups. There is some evidence that Muslim females from Bosnia and also from Turkey are less likely to participate in the labour market (*Biffl*, 2006).

Recent trends and new institutional rules tend to indicate that future migrants are more likely to be better educated and less likely to come from traditional migration countries like Yugoslavia and Turkey (*Biffl*, 2006). We expect that these migrants are more similar to the native population and thus model migration in the base scenario as an increase in labour supply without differentiating between natives and migrants (*Barrell et al.*, 2006).

### 3.2.1 Effects of low migration on output and employment

A drop in the working age population is a textbook example of a negative supply shock. Such a shock leads to a permanent decrease in the level of real GDP, leaving real per capita GDP unaffected. Table 3.2.1 presents the simulation results for the low migration scenario of Statistics Austria. In this variant the working age population (15-64) increases until 2016, reaching a peak of 5.7 million persons in that year. In the following, the working age population decreases continuously until the end of our forecast horizon. Over the period 2012 to 2070, the average rate of change in the working age population amounts to –0.3 percent. The old age dependency ratio (population aged 65+ over labour force) soars from the current value of 26.5 to a peak of 52.8 percent in 2062.

The diminishing size of the working age population weighs negatively on the labour force, although higher participation rates mitigate the rate of decline to an average of 0.1 percent per year. Starting from 2018 the labour force constantly falls thereafter (Figure 3.2.1). The

dampening effect of the labour force has only modest implications for the unemployment rate. Between 2030 and 2070 it is 0.1 percentage points lower than in the baseline scenario. The steady-state unemployment rate equals to 6.5 percent in the baseline.

On average output growth amounts to 1.5 percent and thus is 0.1 percentage points lower than in the baseline scenario (Figure 3.2.2). Output growth increases from 0.9 percent at the beginning of the simulation period to 1.6 percent in 2070. Compared to the baseline scenario, the growth path shifts downwards but shows an otherwise similar time-pattern. In A-LMM the capital stock adjusts in response to the lack of workers. The GDP per capita and real wages, therefore, grow at the same rate as in the baseline scenario.

In the low migration scenario, the old age dependency ratio in 2070 is 1.8 percentage points higher than in the main scenario. The consequences of aging for the pension system are considerable because immigrants tend to be younger than the residents and consequently have higher participation rates. This leads to an increase in the number of pensions relative to the number of insured persons by 2.8 percentage points in 2070, which induces higher public expenditures as compared to the baseline. The share of persons with a pension entitlement in the cohort 65+ is lower than in the baseline. At the same time the size of this cohort decreases so that the net effect on the number of pensions relative to population aged 65+ is negative.

Table 3.2.1: Population projection with low migration

| | 2012 | 2013 | 2020 | 2030 | 2040 | 2050 | 2060 | 2070 | Avg. change (in %) 2012/2070 | Cum. change (in % points) 2012/2070 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1,000 persons | | | | | |
| Working Age Population (15-64) | 5,720.7 | 5,714.4 | 5,691.5 | 5,397.4 | 5,166.5 | 5,071.6 | 4,947.4 | 4,910.5 | -0.3 | |
| Economically active population (Labour force) | 4,165.5 | 4,178.9 | 4,224.3 | 4,123.6 | 4,072.1 | 4,010.1 | 3,927.2 | 3,899.3 | -0.1 | |
| Economically active employees in full time equivalents | 3,095.3 | 3,102.5 | 3,130.1 | 3,055.9 | 3,023.5 | 2,980.2 | 2,917.0 | 2,897.6 | -0.1 | |
| Number of pensions | 2,260.4 | 2,269.1 | 2,430.3 | 2,784.9 | 2,966.3 | 3,050.0 | 3,058.8 | 3,005.1 | 0.5 | |
| | | | | | In percent | | | | | |
| Participation rate, total | 72.8 | 73.1 | 74.2 | 76.4 | 78.8 | 79.1 | 79.4 | 79.4 | 0.1 | 6.6 |
| Women | 66.7 | 67.1 | 68.8 | 72.4 | 75.5 | 75.7 | 76.1 | 76.1 | 0.2 | 9.4 |
| Men | 78.9 | 79.1 | 79.6 | 80.4 | 82.1 | 82.4 | 82.7 | 82.7 | 0.1 | 3.8 |
| Unemployment rate | 7.0 | 7.1 | 7.1 | 6.8 | 6.6 | 6.5 | 6.5 | 6.4 | -0.1 | -0.6 |
| Old age dependency ratio | 26.5 | 27.1 | 30.2 | 39.9 | 48.0 | 50.8 | 52.7 | 52.2 | 1.2 | 25.7 |
| Pensions relative to insured persons | 61.5 | 61.6 | 65.2 | 76.6 | 82.6 | 86.2 | 88.3 | 87.4 | 0.6 | 25.9 |
| Pensions relative to population aged 65+ | 149.2 | 146.7 | 141.6 | 129.4 | 119.6 | 118.3 | 117.4 | 117.3 | -0.4 | -31.9 |
| | | | | | Bill. € | | | | | |
| Gross domestic product at constant 2005 prices | 271.8 | 274.2 | 306.8 | 353.0 | 409.3 | 473.2 | 545.1 | 634.2 | 1.5 | |
| Gross domestic product at current prices | 309.9 | 318.8 | 409.7 | 574.8 | 812.4 | 1,144.9 | 1,607.8 | 2,280.2 | 3.5 | |
| | | | | | 1,000 € | | | | | |
| Real GDP per capita | 32.1 | 32.3 | 35.5 | 40.1 | 46.2 | 53.6 | 62.3 | 73.2 | 1.4 | |
| | | | | | 2012 = 100 | | | | | |
| Real wage per capita, in full time equivalents (MPL) | 100.0 | 100.7 | 111.9 | 132.2 | 154.7 | 181.7 | 213.7 | 250.0 | 1.6 | |
| | | | | Percentage change against previous year | | | | | | |
| Gross domestic product at constant 2005 prices | 0.8 | 0.9 | 1.5 | 1.4 | 1.5 | 1.4 | 1.5 | 1.6 | 1.5 | |
| Compensation to employees, at current prices | 4.3 | 2.9 | 3.6 | 3.4 | 3.5 | 3.4 | 3.5 | 3.6 | 3.5 | |
| Real wage per employee | 0.6 | 0.7 | 1.6 | 1.6 | 1.6 | 1.7 | 1.6 | 1.6 | 1.6 | |
| GDP deflator | 2.2 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | |
| | | | | | Ratio | | | | | |
| Marginal product of capital | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 | 0.0 | 0.0 |
| Capital-output-ratio | 3.77 | 3.79 | 3.76 | 3.77 | 3.77 | 3.77 | 3.78 | 3.77 | 0.0 | |

### 3.2.2  Effects of high migration on output and employment

Higher migration implies a stronger inflow of labour and is an example of a positive supply shock. Such a shock leads to a permanent increase in the level of real GDP, leaving real per capita GDP unaffected. The size of the supply shock in the high migration scenario of Statistics Austria is comparable to that in the low migration scenario detailed above, but the sign is reversed. Consequently, we expect symmetric effects on the macroeconomic variables, which are provided in Table 3.2.2.

Higher migration leads to an increase in the labour force. The resulting increase in the GDP growth and wages further increases the labour force by inducing higher participation rates. Figure 3.2.1 shows the cumulative effect of higher migration on the labour force in comparison with the other scenarios. Compared to the baseline scenario, the unemployment rate rises during the first few years, and converges to the steady state level thereafter.

On average output growth amounts to 1.8 percent and thus is 0.2 percentage points higher than in the baseline scenario (Figure 3.2.2). We observe the expected symmetry with respect to the output growth rate as compared to the low migration scenario. The per capita quantities, however, remain unchanged. The fact that the marginal product of capital is very similar to that in the baseline scenario shows that forward looking firms adjust their capital stock in response to the higher expected output.

Higher migration decreases the old-age dependency ratio by 1.5 percentage points in 2070, leading to lower public expenditures on pensions. Between 2012 and 2030 the share of persons with a pension entitlement in the cohort 65+ decreases by 31.4 percentage points. While the size of this cohort also increases, the net effect on the number of pensions relative to population aged 65+ is negative.

*Figure 3.2.1: Labour force*
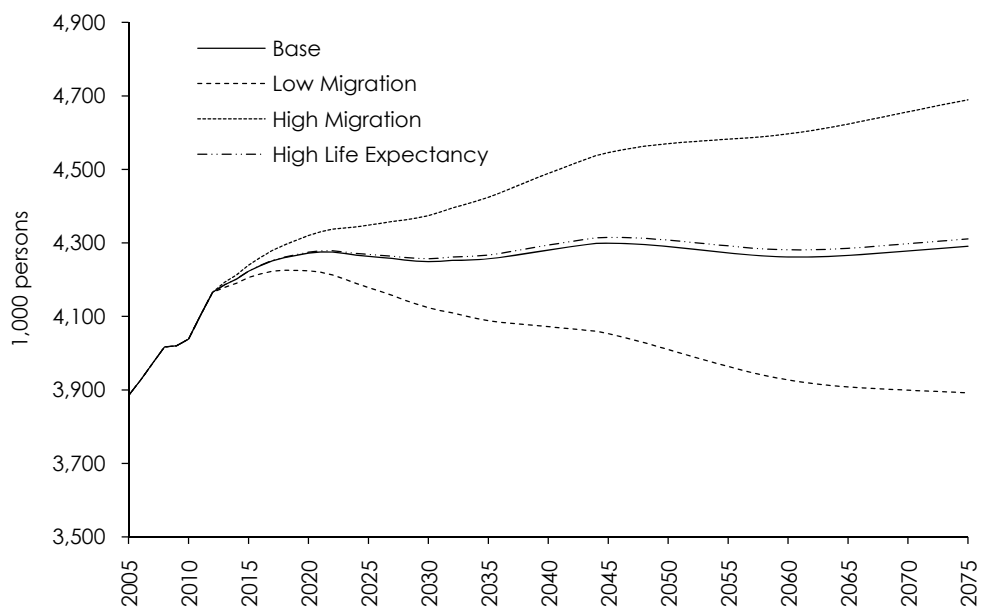


*Figure 3.2.2: Growth rate of real GDP*
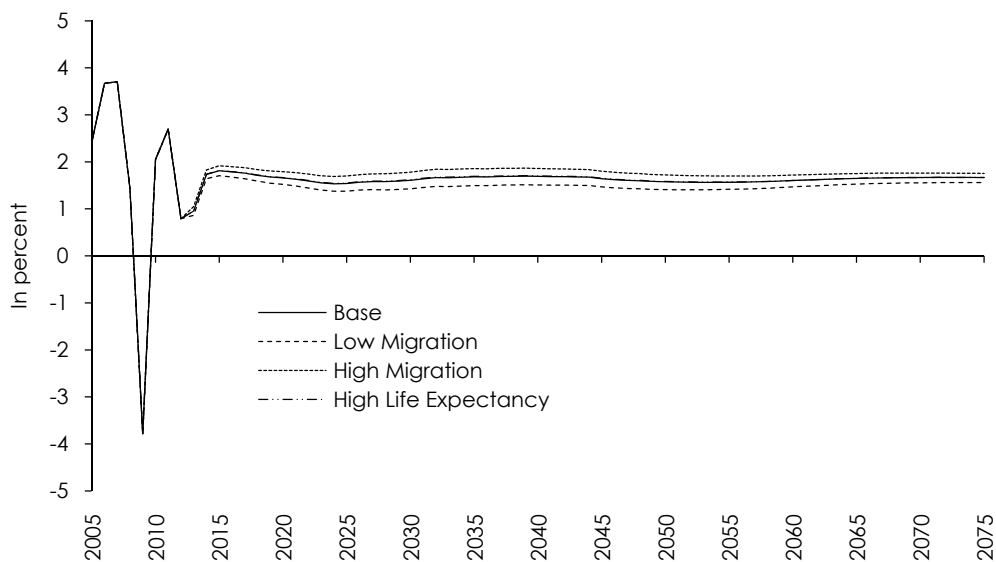


Note: The line for higher life expectancy is masked by the baseline due to an almost identical development.

