Flash Economics

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Economic growth is set to decline everywhere (the United States, the euro zone, Japan, China)

GDP growth is the sum of:

- Labour productivity gains;
- Growth in the working-age population;
- The change in the employment rate.

In the United States, the attacks on science, the rejection of immigration and the stagnation of the employment rate due to the poor health of Americans will lead to weak growth.

In the Euro zone, productivity is stagnating, the working-age population is shrinking, and the employment rate is now low.

In Japan, the working-age population is falling, and the employment rate can no longer rise; labour productivity has stagnated since 2014 and has been falling since 2018.

In China, the working-age population has started to shrink, the unemployment rate is high, particularly among young people, which leads us to believe that the employment rate is no longer rising, and despite productivity gains, which are declining year on year, growth is going to be increasingly modest.

We can therefore see that growth will slow (United States, China) or remain weak (Euro zone, Japan) in these four major regions. The only factor that will enable these countries to maintain decent growth is the introduction of artificial intelligence. However, if artificial intelligence replaces jobs, the number of low-skilled jobs will increase, with little positive effect on labour productivity.

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Reminder: the determinants of GDP growth

Real GDP growth is the sum of:

- Growth in labour productivity;
- Growth in the working-age population;
- Growth in the employment rate.

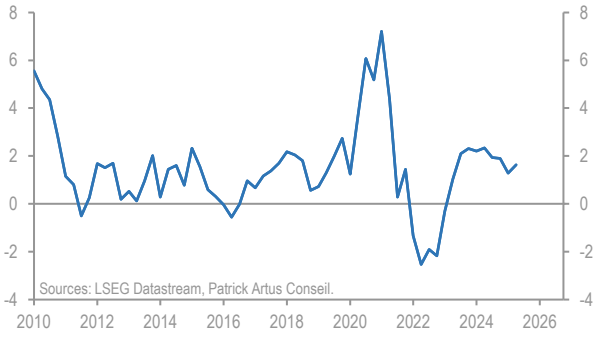
We use this breakdown of growth to show that growth will weaken in the United States, the Euro zone, Japan and China.

United States: the effects of attacks on science and the rejection of immigration

The Trump administration has slashed federal funding for federal research agencies and universities, discouraged further research into climate change and vaccines, and curbed the arrival of foreign students and researchers.

As a result, we can expect to see a decline in productivity gains in the United States (Chart 1A).

Chart 1A
United States: Productivity per head (Y/Y as %)



Furthermore, growth in the working-age population (Chart 1B) will also decline with the departure of immigrant workers (Chart 1C) and the rapid fall in the fertility rate (Chart 1D).

Chart 1B
United States: Population aged 15 to 64 (Y/Y as %)

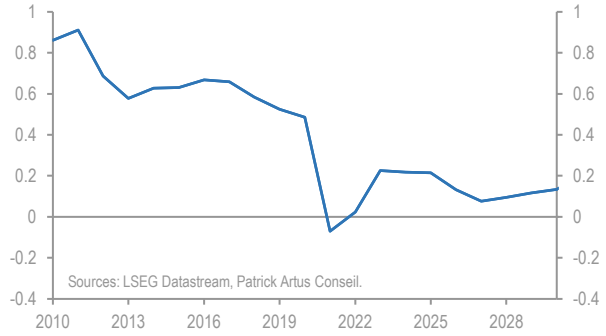
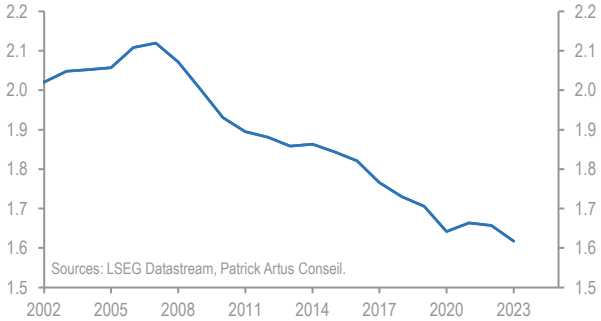


Chart 1C
United States: Foreign-born labour force
(in millions of persons)

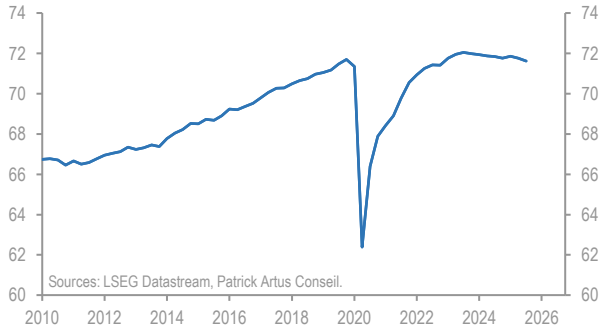


Chart 1D
United States: Fertility rate (births per woman)



Finally, **the employment rate** in the United States has not risen since 2020, mainly because of the country's poor health situation (**Chart 1E**).

