

ÖSTERREICHISCHE RAUMORDNUNGSKONFERENZ (ÖROK)

SCHRIFTENREIHE NR. 184

**ÖROK-REGIONALPROGNOSEN 2010-2030
MODELLRECHNUNG BIS 2050
BEVÖLKERUNG, ERWERBSPERSONEN
UND HAUSHALTE IN DEN NUTS 3-REGIONEN
UND BEZIRKEN ÖSTERREICHS**

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Wien, Juni 2011

Summary

ÖROK REGIONAL FORECASTS 2010-2030

MODELLING TO 2050

FOR POPULATION, LABOUR FORCE AND HOUSEHOLDS

The regional forecasts produced by STATISTICS AUSTRIA upon commissioning by the Austrian Conference On Spatial Planning (ÖROK) provide a projection of population figures, of the labour force by age and sex, of the number of private households by household size for a total of 124 projected regions, and consequently for Austria's 99 political districts, 35 NUTS-3 regions and nine federal states (Bundesländer). In this context, the results of the population forecast for Austria as a whole on the one hand, and for the states on the other, correspond to the results of STATISTICS AUSTRIA's population forecast of autumn 2009. The regionalised assumptions are of the forecast type until 2030 and of the modelling type with essentially constant forecasting parameters thereafter (until 2050).

1. Population Forecast

Overall, Austria's population will grow in the future: reaching 8,574,000 by 2015 (+2.8% compared to 2008) and 9.048 million by 2030 (+8.5%). According to the present forecast, these figures will continue to rise after 2030, namely to 9,467,000 in 2050 (+13.6%). We expect Vienna's and Lower Austria's population figures to rise above average, while those of Carinthia, the southernmost state of Austria, will stagnate over the medium term and suffer slight losses in the long term. By and large, future population growth in Burgenland, Vorarlberg and Tyrol corresponds to the overall Austrian trend. On the other hand, the states of Salzburg, Upper Austria and Styria will grow below the Austrian average.

Regional demographic development

Upon further regionalisation, the situation is much more complex. As was the case in the past, by 2030 the regions with strong population growth of up to 28% (Schwechat) will be in sharp contrast to those with declining figures of as much as 11% (Murau). The regions surrounding major cities, in particular the metropolitan area of the capital city of Vienna, will record the biggest increases also over the next decades. While the populations of the cities themselves will also rise, these increases will not be as significant as those registered in the areas surrounding these cities.

Based on the NUTS-3 regional classification, Wiener Umland-Nord and Wiener Umland-Süd (Vienna region

North and Vienna region South) are expected to experience the highest rates of growth. As of 01/01/2030, the population figures of these two regions are projected to exceed by 21% those recorded at 01/01/2009, the basis of the forecast. Suburbanisation around the Vienna area now extends as far east as to northern Burgenland, whose population will have increased 14% by 2030. By comparison, Vienna itself will not grow more than 13%. While the Austrian capital will boast not only a positive balance of births but also a positive migration balance with foreign countries, the city will clearly lose part of its population to its surrounding areas. Strong population growth of 15% over the next twenty years is also predicted for the region surrounding the Styrian capital of Graz.

The following NUTS-3 regions will also record population growth above 10% by 2030: Rheintal-Bodensee (Rhine Valley – Lake Constance) in Vorarlberg, Linz-Wels in Upper Austria, Innsbruck (Tyrol) and Sankt Pölten (Lower Austria).

As in the past, population figures for both the western and eastern parts of the Upper Styria region will continue to decline at a relatively fast rate in the future. By 2030, the population will drop 8% due to higher deficits in births and increased internal migration. The demographic situation is similar for Upper and Lower Carinthia, but at 5%, losses to 2030 are not quite as high as in the Upper Styria region in relative terms. Salzburg's Lungau region as well as Eastern Tyrol will see a 4% population decline by 2030.

