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China's Economy: Thirty Years of Surpassing Development¹

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Abstract

China has eradicated absolute poverty and has reached the middle level of development. On its way, it crossed the borders of several clusters and surpassed South Africa and Brazil. Its achievements were based on the development of market institutions, world market opportunities, and the maintenance of an exceptionally high capital formation rate. The rapid pace of changes, demographic policy, and the solution of infrastructure problems have created certain issues—we note social inequality, environmental problems, the growth of household debts, and financial problems in the real estate sector, which are largely the consequences of huge social programmes. The transition to a “new normal” with lower (but still high) growth rates in many ways resembles the known effect of a “middle income trap.” The country has been developing along well-known lines but faster and by its own manner. By the horizon of 2035, China is expected to reach the current level of development of South and East Europe.

Key words: China, economic growth, inequality, middle income

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Introduction

A considerable amount of literature has been devoted to China's economic development over the past three decades, but there is still much room for applied analysis and theoretical conclusions. The importance of the country as an object of analysis and as a factor in global development cannot be overstated. And, to a large extent, it is clear that Chinese domestic decisions on the development of economic institutions, industries and regions played a decisive role between 1992 and 2023. Certainly, favourable global conditions for China's imports of raw materials, access to technology and exports of manufactured goods were of paramount importance, as they played a positive role in the growth of Chinese household wealth from an initial \$1,700 PPP (purchasing power parity, 2017) to around \$18,000 by 2022. This remarkable result is usually attributed either to the success of central planning in an open global market environment, or simply to the use of cheap labour and massive capital investment (in the spirit of traditional resource-based approaches), or to the gradual emergence of a system of open institutions, in particular the country's shift from extractive to inclusive institutions.

The complexity of the issue broadly leaves room for arguments in favour of all three approaches — it is unlikely that the proponents of any of them would dare to insist that it is just their theoretical approach that fully explains all this enormous growth in the welfare of the Chinese population. To illustrate the point, consider a conventional example. The average citizen of China born in 1980 spent his childhood and school years in palpable poverty. In 1998, GDP per capita (PPP 2017) was only \$2.98k, but this Chinese citizen experienced a growth rate of 10%, and by the time they turned 30 in 2010, they were living in a country with a GDP of \$8.84k. His personal wealth grew very rapidly, as did the wealth and economic power of the country as a whole, eventually overtaking Brazil. So it is not enough just to point out the speed and general reasons for this growth, we also need to provide a more applied analysis, because according to our calculations, China has moved from the 6th to the 3rd cluster. But the country still has a long way to go. We will draw on a

number of well-known Western works: Ronald Coase with Ning Wang [Coase, Wang, 2016]; Daron Acemoglu and James Robinson [Acemoglu, Robinson, 2012], Douglas North, John Wallis and Barry Weingast [North, Wallis, Weingast, 2011]. The extensive Russian literature on Chinese reforms is mainly of a political economy nature. For the analysis of the structure and dynamics of the economy, we refer to the great work of A.V. Ostrovskiy. [Ostrovskiy, 2020], as well as our works [Grigoryev, Kulpina, 2013; Grigoryev, Zharonkina, 2023]. This will allow us to focus on the analysis of the current characteristics of China's socio-economic development.

China's reform and opening-up policy dates back to the late 1970s. The main obstacle to reform was the socialist ideology, although the authorities had already tried to combine a planned economy with market mechanisms. Before analysing the next stage of the PRC's development, it is worth mentioning the main functions of institutions. In general, institutions play two roles in the life of a society. On the one hand, institutions serve as "mechanisms" necessary for survival in society and for uniting individuals through various social organisations. They usually emerge unintentionally, as a result of human activity. Some institutions are deliberately created, but ultimately produce a result that does not always correspond to the original plans. Institutions also serve as symbols of identity and social status. For example, the ideology of socialism in the PRC gradually became a symbol of social identity, while the actual content of institutions began to change. During the 1980s, the Chinese people began to rethink their attitudes to socialism and gradually move away from identification with the ideology, and the Chinese leadership was willing to make institutional changes. One of these was the active involvement of scholars in the political sphere, helping the Chinese leadership to chart the course of economic policy and resolve conflicts between party factions during deliberations. Another institutional innovation was the reform of the legal system: the enactment of new laws, the creation of special economic zones, the growth of the legal profession, and so on. The development of legislation made it possible to limit central power and protect the rights of local authorities, thus contributing to the economic development of the regions.

The process of reflecting on China's achievements, methods and challenges spans a very long period, typically from the establishment of a new China under Mao Zedong in the late 1940s. Traditionally, a key point of reference is the December 1978 Plenum, which set the course for economic and social reform. At this point in China's history, the difficult and painful experiments that had failed to produce radical improvements in the country's overall life and strength were already over. In this paper we will limit our analysis to the period from 1992 onwards for a number of reasons. The radical transformations that began in the Russian Federation had virtually eliminated the question of how far another socialist country could deviate from Marxism, although

of course the global ideological system no longer existed by then. At this point, the reform pause (1988-1992) is said to have come to an end: "...China emerged from this period of political turmoil and, with luck, determination and foresight, embarked on its market transformation with renewed vigour..." [Coase, Wang, 2016, p.138]. It is probably fair to say that the 'ordinary people' were tired of 40 years of experimentation and the elites needed cautious market reforms, which is a situation that mirrors the revolutionary one.²

In our previous work we tried to identify the parameters of China's growth in the period under consideration [Grigoryev, Zharonkina, 2023]. Our approach allows us to conduct a comparative analysis of China's movement by levels of development marked by clusters [Grigoryev, Parshina, 2013]. Global development by 2020 looked quite promising for addressing many of humanity's challenges, although not as optimistic as it appeared in its original form in the 2015 UN Sustainable Development Goals. One of the critical challenges in working out how to address global challenges and achieve the 2030 Agenda is to try to provide a unified approach. Of course, the distinction between developed and developing countries is recognised, but theories of growth and the evolution of institutions are far from sufficient to reflect and create applied tools to achieve the SDG 2030 and beyond. This makes it all the more important to consider China's experience, which is peculiar but has produced outstanding results. At every stage of its development, China has cut across the growth trajectories of many countries of its level.

Ultimately, we want to get a clearer picture of such rapid growth and the state of socio-economic parameters at the time of passing the milestones. Presumably it would be difficult for other countries to replicate this acceleration of development, but one of the things we will try to do is to clarify exactly what is difficult for other countries to replicate in order to achieve comparable results:

- Sociopolitical stability of social processes;
- Peace on the borders and absence of open long-term internal socio-political crises;
- Uniform interpretation of development goals by the ruling elite over a long period of time, low political costs;
- Sustained high rates of accumulation;
- Solving the problems of transport and energy infrastructure;
- Sustainable education of the population, building human capital;

² A revolutionary situation is a concept first formulated by V. I. Lenin in his work "The May Revolutionary Proletariat" (1913): "It is not enough for the revolution that the lower classes do not want to live as before. For the revolution it is also necessary that the upper classes should not be able to manage and govern as before."

