Hamburg Commercial Bank

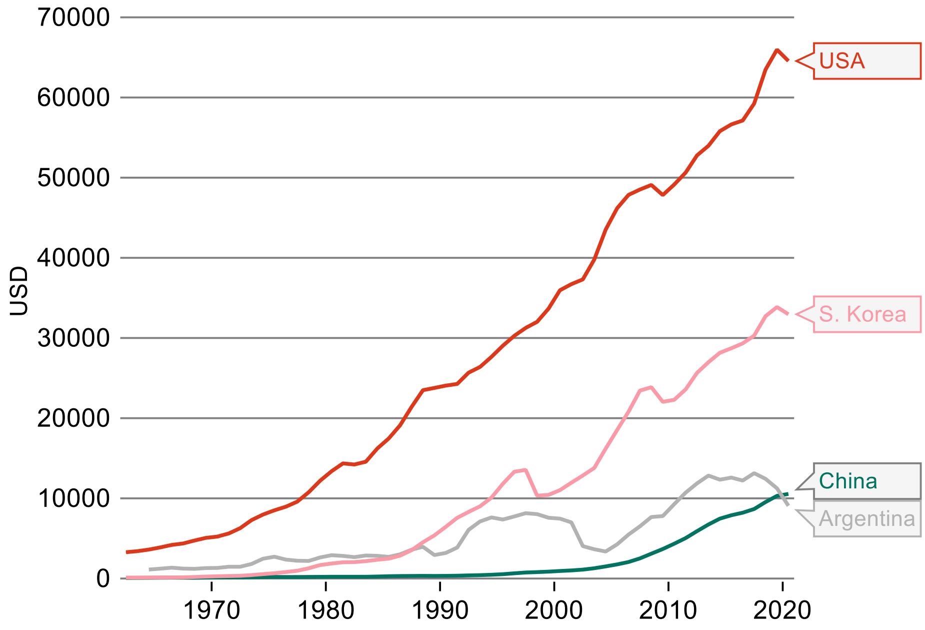
Focus

FOCUS ON CHINA

China and the Middle Income Trap

China has been one of the most important engines of the global economy over the past 15 years, but now this engine is stuttering. Next year, economic growth is likely to be below 5 %, the lowest level since 1990. There is no shortage of explanations for the downturn. The zero tolerance strategy toward Covid-19 is dampening consumption; shortages of energy, raw materials and essential inputs are hampering production; disruptions in supply chains are a new challenge; and the impending collapse of major real estate companies, such as Evergrande, is a problem for the economically important construction sector. Add to this a government that is clamping down on the tech sector with harsh regulatory measures. While these developments are problematic and playing their part in slowing growth, many of them - Corona, supply chain problems, and bankruptcy risks in the real estate sector - will be temporary. The real threat to China, therefore, is not so much a temporary loss of momentum, but a structurally induced flattening of activity, possibly even permanent stagnation - as incredible as that may sound for China. This is particularly threatening because it could leave China stuck at a middle-income level without a chance to catch up with the industrialized countries.

GDP per capita, USD



Source: Macrobond, HCOB Economics, World Bank

Content

Introduction: China faces difficult times

Sustained growth of countries is the exception rather than the rule. Since the 20th century, only 13 of the 101 countries studied have managed to establish themselves permanently among the developed countries with high per capita incomes (including Poland, South Korea, Singapore, Taiwan, Hong Kong, etc.). Apart from this empirical finding, the preconditions in China for regaining above-average growth from the current middle stage of development and catching up with the industrialized countries in ten or twenty years are far less favorable than one might think. This is because the population is shrinking and the proportion of the population capable of working is declining particularly sharply. If we want to overcompensate for this development, we need a strong increase in productivity. However, this is difficult to achieve with a population that is on average very poorly educated. One cannot completely rule out the possibility that the innovative power of Chinese companies in Shenzhen, for example, could work wonders and bring the country forward at a breathtaking speed in the upcoming years. On a sober note, however, one should rather expect that a period of slow growth is now dawning and that China will remain in the so-called middle-income trap.

