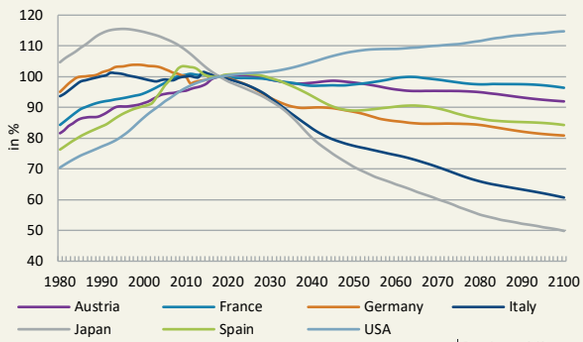
Macroeconomic effects of demographic aging in the USA

Figure 1 **Historic and expected development of working-age population (aged between 15-64 years), 1980- 2100**



Quelle: UNO - Department of Economic and social Affairs, Eurostat database.

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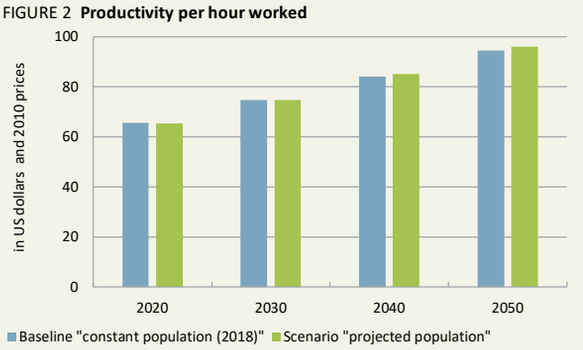
FIGURE 2 **Productivity per hour worked**



Source: European Commission, WIFO calculations.

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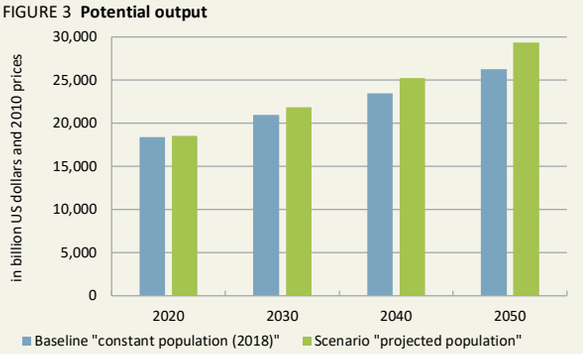
FIGURE 3 **Potential output**



Source: European Commission, WIFO calculations.

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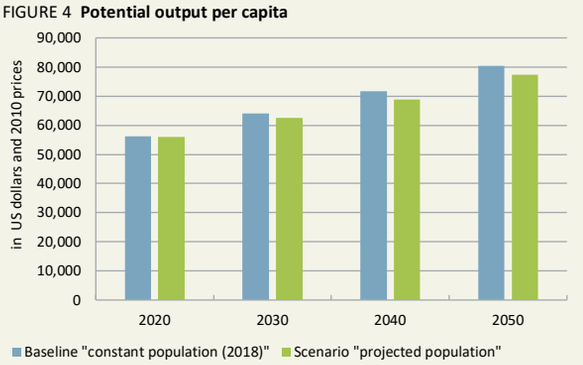
FIGURE 4 **Potential output per capita**



Source: European Commission, WIFO calculations.

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The working-age population is projected to grow continuously in the USA and to be around 8% higher in 2050 than it was in 2018 (see Figure 1). At the same time, the society is aging. This overview shows how demographic aging (the scenario “projected population”) in the USA will affect key macroeconomic indicators, compared to a scenario in which the population remains constant at the level of 2018 (the baseline “constant population (2018)”).

Since the share of older workers in the working-age population will be relatively moderate in the next few decades, the labor productivity in the scenario “projected population” should be somewhat higher by 2050 than it would be without demographic trends. Labor productivity per hour worked in the scenario “projected population” will be above the baseline by 1 US dollar in 2040 and by around 1,4 US dollars in 2050 (in 2010 prices) (see Fig. 2).

A combination of a slight increase in labor productivity and a growing working-age population should induce a demographically caused increase in the real gross domestic product (GDP) of the USA. In the scenario “projected population” the GDP in 2030 is expected to be about 920 billion dollars (in 2010 prices) higher than it would be with a constant population. In 2050, the calculated difference is expected to be slightly over 3,000 billion dollars (see Fig. 3).

Nevertheless, the USA will also be affected by the negative economic consequences of demographic aging. Although the labor force is expected to continue to grow, the ratio of people of retirement age to those of working age will increase. As a result, the GDP per capita, which indicates in effect the average material prosperity per inhabitant, is expected to decrease. In 2030, the real GDP per capita should be about 1,500 dollars lower in the scenario “projected population” than in the baseline. In 2040 and 2050, the difference is expected to be around 3,000 dollars (in 2010 prices) (see Fig. 4).