- Rapid adjustment to external conditions: exports and imports;
- Extensive use of foreign capital, especially in the early stages of development and through special instruments (free zones);
- Efforts to address the country's major problems: regional and social inequality, ecology.

1. Start of reforms

For a country embarking on a wave of reform, China had the accumulated education, traditional work ethic, and entrepreneurial spirit of its people. It also had a monopoly on power, a long history of control over decision-making, and a certain guarantee of institutional stability (in the event of success). Even by 1992, there was an influx of foreign capital, particularly through free economic zones, and with it an influx of technology and know-how. World markets were opened in a wave of liberalisation with the opening up of autarky of the USSR and the Comecon. With the end of the "first" Cold War and the collapse of the Soviet threat, the fears of the US and NATO elites of a Chinese threat were, for the time being, allayed. In any case, "the West," with its GDP per capita of tens of thousands of dollars, did not perceive a threat at the time and could not foresee the situation in 2020, the attempts to contain Russia and China, and the global stalemate.

The Chinese leadership used this "external window of opportunity" to implement an understandable liberalisation of economic activity, especially in the countryside, and to remove the ideological taboo on enrichment. In global terms, the 1990s, those years of great moderation and rapid growth, were a very opportune time for China to export masses of low-cost manufactured goods. Starting from a relatively low level of productivity, with significant absolute poverty as a basic reality inherited from a period of over-regulation, restriction and planning, the Chinese leadership sought a basically hybrid way out of the situation. It was a matter of harnessing available resources, removing institutional barriers and giving the new set of institutions an acceptable ideological name — socialism with Chinese characteristics. "...The idea that the planned economy is the main element and the market economy an auxiliary element is deeply rooted in the Chinese mind..." [Coase, Wang, 2016, p.183]. While Coase tries to explain the phenomenon of China's growth with the help of institutionalist theory, Acemoglu and Robinson focus mainly on the importance of resource factors in the development of China: "The country benefits greatly from its large supply of cheap labour and access to foreign markets, capital and technology..." [Acemoglu, Robinson, 2012, p.333].

It should be stressed that until 1992 there was no practical experience of successfully building a medium-developed economy on a socialist basis. The first Russian programme that did

not include the improvement of socialism was the "500 days" from 1990 [Grigoryev, 2010]. It was a signal to the whole world that there was no one else to "learn" socialism from. In Russia, when the first government was formed in October-November 1991, the programme for building a market economy was not presented in advance. At the beginning there were only sketched steps towards liberalisation, opening of the economy, and privatisation [Grigoryev, 1991].

In Russian history, a certain "coincidence" in the timing of reforms is sometimes noted: the government under E.T. Gaidar began its work in November 1991, when the USSR's GDP had already fallen by 18% (since 1989). Apparently, it was necessary to start reforms earlier [Grigoryev, 2019], and from January 1992 our period of "shock therapy" against the background of a collapse of production and hyperinflation began. So the Chinese comrades and observers had neither theoretical "Soviet" nor applied "Russian" material to solve their problems. The two great countries of socialism began their market reforms almost simultaneously, but from completely different stages of development and in different directions. Russia, of course, had advisors from the West, but they did little for the Chinese case, although the idea of shock therapy was either attractive or forced [Ostrovskiy, 2020].

But since the publication of the Decisions on the Reform of the Economic System in 1984, the specific goal of the reforms has been outlined — a market economy. However, the events of Tiananmen Square in 1989 led to the rollback and curtailment of reforms in many areas of the economy, demonstrating "...the weakness and vulnerability of China's fragile political power, in particular its complete lack of institutional mechanisms to address public discontent and its lack of political skills to persuade and inspire the people by peaceful means..." [Coase, Wang, 2016].

Under the leadership of Deng Xiaoping, China moved towards building a market economy with a socialist face. There have been great successes along the way, while the changing challenges are "stages of a great unfinished journey".

The Chinese authorities' experimental approach to reform ("crossing the river by touching the stones") reflected their belief that ideas should come before self-interest. The interim results of China's difficult journey were described in the Party magazine *Qiushi*: "Such impressive results have been achieved by China as a result of a meaningful elaboration of the theoretical issues of economic reform. They abandoned the thoughtless use of monetarist methods of transition to a market economy and developed their own theory of "socialist market economy", which is actually the theory of transition from a command, administrative, over-centralised to a market economy, where "not only the traditional theory of planned economy was rethought, but also the theoretical provisions of the traditional theory of market economy were qualitatively developed" (*Qiushi*, cited by Ostrovskiy, 2020, pp.22-23).

2. Global growth and acceleration in China

Three decades of global economic growth have been very different, but we assume that the details of global development over this period are well described, so we will minimize the presentation of them as much as possible. We use a cluster approach to analyse cross-country inequality over time, showing how all countries in the world (except China) increased their GDP per capita by 45% in 2019 compared to 1992, while maintaining their place in one cluster or another or moving between them. In terms of coverage, the period corresponds to the period of analysis of the Chinese economy in this paper, but China grew much faster than the global "norms", moving from the 6th to the 3rd cluster during this period [Grigoryev, Pavlyushina, 2022, chapter 1]. Traditionally, China's development is considered at key periods based on the activities of the General Secretaries and Congresses of the Communist Party of China. We intend to supplement this with a cluster analysis (Table 1, Figure 1).

Table 1: Cluster boundaries and country examples (GDP per capita PPP, international dollars, 2017)