The concept of the middle-income trap

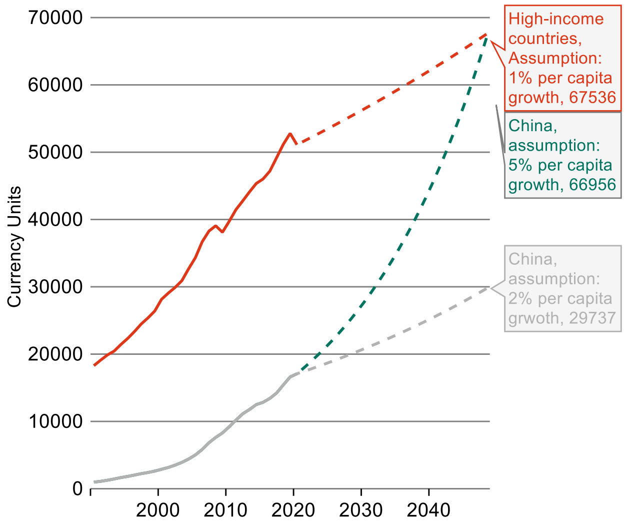
The phenomenon known as the "middle-income trap" was developed in the mid-2000s by researchers at the World Bank, who observed some anomalies in the economic development of emerging economies. They found that many countries initially managed to redirect their labor force from low-productivity sectors (e.g., agriculture) to high-productivity sectors (e.g., industry and modern services) impressively. Countries imported technologies that produced labor-intensive and low-cost products. The demand on the world market rewarded the emerging countries with strong growth, which allowed them to emerge from the status of low-income countries. Then, however, the momentum that catapulted emerging economies out of poverty slowed noticeably in most countries, that prevented them from taking the next step to ultimately achieve high income. With higher wages, countries lost their competitive adavantage, economic growth weakened and per capita income stagnated.

Being caught in the middle-income trap meant that one could neither keep up with low-wage countries in terms of price, nor catch up with developed countries in terms of product quality. In purely quantitative terms, middle per capita income is readily defined relative to the USA. There are various variables that are discussed, but a per capita income of 15 to 45 % of the income in the USA is considered middle income. In absolute terms, this is equivalent to $10,000 to $30,000.

China's development status in figures: Middle income achieved

After a rapid rise that began with China's opening in 1979, the country reached a per capita income of $10,500 in 2020, falling within the definition of middle income of $10,000 to $30,000. According to the World Bank's benchmark, which does not compare the absolute dollar amount but takes into account the actual purchasing power of income, China ranks among the countries with above-average middle incomes.

Growth scenarios, GDP per capita in China und high-income countries



Source: Macrobond, Hamburg Commercial Bank Economics, World Bank

Other key figures in comparison with the USA are also interesting in this context: According to the World Bank and OECD, China had 70 % fewer technically trained personnel in research and development (R&D), R&D spending is around 15 % lower, the human capital index is 7 % lower, and estimates from the International Labor Organization (ILO) suggest that just over 50 % of the population is employed in the informal sector. Though students in Chinese metropolitan areas performed 10 % better than the international average, according to the PISA study. In rural areas, where most children and young people live, the situation is less encouraging, as explained below.

China's former Vice Minister of Finance, Zhu Guangyao, estimates that average GDP growth of at least 5 % would have to be achieved on a sustained basis to escape the middle-income trap. If we were to take Zhu at his word, it would take until 2048 countries, assuming that their per capita incomes grow by only 1 % per year (see figure above: Growth scenarios). If, on the other hand, China's per capita income is assumed to grow by only 2 % per year, the absolute gap to the developed economies increases over this period.

Demographics as an obstacle to growth: Too old to get rich?

For emerging countries like China, demographic change can be extraordinarily obstructive. The figures from the latest population census are worrying: the birth rate is currently 8.5 births per 1,000 inhabitants, the lowest rate since data collection began in 1978. Likewise, the important age group of the working-age population (15-59 years) is shrinking[1].In 2011, the respective figure read 925 million. It has now dropped to 894 million. The senior age group (>65 years) has grown by almost 80 million compared to 2010. In view of the series of bad news, the $130 billion pension gap in the public pension program seems almost insignificant.