The savings rate is also declining due to demographic aging, i.e. the rise in the ratio of people of retirement age to those of working age. While it is expected to rise slightly between 2020 and 2050 in the baseline – from 17% to 17.6% – it ought to decrease in the scenario “projected population” (see Fig. 5). In 2040, the savings

FIGURE 5 **Gross domestic saving**

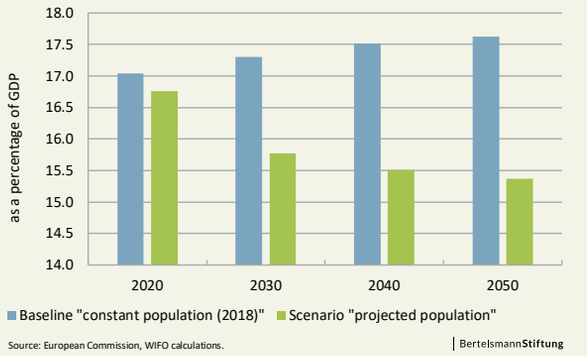


FIGURE 6 **Gross fixed capital formation**

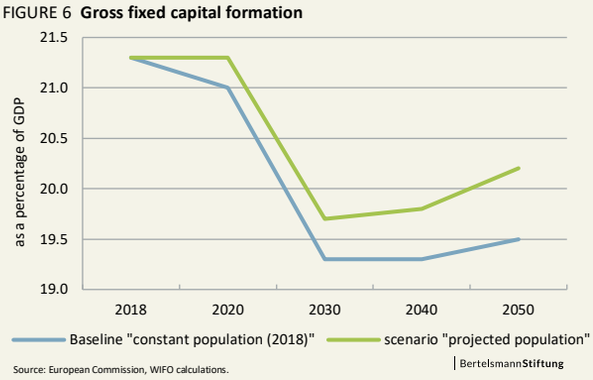


FIGURE 7 **Consumer price inflation rate**

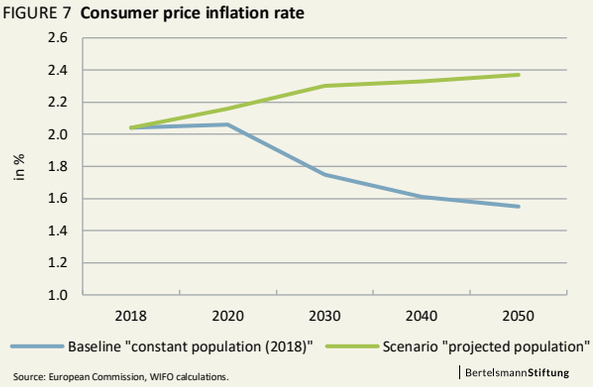
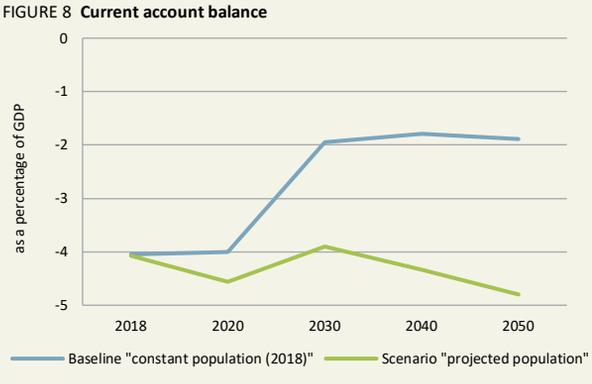


FIGURE 8 **Current account balance**



rate is expected to be around 2 percentage points (or about 11%) lower than it would be without demographic aging; in 2050, it is expected to be 2.3 percentage points (or almost 13%).

The growing working-age population requires investment to provide matching jobs for job seekers. Due to demographic factors, the investment rate is expected to be higher in the scenario "projected population" than in the baseline (see Fig. 6): In 2040 about 0.5 percentage points (or 2.6%) and in 2050 0.7 percentage points (or 3.6%).

The inflation rate is higher in the scenario "projected population" than in the baseline. The reason for this is the higher aggregate demand resulting from a higher investment rate and a lower savings rate. While the annual inflation rate in the baseline scenario is expected to be around 1.6% in both 2040 and 2050, it ought to reach 2.3% (2040) and 2.4% (2050) in the scenario "projected population scenario" (see Fig. 7).

Finally, the higher aggregate demand due to demographics should increase the American current account deficit. If the consumption rate rises (because the savings rate drops) and the investment rate is higher (due to demographic trends), this ought to result in a higher net import demand from abroad, and thus, in a higher current account deficit. In the scenario "projected population" the current account deficit is expected to be 2,5 percentage points higher in 2040 than in the baseline (4,3 percent of GDP instead of 1.8 percent) and even 2.9 percentage points in 2050 (see Fig. 8).

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