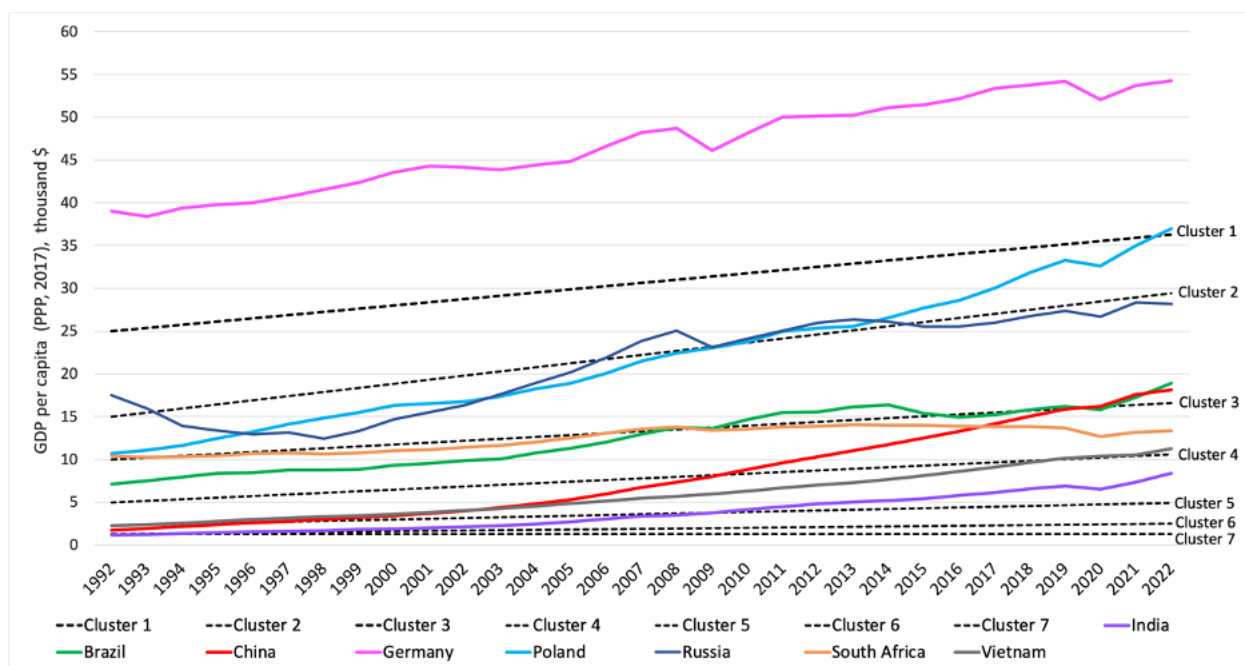
Clusters	Lower boundary 1992	Upper boundary 1992	Lower boundary 2022	Upper boundary 2022	Examples of countries from each cluster for 2022.	GDP per capita in 1992.	GDP per capita in 2022.
1	25001		36349		Poland	10,7	36,8
2	15001	25000	21810	36348	Chile	11,3	25,9
3	10001	15000	14541	21809	China	1,7	18,2
4	5001	10000	7271	14540	Vietnam	2,3	11,4
5	2301	5000	3345	7270	India	1,9	7,1
6	1301	2300	1892	3344	Ethiopia	0,6	2,4
7		1300		1890	Mozambique	0,4	1,2

Source: calculated by the authors on the basis of World Bank data [n.d.]

The pattern of the Chinese economy's rise through the clusters from 1992 to 2022 is dramatic. It is not just rapid growth, which would be good but not enough given the starting point and the ambitions of the country and, in particular, its leadership. We see an acceleration through

several stages (expressed in clusters) against a backdrop of moderate global growth. What took most countries decades to achieve, China has done in a short time. In this case, we do not show comparable countries for the whole period under consideration, but only for the periods in which China outperformed them specifically.

Figure 1. Dynamics of GDP (PPP, 2017) per capita of China and countries with a similar level of development in a cluster system, thousand international dollars, 1992 - 2022.



Source: World Development Indicators, GDP per capita, PPP (constant 2017 international \$) (<https://data.worldbank.org/indicator/NY.GDP.PCAP.PP.KD?locations=CN>)

The beginning of the reforms in the 1990s was based on the liberalisation of economic activities of farmers, traders and enterprises. But the centralised management of investment, the promotion of exports, the creation of free zones was all part of the logic of opening up the economy and free competition between companies and regions. The change in mentality was enormous, and certainly in contrast to the historical path of the long formation of Western institutions the Chinese government retained significant control over social development, first the economy, then the development of civil society according to its own logic. In 2006, R. Coase said that "...the Chinese market economy will continue to develop, preserving its specific character, incorporating China's rich traditions and all the diversity of the modern world. After all, capitalism is not the end of the road, but an evolutionary process of collective learning and self-transformation..." [Coase, 2006]. The initial reform processes were based on liberalisation and the creation of private enterprises rather than privatisation. The attraction of foreign capital, including through free zones, allowed not only the development of relevant regions and industries, but also experimentation with

institutional approaches. Limited domestic demand was overcome by high competitiveness in foreign markets (where Chinese goods are now partly replaced by products from neighbouring countries).

"China has made remarkable economic progress during the reform years. These have been linked to a refusal to follow the principles of the 'Washington Consensus', such as the liberalisation of the economy, the withdrawal of the state from economic management and the rapid privatisation of state-owned enterprises. One of the main factors in the success of the reform was China's active integration into the system of the international division of labour and the use of foreign economic factors, such as the attraction of foreign capital for the development of foreign technologies in the country, the development of free economic zones in China, and the rapid development of foreign economic relations with both developed and developing countries. In the 21st century, China will increase its economic power, and on this basis there will be a gradual increase in the living standards of the population and the construction of a "small welfare society" (xiaokang shehui) in the country by 2020" [Ostrovskiy, 2020, p.68-69].

The great market leap of China between 1992 and 2007, the transition from the difficult situation of the 6th cluster to the 4th cluster, took fifteen years, which can be attributed primarily to the liberalisation of economic activity, free access to global markets under favourable world conditions, and a coordinated investment policy. In the history of catching-up development, this is an outstanding case in itself, especially against the background of the World Bank's attempts to solve the problem of growth within the framework of modern ideas about its factors [Easterly, 2001. xi - xiii]. In 2007 (Table 2), the parameters of China's economy already correspond to a non-wealthy country with large investment plans. Then there was an increase in the rate of accumulation, energy development and welfare growth. Throughout these years, there has been a catching-up process in terms of infrastructure (similar to Europe in 1880-1913). Between 2007 and 2013, there was another big leap in the country's development and, according to our calculations, it moved into the list of countries with a much longer period of residence among the average developed countries in the 3rd cluster. The new objectives of the 2012 Congress are already being implemented in an environment of a birth control programme and a reduced growth rate. This means that the country has essentially reached economic maturity and there are signs of a new normal.

The 2012-2023 development norm ran within the 3rd cluster and took China to \$18k (PPP, 2017). This was after the 2008-2010 global financial crisis, the collapse of global governance, the COVID pandemic and the onset of the geopolitical crisis. The dream of a strong China has been fulfilled, but by other means, in the words of Nobel laureate Robert Coase: "...Over several decades

of reform and opening-up, China has succeeded in creating a market for goods that has put the country back on the road to economic prosperity and, fortunately, helped it return to its cultural roots. Developing a marketplace of ideas will help China's economy grow through knowledge and innovation. But more importantly, China's rich traditions can be revitalised through transformative integration into the diverse modern world. China will then become not only a global industrial centre, but also a vibrant source of creativity and innovation..." [Coase, Wang, 2016].

We believe that the current economy and society can be considered the Chinese norm. In other words, we suggest that Chinese society should not be expected to reach Western standards (which remains possible still). It can be argued that a huge country that has solved major development issues is shaping its own norms and in many ways catching up with the leading countries. It is hard to deny that China has become a source of innovation for hybrid approaches, combining a high degree of economic freedom for economic agents with targeted intervention by planning authorities...