Future age structure trends

Due to the strong baby boomer generation of the 1950's and 60's Austria's future population growth is accompanied by an ageing process. As in the past, the number of people under 20 years of age will continue to decline in the next few years: from 21.2% to 19.0% of the total population between 2008 and 2030. On the other hand, the population aged above 65 will be marked by strong growth, both numerically and in percentage terms. By 2030, its absolute numbers will increase by one half, and its share in the population will rise from 17.2% to 23.8%. As a result of immigration in particular, the potential labour force aged 20 to less than 65 will continue to grow slightly in the coming years, but reassume its decline

over the long term. In the short term, the percentage of the potential labour force will increase to more than 60%.

Except for a few regions, the number of children and young people aged 19 or under will not continue to rise. Figures for young people are only expected to rise in regions of strong predicted growth. Growth in that age group is essentially limited to the greater Vienna area, though the number of children and young people will continue to rise in the regions surrounding some state capitals, at least over the medium term (by as much as 25% in Schwechat). In all other Austrian regions, the population aged below 20 is expected to decline in the medium and long term. On the other hand, by 2030 the regions suffering demographic losses will also see a major decline in children and young people (by as much as 30% in Styria's Murau).

A growing or dwindling labour force potential is also strongly correlated with overall demographic development. Again, in the region surrounding Vienna, the population aged 20 to 64 will record the strongest growth (up 20% in Schwechat), while the Upper Styria region will suffer the strongest decline (down -20% in Murau). By 2030, the potential labour force is estimated to have grown by 14% in Wiener Umland-Nord and 13% in Wiener Umland-Süd. With 8% and 6%, respectively, the increase in the potential labour force by 2030 is significantly lower for the cities of Graz and Vienna.

On the other hand, the number of people of retirement age, i.e. from 65, will not plunge any further anywhere over the medium and long term. By 2030, their numbers will increase most in the district comprising the area around Salzburg (81%), and least in the district of Leoben (10%). The imminent ageing process certainly constitutes one of the key demographic challenges of the future. This challenge must be faced by both the federal and state administrations and, in particular, by the institutions responsible for infrastructural planning and investments to provide support services for the elderly. The forthcoming population ageing process is not only attributable to the gratifying aspect of increasing life expectancy. It is, above all, due to the strong birth cohorts of the past and, in particular, to the baby boomers of the 1950's and 60's, who are due to reach retirement age in the foreseeable future.

2. Projected Workforce Participation

A forecast of labour participation rates links future demographic developments as predicted by the main variant of the population forecast with three different scenarios on future labour participation. A main scenario that reflects the most plausible development of age- and sex-specific participation rates is contrasted with two alternative scenarios. An activation scenario assumes

further increase in future participation by women and by the older workforce compared to the main scenario. On the other hand, a status-quo scenario in the form of a sensitivity analysis disregards the changes in current age- and sex-related participation rates throughout the forecasting period.

Workforce trends in Austria

A projection of future trends in the Austrian labour force by age and sex is based on the results of the demographic forecast. According to these results, figures for the labour force (age 15 to 64) will continue to rise, from approx. 5.66 million at present to 5.79 million in 2020, declining thereafter to slightly less than 5.5 million by 2037. After that year, the number of people in this age group will continue to rise slightly, to 5.545 million by 2050.

The main scenario of the labour forecast essentially reflects these developments. However, the labour force reaches a maximum of 4.2 million at a somewhat earlier stage, namely in 2018 (2009: 4.084 million). For demographic reasons, the labour force drops by approx. 100,000 to less than 4.1 million by 2030, only to reassume its rise thereafter. In the main scenario, the forecast assumes a total labour force of 4.235 million in 2015. Because of the different assumptions on future participation trends for men and women, the increase after 2030 is almost exclusively due to a rising female workforce, while the number of employed or jobless males is practically stagnant.

That said, the moderate growth in labour supply unveils significant change within the age structure of the labour force. As baby boomers reach advanced working age and, in particular, participation beyond the age of 50 is assumed to rise significantly in the future, older workers' participation by will go up considerably. The labour force aged 50 and above should exceed the one-million limit as early as 2015 (2009: 811,000) and go beyond 1.1 million even before 2020.