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*Table 3.2.2: Population projection with high migration*

| | 2012 | 2013 | 2020 | 2030 | 2040 | 2050 | 2060 | 2070 | Avg. change (in %) 2012/2070 | Cum. change (in % points) 2012/2070 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1,000 persons | | | | | |
| Working Age Population (15-64) | 5,720.7 | 5,733.0 | 5,815.5 | 5,712.4 | 5,691.4 | 5,784.0 | 5,801.9 | 5,872.6 | 0.0 | |
| Economically active population (Labour force) | 4,165.5 | 4,193.1 | 4,320.0 | 4,374.3 | 4,489.0 | 4,570.0 | 4,596.6 | 4,656.6 | 0.2 | |
| Economically active employees in full time equivalents | 3,095.3 | 3,109.4 | 3,196.0 | 3,236.0 | 3,329.2 | 3,394.6 | 3,414.1 | 3,460.4 | 0.2 | |
| Number of pensions | 2,260.4 | 2,270.5 | 2,442.5 | 2,823.4 | 3,049.5 | 3,205.6 | 3,320.3 | 3,377.7 | 0.7 | |
| | | | | | In percent | | | | | |
| Participation rate, total | 72.8 | 73.1 | 74.3 | 76.6 | 78.9 | 79.0 | 79.2 | 79.3 | 0.1 | 6.5 |
| Women | 66.7 | 67.1 | 68.9 | 72.5 | 75.5 | 75.7 | 75.9 | 75.9 | 0.2 | 9.2 |
| Men | 78.9 | 79.2 | 79.7 | 80.6 | 82.2 | 82.3 | 82.5 | 82.6 | 0.1 | 3.7 |
| Unemployment rate | 7.0 | 7.2 | 7.2 | 6.9 | 6.7 | 6.6 | 6.5 | 6.5 | -0.1 | -0.5 |
| Old age dependency ratio | 26.5 | 27.0 | 29.6 | 38.0 | 44.5 | 46.5 | 48.4 | 48.9 | 1.1 | 22.4 |
| Pensions relative to insured persons | 61.5 | 61.4 | 64.1 | 73.2 | 77.0 | 79.5 | 81.9 | 82.2 | 0.5 | 20.7 |
| Pensions relative to population aged 65+ | 149.2 | 146.8 | 141.9 | 130.0 | 120.4 | 119.2 | 118.2 | 117.7 | -0.4 | -31.4 |
| | | | | | Bill. € | | | | | |
| Gross domestic product at constant 2005 prices | 271.8 | 274.7 | 312.3 | 370.9 | 445.6 | 532.2 | 630.2 | 749.5 | 1.8 | |
| Gross domestic product at current prices | 309.9 | 319.4 | 417.1 | 604.0 | 884.4 | 1,287.6 | 1,858.8 | 2,694.8 | 3.8 | |
| | | | | | 1,000 € | | | | | |
| Real GDP per capita | 32.1 | 32.3 | 35.5 | 40.3 | 46.6 | 54.2 | 63.0 | 73.7 | 1.4 | |
| | | | | | 2012 = 100 | | | | | |
| Real wage per capita, in full time equivalents (MPL) | 100.0 | 100.4 | 111.3 | 130.6 | 152.4 | 178.8 | 210.6 | 246.9 | 1.6 | |
| | | | | Percentage change against previous year | | | | | | |
| Gross domestic product at constant 2005 prices | 0.8 | 1.0 | 1.8 | 1.8 | 1.9 | 1.7 | 1.7 | 1.8 | 1.8 | |
| Compensation to employees, at current prices | 4.3 | 2.9 | 3.9 | 3.8 | 3.9 | 3.8 | 3.7 | 3.8 | 3.8 | |
| Real wage per employee | 0.6 | 0.4 | 1.5 | 1.5 | 1.6 | 1.7 | 1.6 | 1.6 | 1.6 | |
| GDP deflator | 2.2 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | |
| | | | | | Ratio | | | | | |
| Marginal product of capital | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 | 0.0 | 0.0 |
| Capital-output-ratio | 3.77 | 3.79 | 3.75 | 3.75 | 3.73 | 3.72 | 3.73 | 3.73 | 0.0 | |

### 3.2.3 An alternative high life expectancy scenario of the population projection

Table 3.2.3 presents the results for the high life expectancy scenario on the macroeconomic development in Austria. The main difference between the baseline and the high life expectancy scenario lies in the old age dependency ratio and the number of pensions. Both indicators are higher due to lower mortality rates in the older age cohorts. The effect of higher life expectancy at birth on the labour force is positive but small (Figure 3.2.1). The increase in the labour force amounts to about 19,700 persons in 2070. As can be seen in Figure 3.2.2, the resulting growth in the GDP growth is almost identical (Table 3.2.3).

Whereas the economic development is similar to the base scenario, the increased life expectancy has significant consequences for the old age dependency ratio, which increases from 26.5 percent to 53.8 percent in 2070. Most of the increase in the old age dependency ratio will occur until 2060. In accordance with this development the number of pensions increases from currently 2.3 million to 3.4 million in 2070. In the base scenario the number of pensions in 2070 is 3.2 million. The number of pension relative to the population aged 65+ decreases marginally compared to the baseline. This is a consequence of the definition of this ratio and the assumption of a constant share of pensioners in the population aged 65+.

*Table 3.2.3: Population projection with high life expectancy*

| | 2012 | 2013 | 2020 | 2030 | 2040 | 2050 | 2060 | 2070 | Avg. change (in %) 2012/2070 | Cum. change (in % points) 2012/2070 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | |
| Working Age Population (15-64) | 5,720.7 | 5,723.9 | 5,757.1 | 5,564.7 | 5,442.6 | 5,444.5 | 5,391.8 | 5,408.9 | -0.1 | |
| Economically active population (Labour force) | 4,165.5 | 4,186.2 | 4,274.6 | 4,257.0 | 4,293.9 | 4,307.7 | 4,281.3 | 4,297.7 | 0.1 | |
| Economically active employees in full time equivalents | 3,095.3 | 3,106.0 | 3,164.7 | 3,151.4 | 3,185.6 | 3,199.6 | 3,179.0 | 3,192.9 | 0.1 | |
| Number of pensions | 2,260.4 | 2,270.7 | 2,452.1 | 2,862.3 | 3,118.2 | 3,293.0 | 3,383.6 | 3,386.2 | 0.7 | |
| *1,000 persons* | | | | | | | | | | |
| Participation rate, total | 72.8 | 73.1 | 74.2 | 76.5 | 78.9 | 79.1 | 79.4 | 79.5 | 0.2 | 6.6 |
| Women | 66.7 | 67.1 | 68.8 | 72.5 | 75.6 | 75.8 | 76.0 | 76.1 | 0.2 | 9.4 |
| Men | 78.9 | 79.1 | 79.7 | 80.5 | 82.2 | 82.4 | 82.7 | 82.8 | 0.1 | 3.9 |
| Unemployment rate | 7.0 | 7.1 | 7.2 | 6.9 | 6.7 | 6.6 | 6.5 | 6.5 | -0.1 | -0.5 |
| Old age dependency ratio | 26.5 | 27.0 | 30.1 | 39.9 | 48.1 | 51.4 | 53.8 | 53.8 | 1.2 | 27.3 |
| Pensions relative to insured persons | 61.5 | 61.5 | 65.0 | 76.2 | 82.3 | 86.7 | 89.6 | 89.3 | 0.6 | 27.8 |
| Pensions relative to population aged 65+ | 149.2 | 146.7 | 141.4 | 129.0 | 119.2 | 117.7 | 116.6 | 116.3 | -0.4 | -32.8 |
| *In percent* | | | | | | | | | | |
| Gross domestic product at constant 2005 prices | 271.8 | 274.4 | 309.7 | 362.5 | 428.6 | 504.4 | 590.0 | 694.8 | 1.6 | |
| Gross domestic product at current prices | 309.9 | 319.1 | 413.6 | 590.3 | 850.6 | 1,220.5 | 1,740.2 | 2,498.0 | 3.7 | |
| *Bill. €* | | | | | | | | | | |
| Real GDP per capita | 32.1 | 32.3 | 35.5 | 40.0 | 45.9 | 53.0 | 61.5 | 72.2 | 1.4 | |
| *1,000 €* | | | | | | | | | | |
| Real wage per capita, in full time equivalents (MPL) | 100.0 | 100.5 | 111.6 | 131.3 | 153.4 | 180.1 | 212.0 | 248.3 | 1.6 | |
| *2012 = 100* | | | | | | | | | | |
| Gross domestic product at constant 2005 prices | 0.8 | 1.0 | 1.7 | 1.6 | 1.7 | 1.6 | 1.6 | 1.7 | 1.6 | |
| Compensation to employees, at current prices | 4.3 | 2.9 | 3.7 | 3.6 | 3.7 | 3.6 | 3.6 | 3.7 | 3.7 | |
| Real wage per employee | 0.6 | 0.5 | 1.5 | 1.6 | 1.6 | 1.7 | 1.6 | 1.6 | 1.6 | |
| GDP deflator | 2.2 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | |
| *Percentage change against previous year* | | | | | | | | | | |
| Marginal product of capital | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 | 0.0 | 0.0 |
| Capital-output-ratio | 3.77 | 3.79 | 3.75 | 3.76 | 3.75 | 3.74 | 3.75 | 3.75 | 0.0 | 0.0 |
| *Ratio* | | | | | | | | | | |

## 3.3    Alternative productivity scenarios

There is an ongoing debate whether the recent financial and economic crisis will result in a permanently lower output growth. The growth rate of total factor productivity is one of the main determinants of the average long-term growth rate of an economy and it is exogenous in A-LMM. This opens the opportunity to experiment with different assumptions about the growth rate of total factor productivity.

The average growth rate of the economy is determined by changes in employment, the capital stock, and total factor productivity. While employment is primarily driven by participation rates and demographic developments, the capital stock adjusts endogenously according to optimality conditions with respect to Tobin's Q. In this section we will discuss a pessimistic and an optimistic alternative scenario for productivity growth (see Tables 3.3.1 and 3.3.2). In the baseline, the growth rate of total factor productivity is set constant at an annual rate of 0.8 percent. This value is lower than assumed hitherto and implies for Austria the same growth of average labour productivity (in full time equivalents) as assumed by European Aging Group for hourly labour productivity growth (Table 1.8 in *European Commission*, 2012). Our baseline average labour productivity growth matches the EU27 average and is 0.2 percentage points above the average for the Euro area.

On a balanced growth path, where employment and the capital output ratio remain constant, labour productivity growth coincides with the growth rate of total factor productivity divided by the labour share. This scenario implies an annual rate of growth in labour productivity of 1.6 percent. The low growth scenario assumes a growth rate of total factor productivity of 0.675 percent. This implies an average increase in labour productivity of 1.35 percent. In the high growth scenario we assume that total factor productivity increases by 0.925 percent per year, which corresponds to an average increase in labour productivity by 1.85 percent per year. In both productivity scenarios, the underlying population projection corresponds to the main variant as in the baseline scenario.

Figure 3.3.1 compares the assumptions for the alternative productivity scenarios to the historic development of average labour productivity growth (in full time equivalents) from 1976 to 2012. The mean of the annual growth rates of 1.6 percent per year is identical to the growth rate in the baseline scenario (1.6 percent). The amplitude of historic fluctuations in labour productivity growth has been markedly higher than the range between our lower and upper values, implying positive as well as negative deviations from the average growth rate. The most recent development, however, is clearly below the long-run average. This motivates our reassessment of the long-run growth perspective.

*Table 3.3.1: Low Labour Productivity Growth*

| | 2012 | 2013 | 2020 | 2030 | 2040 | 2050 | 2060 | 2070 | Avg. change (in %) 2012/2070 | Cum. change (in % points) 2012/2070 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | **1,000 persons** | | | | | |
| Working Age Population (15-64) | 5,720.7 | 5,723.7 | 5,753.5 | 5,554.9 | 5,428.9 | 5,427.8 | 5,374.6 | 5,391.5 | -0.1 | |
| Economically active population (Labour force) | 4,165.5 | 4,186.0 | 4,263.5 | 4,228.8 | 4,247.6 | 4,243.8 | 4,202.6 | 4,205.4 | 0.0 | |
| Economically active employees in full time equivalents | 3,095.3 | 3,105.9 | 3,156.5 | 3,130.1 | 3,150.3 | 3,151.5 | 3,120.5 | 3,124.9 | 0.0 | |
| Number of pensions | 2,260.4 | 2,269.8 | 2,438.9 | 2,810.2 | 3,017.7 | 3,142.1 | 3,207.7 | 3,213.4 | 0.6 | |
| | | | | | **In percent** | | | | | |
| Participation rate, total | 72.8 | 73.1 | 74.1 | 76.1 | 78.2 | 78.2 | 78.2 | 78.0 | 0.1 | 5.2 |
| Women | 66.7 | 67.1 | 68.7 | 72.1 | 74.9 | 74.8 | 74.8 | 74.6 | 0.2 | 7.9 |
| Men | 78.9 | 79.1 | 79.5 | 80.2 | 81.6 | 81.5 | 81.5 | 81.4 | 0.1 | 2.5 |
| Unemployment rate | 7.0 | 7.1 | 7.1 | 6.9 | 6.7 | 6.5 | 6.5 | 6.4 | -0.1 | -0.6 |
| Old age dependency ratio | 26.5 | 27.0 | 29.9 | 38.9 | 46.2 | 48.5 | 50.4 | 50.4 | 1.1 | 23.9 |
| Pensions relative to insured persons | 61.5 | 61.5 | 64.9 | 75.4 | 80.6 | 84.0 | 86.5 | 86.6 | 0.6 | 25.1 |
| Pensions relative to population aged 65+ | 149.2 | 146.8 | 141.9 | 130.0 | 120.4 | 119.3 | 118.5 | 118.3 | -0.4 | -30.8 |
| | | | | | **Bill. €** | | | | | |
| Gross domestic product at constant 2005 prices | 271.8 | 272.8 | 302.8 | 345.4 | 397.2 | 454.6 | 517.0 | 592.1 | 1.4 | |
| Gross domestic product at current prices | 309.9 | 317.3 | 404.5 | 562.3 | 788.3 | 1,099.9 | 1,524.9 | 2,128.9 | 3.4 | |
| | | | | | **1,000 €** | | | | | |
| Real GDP per capita | 32.1 | 32.1 | 34.8 | 38.4 | 43.1 | 48.7 | 55.1 | 62.9 | 1.2 | |
| | | | | | **2012 = 100** | | | | | |
| Real wage per capita, in full time equivalents (MPL) | 100.0 | 100.0 | 109.4 | 126.0 | 143.8 | 164.8 | 189.3 | 216.3 | 1.3 | |
| | | | | **Percentage change against previous year** | | | | | | |
| Gross domestic product at constant 2005 prices | 0.8 | 0.4 | 1.4 | 1.3 | 1.4 | 1.3 | 1.3 | 1.4 | | |
| Compensation to employees, at current prices | 4.3 | 2.3 | 3.5 | 3.3 | 3.5 | 3.3 | 3.3 | 3.4 | | |
| Real wage per employee | 0.6 | -0.1 | 1.3 | 1.3 | 1.3 | 1.4 | 1.4 | 1.3 | | |
| GDP deflator | 2.2 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | |
| | | | | | **Ratio** | | | | | |
| Marginal product of capital | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 | 0.0 | 0.0 |
| Capital-output-ratio | 3.77 | 3.81 | 3.78 | 3.80 | 3.79 | 3.79 | 3.81 | 3.80 | 0.0 | 0.0 |