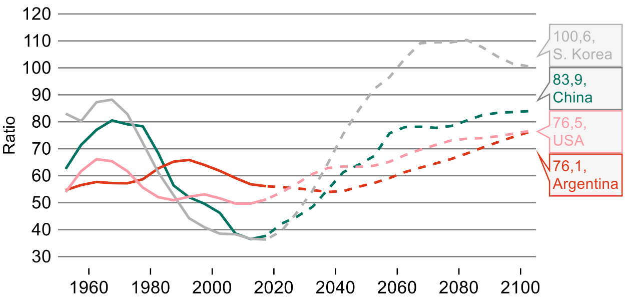
The reasons for this development are well known among experts. One of them is the state's strictly implemented one-child policy. It was not until 2016 that the authorities allowed up to three children. Unfortunately, only with short-term success. In the medium term, two factors speak against a long-term boost to the birth rate through China's more child-friendly policy. Firstly, the cultural change, as women are increasingly giving more priority to their careers. Secondly, children are now an immense cost factor that acts as a deterrent for young adults.

If the current unfavorable demographic trend continues, researchers at the Chinese Academy of Social Sciences (Beijing) expect China's population to barely increase until 2029 (to 1.44 billion people), to shrink from then on, and to fall back to the population level of the mid-1990s in 2065. The senior age group (>65 years) will grow to 300 million as early as 2025. Compared with 2020, this would be an increase of more than 100 million people in the senior age group.

In the famous book "The Great Demographic Reversal" the economists Charles Goodhart and Manoj Pradhan describe the connection between the shrinking total population and the soon expected slump in economic growth for China. In their view, China's shrinking labor force and rising senior age group will ensure that pension and medical care costs will rise and the ratio of the occupationally inactive population (defined as 0-14 years and >60 years) to the working-age population (defined as 15-59 years) will increase massively. The more this so-called dependency ratio increases, the more it will have a dampening effect on economic development.

Economic growth comes from a rising labor force and rising productivity per worker. If the labor force now falls, the necessary increase in productivity will have to assume miraculous proportions so that China can continue to grow substantially. These proportions would theoretically be possible through modern technology, such as AI, robotics, etc. Productivity figures from the last decade lead Goodhart and Pradhan to conclude that the gap in demographics in terms of economic growth cannot be closed by sufficient productivity growth. Observing the prevailing forces in the field, one must conclude that China is getting old faster than it is getting rich. This would increase the likelihood of China remaining in the middle-income range.

Dependency rate (0-14 & 65+ per 100 people 15-64)



Source: Macrobond, HCOB Economics, UNDESA

The obstacles on the way to higher productivity can be characterized by two terms in particular: Overcapacity and education level.

Overcapacity in the construction sector

Around a quarter of China's GDP is attributable to activities from the construction sector. These have been noticeable through gigantic orders in the form of infrastructure projects, factories and residential complexes. China's plan to rapidly stimulate GDP with the help of the construction sector has worked and contributed to a high employment rate. However, it is apparent that a significant portion of the investments were built far in excess of requirements.

For example, a study by Tan, Wei, and Yen based on 2018 data shows that the average apartment vacancy rate in urban China is about 20 %. This figure is derived by observing night lights through satellite imagery and constitutes an estimation because comprehensive official data are not available. The figure from the study includes both sold and unsold apartments. According to an estimate by Rhodium Group, China has unsold vacant residential buildings that could house 90 million people. When investment capital flows into companies and projects where it is not needed, it does not generate a significant return and in the form of debt, it will become a burden on the economy in the long term.