Chart 1E
United States: Employment rate of population aged 15 to 64 (as %)



Overall, growth in the United States is likely to weaken as a result of :

- Falling productivity gains ;
- The decline in the working-age population;
- A stagnating employment rate.

Euro zone: the only source of growth is the rise in the employment rate

In the Euro zone:

- Labour productivity has stagnated since 2017 (**Chart 2A**);
- The working-age population is shrinking (**Chart 2B**).

The only source of growth may therefore be growth in the employment rate (**Chart 2C**).

Chart 2A
Euro zone: Productivity per head (2010.Q1 = 100)

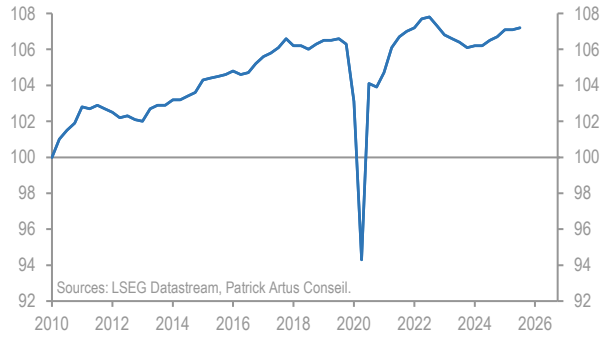


Chart 2B
United States: Population aged 15 to 64 (Y/Y as %)

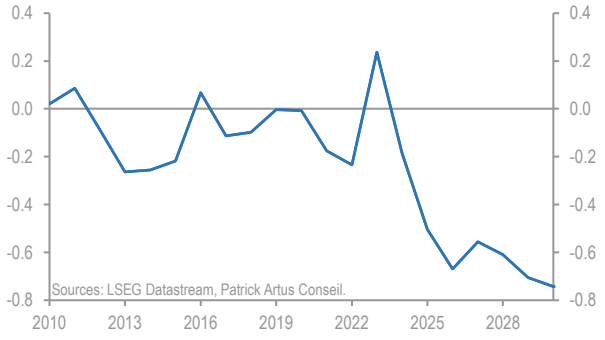
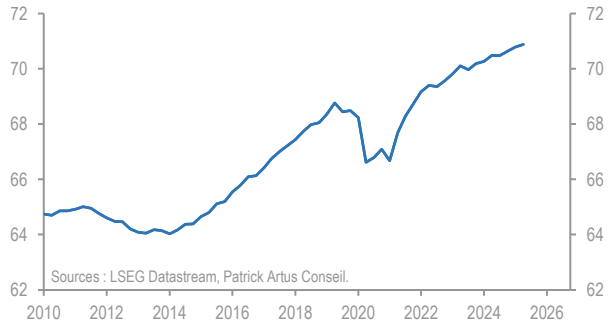


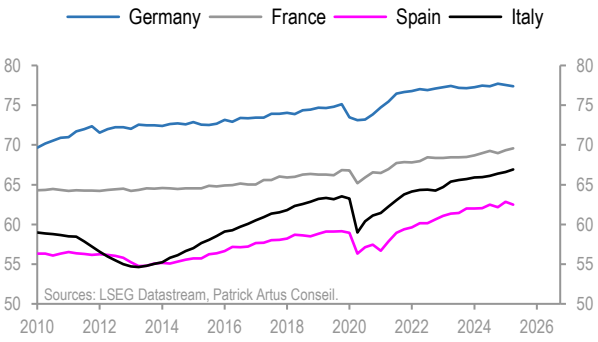
Chart 2C
Euro zone: Employment rate of population aged 15 to 64 (as %)



However, the employment rate:

- Is stagnating in Germany, because it is already very high;
- Is now stagnating in France, with the rise in the youth unemployment rate and the halt to pension reform; and
- Is only rising in Spain and Italy, and more slowly since 2023 (Chart 2D).

Chart 2D
Employment rate of population aged 15 to 64 (as %)



In the Euro zone as a whole, we can therefore expect an increase in the employment rate of around 0.4 points per year, leading to an increase in potential GDP of 0.6% per year.

Japan: productivity and the employment rate stagnate; the working-age population is shrinking

Despite the drive towards robotisation (Table 1), labour productivity has stagnated since 2014 and has been falling since 2018, probably due to the ageing of the population (Chart 3A).