### 3.3.1 A scenario with low productivity growth

As labour supply reacts endogenously to lower real wage growth, the labour force increases marginally slower than in the baseline (Table 3.3.1). The lower growth rate has overall small effects on the labour market. The labour force increases until 2021 and decreases afterwards until 2031. Afterwards, the labour force expands again and reaches the peak-level of 2021 once more around 2044. Overall, this pattern mimics the population development, although, during 2030 and 2040, the increase in the participation rate reverses the influence of the shrinking working age population. In 2070, 4.21 million people will be in the labour force (72,500 less than in the baseline scenario), and the participation rate amounts to 78 percent. However, due to the slightly less favourable labour market conditions, the number of pensions rises to 3.21 million, 22,000 more than in the baseline scenario. Consequently, the share of pensions relative to insured persons is 2.1 percentage points above the baseline scenario.

In the model a lower total factor productivity growth results in lower real wages. The average growth of real wages per capita amounts to 1.3 percent (1.6 percent in the baseline scenario). In the low productivity scenario GDP grows on average with 1.4 percent. Figure 3.3.2 shows that starting at 0.8 percent, the pace of GDP growth increases quickly and converges to the long-run growth rate. The capital output ratio remains constant and is slightly above the average value of the baseline (3.8 percent). As the inflation rate is fixed at the implicit ECB-target of 2 percent per year, nominal GDP grows by 2 percentage points in excess of real GDP.

Compared to the baseline, the number of pensions in this scenario increases by 22.000 persons to 3.21 million until 2070. The rise in the number of pensions in 2070 results from lower employment in the run-up to 2070. The number of pensions relative to the insured persons increases from 61.5 percent (2012) to 86.6 percent (2070); 2 percentage points above the baseline.

### 3.3.2 A scenario with high productivity growth

Due to the low wage elasticity of labour supply, higher productivity growth provides only a moderate stimulus to employment. The higher total factor productivity growth feeds through into a stronger expansion of real wages. The average growth of real wages per capita rises by 0.25 percentage points relative to the baseline (Table 3.3.2). Higher labour productivity leads to higher GDP-growth, averaging at 1.9 percent per year. Because investment spending develops in line with GDP and the rate of capital depreciation is constant we end up with a slightly lower capital-output-ratio.

Labour supply reacts positively to higher real wages. As a consequence the labour force grows in this scenario as opposed to stagnating in the baseline, which is also reflected in the development of employment measured in full time equivalents. In 2070, we expect a labour force of 4.35 million people, or 73,000 persons above the baseline. Under the more optimistic assumptions about productivity growth, participation rates will increase until 2070 by roughly

10.7 (women) and 5.1 (men) percentage points. Compared to the main scenario this corresponds to a rise in the participation rate by 1.4 percentage points (2070).

The unemployment rate settles down at 6.5 percent in the long-run, similar to the baseline. Accordingly, the number of pensions goes up to 3.17 million until 2070 – 22,000 below the baseline. The rise in the number of pensions in 2070 results from higher employment in the run-up to 2070, counteracting the positive effects from higher employment on the pension system by additional pension claims. Consequently, the number of pensions relative to insured persons increases from 61.5 (2012) to 82.6 (2070) in the high growth scenario; 2 percentage points below the baseline.

The resulting GDP growth is 0.3 percentage points higher than in the baseline. Figure 3.3.2 shows that our assumptions on the rate of productivity growth mainly result in a stable difference to baseline real GDP growth. Investment adjusts until the marginal productivity of capital remains optimal and the capital output ratio decreases towards a level of 3.7 percent (2070). Since inflation is assumed constant at 2 percent, nominal GDP grows by 2 percentage points faster than real GDP.

*Table 3.3.2: High Labour Productivity Growth*

| | 2012 | 2013 | 2020 | 2030 | 2040 | 2050 | 2060 | 2070 | Avg. change (in %) 2012/2070 | Cum. change (in % points) 2012/2070 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1,000 persons | | | | | |
| Working Age Population (15-64) | 5,720.7 | 5,723.7 | 5,753.5 | 5,554.9 | 5,428.9 | 5,427.8 | 5,374.6 | 5,391.5 | -0.1 | |
| Economically active population (Labour force) | 4,165.5 | 4,186.0 | 4,280.8 | 4,269.2 | 4,313.8 | 4,336.6 | 4,321.5 | 4,350.9 | 0.1 | |
| Economically active employees in full time equivalents | 3,095.3 | 3,105.9 | 3,169.6 | 3,161.9 | 3,202.5 | 3,223.5 | 3,210.8 | 3,233.3 | 0.1 | |
| Number of pensions | 2,260.4 | 2,269.8 | 2,434.0 | 2,798.0 | 2,998.0 | 3,113.5 | 3,171.4 | 3,169.3 | 0.6 | |
| | | | | | In percent | | | | | |
| Participation rate, total | 72.8 | 73.1 | 74.4 | 76.9 | 79.5 | 79.9 | 80.4 | 80.7 | 0.2 | 7.9 |
| Women | 66.7 | 67.1 | 69.0 | 72.8 | 76.2 | 76.6 | 77.1 | 77.4 | 0.3 | 10.7 |
| Men | 78.9 | 79.1 | 79.8 | 80.9 | 82.7 | 83.2 | 83.7 | 84.0 | 0.1 | 5.1 |
| Unemployment rate | 7.0 | 7.1 | 7.1 | 6.8 | 6.6 | 6.5 | 6.5 | 6.5 | -0.1 | -0.5 |
| Old age dependency ratio | 26.5 | 27.0 | 29.9 | 38.9 | 46.2 | 48.5 | 50.4 | 50.4 | 1.1 | 23.9 |
| Pensions relative to insured persons | 61.5 | 61.5 | 64.5 | 74.3 | 78.8 | 81.4 | 83.2 | 82.6 | 0.5 | 21.1 |
| Pensions relative to population aged 65+ | 149.2 | 146.8 | 141.6 | 129.4 | 119.7 | 118.2 | 117.1 | 116.7 | -0.4 | -32.5 |
| | | | | | Bill. € | | | | | |
| Gross domestic product at constant 2005 prices | 271.8 | 276.0 | 316.4 | 379.5 | 460.3 | 556.2 | 668.4 | 808.9 | 1.9 | |
| Gross domestic product at current prices | 309.9 | 321.0 | 422.7 | 617.9 | 913.6 | 1,345.8 | 1,971.4 | 2,908.4 | 3.9 | |
| | | | | | 1,000 € | | | | | |
| Real GDP per capita | 32.1 | 32.5 | 36.3 | 42.2 | 50.0 | 59.6 | 71.3 | 85.9 | 1.7 | |
| | | | | | 2012 = 100 | | | | | |
| Real wage per capita, in full time equivalents (MPL) | 100.0 | 101.1 | 113.8 | 137.0 | 163.8 | 197.1 | 237.7 | 285.4 | 1.8 | |
| | | | | Percentage change against previous year | | | | | | |
| Gross domestic product at constant 2005 prices | 0.8 | 1.5 | 1.9 | 1.9 | 2.0 | 1.9 | 1.9 | 1.9 | 1.9 | |
| Compensation to employees, at current prices | 4.3 | 3.5 | 4.0 | 3.9 | 4.0 | 3.9 | 3.9 | 4.0 | 3.9 | |
| Real wage per employee | 0.6 | 1.1 | 1.8 | 1.8 | 1.8 | 1.9 | 1.9 | 1.9 | 1.8 | |
| GDP deflator | 2.2 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | |
| | | | | | Ratio | | | | | |
| Marginal product of capital | 0.13 | 0.13 | 0.13 | 0.13 | 0.14 | 0.14 | 0.13 | 0.14 | 0.0 | |
| Capital-output-ratio | 3.77 | 3.77 | 3.72 | 3.72 | 3.70 | 3.70 | 3.71 | 3.70 | 0.0 | -0.1 |

WIFO

Figure 3.3.1: Development of labour productivity
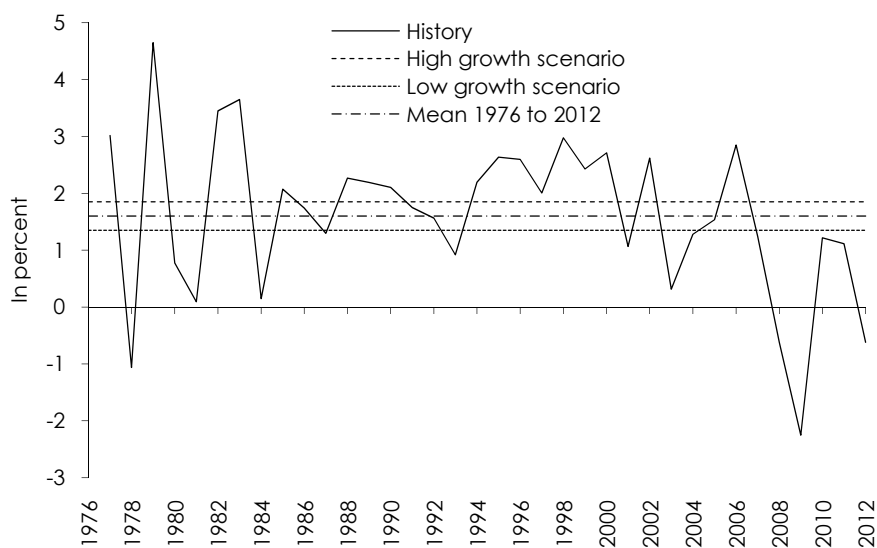


Note: Labour productivity is defined as real GDP per economically active employee
 measured in full time equivalents.

*Figure 3.3.2: Growth rate of real GDP*
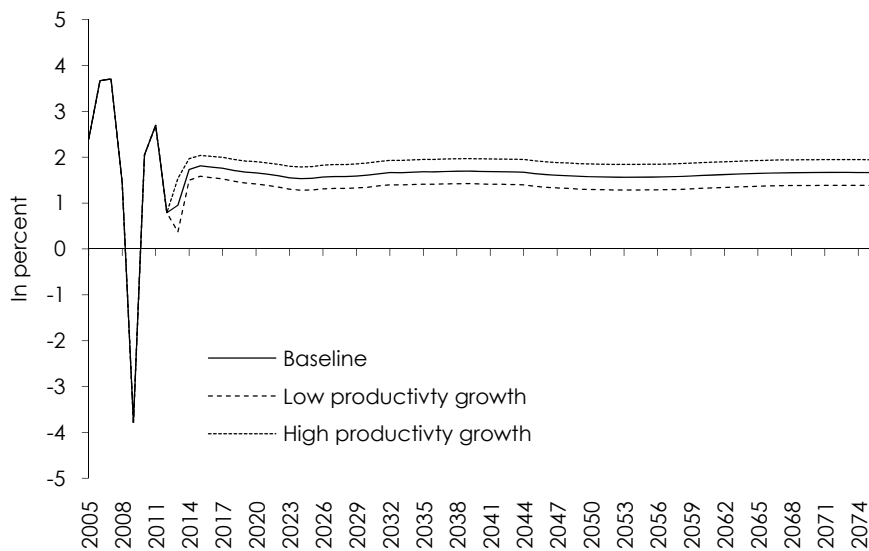
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# Appendix 1: List of variables