The picture that the whole world has observed with a good deal of surprise (and envy) over the past 30 years is the accelerated upward trajectory of the Chinese economy, both in quantitative and qualitative terms, from a relatively low starting point. After a long period of experimentation, reforms began after the 1978 plenum. However, for a more relevant analysis, we focus on the period from 1992 onwards, when progress became explicit and continuous. In terms of the cluster approach (Figure 1), we consider it important to look not only at growth, but also at the "qualitative" steps from cluster to cluster [Grigoryev, Pavlyushina, 20-22, Chapter 1]. To some extent, the nature of the accumulation process, the sectoral structure and the dynamics of capital investment were considered by us in the previous article [Grigoryev, Zharonkina, 2023].

We will look at the cross-sections of the parameters of the Chinese economy and society at the main transition milestones: entry into the 6th cluster in 1992; 1997 - transition to the 5th cluster; 2007 - transition to the 4th cluster; as of 2019, China is in the 3rd cluster. Economic indicators are broadly linked to the level of development in terms of GDP, but they need to be seen holistically, both as policy instruments and as outcomes of development. It took fifteen years to move from cluster 6 to cluster 4. Table 2 shows how quickly and significantly the indicators changed at each threshold. In 2007, this meant that China's \$6.8k (PPP, 2017) per capita moved into Cluster 4 (the boundaries for that year were \$6.3k to \$12.7k) and away from India (\$3.6k) and Vietnam (\$5.5k). The yuan exchange rate was very low throughout this period (7.6 to the dollar towards the end), but net exports reached a quarter of a trillion dollars and car production reached almost 9 million units. This is, of course, first and foremost a testament to the industriousness of

the Chinese people and a competent industrial policy that made use of all available technologies. But the most important factor is that the rate of accumulation has been high by international standards - starting at 30% of GDP and reaching 37.9% in 2007, with GDP per capita quadrupling. The incorporation of market forces within the country and the exploitation of global market opportunities provided resources that were used in a planned manner, which, in the simplest form, was the institutional secret of continuous development. In our view, there is no contradiction here between institutional forces and traditional growth theory. State planning committee could rely on rapidly expanding resources to achieve basic, understandable and vital goals: combating absolute poverty, which affected 90% of the population in 1981, fell to just 70% by 1990 and was reduced to a minimum over the next quarter of a century [Jain-Chandra et al., 2018, Fig. 6]. However, high growth rates made it possible to initiate a large-scale increase in living standards without reducing the savings rate.

Our analysis emphasizes the year 2013, which was the first year after the 18th CPC Congress and the first year of Xi Jinping's administration. It is important for the significant shifts in the parameters of the economic structure and the fact that it is the beginning of a change in the growth pattern towards a moderate growth rate of 5%-7%. The structure of the country's GDP (by sector) has undergone radical changes, we see that the share of the agricultural sector shrank to 9% of GDP by 2013 and then stabilised at 7.3%. The secondary sector (industry) declined for a long time until 2020, after which its role grew again in line with the new needs of the global economy and the capabilities of China's industry, which can be clearly seen in the record figures of total (\$3.6 trillion) and net exports (\$877 billion) in 2022. The fluctuations in the values of the parameters between 2019 and 2022 reflect the peculiarities of each year, but it is safe to say that the main parameters are stabilising. The scope of this paper does not allow a direct comparison of the parameters of the Chinese economy with similar indicators of countries with similar GDP per capita, which China has caught up with and is now overtaking. Not all indicators, especially social ones, can be achieved in a short period of time, but many have grown radically in recent years. In the case of China, we see the necessity (and success) of the unity of transformation in a wide range of parameters of the economy and social aspects of life. The possibility of such simultaneous and rapid modernisation in a purely planned approach is doubtful, as history proves, but it has not yet been observed in a completely open social development context.

Table 2: China's economic performance, 1992 - 2022.

Year	Population, billion people	GDP per capita, PPP (in constant prices 2017, \$ thousand)	GDP per capita growth rate (%)	Savings rate (% of GDP)	Currency exchange rate (RMB to 1 US\$)	Net exports, billion USD	Car production volume, mln. units.	Share of agriculture in GDP, %	Share of industry (secondary sector) in GDP, %	Share of services in GDP, %	Energy intensity 1*	Energy intensity 2 **	Coal consumption, Mt (10 ⁶ tonnes)
1992	1,165	1,7	12,8	30,3	5,51	4,4							1090
1997	1,230	2,8	8,1	31,0	8,29	40,4							1334
2007	1,318	6,8	13,6	37,9	7,61	264,0	8,9				0,347	2,36	2821
2013	1,363	11,1	7,1	44,5	6,20	259,0	22,1	8,9	44,2	46,9	0,258	3,06	3975
2019	1,408	16,0	5,6	42,8	6,91	421,1	25,7	7,1	38,6	54,3	0,208	3,46	3899
2020	1,411	16,3	2,0	42,5	6,90	524,0	25,2	7,7	37,8	54,5	0,205	3,53	3948
2021	1,412	17,7	8,4	42,0	6,45	675,9	26,1	7,2	39,3	53,5	0,191	3,72	4184
2022	1,412	18,2	3,0	--	6,74	877,6	27,0	7,3	39,9	52,8	0,178	3,83	4554

* thousand tonnes of SCE* / PPP GDP at current prices, \$ million (SCE - standard coal equivalent ~ 29.3 MJ)

** total energy consumption/population, tonnes of SCE per person

Source: calculated by the authors based on data from World Bank[n.d.], IMF [n.d.], NBS of China [n.d.], IEA [n.d.].

Indicators of individual consumption by the population can be seen as a useful measure of success in improving the overall well-being of the country. Table 3 shows a stabilisation of the structure of the population's expenditure by 2020-2022: food and beverages - around 36%; entertainment, health and education - just under 20%. There is a relatively high share for food, but a low share for durable goods.

Table 3: Level and structure of consumption, thousand yuan, %.

Year	Personal consumption per capita (thousand yuan)	Expenditure of households (% of total consumption)				
		Food, tobacco, liquor, clothes and shoes	Housing	Equipment, furniture and services	Transport and communications	Education, culture and health
1992	0,94	-	-	-	-	-
1997	2,4	-	-	-	-	-
2007	6,6	43,8	17,8	5,4	11,6	18,8
2013	13,2	39,0	22,7	6,1	12,3	17,5
2019	21,6	34,4	23,4	5,9	13,3	20,5
2020	21,2	36,0	24,6	5,9	13,0	18,3
2021	24,1	35,7	23,4	5,9	13,1	19,6
2022	24,5	36,1	24,0	5,8	13,0	18,7

Source: calculated by the authors based on data from World Bank [n.d.], IMF [n.d.], NBS of China [n.d.], IEA [n.d.].