Workforce trends by state

Differentiating by federal state (Bundesland), Carinthia will post the strongest workforce decline. In that state, labour supply will fall by 11% over the next three decades (to 2039) and presumably be followed by stagnant figures. While the workforce populations of Styria, Salzburg and Upper Austria will also decline by mid-century, losses will be in the range of approx. 2% - 5%, i.e. significantly below the figures for Carinthia.

Following a mild drop of about 3% in the 2020's, by 2050 Burgenland's labour force will return to the level originally projected in 2009. In Tyrol, Vorarlberg and Lower Austria, the labour force is expected to rise overall

throughout the forecasting period (2009-2050), even though in the 2020's, growth in these states will also be interrupted by a phase of slight temporary decline. Overall, however, by mid-century the labour force will increase more steeply in Lower Austria (+9%) than in Vorarlberg (+6%) or Tyrol (+3%).

The Austrian capital city of Vienna will be the only federal state to record continuous labour force growth by the middle of the century. From 2009 to 2050, Vienna is expected to grow at an exceptionally high rate of approximately 16%.

Small-scale workforce trends

On a small scale, trends in future figures of the labour force essentially follow the regional demographic trend pattern for the population of working age. Regions posting stable or further rises in inhabitants aged 15 to less than 65 will also record further rises in the labour force. On the other hand, regional population losses also affect the regional labour force supply. In most cases, the decline in the labour force is even more significant because such exodus has often been triggered by deteriorating job perspectives; it is worth noting in this context that workforce groups with higher participation rates migrate more often than those less inclined to work.

With few exceptions, the labour force will grow most in Austria's major cities and their surroundings, with the eastern region recording by far the strongest growth. By 2050, the labour force living in the area surrounding the city of Vienna will exceed that of 2009 by 25%. The city of Graz and its surroundings, the capital city of Vienna itself, but also northern Burgenland, the cities of Sankt Pölten, Linz-Wels and Innsbruck and their surroundings as well as the Upper Rhine Valley-Lake Constance area are also expected to post strong growth.

In terms of political districts, the surroundings of Vienna (Wien-Umgebung) will register the strongest growth (up+33%) in the labour force by 2050, followed by the districts of Baden, Korneuburg, Mödling, Bruck an der Leitha, Wiener Neustadt (city) and Gänserndorf, where increases range between 22 and 25%, respectively.

Except for Graz and its surroundings, the inner alpine and southern regions of Austria in particular, affecting all of the state of Styria, central and southern Burgenland, the whole of the state of Carinthia, the Salzburg regions of Lungau, Pinzgau and Pongau as well as eastern Tyrol, will mark a comparatively strong decline in the labour force. Moreover, other peripheral and weak regions such as the Mühlviertel and the Waldviertel, the Alpine foothills in Upper Austria, the Tyrolean Oberland and the Bregenzer Wald (Bregenz forest) will record a more or less strong decline in the labour force.

With a labour force decreasing by almost a third between 2009 and 2050, the decline is expected to be highest in the district of Murau. The districts of Judenburg, Wolfsberg, Zwettl, Hermagor, Mürzzuschlag and Lienz will see a decline in the range of approx. 25%.

Activation scenario and status-quo scenario

The impact of assumed future changes in male and female workforce participation behaviour on the outcome of projected labour participation rates is shown by two alternative forecasting scenarios. Under the status-quo scenario - assuming constant 2009 participation rates into the future - the female labour force, in particular, would barely continue to rise for demographic reasons and decline continuously from as early as 2016; the main scenario, on the other hand, predicts a clear growth based on the assumed increase in female participation. Overall, under the status-quo scenario the population in the labour force would decline to less than 4 million from 2025 and to less than 3.9 million after 2032.