| | English | German |
|---|---|---|
| CA | Current account balance, at current prices | Saldo der Leistungsbilanz, laufende Preise |
| CAT | Balance in transfers, at current prices | Saldo der Transferbilanz, laufende Preise |
| CAXM | Balance in goods and services trade, at current prices | Saldo der Waren- und Dienstleistungsbilanz, laufende Preise |
| CAY | Balance in income, at current prices | Saldo der Einkommensbilanz, laufende Preise |
| CP | Private consumption, at constant prices | Privater Konsum, real |
| DPN | Consumption of fixed capital, at current prices | Abschreibungen, laufende Preise |
| GBD | General government financial balance, at current prices | Finanzierungssaldo Staat, laufende Preise |
| GC | Government consumption, at constant prices | Konsumausgaben des Staates, zu laufenden Preisen |
| GD | Government debt, at current prices | Staatsschuld, laufende Preise |
| GE | Government expenditures, at current prices | Staatsausgaben, laufende Preise |
| GEI | Government expenditures on interest, at current prices | Zinsen für die Staatsschuld, Staat konsolidiert, laufende Preise |
| GELTC | Government expenditures on long term care, at current prices | Ausgaben für Pflegegeld (Bundespflegegeld), laufende Preise |
| GEO | Other government expenditures, at current prices | Sonstige staatliche Ausgaben, laufende Preise |
| GOS | Gross operating surplus and gross mixed income, at current prices | Bruttobetriebsüberschuss u. Selbständigeneinkommen, laufende Preise |
| GR | Government revenues, at current prices | Staatseinnahmen, laufende Preise |
| HSC | Social contributions, payable, private households, at current prices | Sozialbeiträge, private Haushalte, gezahlt, laufende Preise |
| HTDIR | Current taxes on income and wealth, payable, private households, at current prices | Einkommen und Vermögensteuern, private Haushalte, gezahlt, laufende Preise |
| HTRM | Social benefits other than social transfers in kind, receivable, private households, at current prices | Monetäre Sozialleistungen, private Haushalte, erhalten, laufende Preise |
| HTRO | Balance of other current transfers, private households, at current prices | Sonstige laufende Transfers, Saldo, private Haushalte, laufende Preise |
| HWF | Financial wealth of private households, at constant 2005 prices | Finanzvermögen der privaten Haushalte, zu Preisen von 2005 |
| HWH | Human wealth of private households, at constant 2005 prices | Humanvermögen der privaten Haushalte, zu Preisen von 2005 |
| HYI | Balance of property income, private households, at current prices | Vermögenseinkommen, Saldo, private Haushalte, laufende Preise |
| HYL | Compensation of employees, receivable, private households, at current prices | Arbeitnehmerentgelt, private Haushalte, erhalten, laufende Preise |
| HYNSI | Non-entrepreneurial disposable income of private households, at current prices | Verfügbares Einkommen der privaten Haushalte ohne Selbständigeneinkommen, laufende Preise |
| HYS | Mixed income, net, private households, at current prices | Selbständigeneinkommen, priv. Haushalte, erhalten, laufende Preise |
| I | Gross capital formation, at constant prices | Bruttoinvestitionen, real |
| K | Physical capital stock, at constant prices | Nettokapitalstock, real |
| LD | Economically active employees in full time equivalents, in million persons | Unselbständig (Aktiv)Beschäftigte in Vollzeitäquivalente, Mio. Personen |

| Code | English | German |
|---|---|---|
| LE | Employees (incl. LENA), in million persons | Unselbständig Beschäftigte (inkl. KUG), Mio. Personen |
| LENA | Persons on maternity leave and persons in military services, in million persons | Kindergeldbezieher und Präsenzdiener, Mio. Personen |
| LF | Economically active population (Labour force), in million persons | Realisierte Erwerbspersonen |
| LFF | Economically active population, females, in million persons | Erwerbspersonen, Frauen |
| LFM | Economically active population, males, in million persons | Erwerbspersonen, Männer |
| LS | Dependent labour supply, in million persons | Arbeitsangebot unselbständig, Mio. Personen |
| LSS | Self employed, in million persons | Selbständig Beschäftigte, Mio. Personen |
| LSSA | Self employed, farmers, in million persons | Selbständig Beschäftigte Landwirtschaft, Mio. Personen |
| LSSNA | Self employed, non-farmers, in million persons | Selbständig Beschäftigte Gewerbe, Mio. Personen |
| LU | Unemployed, in million persons | Arbeitslose, Mio. Personen |
| M | Goods and services imports, at constant prices | Güter und Dienstleistungsimporte, real |
| MCBS | Minimum contribution basis of self employed | Mindestbeitragsgrundlage für Selbständige |
| NFA | Net foreign assets, at current prices | Netto-Auslandsvermögensposition, laufende Preise |
| NOS | Net operating surplus and net mixed income, at current prices | Nettobetriebsüberschuss und Selbständigeneinkommen netto, laufende Preise |
| NYLN | Compensation to employees, at current prices, net wage taxes and social security contributions | Arbeitnehmerentgelt, laufende Preise, abzüglich Lohnsteuer und Sozialversicherungsbeiträge |
| P | Deflator, GDP | Deflator, Bruttoinlandsprodukt |
| PASE | Pension adjustment structural effect | Pensionsanpassung Struktureffekt |
| PAW | Pension adjustment weight | Pensionsanpassung Gewicht |
| PC | Deflator, private consumption | Deflator, privater Konsum |
| PEN | Number of pensions, in million | Anzahl der Pensionsbezüge (Direktpensionen+Hinterbliebenenpensionen) |
| PGC | Deflator, government consumption | Deflator, öffentlicher Konsum |
| PI | Deflator, gross capital formation | Deflator, Bruttoinvestitionen |
| POP | Population, in million persons | Bevölkerung, Mio. Personen |
| POP00 | Population, age group 0 to 4, in million persons | Bevölkerung im Alter von 0 bis 4 |
| POP00HE | Population, age group 0 to 4, in million persons (high life expectancy) | Bevölkerung im Alter von 0 bis 4 (hohe Lebenserwartung) |
| POP00HW | Population, age group 0 to 4, in million persons (high migration) | Bevölkerung im Alter von 0 bis 4 (hohe Nettozuwanderung) |
| POP00NW | Population, age group 0 to 4, in million persons (low fertility) | Bevölkerung im Alter von 0 bis 4 (niedrige Nettozuwanderung) |
| POP01 | Population, age group 5 to 9, in million persons | Bevölkerung im Alter von 5 bis 9 |
| POP01HE | Population, age group 5 to 9, in million persons (high life expectancy) | Bevölkerung im Alter von 5 bis 9 (hohe Lebenserwartung) |
| POP01HW | Population, age group 5 to 9, in million persons (high migration) | Bevölkerung im Alter von 5 bis 9 (hohe Nettozuwanderung) |

| Code | Description (EN) | Description (DE) |
| --- | --- | --- |
| POP01NW | Population, age group 5 to 9, in million persons (low fertility) | Bevölkerung im Alter von 5 bis 9 (niedrige Nettozuwanderung) |
| POP02 | Population, age group 10 to 14, in million persons | Bevölkerung im Alter von 10 bis 14 |
| POP02HE | Population, age group 10 to 14, in million persons (high life expectancy) | Bevölkerung im Alter von 10 bis 14 (hohe Lebenserwartung) |
| POP02HW | Population, age group 10 to 14, in million persons (high migration) | Bevölkerung im Alter von 10 bis 14 (hohe Nettozuwanderung) |
| POP02NW | Population, age group 10 to 14, in million persons (low fertility) | Bevölkerung im Alter von 10 bis 14 (niedrige Nettozuwanderung) |
| POP03 | Population, age group 15 to 19, in million persons | Bevölkerung im Alter von 15 bis 19 |
| POP03HE | Population, age group 15 to 19, in million persons (high life expectancy) | Bevölkerung im Alter von 15 bis 19 (hohe Lebenserwartung) |
| POP03HW | Population, age group 15 to 19, in million persons (high migration) | Bevölkerung im Alter von 15 bis 19 (hohe Nettozuwanderung) |
| POP03NW | Population, age group 15 to 19, in million persons (low fertility) | Bevölkerung im Alter von 15 bis 19 (niedrige Nettozuwanderung) |
| POP04 | Population, age group 20 to 24, in million persons | Bevölkerung im Alter von 20 bis 24 |
| POP04HE | Population, age group 20 to 24, in million persons (high life expectancy) | Bevölkerung im Alter von 20 bis 24 (hohe Lebenserwartung) |
| POP04HW | Population, age group 20 to 24, in million persons (high migration) | Bevölkerung im Alter von 20 bis 24 (hohe Nettozuwanderung) |
| POP04NW | Population, age group 20 to 24, in million persons (low fertility) | Bevölkerung im Alter von 20 bis 24 (niedrige Nettozuwanderung) |
| POP05 | Population, age group 25 to 29, in million persons | Bevölkerung im Alter von 25 bis 29 |
| POP05HE | Population, age group 25 to 29, in million persons (high life expectancy) | Bevölkerung im Alter von 25 bis 29 (hohe Lebenserwartung) |
| POP05HW | Population, age group 25 to 29, in million persons (high migration) | Bevölkerung im Alter von 25 bis 29 (hohe Nettozuwanderung) |
| POP05NW | Population, age group 25 to 29, in million persons (low fertility) | Bevölkerung im Alter von 25 bis 29 (niedrige Nettozuwanderung) |
| POP06 | Population, age group 30 to 34, in million persons | Bevölkerung im Alter von 30 bis 34 |
| POP06HE | Population, age group 30 to 34, in million persons (high life expectancy) | Bevölkerung im Alter von 30 bis 34 (hohe Lebenserwartung) |
| POP06HW | Population, age group 30 to 34, in million persons (high migration) | Bevölkerung im Alter von 30 bis 34 (hohe Nettozuwanderung) |
| POP06NW | Population, age group 30 to 34, in million persons (low fertility) | Bevölkerung im Alter von 30 bis 34 (niedrige Nettozuwanderung) |
| POP07 | Population, age group 35 to 39, in million persons | Bevölkerung im Alter von 35 bis 39 |
| POP07HE | Population, age group 35 to 39, in million persons (high life expectancy) | Bevölkerung im Alter von 35 bis 39 (hohe Lebenserwartung) |
| POP07HW | Population, age group 35 to 39, in million persons (high migration) | Bevölkerung im Alter von 35 bis 39 (hohe Nettozuwanderung) |
| POP07NW | Population, age group 35 to 39, in million persons (low fertility) | Bevölkerung im Alter von 35 bis 39 (niedrige Nettozuwanderung) |
| POP08 | Population, age group 40 to 44, in million persons | Bevölkerung im Alter von 40 bis 44 |
| POP08HE | Population, age group 40 to 44, in million persons (high life expectancy) | Bevölkerung im Alter von 40 bis 44 (hohe Lebenserwartung) |
| POP08HW | Population, age group 40 to 44, in million persons (high migration) | Bevölkerung im Alter von 40 bis 44 (hohe Nettozuwanderung) |

| Code | Population, age group (English) | Bevölkerung (Deutsch) |
|---|---|---|
| POP08NW | Population, age group 40 to 44, in million persons (low fertility) | Bevölkerung im Alter von 40 bis 44 (niedrige Nettozuwanderung) |
| POP09 | Population, age group 45 to 49, in million persons | Bevölkerung im Alter von 45 bis 49 |
| POP09HE | Population, age group 45 to 49, in million persons (high life expectancy) | Bevölkerung im Alter von 45 bis 49 (hohe Lebenserwartung) |
| POP09HW | Population, age group 45 to 49, in million persons (high migration) | Bevölkerung im Alter von 45 bis 49 (hohe Nettozuwanderung) |
| POP09NW | Population, age group 45 to 49, in million persons (low fertility) | Bevölkerung im Alter von 45 bis 49 (niedrige Nettozuwanderung) |
| POP10 | Population, age group 50 to 54, in million persons | Bevölkerung im Alter von 50 bis 54 |
| POP10HE | Population, age group 50 to 54, in million persons (high life expectancy) | Bevölkerung im Alter von 50 bis 54 (hohe Lebenserwartung) |
| POP10HW | Population, age group 50 to 54, in million persons (high migration) | Bevölkerung im Alter von 50 bis 54 (hohe Nettozuwanderung) |
| POP10NW | Population, age group 50 to 54, in million persons (low fertility) | Bevölkerung im Alter von 50 bis 54 (niedrige Nettozuwanderung) |
| POP11 | Population, age group 55 to 59, in million persons | Bevölkerung im Alter von 55 bis 59 |
| POP11HE | Population, age group 55 to 59, in million persons (high life expectancy) | Bevölkerung im Alter von 55 bis 59 (hohe Lebenserwartung) |
| POP11HW | Population, age group 55 to 59, in million persons (high migration) | Bevölkerung im Alter von 55 bis 59 (hohe Nettozuwanderung) |
| POP11NW | Population, age group 55 to 59, in million persons (low fertility) | Bevölkerung im Alter von 55 bis 59 (niedrige Nettozuwanderung) |
| POP12 | Population, age group 60 to 64, in million persons | Bevölkerung im Alter von 60 bis 64 |
| POP12HE | Population, age group 60 to 64, in million persons (high life expectancy) | Bevölkerung im Alter von 60 bis 64 (hohe Lebenserwartung) |
| POP12HW | Population, age group 60 to 64, in million persons (high migration) | Bevölkerung im Alter von 60 bis 64 (hohe Nettozuwanderung) |
| POP12NW | Population, age group 60 to 64, in million persons (low fertility) | Bevölkerung im Alter von 60 bis 64 (niedrige Nettozuwanderung) |
| POP13 | Population, age group 65 to 69, in million persons | Bevölkerung im Alter von 65 bis 69 |
| POP13HE | Population, age group 65 to 69, in million persons (high life expectancy) | Bevölkerung im Alter von 65 bis 69 (hohe Lebenserwartung) |
| POP13HW | Population, age group 65 to 69, in million persons (high migration) | Bevölkerung im Alter von 65 bis 69 (hohe Nettozuwanderung) |
| POP13NW | Population, age group 65 to 69, in million persons (low fertility) | Bevölkerung im Alter von 65 bis 69 (niedrige Nettozuwanderung) |
| POP14 | Population, age group 70 to 74, in million persons | Bevölkerung im Alter von 70 bis 74 |
| POP14HE | Population, age group 70 to 74, in million persons (high life expectancy) | Bevölkerung im Alter von 70 bis 74 (hohe Lebenserwartung) |
| POP14HW | Population, age group 70 to 74, in million persons (high migration) | Bevölkerung im Alter von 70 bis 74 (hohe Nettozuwanderung) |
| POP14NW | Population, age group 70 to 74, in million persons (low fertility) | Bevölkerung im Alter von 70 bis 74 (niedrige Nettozuwanderung) |
| POP15 | Population, age group 75 to 79, in million persons | Bevölkerung im Alter von 75 bis 79 |
| POP1564 | Population, age group 15 to 64, in million persons | Bevölkerung im Alter von 15 bis 64 |
| POP1564HE | Population, age group 15 to 64, in million persons (high life expectancy) | Bevölkerung im Alter von 15 bis 64 (hohe Lebenserwartung) |