Defense spending and R&D costs play an important role among the socio-economic indicators of any country. In the case of a modern superpower, these values and their trends reveal a great deal about the country's policies and its position in the world. In China, per capita military expenditure (in dollars) has increased about twenty-fold in thirty years. Investment in R&D has grown at almost the same rate and is twice as high as military expenditure. The energy aspects of China's economic development have attracted global attention as the country's total energy consumption has risen from 1.4 billion tonnes in 2000 to 5.4 billion tonnes in 2022, with coal consumption rising from 1.09 trillion tonnes (1992) to 3.975 trillion tonnes in 2013. It will then continue to rise to 4.554 trillion tonnes in 2022. China has signaled its intention to achieve carbon neutrality by 2060, but as we can see, this is an incredibly daunting task. A more detailed analysis shows that there is significant growth in energy efficiency per unit of GDP (PPP), which doubles between 2007 and 2022 (see Table 2). However, the energy consumption rate (in tonnes of SCE per person) has risen from 2.36 to 3.83 over this period. The development of China's energy indicators reflects the stage of development of its transport and energy infrastructure, as well as its housing construction. It will take another decade for the high-speed rail system to be built and for significant investment to be made in less developed regions before resources can be freed up to radically reduce the use of hydrocarbon fuels.

More broadly, the structural characteristics of the Chinese economy present a pattern of a medium-developed power moving in an incredibly short time through stages (clusters) that took most developed countries very different and much longer historical periods. China can draw on the experience of other countries, both technologically and institutionally. But, it must be admitted, this poses enormous difficulties, on the one hand because of the colossal size and diversity of the country. On the other hand, there is the obvious desire on the part of the country's leadership to modernise very quickly and, if possible, all over the country at the same time. In principle, it is possible to construct a system of socio-economic indicators that will be shaped by the transition from the 3rd to the 2nd cluster, and from 18 to 35 thousand dollars per capita, or to the level of developed countries of Eastern and Southern Europe.

No. 3 Rapid economic growth and inequality.

Of course, rapid economic growth is never evenly distributed within a country or across regions and countries. For one reason or another — institutions, resources, geography, individual qualities of actors, families (antecedents of families) or entrepreneurs within a village or a city — social stratification becomes a reality following the expansion of market opportunities, the removal of barriers, the liberalisation of the environment. The spirit of entrepreneurship can be considered as much a Chinese cultural code as a Phoenician, Venetian, or Anglo-Saxon one. The emergence

of a market economy based on entrepreneurship and private property naturally leads to the emergence of social inequalities.

In the second section, we looked at how the Chinese economy has progressed over the past three decades - like a speeding train, bypassing the boundaries of clusters like bridges over rivers that demarcate areas and regions. Table 4 below shows how the economy as a whole and households have reached new levels and parameters of consumption. Reducing population growth to zero provides an opportunity to convert additional income into more sophisticated and higher quality consumption, goods and services. Note that the share of private consumption in GDP remains below 40% throughout the period, which is atypical for the world economy (usually 50-55% and almost 70% in the US). This suggests several meaningful and statistical reasons. Firstly, it indicates a high rate of accumulation, which has been maintained throughout the period under review. From the point of view of growth theory, this is extremely important because it suggests that institutional factors are of great importance: the postponement of private consumption in favour of the construction of physical infrastructure, the expansion of productive capacity and urbanisation. Social indicators also improved rapidly with the prolonged high growth rate.

By the end of the second decade of the twenty-first century, China's emergence into the third cluster — \$18,000 PPP — paints a picture of a medium-developed country. In paragraph 2, we discussed the problem of the middle development trap. Recall that it is usually a decline in growth rates from 4-5% to 3-4%. In China, the maintenance of high growth rates has led to a certain "smoothness" in the movement of socio-economic indicators. The share of urban population is stabilising (around 65%) and there is a noticeable convergence in regional development levels, from 4 to 2 times between highly developed Shanghai and moderately developed Hubei. The country will have a very high tertiary education rate of 72% (from a starting point of 2.8% in 1992), which is essential for the retraining of personnel at such a high rate of development. The structure of private consumption will change, but at a slower pace. Of course, the services component of consumption can and will continue to expand, especially in the area of educational, medical services and leisure. The multiple growth in personal consumption over the period certainly masks social differences, which will be discussed below. Recall that the share of private consumption in China's GDP structure is unusually low. As a result, average per capita consumption remains somewhat below that of the average developed country, at \$18,000 PPP per capita. So the country's great success in development is linked to the search for a "new normal" — how personal consumption should change to become a more important pillar of growth than it was before, when exports and investment dominated.

Table 4: Social indicators

Year	Natural increase (per 1000 people)	Ratio of GNP per capita in Shanghai to GNP per capita in Hubei	Share of urban population, %	Number of Internet users (million people)	Share of population with tertiary education (% of total population)	Military expenditures per capita, USD/person.	R&D expenditure per capita, US\$/person.
1992	11,6	4,18	27,5	-	2,8	10,4	19,3
1997	10,1	4,83	31,9	0,6	5,8	12,8	18,4
2007	5,2	3,85	45,9	210,0	21,4	47,1	95,45
2013	5,9	2,18	54,5	617,6	32,8	116,4	226,8
2019	3,3	2,08	62,7	903,6	57,3	170,3	367,3
2020	1,5	2,04	63,9	989,0	62,2	182,8	401,1
2021	0,3	2,03	64,7	1032,0	67,4	202,5	439,2
2022	--	1,95	65,2	1067,4	72,0	206,8	

Source: calculated by the authors based on data from World Development Indicators [n.d.], IMF [n.d.], NBS of China [n.d.], CEIC [n.d.]

Rapid economic growth is typically associated with rising social inequality, especially in the early stages of development. Traditional estimates of decile parameters published by the World Bank place China's social inequality in a rather "mediocre" category, with the income share of the 10th decile being around 30% for developing countries. Note that from the point of view of S. Kuznets' Umbrella Theorem, China is clearly an ideal candidate for testing: first, inequality should bend the umbrella upwards, and then growth should presumably curve the umbrella downwards [Kuznets, 1955]. However, we could not find any clear applied cases of countries moving downwards along the trajectory of the umbrella (small fluctuations).

Rather, we observe a stabilisation of inequality at a certain level determined by national social history, institutions (taxes, etc.) and the socio-political balance in society. We see several models of social inequality in the world — for example, Anglo-Saxon or continental European [Grigoryev, Pavlyushina, 2022, chapter 14]. The uniqueness, size and specific features of China do not motivate the researcher to assign it to any particular group of countries, at least up to a certain time and level of development of the country (technically, up to the moment of long-term sustainable preservation of the model). Various future developments can be suspected, but for now we want to get an objective picture of these three decades. At the 19th Congress of the Communist Party of China in 2017, the reduction of inequality and, consequently, social tensions was recognised as one of the priority development tasks for the coming years, so there may be targeted state action in this area [Ostrovskiy, 2020].

China is naturally of great interest to global research organisations, and there is an important 2018 IMF paper on social inequality in the country [Jain-Chandra et al., 2018]. Their analysis refers to the period in the country's history when the Chinese economy crossed the boundary between the 4th and 3rd clusters and transitioned to a search for a "new normal" with a growth rate of 5-6% of GDP.