The activation scenario, on the other hand, assumes social and political parameters leading to further enhanced labour force participation in the future, especially among women and older members of the labour force. Consequently, in this scenario the population in the labour force would exceed that of the main scenario by 220,000 persons in the long term (in 2050), i.e. amount to a total of 4.45 million. Compared to the base year of the forecast, this implies a 9% total rise in labour supply by the middle of the century.

3. Household Forecast

Based on the population forecast, a small-scale household forecast was prepared in two variants. The trend variant is based on extrapolation of the age- and sex-specific household representative rates to 2021. The constant variant keeps the estimated rates for 2009 constant across the entire projected period.

Household trends by Bundesland

According to the trend variant, the number of private households in Austria will continue to rise in the future. The increase in private households is primarily a consequence of rising population figures. The 2001 census counted 3.34 million private households in Austria. The micro-census of 2009 registered a total of as much as 3.6 million, which is an increase of 7.7% over 2001. With 3.86 million in 2020, this figure will probably be up 7.2% over 2009, reaching 4.05 million by 2030 (+12.5%) and, finally, 4.31 million by 2050 (+19.8%).

In the future, the total number of private households will rise in all states, though at different levels and not inva-

riably across the entire forecasting period to 2050. The strongest growth to 2030 is expected for Vorarlberg (+16.4%), followed by Lower Austria (+15.2%) and Burgenland (+14.4%). Vienna (+13.4%), Tyrol (+12.9%) and Upper Austria (+12.8%) will still be above the +12.5% Austrian average. Household growth in Carinthia (+8.1%), Styria (+8.6%) and in the state of Salzburg (+10.6%) is significantly below the Austrian average.

Single-person households

Differentiating between single- or multi-person households, the number of singles will continue to increase above average. Austria-wide, the number of single-person households will exceed the 2009 figure of 1.29 million by more than one fifth (+21.3%), reaching 1.56 million in 2030.

In Vorarlberg, the number of single-person households will rise by nearly a third by 2030. By that year, single figures will also increase far above the Austrian average in Burgenland, Upper Austria, Carinthia, Tyrol, Lower Austria and Salzburg. Styria (+19%) and the capital city of Vienna (+16%) will be the only states to fall below the average Austrian rate of increase, posting the lowest rises in single-person households among all assumptions for states.

Multi-person households

The number of multi-person households will increase Austria-wide across the entire projected period to 2050, but not in all federal states. In Carinthia this number is already showing a slight downward trend. While in 2009, Austria boasted 2.31 million multi-person households, this figure will go up to 2.49 million units (+7.7%) in 2030 under the trend variant of the current model, and finally to 2.58 million (+11.8%) in 2050.

The three eastern states with the highest future population growth, as well as Vorarlberg in the west, will record the strongest growth in multi-person households by 2030, scoring growth rates above the Austrian average. The ranking is led by Lower Austria, followed by the Austrian capital city of Vienna, Vorarlberg and Burgenland.

In Carinthia, the number of multi-person households is stagnant and should be slightly below the 2009 figure in 2030. On the other hand, four states post growth rates, to 2030, below the average for multi-person households, namely Tyrol, Upper Austria, Salzburg and Styria.

By size of multi-person household, continued strong growth Austria-wide in the future will mainly occur among two-person households: 13 % on average. The number of three-person households will increase less strongly, while that of four-person households is stagnant. On the other hand, the large household-sharing

communities consisting of five or more members will diminish.

Small-scale household trends

It is evident that in the next few decades, the number of private households will increase nearly everywhere in Austria on the small-scale regional level as well. The few projected regions with dropping household figures correspond to some peripheral regions with high emigration rates, which lead to strong additional demographic ageing as a result. According to the current projection for 2030, a total of eight of these regions will feature fewer private households than in 2009. In the future, these regions will see shrinking or stagnant populations. This is reflected in household numbers as well. The most significant declines are predicted for the Upper Styrian districts of Leoben and Mürzzuschlag, where in 2030, the number of private households should be 7% and 6%, respectively, below 2009. However, in 2030, the districts of Judenburg (-4%), Murau (-3%), Bruck an der Mur (-2%) and Gmünd (-1.8%) are also expected to post fewer private households than in 2009. The number of private households is expected to stagnate in Zwettl (-0.4%) and in Upper Austria's statutory town of Steyr (-0.1%).