| | | |
|---|---|---|
| POP1564HW | Population, age group 15 to 64, in million persons (high migration) | Bevölkerung im Alter von 15 bis 64 (hohe Nettozuwanderung) |
| POP1564NW | Population, age group 15 to 64, in million persons (low fertility) | Bevölkerung im Alter von 15 bis 64 (niedrige Nettozuwanderung) |
| POP15HE | Population, age group 75 to 79, in million persons (high life expectancy) | Bevölkerung im Alter von 75 bis 79 (hohe Lebenserwartung) |
| POP15HW | Population, age group 75 to 79, in million persons (high migration) | Bevölkerung im Alter von 75 bis 79 (hohe Nettozuwanderung) |
| POP15NW | Population, age group 75 to 79, in million persons (low fertility) | Bevölkerung im Alter von 75 bis 79 (niedrige Nettozuwanderung) |
| POP16 | Population, age group 80 to 84, in million persons | Bevölkerung im Alter von 80 bis 84 |
| POP16HE | Population, age group 80 to 84, in million persons (high life expectancy) | Bevölkerung im Alter von 80 bis 84 (hohe Lebenserwartung) |
| POP16HW | Population, age group 80 to 84, in million persons (high migration) | Bevölkerung im Alter von 80 bis 84 (hohe Nettozuwanderung) |
| POP16NW | Population, age group 80 to 84, in million persons (low fertility) | Bevölkerung im Alter von 80 bis 84 (niedrige Nettozuwanderung) |
| POP17 | Population, age group 85 to 89, in million persons | Bevölkerung im Alter von 85 bis 89 |
| POP17HE | Population, age group 85 to 89, in million persons (high life expectancy) | Bevölkerung im Alter von 85 bis 89 (hohe Lebenserwartung) |
| POP17HW | Population, age group 85 to 89, in million persons (high migration) | Bevölkerung im Alter von 85 bis 89 (hohe Nettozuwanderung) |
| POP17NW | Population, age group 85 to 89, in million persons (low fertility) | Bevölkerung im Alter von 85 bis 89 (niedrige Nettozuwanderung) |
| POP18 | Population, age group 90 to 94, in million persons | Bevölkerung im Alter von 90 bis 94 |
| POP18HE | Population, age group 90 to 94, in million persons (high life expectancy) | Bevölkerung im Alter von 90 bis 94 (hohe Lebenserwartung) |
| POP18HW | Population, age group 90 to 94, in million persons (high migration) | Bevölkerung im Alter von 90 bis 94 (hohe Nettozuwanderung) |
| POP18NW | Population, age group 90 to 94, in million persons (low fertility) | Bevölkerung im Alter von 90 bis 94 (niedrige Nettozuwanderung) |
| POP19 | Population, age group 95 and older, in million persons | Bevölkerung im Alter von 95 und älter |
| POP19HE | Population, age group 95 and older, in million persons (high life expectancy) | Bevölkerung im Alter von 95 und älter (hohe Lebenserwartung) |
| POP19HW | Population, age group 95 and older, in million persons (high migration) | Bevölkerung im Alter von 95 und älter (hohe Nettozuwanderung) |
| POP19NW | Population, age group 95 and older, in million persons (low fertility) | Bevölkerung im Alter von 95 und älter (niedrige Nettozuwanderung) |
| POPF | Population, females, in million persons | Bevölkerung, Frauen, Mio. Personen |
| POPF00 | Population, females, age group 0 to 4, in million persons | Bevölkerung, Frauen, im Alter von 0 bis 4 |
| POPF00HE | Population, females, age group 0 to 4, in million persons (high life expectancy) | Bevölkerung, Frauen, im Alter von 0 bis 4 (hohe Lebenserwartung) |
| POPF00HW | Population, females, age group 0 to 4, in million persons (high migration) | Bevölkerung, Frauen, im Alter von 0 bis 4 (hohe Nettozuwanderung) |
| POPF00NW | Population, females, age group 0 to 4, in million persons (low fertility) | Bevölkerung, Frauen, im Alter von 0 bis 4 (niedrige Nettozuwanderung) |

| Code | Description | Beschreibung |
|---|---|---|
| POPF01 | Population, females, age group 5 to 9, in million persons | Bevölkerung, Frauen, im Alter von 5 bis 9 |
| POPF01HE | Population, females, age group 5 to 9, in million persons (high life expectancy) | Bevölkerung, Frauen, im Alter von 5 bis 9 (hohe Lebenserwartung) |
| POPF01HW | Population, females, age group 5 to 9, in million persons (high migration) | Bevölkerung, Frauen, im Alter von 5 bis 9 (hohe Nettozuwanderung) |
| POPF01NW | Population, females, age group 5 to 9, in million persons (low fertility) | Bevölkerung, Frauen, im Alter von 5 bis 9 (niedrige Nettozuwanderung) |
| POPF02 | Population, females, age group 10 to 14, in million persons | Bevölkerung, Frauen, im Alter von 10 bis 14 |
| POPF02HE | Population, females, age group 10 to 14, in million persons (high life expectancy) | Bevölkerung, Frauen, im Alter von 10 bis 14 (hohe Lebenserwartung) |
| POPF02HW | Population, females, age group 10 to 14, in million persons (high migration) | Bevölkerung, Frauen, im Alter von 10 bis 14 (hohe Nettozuwanderung) |
| POPF02NW | Population, females, age group 10 to 14, in million persons (low fertility) | Bevölkerung, Frauen, im Alter von 10 bis 14 (niedrige Nettozuwanderung) |
| POPF03 | Population, females, age group 15 to 19, in million persons | Bevölkerung, Frauen, im Alter von 15 bis 19 |
| POPF03HE | Population, females, age group 15 to 19, in million persons (high life expectancy) | Bevölkerung, Frauen, im Alter von 15 bis 19 (hohe Lebenserwartung) |
| POPF03HW | Population, females, age group 15 to 19, in million persons (high migration) | Bevölkerung, Frauen, im Alter von 15 bis 19 (hohe Nettozuwanderung) |
| POPF03NW | Population, females, age group 15 to 19, in million persons (low fertility) | Bevölkerung, Frauen, im Alter von 15 bis 19 (niedrige Nettozuwanderung) |
| POPF04 | Population, females, age group 20 to 24, in million persons | Bevölkerung, Frauen, im Alter von 20 bis 24 |
| POPF04HE | Population, females, age group 20 to 24, in million persons (high life expectancy) | Bevölkerung, Frauen, im Alter von 20 bis 24 (hohe Lebenserwartung) |
| POPF04HW | Population, females, age group 20 to 24, in million persons (high migration) | Bevölkerung, Frauen, im Alter von 20 bis 24 (hohe Nettozuwanderung) |
| POPF04NW | Population, females, age group 20 to 24, in million persons (low fertility) | Bevölkerung, Frauen, im Alter von 20 bis 24 (niedrige Nettozuwanderung) |
| POPF05 | Population, females, age group 25 to 29, in million persons | Bevölkerung, Frauen, im Alter von 25 bis 29 |
| POPF05HE | Population, females, age group 25 to 29, in million persons (high life expectancy) | Bevölkerung, Frauen, im Alter von 25 bis 29 (hohe Lebenserwartung) |
| POPF05HW | Population, females, age group 25 to 29, in million persons (high migration) | Bevölkerung, Frauen, im Alter von 25 bis 29 (hohe Nettozuwanderung) |
| POPF05NW | Population, females, age group 25 to 29, in million persons (low fertility) | Bevölkerung, Frauen, im Alter von 25 bis 29 (niedrige Nettozuwanderung) |

| Code | Description | Beschreibung |
|---|---|---|
| POPF06 | Population, females, age group 30 to 34, in million persons | Bevölkerung, Frauen, im Alter von 30 bis 34 |
| POPF06HE | Population, females, age group 30 to 34, in million persons (high life expectancy) | Bevölkerung, Frauen, im Alter von 30 bis 34 (hohe Lebenserwartung) |
| POPF06HW | Population, females, age group 30 to 34, in million persons (high migration) | Bevölkerung, Frauen, im Alter von 30 bis 34 (hohe Nettozuwanderung) |
| POPF06NW | Population, females, age group 30 to 34, in million persons (low fertility) | Bevölkerung, Frauen, im Alter von 30 bis 34 (niedrige Nettozuwanderung) |
| POPF07 | Population, females, age group 35 to 39, in million persons | Bevölkerung, Frauen, im Alter von 35 bis 39 |
| POPF07HE | Population, females, age group 35 to 39, in million persons (high life expectancy) | Bevölkerung, Frauen, im Alter von 35 bis 39 (hohe Lebenserwartung) |
| POPF07HW | Population, females, age group 35 to 39, in million persons (high migration) | Bevölkerung, Frauen, im Alter von 35 bis 39 (hohe Nettozuwanderung) |
| POPF07NW | Population, females, age group 35 to 39, in million persons (low fertility) | Bevölkerung, Frauen, im Alter von 35 bis 39 (niedrige Nettozuwanderung) |
| POPF08 | Population, females, age group 40 to 44, in million persons | Bevölkerung, Frauen, im Alter von 40 bis 44 |
| POPF08HE | Population, females, age group 40 to 44, in million persons (high life expectancy) | Bevölkerung, Frauen, im Alter von 40 bis 44 (hohe Lebenserwartung) |
| POPF08HW | Population, females, age group 40 to 44, in million persons (high migration) | Bevölkerung, Frauen, im Alter von 40 bis 44 (hohe Nettozuwanderung) |
| POPF08NW | Population, females, age group 40 to 44, in million persons (low fertility) | Bevölkerung, Frauen, im Alter von 40 bis 44 (niedrige Nettozuwanderung) |
| POPF09 | Population, females, age group 45 to 49, in million persons | Bevölkerung, Frauen, im Alter von 45 bis 49 |
| POPF09HE | Population, females, age group 45 to 49, in million persons (high life expectancy) | Bevölkerung, Frauen, im Alter von 45 bis 49 (hohe Lebenserwartung) |
| POPF09HW | Population, females, age group 45 to 49, in million persons (high migration) | Bevölkerung, Frauen, im Alter von 45 bis 49 (hohe Nettozuwanderung) |
| POPF09NW | Population, females, age group 45 to 49, in million persons (low fertility) | Bevölkerung, Frauen, im Alter von 45 bis 49 (niedrige Nettozuwanderung) |
| POPF10 | Population, females, age group 50 to 54, in million persons | Bevölkerung, Frauen, im Alter von 50 bis 54 |
| POPF10HE | Population, females, age group 50 to 54, in million persons (high life expectancy) | Bevölkerung, Frauen, im Alter von 50 bis 54 (hohe Lebenserwartung) |
| POPF10HW | Population, females, age group 50 to 54, in million persons (high migration) | Bevölkerung, Frauen, im Alter von 50 bis 54 (hohe Nettozuwanderung) |
| POPF10NW | Population, females, age group 50 to 54, in million persons (low fertility) | Bevölkerung, Frauen, im Alter von 50 bis 54 (niedrige Nettozuwanderung) |