The authors' conclusion (abstract) is dramatic: "...income inequality increased dramatically from the early 1980s and rendered China among the most unequal countries in the world. This trend has started to reverse as China has experienced a modest decline in inequality since 2008. This paper identifies various drivers behind these trends — including structural changes such as urbanisation and aging and, more recently, policy initiatives to combat it." [Jain-Chandra et al., 2018, p.2]. The rise in inequality in the 1980s is largely attributed to structural changes: urbanisation, slowing birth rates, the shift of labour from agriculture to industry, and the increasing role of tertiary education [Jain-Chandra et al., 2018, p.14]. Of course, it was these factors that underpinned the country's productivity gains, along with increased capital investment, so we can

speak of a 'natural' rise in inequality in the process of industrialisation, urbanisation and infrastructure building — similar to what happened in developed countries many years earlier and over a much longer period. The catching-up process in terms of prosperity has brought the desired social benefits, but also inevitable social costs.

Table 5 Social Inequality Indicators, 1993, 2002, 2008,2012, 2019, %

	1993	2002	2008	2012	2019
First decile	3,3	2,3	2,0	2,1	2,8
First quintile	7,9	5,7	5,1	5,3	6,7
Second quintile	12	9,6	9,5	9,7	10,7
Third quintile	15,9	14,4	14,6	14,7	15,2
Fourth quintile	22,1	22,4	22,2	22,4	22
Fifth quintile (richest 20 per cent)	42,2	47,9	48,5	47,8	45,3
Tenth decile (richest 10 per cent)	26,6	31,4	31,8	31,5	29,5

Source: World Development Indicators [n.d.].

Despite a continued rise in social inequality, poverty in the country has declined since the beginning of the 21st century. Nevertheless, millions of Chinese still live in poverty: the World Bank estimates that less than 25% of the country's population lived on less than \$6.85 a day in 2019 [World Bank, n.d.].

Table 5 provides a picture of social inequality that is well understood by international standards — this is how anyone looking at the main IBRD tables sees Chinese society. The standard parameters indicate a fairly high level of inequality, which is characteristic of many developing countries. It is shaped by the process of building institutions of national ownership, tax systems and the degree of perceived need for social protection. With very rapid growth, as we see, inequality builds up just as quickly, and generally does not move down the "umbrella".

In terms of meeting the challenges of catching-up development, China's absolute poverty reduction by 2016 was not a record, but a remarkable achievement. Hundreds of millions of people have been brought to a level where it is already possible to think about further growth in prosperity after living through the harsh 20th century. Without trying to modernise development theory too much with the example of a single important country, we believe that openness and innovation, so

fundamental to institutional theory, begin to work more effectively at higher income levels after the initial liberalisation phase of economic life has been worked out.

Social inequality in China, as in many countries, reached a plateau in 2012-2016 from which the decline, if any, has been negligible. With the growth of business and domestic accumulation, income from property and financial instruments begins to "work towards inequality", as in the rest of the world. Again, the speed of transformation of the country's economy is important. Note that the reduction in state involvement in the economy recommended by institutional theory may have improved some growth parameters, but recall that the GDP growth rate in the first decade of the 21st century was over 10%.

Chinese statistics provide a unique comparative analysis of the state of family finances, based on extensive surveys from 2013 and 2018, which we use to monitor the income, assets and debts of families of different wealth levels. Table 6 provides an interesting snapshot of the situation of Chinese families in urban and rural areas. As expected, the average income of urban families is more than double that of rural families. However, we do not have a precise pattern for the relationship between the survey data and the general population. Over five years, the average income of urban families has increased by about 40% and that of rural families by 37%.

The growth in personal income over five years according to the surveys is the same as the overall growth according to the aggregate data, urban and rural. A radical change in the asset-liability and income structure is the tripling (from 0.2 to 0.6) of the debt-asset ratio, indicating an increase in the use of credit in the pre-COVID period. The structure of society as presented by Prof. Zhang Yi gives us 20% for 2013.

Table 6: China's social structure in 2013.

Class	Share of social class in the total working-age population (%)
Owners	4,62
A new middle class	15,75
Old middle class	13,85
Workers	35,45
Peasants	30,32

Source: calculated by the authors based on Zhang Yi (2017)

Based on their social structure in 2013, it is possible to rely on a significant wealthy new middle class. According to the calculations of Professor Zhang Yi, the 'owner' and 'new middle class' strata

- educated professionals, professional managers, skilled managers and professionals - is more focused on 'development consumption', while the working class, farmers and 'old middle class' is more focused on 'survival' [Zhang, 2017]. Furthermore, it is logical to assume that the top 5% of respondents are more likely to be property owners, another 15 pp of the new middle class form the 5th quintile, and the old middle class (or some ratio of these two groups) form the 4th quintile. In the following we will assume that the ratio of the groups represented has apparently changed in the five years between the 2013 and 2018 surveys, which requires further research (Table 7). However, if we move from the consideration of socio-professional groups to the parameters of deciles and quintiles, we can directly compare the latter, as they indicate social inequality to a comparable extent.

Table 7: Distribution of income, assets and debt per family by group, thousand yuan.

	Income (average)			Assets (average)			Debt (average)		
	2013	2018	Increase, %	2013	2018	Increase, %	2013	2018	Increase, %
Urban									
All groups	84,0	116,7	39,0	85,4	125,8	47,3	142,1	261,1	83,7
5%	283,3	385,6	36,1	463,8	942,3	103,2	314,8	814,9	158,9
10%*	227,6	309,5	36,0	338,8	645,6	90,6	196,4	561,5	185,9
10%**	138,3	181,7	31,4	133,1	214,9	61,5	—	140,1	—
20%**	100,9	132,5	31,3	75,4	111,3	47,6	—	—	—
Rural									
All groups	36,6	50,0	36,7	44,3	57,8	30,4	49,4	116,3	135,0
5%	131,0	186,0	42,0	266,3	445,6	67,3	122,9	411,1	231,9
10%*	104,8	147,6	40,8	186,3	300,9	61,5	76,8	262,7	242,1
10%**	8,6	81,7	950,0	69,7	97,3	39,6	—	44,6	—
20%**	--	58,5	-	39,5	52,0	31,6	—	—	—

*Accumulated percentiles; **Separate percentiles (9th decile, 4th quintile)

Note: These figures are calculated without taking into account omissions. Data on debts in 2013 refers to 14% of respondents, in 2018, to 27%. Asset data in 2013 refers to 93%, in 2018, to 98%, and for income in 2013 and 2018 to 100%

Source: Calculated based on data from CHIP China Institute for Income Distribution (<http://www.ciidbnu.org/index.asp?lang=EN>).

Chinese Household Income Project (CHIP) is a social survey of urban and rural Chinese households conducted every few years by the China Institute of Income Distribution (CIID).