Table 1: Robots installed per 10,000 employees in the manufacturing industry (2023)

Country	Robots installed per 10,000 employees
South Korea	1012
China	470
Germany	429
Japan	419
United States	295
Italy	228
France	186
Spain	174

Source: World Robotics 2024

Chart 3A
Japan: Labour productivity in the overall economy
(2010.Q1 = 100)



The employment rate is very high and can no longer rise (Chart 3B), and the working-age population is falling (Chart 3C).

Chart 3B
Japan: Employment rate of population aged 15 to 64
(as %)

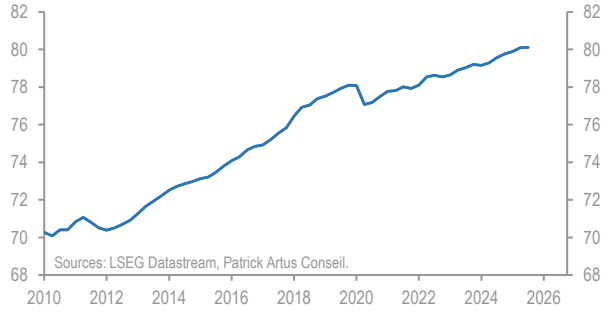
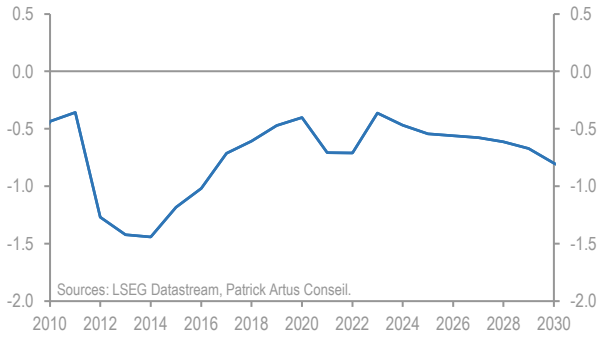


Chart 3C
Japan: Population aged 15 to 64 (as % per year)

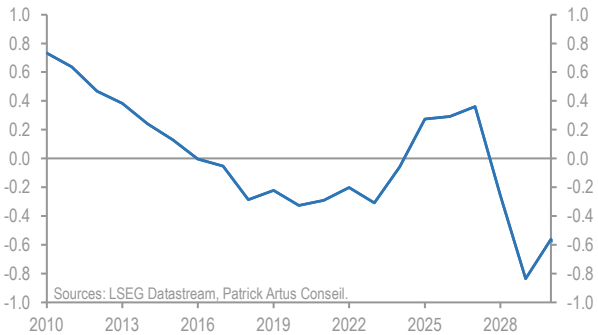


As a result, we can only expect extremely weak growth in Japan.

China: the effect of demographic ageing and weak growth

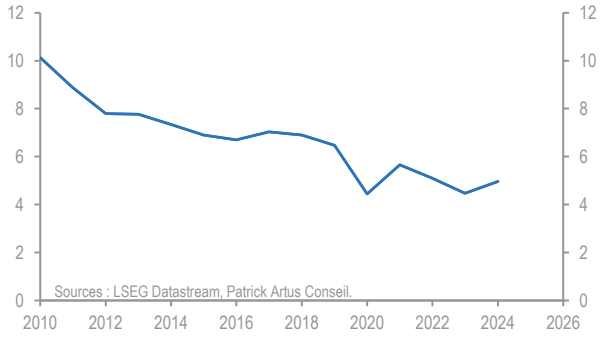
In China, the working-age population is set to shrink rapidly (Chart 4A); the youth unemployment rate is officially 17.4%, but in reality it is much higher (40% to 60% according to academic estimates), and as a result the employment rate is unlikely to rise any further.

Chart 4A
China: Population aged 15 to 64 (Y/Y as %)



Despite continuing fairly high, albeit falling, productivity gains (Chart 4B), **Chinese GDP growth will therefore inevitably slow**.

Chart 4B
China: Productivity per head (Y/Y as %)



Summary: can artificial intelligence save growth?

We have seen that growth is likely to be very weak (Euro zone, Japan), or modest (United States, China) since :

- Productivity is stagnating (Euro zone, Japan) or will slow (US, China) ;
- The working-age population is shrinking (US, Euro zone, Japan, China);
- The employment rate will remain stable (United States, Japan, China) or increase slowly (Euro zone).

The only hope, if growth is to be saved, **lies in the introduction of artificial intelligence**.

But it seems that AI is replacing jobs in sectors that make extensive use of AI (tech, logistics, consulting, legal services, etc..). As a result, the people whose jobs are destroyed in these sectors will find unsophisticated work in low-tech sectors, and if productivity increases in AI-using sectors, the number of low-productivity jobs will increase, and all in all, AI may have little effect on the productivity of the economy as a whole.

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