| Code | English | German |
|---|---|---|
| POPFI1 | Population, females, age group 55 to 59, in million persons | Bevölkerung, Frauen, im Alter von 55 bis 59 |
| POPFI1HE | Population, females, age group 55 to 59, in million persons (high life expectancy) | Bevölkerung, Frauen, im Alter von 55 bis 59 (hohe Lebenserwartung) |
| POPFI1HW | Population, females, age group 55 to 59, in million persons (high migration) | Bevölkerung, Frauen, im Alter von 55 bis 59 (hohe Nettozuwanderung) |
| POPFI1NW | Population, females, age group 55 to 59, in million persons (low fertility) | Bevölkerung, Frauen, im Alter von 55 bis 59 (niedrige Nettozuwanderung) |
| POPFI2 | Population, females, age group 60 to 64, in million persons | Bevölkerung, Frauen, im Alter von 60 bis 64 |
| POPFI2HE | Population, females, age group 60 to 64, in million persons (high life expectancy) | Bevölkerung, Frauen, im Alter von 60 bis 64 (hohe Lebenserwartung) |
| POPFI2HW | Population, females, age group 60 to 64, in million persons (high migration) | Bevölkerung, Frauen, im Alter von 60 bis 64 (hohe Nettozuwanderung) |
| POPFI2NW | Population, females, age group 60 to 64, in million persons (low fertility) | Bevölkerung, Frauen, im Alter von 60 bis 64 (niedrige Nettozuwanderung) |
| POPFI3 | Population, females, age group 65 to 69, in million persons | Bevölkerung, Frauen, im Alter von 65 bis 69 |
| POPFI3HE | Population, females, age group 65 to 69, in million persons (high life expectancy) | Bevölkerung, Frauen, im Alter von 65 bis 69 (hohe Lebenserwartung) |
| POPFI3HW | Population, females, age group 65 to 69, in million persons (high migration) | Bevölkerung, Frauen, im Alter von 65 bis 69 (hohe Nettozuwanderung) |
| POPFI3NW | Population, females, age group 65 to 69, in million persons (low fertility) | Bevölkerung, Frauen, im Alter von 65 bis 69 (niedrige Nettozuwanderung) |
| POPFI4 | Population, females, age group 70 to 74, in million persons | Bevölkerung, Frauen, im Alter von 70 bis 74 |
| POPFI4HE | Population, females, age group 70 to 74, in million persons (high life expectancy) | Bevölkerung, Frauen, im Alter von 70 bis 74 (hohe Lebenserwartung) |
| POPFI4HW | Population, females, age group 70 to 74, in million persons (high migration) | Bevölkerung, Frauen, im Alter von 70 bis 74 (hohe Nettozuwanderung) |
| POPFI4NW | Population, females, age group 70 to 74, in million persons (low fertility) | Bevölkerung, Frauen, im Alter von 70 bis 74 (niedrige Nettozuwanderung) |
| POPFI5 | Population, females, age group 75 to 79, in million persons | Bevölkerung, Frauen, im Alter von 75 bis 79 |
| POPFI5HE | Population, females, age group 75 to 79, in million persons (high life expectancy) | Bevölkerung, Frauen, im Alter von 75 bis 79 (hohe Lebenserwartung) |
| POPFI5HW | Population, females, age group 75 to 79, in million persons (high migration) | Bevölkerung, Frauen, im Alter von 75 bis 79 (hohe Nettozuwanderung) |
| POPFI5NW | Population, females, age group 75 to 79, in million persons (low fertility) | Bevölkerung, Frauen, im Alter von 75 bis 79 (niedrige Nettozuwanderung) |

| | | |
|---|---|---|
| POPF16 | Population, females, age group 80 to 84, in million persons | Bevölkerung, Frauen, im Alter von 80 bis 84 |
| POPF16HE | Population, females, age group 80 to 84, in million persons (high life expectancy) | Bevölkerung, Frauen, im Alter von 80 bis 84 (hohe Lebenserwartung) |
| POPF16HW | Population, females, age group 80 to 84, in million persons (high migration) | Bevölkerung, Frauen, im Alter von 80 bis 84 (hohe Nettozuwanderung) |
| POPF16NW | Population, females, age group 80 to 84, in million persons (low fertility) | Bevölkerung, Frauen, im Alter von 80 bis 84 (niedrige Nettozuwanderung) |
| POPF17 | Population, females, age group 85 to 89, in million persons | Bevölkerung, Frauen, im Alter von 85 bis 89 |
| POPF17HE | Population, females, age group 85 to 89, in million persons (high life expectancy) | Bevölkerung, Frauen, im Alter von 85 bis 89 (hohe Lebenserwartung) |
| POPF17HW | Population, females, age group 85 to 89, in million persons (high migration) | Bevölkerung, Frauen, im Alter von 85 bis 89 (hohe Nettozuwanderung) |
| POPF17NW | Population, females, age group 85 to 89, in million persons (low fertility) | Bevölkerung, Frauen, im Alter von 85 bis 89 (niedrige Nettozuwanderung) |
| POPF18 | Population, females, age group 90 to 94, in million persons | Bevölkerung, Frauen, im Alter von 90 bis 94 |
| POPF18HE | Population, females, age group 90 to 94, in million persons (high life expectancy) | Bevölkerung, Frauen, im Alter von 90 bis 94 (hohe Lebenserwartung) |
| POPF18HW | Population, females, age group 90 to 94, in million persons (high migration) | Bevölkerung, Frauen, im Alter von 90 bis 94 (hohe Nettozuwanderung) |
| POPF18NW | Population, females, age group 90 to 94, in million persons (low fertility) | Bevölkerung, Frauen, im Alter von 90 bis 94 (niedrige Nettozuwanderung) |
| POPF19 | Population, females, age group 95 and older, in million persons | Bevölkerung, Frauen, im Alter von 95 und älter |
| POPF19HE | Population, females, age group 95 and older, in million persons (high life expectancy) | Bevölkerung, Frauen, im Alter von 95 und älter (hohe Lebenserwartung) |
| POPF19HW | Population, females, age group 95 and older, in million persons (high migration) | Bevölkerung, Frauen, im Alter von 95 und älter (hohe Nettozuwanderung) |
| POPF19NW | Population, females, age group 95 and older, in million persons (low fertility) | Bevölkerung, Frauen, im Alter von 95 und älter (niedrige Nettozuwanderung) |
| POP65 | Population, females, age group 65 and older, in million persons | Bevölkerung, Frauen, im Alter von 65 und älter |
| POP65HE | Population, females, age group 65 and older, in million persons (high life expectancy) | Bevölkerung, Frauen, im Alter von 65 und älter (hohe Lebenserwartung) |
| POPF65HW | Population, females, age group 65 and older, in million persons (high migration) | Bevölkerung, Frauen, im Alter von 65 und älter (hohe Nettozuwanderung) |
| POPF65NW | Population, females, age group 65 and older, in million persons (low fertility) | Bevölkerung, Frauen, im Alter von 65 und älter (niedrige Nettozuwanderung) |
| POPFHE | Population, females, in million persons (high life expectancy) | Bevölkerung, Frauen, Mio. Personen (hohe Lebenserwartung) |

| Code | Deutsch | English |
|---|---|---|
| POPFHW | Bevölkerung, Frauen, Mio. Personen (hohe Nettozuwanderung) | Population, females, in million persons (high migration) |
| POPFNW | Bevölkerung, Frauen, Mio. Personen (niedrige Nettozuwanderung) | Population, females, in million persons (low fertility) |
| POPHE | Bevölkerung, Mio. Personen (hohe Lebenserwartung) | Population, in million persons (high life expectancy) |
| POPHW | Bevölkerung, Mio. Personen (hohe Nettozuwanderung) | Population, in million persons (high migration) |
| POPNW | Bevölkerung, Mio. Personen (niedrige Nettozuwanderung) | Population, in million persons (low fertility) |
| POPM | Bevölkerung, Männer, Mio. Personen | Population, males, in million persons |
| POPM00 | Bevölkerung, Männer, im Alter von 0 bis 4 | Population, males, age group 0 to 4, in million persons |
| POPM00HE | Bevölkerung, Männer, im Alter von 0 bis 4 (hohe Lebenserwartung) | Population, males, age group 0 to 4, in million persons (high life expectancy) |
| POPM00HW | Bevölkerung, Männer, im Alter von 0 bis 4 (hohe Nettozuwanderung) | Population, males, age group 0 to 4, in million persons (high migration) |
| POPM00NW | Bevölkerung, Männer, im Alter von 0 bis 4 (niedrige Nettozuwanderung) | Population, males, age group 0 to 4, in million persons (low fertility) |
| POPM01 | Bevölkerung, Männer, im Alter von 5 bis 9 | Population, males, age group 5 to 9, in million persons |
| POPM01HE | Bevölkerung, Männer, im Alter von 5 bis 9 (hohe Lebenserwartung) | Population, males, age group 5 to 9, in million persons (high life expectancy) |
| POPM01HW | Bevölkerung, Männer, im Alter von 5 bis 9 (hohe Nettozuwanderung) | Population, males, age group 5 to 9, in million persons (high migration) |
| POPM01NW | Bevölkerung, Männer, im Alter von 5 bis 9 (niedrige Nettozuwanderung) | Population, males, age group 5 to 9, in million persons (low fertility) |
| POPM02 | Bevölkerung, Männer, im Alter von 10 bis 14 | Population, males, age group 10 to 14, in million persons |
| POPM02HE | Bevölkerung, Männer, im Alter von 10 bis 14 (hohe Lebenserwartung) | Population, males, age group 10 to 14, in million persons (high life expectancy) |
| POPM02HW | Bevölkerung, Männer, im Alter von 10 bis 14 (hohe Nettozuwanderung) | Population, males, age group 10 to 14, in million persons (high migration) |
| POPM02NW | Bevölkerung, Männer, im Alter von 10 bis 14 (niedrige Nettozuwanderung) | Population, males, age group 10 to 14, in million persons (low fertility) |
| POPM03 | Bevölkerung, Männer, im Alter von 15 bis 19 | Population, males, age group 15 to 19, in million persons |
| POPM03HE | Bevölkerung, Männer, im Alter von 15 bis 19 (hohe Lebenserwartung) | Population, males, age group 15 to 19, in million persons (high life expectancy) |
| POPM03HW | Bevölkerung, Männer, im Alter von 15 bis 19 (hohe Nettozuwanderung) | Population, males, age group 15 to 19, in million persons (high migration) |
| POPM03NW | Bevölkerung, Männer, im Alter von 15 bis 19 (niedrige Nettozuwanderung) | Population, males, age group 15 to 19, in million persons (low fertility) |
| POPM04 | Bevölkerung, Männer, im Alter von 20 bis 24 | Population, males, age group 20 to 24, in million persons |
| POPM04HE | Bevölkerung, Männer, im Alter von 20 bis 24 (hohe Lebenserwartung) | Population, males, age group 20 to 24, in million persons (high life expectancy) |
| POPM04HW | Bevölkerung, Männer, im Alter von 20 bis 24 (hohe Nettozuwanderung) | Population, males, age group 20 to 24, in million persons (high migration) |

| Code | Description (English) | Beschreibung (Deutsch) |
|---|---|---|
| POPM04NW | Population, males, age group 20 to 24, in million persons (low fertility) | Bevölkerung, Männer, im Alter von 20 bis 24 (niedrige Nettozuwanderung) |
| POPM05 | Population, males, age group 25 to 29, in million persons | Bevölkerung, Männer, im Alter von 25 bis 29 |
| POPM05HE | Population, males, age group 25 to 29, in million persons (high life expectancy) | Bevölkerung, Männer, im Alter von 25 bis 29 (hohe Lebenserwartung) |
| POPM05HW | Population, males, age group 25 to 29, in million persons (high migration) | Bevölkerung, Männer, im Alter von 25 bis 29 (hohe Nettozuwanderung) |
| POPM05NW | Population, males, age group 25 to 29, in million persons (low fertility) | Bevölkerung, Männer, im Alter von 25 bis 29 (niedrige Nettozuwanderung) |
| POPM06 | Population, males, age group 30 to 34, in million persons | Bevölkerung, Männer, im Alter von 30 bis 34 |
| POPM06HE | Population, males, age group 30 to 34, in million persons (high life expectancy) | Bevölkerung, Männer, im Alter von 30 bis 34 (hohe Lebenserwartung) |
| POPM06HW | Population, males, age group 30 to 34, in million persons (high migration) | Bevölkerung, Männer, im Alter von 30 bis 34 (hohe Nettozuwanderung) |
| POPM06NW | Population, males, age group 30 to 34, in million persons (low fertility) | Bevölkerung, Männer, im Alter von 30 bis 34 (niedrige Nettozuwanderung) |
| POPM07 | Population, males, age group 35 to 39, in million persons | Bevölkerung, Männer, im Alter von 35 bis 39 |
| POPM07HE | Population, males, age group 35 to 39, in million persons (high life expectancy) | Bevölkerung, Männer, im Alter von 35 bis 39 (hohe Lebenserwartung) |
| POPM07HW | Population, males, age group 35 to 39, in million persons (high migration) | Bevölkerung, Männer, im Alter von 35 bis 39 (hohe Nettozuwanderung) |
| POPM07NW | Population, males, age group 35 to 39, in million persons (low fertility) | Bevölkerung, Männer, im Alter von 35 bis 39 (niedrige Nettozuwanderung) |
| POPM08 | Population, males, age group 40 to 44, in million persons | Bevölkerung, Männer, im Alter von 40 bis 44 |
| POPM08HE | Population, males, age group 40 to 44, in million persons (high life expectancy) | Bevölkerung, Männer, im Alter von 40 bis 44 (hohe Lebenserwartung) |
| POPM08HW | Population, males, age group 40 to 44, in million persons (high migration) | Bevölkerung, Männer, im Alter von 40 bis 44 (hohe Nettozuwanderung) |
| POPM08NW | Population, males, age group 40 to 44, in million persons (low fertility) | Bevölkerung, Männer, im Alter von 40 bis 44 (niedrige Nettozuwanderung) |
| POPM09 | Population, males, age group 45 to 49, in million persons | Bevölkerung, Männer, im Alter von 45 bis 49 |
| POPM09HE | Population, males, age group 45 to 49, in million persons (high life expectancy) | Bevölkerung, Männer, im Alter von 45 bis 49 (hohe Lebenserwartung) |
| POPM09HW | Population, males, age group 45 to 49, in million persons (high migration) | Bevölkerung, Männer, im Alter von 45 bis 49 (hohe Nettozuwanderung) |
| POPM09NW | Population, males, age group 45 to 49, in million persons (low fertility) | Bevölkerung, Männer, im Alter von 45 bis 49 (niedrige Nettozuwanderung) |
| POPM10 | Population, males, age group 50 to 54, in million persons | Bevölkerung, Männer, im Alter von 50 bis 54 |
| POPM10HE | Population, males, age group 50 to 54, in million persons (high life expectancy) | Bevölkerung, Männer, im Alter von 50 bis 54 (hohe Lebenserwartung) |