6262 urban families and 9973 rural families participated in the 2013 survey. In 2018, the number of urban families surveyed was 11375 with 9076 rural families. The social survey collects detailed data on income, expenses, debts, assets and other financial indicators of families for the year of the survey.

Analysis of aggregate and survey data suggests that significant social inequalities had already emerged by 2013. The substantial increase in income by 2018 has maintained the relative differences between urban and rural families. The same is true for accumulated assets and debts. A distinctly new phenomenon was a significant increase in the relative (to income and assets) indebtedness of the population according to the survey statistics. The ADB report comes to similar conclusions [Peschel D. & Liu W., 2022, 33, Figure 40]. The build-up of Chinese household debt has continued to the present day, as can be seen in Figure 2. In practical terms, this means that the expansion of debt requires the expansion of the wealthy classes. And here an important aspect of the pattern is the distribution of income, wealth and debt. Table 7 makes it clear that it is the richest 5% of households that have significantly increased their incomes in 2018 compared with 2013 and the following groups. Crucially, the growth in debt outstripped the growth in wealth — it appears that debt was a key source of wealth creation.

No4. Challenges of the next phase

We have considered the stages that China's economy has passed through in 30 years. This raises the question of the methodology for forecasting China's development in the foreseeable future. We cannot make a meaningful forecast without a large model, but we would like to outline the conditions for such a forecast and, if possible, link the official goals and practical possibilities of development up to 2035. First of all, we should note that we are talking about the welfare of a huge population (1.3 billion people in 1992) [United Nations, n.d.]. The average Chinese born in 1980 will only reach the age of 55 in 2035, but will be able to write a memoir: how he lived his life on a kind of escalator, with GDP (PPP) per capita growing by a factor of about 20 since 1992. If the yuan gradually appreciates, which is quite possible, the weight of the Chinese economy will increase even more compared to its current state, as its momentum is projected to outpace the rest

of the world by 2-3 p.p. per year [Xinhua, 2020]. It would be difficult for us to reproduce the complex processes that take place internally among the country's planners and policymakers (or economic and mathematical models), but we can demonstrate some of the structural parameters of the projections.

In 2020, after the conclusion of the Fifth Plenum of the Central Committee, China's top leaders discussed the 14th Five-Year Plan for 2021-2025 and the longer-term outlook to 2035. In the words of Xi Jinping, "...it is quite possible that China will reach the level of a high-income country by the end of the 14th Five-Year Plan in 2025 and double its per capita GDP by 2035..."³.

In this paper we do not go into detail on the demographic challenges of exiting the fertility constraint regime. The inertia of the demographic parameters is very large and China's population decline will continue in the coming years. Overall productivity growth will have to come more from local innovation than from moving masses of cheap labour to regions and industries with higher productivity. Environmental and climate challenges will be costly. A shift in the structure of private consumption towards services will require changes in the lifestyles of generations that have grown up with rapidly increasing consumption of goods.

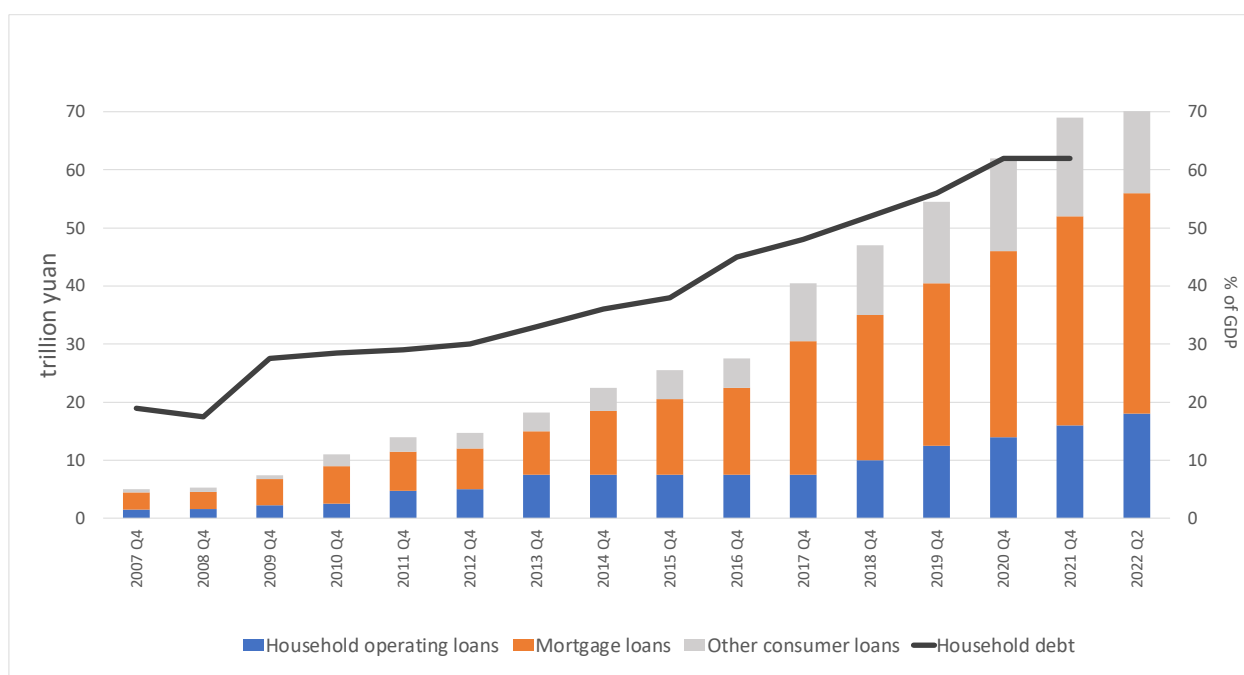
The combination of resource, institutional and external demand factors will continue to evolve. Above all, it is important not to lose sight of the tension between the growth of gross GDP and its per capita parameter. If the population of countries is stable or declining, the overall "gross" growth will naturally also become per capita growth or more (in the latter case). Thus, the doubling of GDP per capita is likely to occur one or two years earlier than the doubling of gross figures. Equally important is the structure of GDP — the ratio of accumulation to private consumption. We even allow for the emergence of interrelated pairs of indicators: some decline in the rate of accumulation in GDP in any case below 40 per cent, with a corresponding increase in the rate of consumption — above 40 per cent (with modifications more - see Appendix 1). The high rate of accumulation will be maintained for a long time in order to complete the development of the transport infrastructure, the permanent modernisation of production facilities, facilitated by more efficient technologies, which should also reduce the dependence on the increase in the labour force.