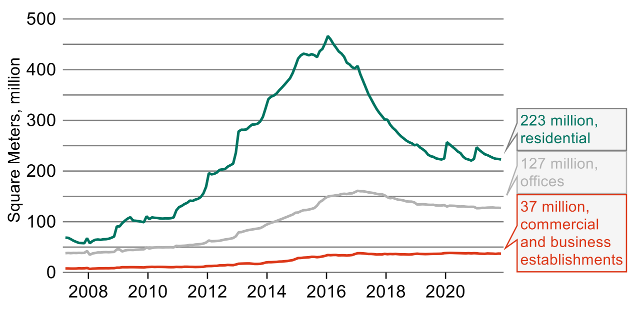
The government has recognized this and is trying to counteract it. At the 19th Party Congress of the Chinese Communist Party in 2017, President Xi made these ambitions unmistakably clear with the following words: "Houses are for living, not for speculating. Accordingly, there is a regulatory

[1] The retirement age for male employees is 60 and for female employees 55.

crackdown on real estate companies that have fueled growth in the past. Real estate developer Evergrande, which has already had to default on payments on its debt, is the most prominent company affected by this policy reversal. The days of unrestrained and purely quantitative growth in the construction sector seem to be over. This may very well lead to a noticeable dampening of economic growth. Researchers from the Institute of International Finance in Washington have calculated that a potential absence of the boom in the construction sector would result in a correction of China's forecast economic growth from 5-6 % to 3 %.

This is probably not a temporary lull in the real estate sector, but a structural weakness. After all, the slower-growing urbanization rate (down from 4 % to 2 % per year) and marriage rate (down from 10 % to 6 % per 1,000 inhabitants), which is important for residential real estate demand, mean that the real estate market will not grow in the foreseeable future.

China, commercialized buildings, squaremeter, vacancy



Source: Macrobond, HCOB Economics, NBS

Poor education level

In the past, the contrast in living conditions between China's metropolitan and rural regions was an important growth driver. This is because workers from the rural regions represented an immense reservoir of labor supply due to their willingness to work in production at low wages. Now, this disparity in terms of geography (urban-rural) and education level (educated-uneducated) could become a problem as people move up to the countryside with higher incomes.

The internationally little-noticed book "Invisible China" by development researchers Scott Rozelle and Natalie Hell (2020) attempts to prove precisely this thesis with empirical evidence collected primarily in rural China.

When Taiwan, South Korea and similarly successful countries managed to reach middle-income levels, more than 70 % of the working-age population had a high school diploma. In China, the figure is about 30 %. In rural areas, the figure is as low as 11.3 % (urban: 44.1 %). However, the production of more technically sophisticated products requires better educated people and here, despite the progress made in recent years, there is obviously a considerable shortfall.
The education problem in China is a problem of children and youth residing in the rural areas, as 70 % of this population group lives in the countryside. Since China has strict rules for national migration (Hukou System), many workers face the problem of having to leave their children behind in the countryside because they are not entitled to a school place and social benefits in the cities. This has far-reaching consequences for closing the education gap. The children and youth left behind in rural areas are in large part in poor health mainly due the situation around nutrition and hygiene. Rozell and Hell's studies conclude that a quarter of them suffer from anemia, which is caused by iron deficiency and severely limits the children's ability to concentrate. In many rural areas, 40 % of adolescents have been diagnosed with intestinal worms. 20 % of high school students have been diagnosed with myopia. 50 % of babies living in rural areas score so poorly on standardized developmental tests for babies that these children typically can never achieve an IQ greater than 90 (100 is the average). For some of the physical deficits listed, there are inexpensive ways to correct them (iron deficiency, intestinal worms, and nearsightedness), but for mental development, the zero to three year period is critical. Parental absence (migrant workers) or lack of time (agriculture) is a structural problem that is less easily remedied.

Little chance of avoiding the middle-income trap in the medium term

What can the Chinese government do to catch up with the industrialized countries despite the difficult conditions? And what do the developments outlined above mean for the global economy?

Demography: All political instruments intended to boost the birth rate are effective only in the long term. This is because, if the dependency rate is taken into account, then, economically speaking, the newborns would initially burden the Chinese state, since they need time to enter China's labor force (15-59).