| Code | Description (English) | Description (German) |
|---|---|---|
| POPM10HW | Population, males, age group 50 to 54, in million persons (high migration) | Bevölkerung, Männer, im Alter von 50 bis 54 (hohe Nettozuwanderung) |
| POPM10NW | Population, males, age group 50 to 54, in million persons (low fertility) | Bevölkerung, Männer, im Alter von 50 bis 54 (niedrige Nettozuwanderung) |
| POPM11 | Population, males, age group 55 to 59, in million persons | Bevölkerung, Männer, im Alter von 55 bis 59 |
| POPM11HE | Population, males, age group 55 to 59, in million persons (high life expectancy) | Bevölkerung, Männer, im Alter von 55 bis 59 (hohe Lebenserwartung) |
| POPM11HW | Population, males, age group 55 to 59, in million persons (high migration) | Bevölkerung, Männer, im Alter von 55 bis 59 (hohe Nettozuwanderung) |
| POPM11NW | Population, males, age group 55 to 59, in million persons (low fertility) | Bevölkerung, Männer, im Alter von 55 bis 59 (niedrige Nettozuwanderung) |
| POPM12 | Population, males, age group 60 to 64, in million persons | Bevölkerung, Männer, im Alter von 60 bis 64 |
| POPM12HE | Population, males, age group 60 to 64, in million persons (high life expectancy) | Bevölkerung, Männer, im Alter von 60 bis 64 (hohe Lebenserwartung) |
| POPM12HW | Population, males, age group 60 to 64, in million persons (high migration) | Bevölkerung, Männer, im Alter von 60 bis 64 (hohe Nettozuwanderung) |
| POPM12NW | Population, males, age group 60 to 64, in million persons (low fertility) | Bevölkerung, Männer, im Alter von 60 bis 64 (niedrige Nettozuwanderung) |
| POPM13 | Population, males, age group 65 to 69, in million persons | Bevölkerung, Männer, im Alter von 65 bis 69 |
| POPM13HE | Population, males, age group 65 to 69, in million persons (high life expectancy) | Bevölkerung, Männer, im Alter von 65 bis 69 (hohe Lebenserwartung) |
| POPM13HW | Population, males, age group 65 to 69, in million persons (high migration) | Bevölkerung, Männer, im Alter von 65 bis 69 (hohe Nettozuwanderung) |
| POPM13NW | Population, males, age group 65 to 69, in million persons (low fertility) | Bevölkerung, Männer, im Alter von 65 bis 69 (niedrige Nettozuwanderung) |
| POPM14 | Population, males, age group 70 to 74, in million persons | Bevölkerung, Männer, im Alter von 70 bis 74 |
| POPM14HE | Population, males, age group 70 to 74, in million persons (high life expectancy) | Bevölkerung, Männer, im Alter von 70 bis 74 (hohe Lebenserwartung) |
| POPM14HW | Population, males, age group 70 to 74, in million persons (high migration) | Bevölkerung, Männer, im Alter von 70 bis 74 (hohe Nettozuwanderung) |
| POPM14NW | Population, males, age group 70 to 74, in million persons (low fertility) | Bevölkerung, Männer, im Alter von 70 bis 74 (niedrige Nettozuwanderung) |
| POPM15 | Population, males, age group 75 to 79, in million persons | Bevölkerung, Männer, im Alter von 75 bis 79 |
| POPM15HE | Population, males, age group 75 to 79, in million persons (high life expectancy) | Bevölkerung, Männer, im Alter von 75 bis 79 (hohe Lebenserwartung) |
| POPM15HW | Population, males, age group 75 to 79, in million persons (high migration) | Bevölkerung, Männer, im Alter von 75 bis 79 (hohe Nettozuwanderung) |
| POPM15NW | Population, males, age group 75 to 79, in million persons (low fertility) | Bevölkerung, Männer, im Alter von 75 bis 79 (niedrige Nettozuwanderung) |
| POPM16 | Population, males, age group 80 to 84, in million persons | Bevölkerung, Männer, im Alter von 80 bis 84 |

| Code | Description (English) | Description (German) |
|---|---|---|
| POPM16HE | Population, males, age group 80 to 84, in million persons (high life expectancy) | Bevölkerung, Männer, im Alter von 80 bis 84 (hohe Lebenserwartung) |
| POPM16HW | Population, males, age group 80 to 84, in million persons (high migration) | Bevölkerung, Männer, im Alter von 80 bis 84 (hohe Nettozuwanderung) |
| POPM16NW | Population, males, age group 80 to 84, in million persons (low fertility) | Bevölkerung, Männer, im Alter von 80 bis 84 (niedrige Nettozuwanderung) |
| POPM17 | Population, males, age group 85 to 89, in million persons | Bevölkerung, Männer, im Alter von 85 bis 89 |
| POPM17HE | Population, males, age group 85 to 89, in million persons (high life expectancy) | Bevölkerung, Männer, im Alter von 85 bis 89 (hohe Lebenserwartung) |
| POPM17HW | Population, males, age group 85 to 89, in million persons (high migration) | Bevölkerung, Männer, im Alter von 85 bis 89 (hohe Nettozuwanderung) |
| POPM17NW | Population, males, age group 85 to 89, in million persons (low fertility) | Bevölkerung, Männer, im Alter von 85 bis 89 (niedrige Nettozuwanderung) |
| POPM18 | Population, males, age group 90 to 94, in million persons | Bevölkerung, Männer, im Alter von 90 bis 94 |
| POPM18HE | Population, males, age group 90 to 94, in million persons (high life expectancy) | Bevölkerung, Männer, im Alter von 90 bis 94 (hohe Lebenserwartung) |
| POPM18HW | Population, males, age group 90 to 94, in million persons (high migration) | Bevölkerung, Männer, im Alter von 90 bis 94 (hohe Nettozuwanderung) |
| POPM18NW | Population, males, age group 90 to 94, in million persons (low fertility) | Bevölkerung, Männer, im Alter von 90 bis 94 (niedrige Nettozuwanderung) |
| POPM19 | Population, males, age group 95 and older, in million persons | Bevölkerung, Männer, im Alter von 95 und älter |
| POPM19HE | Population, males, age group 95 and older, in million persons (high life expectancy) | Bevölkerung, Männer, im Alter von 95 und älter (hohe Lebenserwartung) |
| POPM19HW | Population, males, age group 95 and older, in million persons (high migration) | Bevölkerung, Männer, im Alter von 95 und älter (hohe Nettozuwanderung) |
| POPM19NW | Population, males, age group 95 and older, in million persons (low fertility) | Bevölkerung, Männer, im Alter von 95 und älter (niedrige Nettozuwanderung) |
| POPM65 | Population, males, age group 65 and older, in million persons | Bevölkerung, Männer, im Alter von 65 und älter |
| POPM65HE | Population, males, age group 65 and older, in million persons (high life expectancy) | Bevölkerung, Männer, im Alter von 65 und älter (hohe Lebenserwartung) |
| POPM65HW | Population, males, age group 65 and older, in million persons (high migration) | Bevölkerung, Männer, im Alter von 65 und älter (hohe Nettozuwanderung) |
| POPM65NW | Population, males, age group 65 and older, in million persons (low fertility) | Bevölkerung, Männer, im Alter von 65 und älter (niedrige Nettozuwanderung) |
| POPMHE | Population, in million persons (high life expectancy) | Bevölkerung, Männer, Mio. Personen (hohe Lebenserwartung) |
| POPMHW | Population, in million persons (high migration) | Bevölkerung, Männer, Mio. Personen (hohe Nettozuwanderung) |
| POPMNW | Population, in million persons (low fertility) | Bevölkerung, Männer, Mio. Personen (niedrige Nettozuwanderung) |
| PRD | Probability of death (Inverse of life - expectancy), private households | Sterbewahrscheinlichkeit (Kehrwert d. Lebenserwartung) des privaten Haushalts |
| PRF03 | Participation rate, females, age group 15 to 19 | Erwerbsquote, Frauen, im Alter von 15 bis 19 |

| Code | English | German |
|---|---|---|
| PRF04 | Participation rate, females, age group 20 to 24 | Erwerbsquote, Frauen, im Alter von 20 bis 24 |
| PRF05 | Participation rate, females, age group 25 to 29 | Erwerbsquote, Frauen, im Alter von 25 bis 29 |
| PRF06 | Participation rate, females, age group 30 to 34 | Erwerbsquote, Frauen, im Alter von 30 bis 34 |
| PRF07 | Participation rate, females, age group 35 to 39 | Erwerbsquote, Frauen, im Alter von 35 bis 39 |
| PRF08 | Participation rate, females, age group 40 to 44 | Erwerbsquote, Frauen, im Alter von 40 bis 44 |
| PRF09 | Participation rate, females, age group 45 to 49 | Erwerbsquote, Frauen, im Alter von 45 bis 49 |
| PRF10 | Participation rate, females, age group 50 to 54 | Erwerbsquote, Frauen, im Alter von 50 bis 54 |
| PRF11 | Participation rate, females, age group 55 to 59 | Erwerbsquote, Frauen, im Alter von 55 bis 59 |
| PRF12 | Participation rate, females, age group 60 to 64 | Erwerbsquote, Frauen, im Alter von 60 bis 64 |
| PRF65 | Participation rate, females, age group 65 and older | Erwerbsquote, Frauen, im Alter von 65 und älter |
| PRFT03 | Trend participation rate, females, age group 15 to 19 | Trend Erwerbsquote, Frauen, im Alter von 15 bis 19 |
| PRFT04 | Trend participation rate, females, age group 20 to 24 | Trend Erwerbsquote, Frauen, im Alter von 20 bis 24 |
| PRFT05 | Trend participation rate, females, age group 25 to 29 | Trend Erwerbsquote, Frauen, im Alter von 25 bis 29 |
| PRFT06 | Trend participation rate, females, age group 30 to 34 | Trend Erwerbsquote, Frauen, im Alter von 30 bis 34 |
| PRFT07 | Trend participation rate, females, age group 35 to 39 | Trend Erwerbsquote, Frauen, im Alter von 35 bis 39 |
| PRFT08 | Trend participation rate, females, age group 40 to 44 | Trend Erwerbsquote, Frauen, im Alter von 40 bis 44 |
| PRFT09 | Trend participation rate, females, age group 45 to 49 | Trend Erwerbsquote, Frauen, im Alter von 45 bis 49 |
| PRFT10 | Trend participation rate, females, age group 50 to 54 | Trend Erwerbsquote, Frauen, im Alter von 50 bis 54 |
| PRFT11 | Trend participation rate, females, age group 55 to 59 | Trend Erwerbsquote, Frauen, im Alter von 55 bis 59 |
| PRFT12 | Trend participation rate, females, age group 60 to 64 | Trend Erwerbsquote, Frauen, im Alter von 60 bis 64 |
| PRFT65 | Trend participation rate, females, age group 65 and older | Trend Erwerbsquote, Frauen, im Alter von 65 und älter |
| PRM03 | Participation rate, males, age group 15 to 19 | Erwerbsquote, Männer, im Alter von 15 bis 19 |
| PRM04 | Participation rate, males, age group 20 to 24 | Erwerbsquote, Männer, im Alter von 20 bis 24 |
| PRM05 | Participation rate, males, age group 25 to 29 | Erwerbsquote, Männer, im Alter von 25 bis 29 |
| PRM06 | Participation rate, males, age group 30 to 34 | Erwerbsquote, Männer, im Alter von 30 bis 34 |
| PRM07 | Participation rate, males, age group 35 to 39 | Erwerbsquote, Männer, im Alter von 35 bis 39 |
| PRM08 | Participation rate, males, age group 40 to 44 | Erwerbsquote, Männer, im Alter von 40 bis 44 |
| PRM09 | Participation rate, males, age group 45 to 49 | Erwerbsquote, Männer, im Alter von 45 bis 49 |
| PRM10 | Participation rate, males, age group 50 to 54 | Erwerbsquote, Männer, im Alter von 50 bis 54 |
| PRM11 | Participation rate, males, age group 55 to 59 | Erwerbsquote, Männer, im Alter von 55 bis 59 |
| PRM12 | Participation rate, males, age group 60 to 64 | Erwerbsquote, Männer, im Alter von 60 bis 64 |
| PRM65 | Participation rate, males, age group 65 and older | Erwerbsquote, Männer, im Alter von 65 und älter |
| PRMT03 | Trend participation rate, males, age group 15 to 19 | Trend Erwerbsquote, Männer, im Alter von 15 bis 19 |
| PRMT04 | Trend participation rate, males, age group 20 to 24 | Trend Erwerbsquote, Männer, im Alter von 20 bis 24 |
| PRMT05 | Trend participation rate, males, age group 25 to 29 | Trend Erwerbsquote, Männer, im Alter von 25 bis 29 |