On the other hand, the number of households will continue to increase strongly in the regions marked by continued, strong demographic growth. Most increases are almost exclusively expected in the vicinity of, and in slightly more distant areas surrounding, the big cities (Vienna, Graz, Linz), but also in some regions of the states of Vorarlberg and Tyrol.

In relation to the NUTS-3 regions, most increases are expected in the central areas of the Austrian states. In 2030, the number of households in Wiener Umland-Nord (+25%) and Wiener Umland-Süd (+22%) will exceed the 2009 figure by more than one fifth. Moreover, substantial future household increases are expected for northern Burgenland (+19%), the Rhine Valley - Lake Constance region (+18%) and the Graz region (+17%). In the NUTS-3 regions of Tyrolean Unterland, Linz-Wels, Innsbruck, Vienna, St. Pölten and Innviertel, the number of private households will increase by 13% to 15% during that period.

Single-person households

The number of single-person households is on a significant rise not only in regions expected to boast strong population growth but also in those projected to feature a more pronounced aging process. This explains the strong increases for the Mühlviertel region (+37%), for example, for the Innviertel (+36%), the Tyrolean Oberland (+34%), Wiener Umland-Nord (+33%), the Rhine Valley - Lake Constance region and the northern Bur-

genland (+32% each), Bludenz-Bregenzerwald (+31%) as well as the Traunviertel, Lungau and Eastern Styria regions (+30%, respectively) by 2030.

On the other hand, single-person households in some structurally weak regions which have already shown strong emigration in the past will stagnate or increase but slightly. In eastern Upper Styria single-person households will grow by a mere 2% by 2030.

Multi-person households

The current forecast calculates an 8% increase in multi-person households for the whole of Austria. In many regions with expected demographic losses, future numbers of multi-person households will follow the downward trend. In eastern and western Upper Styria, for example, multi-person households will decline by 9%; in Lower and Upper Carinthia, this decline will correspond to 5%, respectively.

On the other hand, multi-person households will go up considerably in areas of strong population growth. By 2030, the number of multi-person households will grow by one fifth in the Wiener Umland area, and by 15% each in the Graz region and northern Burgenland. The reduction in average household size will also continue on the regional level.

Constant variant and sensitivity analyses

The trend extrapolation of the population's household formation processes based on household representative rates will tend to result in a slightly lower increase in household figures than to be expected based on demo-

graphic developments assuming constant age- and sex-specific household representative rates. The difference between the trend variant and the variant assuming constant household representative rates shows the impact of trend extrapolation on the development of households. Considering only the demographic development and its change within the age and sex structure, and keeping the household representative rates constant at the 2009 level (constant scenario), the result is 4.10 million private households Austria-wide in 2030. At 4.05 million, the trend scenario figure is only slightly lower – by almost 53,000, i.e. by 1.3%. Everywhere except for the states of Carinthia and Vienna, the extrapolated trend indicates lower household figures than the merely demographic component. In these two states, the figures projected for 2030 show barely any difference between the two variants.

The situation is slightly more complex if we differentiate between single- and multi-person households. The trend toward single households seems to diminish slightly in the future. Indeed, the trend variant shows the number of single-person households to increase somewhat more slowly than under the assumption of constant household rates. Here, the Austria-wide trend variant for 2030 is 53,000 single-person households, or 3.3%, below the constant variant. In Vienna only, the trend toward single-person households rises somewhat more steeply than in the other eight states, as demonstrated by the larger increase in the trend variant over the constant variant (+1.0%). On the other hand, the total number of multi-person households in 2030 shows barely any difference between the trend and constant variants.