Migration: Another way to increase the number of people in the work force would be international migration. According to a MERICS study, China has made great progress by its standards in attracting highly qualified workers. Nevertheless, China as a destination for migrants remains unattractive, as there are still high language, cultural and legal barriers. Since the de facto closure of the country in the fight against the corona pandemic, considerations in this direction are highly speculative.

Training and further education: Better education and training of people can also provide a further impetus toward prosperity. As with stimulating population growth, investments in education for children and young people will only be fruitful in the long term. The findings from the book "Invisible China" also suggest that programs already set up to train the low-skilled labor force are to a large extent not paying off because of the health and hygiene deficits in rural areas.

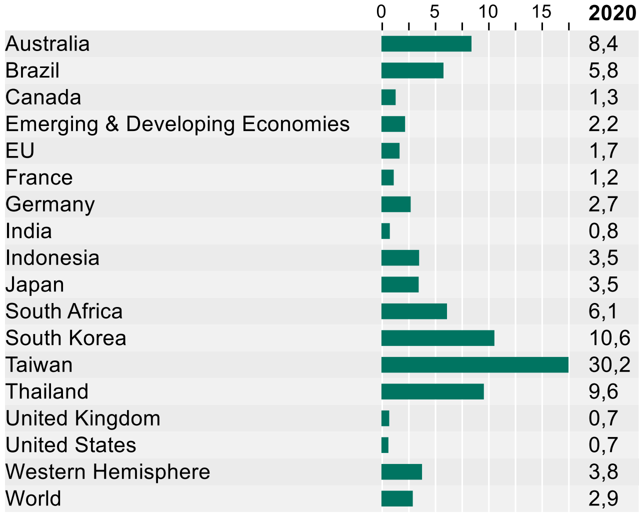
Automation: Increasing productivity through greater use of robotics and AI has had little effect so far, as already mentioned. The increasing productivity gap created by the rising dependency rate, in theory, could possibly be briged by the current state of technology. However, it is important to note that rapid automation coupled with an aging society would, for example, result in employees having to move from industry to the care sector. Experience from countries that are far advanced in their automation shows that this development drives many employees into structural unemployment. It should also be noted that China is pursuing a planned economy approach. This means that metropolitan areas must follow central industrial targets and residents are restricted in their freedom of movement because of the hukou system. A 2019 study by Chen et al. concludes that Chinese metropolitan areas have less diverse labor markets and thus their residents would have worse chances of reorientation in the event of rapid structural change, compared to U.S. metropolitan areas.

Nevertheless, the rapid automation of the Chinese economy in the short term seems technologically and operationally overambitious. It is very likely that social tensions will arise in the course of this transformation process.

Implications for the global economy

For the global economy, which has been significantly influenced in recent two decades by developments in China the anticipated structural growth slump in China is nothing less but a gamechanger. This is because China's share of global economic growth was around one-third in the last decade and has even increased as a result of China's relatively strong crisis year in 2020. The dependencies on a stable global economy are therefore extremely high for countries like Germany (foreign trade ratio: 71.3 %). In 2020, Germany's trade volume with China amounted to €212 billion, with German exports totaling €95.9 billion or about 2.5 % of GDP. About 5,200 German companies are active in China either through sales or production structures. The volume of German direct investment in China amounts to €86.12 billion. A possible slump in growth in China with the prospect of growth being less than 3 % or even stagnation would therefore have far-reaching economic consequences for Germany and could put a permanent strain on growth potential.

Exports to China in % of the corresponding GDP, 2020



Source: Macrobond, HCOB Economics, IMF

In our view, despite the strong will for change on the part of the Chinese leadership, the social and economic challenges are probably too big to solve in the short or medium term. Therefore, we must probably assume that Chinese growth will develop unusually slowly in the coming years. These risks must be understood by German companies as a chance to position themselves more broadly, if necessary, rather than relying on the boom of recent decades. In the course of this development, companies must also be prepared for economic crises to occur in the meantime. In this environment, China's old recipes such as unbridled lending for construction investments will be difficult to implement. China remains one of the world's largest markets, but the engine could soon become a brake on the global economy.

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