| Code | Description (English) | Description (German) |
|---|---|---|
| PRMT06 | Trend participation rate, males, age group 30 to 34 | Trend Erwerbsquote, Männer, im Alter von 30 bis 34 |
| PRMT07 | Trend participation rate, males, age group 35 to 39 | Trend Erwerbsquote, Männer, im Alter von 35 bis 39 |
| PRMT08 | Trend participation rate, males, age group 40 to 44 | Trend Erwerbsquote, Männer, im Alter von 40 bis 44 |
| PRMT09 | Trend participation rate, males, age group 45 to 49 | Trend Erwerbsquote, Männer, im Alter von 45 bis 49 |
| PRMT10 | Trend participation rate, males, age group 50 to 54 | Trend Erwerbsquote, Männer, im Alter von 50 bis 54 |
| PRMT11 | Trend participation rate, males, age group 55 to 59 | Trend Erwerbsquote, Männer, im Alter von 55 bis 59 |
| PRMT12 | Trend participation rate, males, age group 60 to 64 | Trend Erwerbsquote, Männer, im Alter von 60 bis 64 |
| PRMT65 | Trend participation rate, males, age group 65 and older | Trend Erwerbsquote, Männer, im Alter von 65 und älter |
| PW | Deflator, imports | Deflator, Importe |
| PX | Deflator, exports | Deflator, Exporte |
| Q | Tobin's Q | Tobinsches Q |
| QCAY | Adjustment factor, balance in income | Anpassungsfaktor für die Einkommensbilanz |
| QGCN | Ratio of government consumption to government expenditures less social security expenditures, subsidies and expenditures on interest | Verhältnis der Konsumausgaben des Staates zu den Staatsausgaben abzüglich der Sozialausgaben, der Subventionen und Zinsen für die Staatsschuld |
| QGDMV | Ratio of ex-budgetary transactions to government debt | Verhältnis der außerbudgetären Transaktionen zur Staatsschuld |
| QGRO | Other government revenues, ratio | Restliche Staatseinnahmen, Quote |
| QHSC | Share of private households in social contributions | Anteil der privaten Haushalte an den Sozialbeiträgen, Durchschnittssatz |
| QHTDIR | Share of private households in direct taxes | Anteil der privaten Haushalte an den direkten Steuern, Durchschnittssatz |
| QHTRM | Share of private households in monetary transfers | Anteil der privaten Haushalte an den Sozialtransfers, Durchschnittssatz |
| QHTRO | Share of private households in other transfers | Anteil der privaten Haushalte an den sonstigen Transfers, Durchschnittssatz |
| QHYI | Share of private household interest income in gross operating surplus | Anteil der Zinseinkommen privater Haushalte am Betriebsüberschuss, Durchschnittssatz |
| QHYL | Share of private household labour income in compensation to employees | Anteil der privaten Haushalte am Lohneinkommen, Durchschnittssatz |
| QHYS | Share of private household entrepreneurial income in gross operating surplus | Anteil der Einkommen aus unternehmerischer Tätigkeit privater Haushalte am Betriebsüberschuss, Durchschnittssatz |
| QLD | Ratio of LE to LD | Umrechnungsfaktor zwischen (Aktiv)Beschäftigten und Vollzeitäquivalenten |

| Code | English | German |
|---|---|---|
| QLENA | Ratio of LENA to POP0 | Faktor Nicht-Aktiv-Beschäftigte an Kindern im Alter von 0 bis 14 |
| QLS | Share of dependent employees in total labour supply | Anteil der unselbständig Beschäftigten am gesamten Arbeitsangebot |
| QLSSA | Share of farmers in self employed | Anteil der Beschäftigten in Landwirtschaft an den Selbständigen |
| QPP | Share of pensions and active labour force in total population at age 55-64 | Anteil der Pensionen und Labour Force an der Gesamtbevölkerung im Alter zwischen 55 und 64 |
| QRP | Share of pensions in population aged below 55 | Anteil der Pensionen an der Bevölkerung im Alter unter 55 |
| QSB | Ratio of business savings to investment | Verhältnis von Sparen im Unternehmenssektor zu den Investitionen |
| QSC | Ratio of social contributions according to ESA to social security contributions according to Federation of Austrian Social Security Institutions, average rate | Verhältnis von Sozialbeiträgen lt. VGR zu Sozialversicherungsbeiträgen, Durchschnittssatz |
| QSEAO | Ratio of transfer to other expenditures, accident insurance | Verhältnis der sonstigen zu den Transferausgaben Unfallversicherung |
| QSEHO | Ratio of transfer to other expenditures, health insurance | Verhältnis der sonstigen zu den Transferausgaben Krankenversicherung |
| QSEPO | Ratio of transfer to other expenditures, pension insurance | Verhältnis der sonstigen zu den Transferausgaben Pensionsversicherung |
| QSUB | Ratio of subsidies to tax revenues | Verhältnis von Subventionen zu Steuereinnahmen, Durchschnittssatz |
| QWT | Working time (weighted by male/female) | Arbeitszeit (gewichtet mit durchschnittl. Arbeitszeit Männer/Frauen) |
| R | Real long term interest rate | Realer Zinssatz, Sekundärmarktrendite Bund |
| RD | Rate of physical depreciation | Ökonomische Abschreibung, Durchschnittssatz |
| RGD | Implicit average interest rate on government debt | Impliziter durchschnittlicher Zinssatz der Staatsschuld |
| RN | Nominal long term interest rate | Nominaler Zinssatz, Sekundärmarktrendite Bund |
| RSA | Contribution rate, accident insurance | Beitragssatz, Unfallversicherung |
| RSH | Contribution rate, health insurance | Beitragssatz, Krankenversicherung |
| RSHR | Contribution rate, health insurance, for retirees | Beitragssatz, Krankenversicherung für Pensionisten |
| RSPC | Contribution rate, pension insurance, for employers | Beitragssatz, Pensionsversicherung, Arbeitgeber |
| RSPE | Contribution rate, pension insurance, for employees | Beitragssatz, Pensionsversicherung, Arbeitnehmer |
| RSPF | Contribution rates of the pension insurance funds | Beitragssatz, Krankenversicherung der PV Träger |
| RSPS | Contribution rate, pension insurance, for self-employed | Beitragssatz, Pensionsversicherung, Selbständige |
| RSU | Contribution rate, unemployment insurance | Beitragssatz, Arbeitslosenversicherung |
| RTC | Corporation taxes, average tax rate | Unternehmenssteuer (Köst+Gewst), Durchschnittssatz |
| RTDIR | Other taxes on income and wealth, receivable, average tax rate | Restliche Einkommen- und Vermögensteuern, Durchschnittssatz |
| RTIND | Taxes on production and imports, average tax rate | Produktions- und Importabgaben, Durchschnittssatz |

| Abbreviation | English | German |
|---|---|---|
| RTP | Rate of time preference | Zeitpräferenzrate |
| RTW | Wage taxes, average tax rate | Lohnsteuer inkl. AK und Land AK Umlage, Durchschnittssatz |
| S | Domestic savings | Inländisches Sparen |
| SC | Social contributions, at current prices | Sozialbeiträge, laufende Preise |
| SCA | Social security contributions - accident insurance, at current prices | Beitragseinnahmen der Unfallversicherung, laufende Preise |
| SCH | Social security contributions - health insurance, at current prices | Beitragseinnahmen der Krankenversicherung, laufende Preise |
| SCHE | Social security contributions - health insurance, employees, at current prices | Beitragseinnahmen der Krankenversicherung, Arbeitnehmer, laufende Preise |
| SCHR | Social security contributions - health insurance, retirees, at current prices | Beitragseinnahmen der Krankenversicherung, Beiträge für Pensionisten, laufende Preise |
| SCP | Social security contributions - pension insurance, at current prices | Beitragseinnahmen der Pensionsversicherung, laufende Preise |
| SCPE | Social security contributions - pension insurance, employees, at current prices | Beitragseinnahmen der Pensionsversicherung, Unselbständige, laufende Preise |
| SCPGOV | Social security contributions - contribution of the federal government | Beitragseinnahmen der Pensionsversicherung, Bundesbeitrag zur Pensionsversicherung |
| SCPO | Social security contributions - other revenues | Beitragseinnahmen der Pensionsversicherung, sonstige Einnahmen der Pensionsversicherung |
| SCPS | Social security contributions - pension insurance, self-employed, at current prices | Beitragseinnahmen der Pensionsversicherung, Selbständige, laufende Preise |
| SCU | Social security contributions - unemployment insurance, at current prices | Beitragseinnahmen, Arbeitslosenversicherung |
| SDIFFN | Changes in inventory, acquisition less disposition of valuables, and statistical discrepancy, at current prices | Vorratsveränderungen, Nettozugang an Wertsachen und Statistischer Differenz, laufende Preise |
| SE | Social security expenditures and long term care payments, at current prices | Sozialversicherungsausgaben und Pflegegeld, laufende Preise |
| SEA | Total social security expenditures, accident insurance, at current prices | Gesamte Ausgaben, Unfallversicherung |
| SEAO | Other social security expenditures, accident insurance, at current prices | Sonstige Ausgaben, Unfallversicherung |
| SEH | Total social security expenditures, health insurance, at current prices | Gesamte Ausgaben, Krankenversicherung |
| SEHO | Other expenditures - health insurance, at current prices | Sonstige Ausgaben der Krankenversicherung |
| SEP | Total social security expenditures, pension insurance, at current prices | Gesamte Ausgaben, Pensionsversicherung |
| SEPO | Other expenditures - pension insurance, at current prices | Sonstige Ausgaben der Pensionsversicherung |
| STR | Social security and long term care transfers, at current prices | Transferausgaben Sozial- und Arbeitslosenversicherung sowie Pflegegeld, laufende Preise |

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| SUB | Subsidies, at current prices | Subventionen, laufende Preise |
| TDIR | Current taxes on income and wealth, receivable, at current prices | Einkommen- und Vermögensteuern, Aufkommen, laufende Preise |
| TFP | Total factor productivity, rate of change | Veränderungsrate der Gesamtfaktorproduktivität |
| TIND | Taxes on production and imports, at current prices | Produktions- und Importabgaben, laufende Preise |
| TRA | Transfer expenditures, accident insurance, at current prices | Leistungsausgaben der Unfallversicherung |
| TRH | Transfer expenditures, health insurance, at current prices | Leistungsausgaben der Krankenversicherung |
| TRP | Transfer expenditures, pension insurance, at current prices | Leistungsausgaben der Pensionsversicherung |
| TRU | Transfer expenditures, unemployment insurance, at current prices | Leistungsausgaben der Arbeitslosenversicherung |
| TW | Wage taxes, at current prices | Lohnsteuer inkl. AK und Land AK Umlage, laufende Preise |
| TWED | Tax wedge | Lohnschere |
| U | Unemployment rate | Arbeitslosenquote |
| UTH | Upper threshold health insurance contributions, at current prices | Höchstbeitragsgrundlage der Krankenversicherung |
| UTPA | Upper threshold pension and accident insurance contributions, at current prices | Höchstbeitragsgrundlage der Pensions- und Unfallversicherung |
| UTU | Upper threshold unemployment insurance contributions, at current prices | Höchstbeitragsgrundlage der Arbeitslosenversicherung |
| W | Real wage per capita, in full time equivalents | Realer Lohn in Vollzeitäquivalenten |
| WA | Alternative wage path index | Index des Alternativlohns |
| X | Goods and services exports, at constant prices | Güter und Dienstleistungsexporte, real |
| Y | Gross domestic product, at constant prices | Bruttoinlandsprodukt, real |
| YDEN | Disposable income, at current prices | Verfügbares Einkommen, laufende Preise |
| YDN | Disposable income of private households, at current prices | Verfügbares Einkommen der privaten Haushalte, laufende Preise |
| YLN | Compensation to employees, at current prices | Arbeitnehmerentgelt, laufende Preise |
| YN | Gross domestic product, at current prices | Bruttoinlandsprodukt, laufende Preise |
| YNPN | Gross national product, at current prices | Bruttonationalprodukt, laufende Preise |
| YW | Gross domestic product, 25 OECD countries, in 100 billion US dollars, at constant prices | Bruttoinlandsprodukt von 25 OECD-Länder*, 100 Mrd. USD, real |