The growth of private consumption will inevitably require the continuation of housing construction programmes, the development of areas and conditions for recreation, tourism, and the expansion of the consumption of cultural values. An increase in the share of personal consumption in GDP will also mean an additional increase in personal consumption, bringing its level closer to

³ Recall that the IMF's forecasts for global growth include a Chinese component with a significant weight, the difference between China and the rest of the world in terms of momentum has remained very significant over the past decade.

that of currently developed countries. We can illustrate the extent of the shifts with an example. There are certain difficulties along the way that are worthy of study and separate work. These are the high levels of indebtedness of the population, as well as the debts of municipalities in some regions and of the developers themselves. Figure 2 indicates that household debt has risen significantly in relation to GDP and in absolute terms. The increase in debt is mainly due to housing mortgages. In practice, this means what we have shown in the previous paragraph — a further expansion of the role of credit in financing housing and projects related to long-term investment in consumer infrastructure will require an expansion of the wealthy strata of society.

Figure 2. Consumer lending to the population



Note: Household debts - right axis

Source: ADB East Asia Working Paper Series (Peschel, Liu, 2022)

If GDP per capita reaches \$35,000 by 2035, families in the 5th quintile will exceed \$70,000 in 2035 with a slight reduction in current inequality (with the current period estimate of \$40,000). This would mean that over the next two decades, some 300 million Chinese will form the largest national bloc of the richest people on the planet. Robert Barro pointed out in 2015 that China cannot "escape" the general pattern of convergence in development levels [Barro, 2016]. He suggested that China should be seen as a case of successful convergence with Costa Rica, Indonesia, Peru, Thailand and Uruguay, which are countries in the third cluster (more than \$14.5 thousand PPP per capita), into which it has moved by 2019 according to our calculations. The next step, of course, is to bring the country closer to Chile, Hong Kong, Poland, Singapore, South Korea

and Taiwan, which he also mentioned, the last three of which are already countries in the first cluster (over \$36 thousand PPP per capita). By 2022, China has even overtaken most of the other continents mentioned above (except Ireland and Poland), although it still needs to grow to catch up with its developed neighbours. Nevertheless, the cluster ascent continues. But we believe that the specific nature of the combination of planned elements and the use of market institutions makes China a special case of deliberate development with huge successes (with its own difficulties and costs).

Of course, it is much more difficult to predict the evolution of the issue of social inequality, since in observed world statistics (and life) the "Kuznets umbrella" is visible only in part of its left segment. Then the "umbrella" tends to stretch horizontally, with slight fluctuations. With rapid wealth growth and good prospects for young people, the latter is not quite so painful. This is the "secret" of Anglo-Saxon inequality: it is higher than in other systems, but with widely advertised individual vertical lifts. It is conceivable that the top-down expansion of wealthy family cohorts in China will be an important factor in more than just social stability. In applied terms, for the stability of the real estate sector (especially housing itself), the expansion of financially solvent families renewing their housing conditions should naturally be close to the long-term rate of expansion and renewal of the housing stock. Of course, as we know from the practice of developed countries (with above-average levels of development), it is the waves of demand for housing that generate corresponding waves of expansion of public facilities and booms in consumer durables.

If we consider the current level of GDP per capita in China as "average" in the logic of catching-up development, then shifts towards higher quality social services and changes in the way of life are a very difficult task, perhaps more difficult than the tasks of the industrial stage of development. The latter could be considered to be nearing completion, but now it is time to include the energy transition and the preservation and restoration of the environment, which will require substantial investment costs — \$15 trillion is expected to be spent on making the economy carbon neutral by 2060 [Zhang, 2020], but this work is largely ahead of us. High environmental costs and reductions in greenhouse gas emissions may be an important element in leveling lifestyles and social differences in the future.

We do not think it is possible here to estimate long-term changes in budgets, foreign trade, R&D or military spending, although it is clear that the coming gigantic increase in GDP will create enormous potential for China to be one of the world's development leaders. It seems to us that the complex economic and social problems of many countries in the 'middle development trap', such as China, will naturally become more complex. So much will depend on the socio-economic stability of the country, on shifts in institutions towards greater inclusiveness and self-expression.

But we see no reason why the transition from 10% to 5% growth over the past decade should be seen as a crisis, as it is by some of the world's analysts and media, especially when no return to a 10% regime is expected. We would interpret the situation, depending on the range chosen, as a search for a "new normal", overcoming the Chinese "middle-income development trap" (but not from 5-6% to 2-3%, as in most countries, but from 10% to 5%). The assumption of shifts towards greater openness seems quite expected, although the scale and complexity of the tasks of the next period are likely to leave a significant role for Leviathan [Shastitko, 2020], presumably limited to a greater or lesser extent.

Among the challenges for China's development in 2023-2024, Chinese economists and foreign observers mention not only the obvious aspects of development: slowing population growth, overcapacity in traditional industries, the need for innovation and the development of entrepreneurship, and so on. Financial risks in the real estate sector have become the most pressing issue due to the apparent decline in profitability and sustainability of the current business model. We cannot analyse this issue in depth in a short article, so we will limit ourselves to a brief overview of the situation.

China's debt concentration is in smaller cities in the centre and west of the country. This puts the country in a unique position in the world — the vast majority of debt is attributed to local governments rather than the central government. Apparently, this is the result of fulfilling the guidelines for the extensive development of urban infrastructure and solving the housing problem. Municipalities have fulfilled important tasks of the country's development at a stage that other medium-developed countries have largely not reached (or have not completed, remaining in the "trap"). But the simultaneous development of infrastructure, the public sector and housing itself was largely financed through debt. This was particularly true in the less developed central and western provinces. This financing model is, of course, closely linked to social inequality — the ability of families to buy (renovate) and pay for housing. In the previous section we showed that the majority of assets (and debts) are held by the wealthiest strata of society. Moreover, we see that the large increase in family wealth in the short period between 2013 and 2018 was achieved with a tripling of the ratio of debt to assets and annual income.

So again, we see exceptionally rapid growth and massive challenges at the heart of the problem. Note that the problems in the sector go well beyond the commercial problems of the property market and the sustainability of developers' bond issues. For Western observers and investors, this is a purely financial issue. For us, it is an important issue of institutional development, of its Chinese character. And the central government's responsibility for the sustainability of the sector stems not only from the general logic of centralised management, but

also from the importance of shaping the social environment and ensuring equal access to housing and social services. In the past, housing sales were driven by speculative demand from buyers who were wary of rising house prices. In the future, the market will have to meet the underlying demand from buyers who want to buy or improve a home for themselves. It is believed that the property sector will definitely experience a downturn in the medium term. The Chinese authorities have introduced the concept of the "new three": electric cars, lithium-ion batteries, and renewable energy. These sectors, according to the Chinese authorities, could be a substitute for the housing market. However, these sectors account for 3.5% of GDP, which is not comparable to the real estate sector's share of 23% of GDP. Therefore, until the property market improves, the "new trio" will not be able to make a significant contribution to increasing China's GDP growth rate [The Economist, 2023].

So we can expect the government to find a way to solve the problem by (as discussed) issuing new central government debt (bond substitution) or increasing the provincial governments' share of tax revenues. In any case, this is the national problem of this stage of development and the result of the technology used to solve the important problems of the previous stage. In the short term, it is a solution to an aggravated economic policy problem. In the long term, it is the fundamental problem of overcoming the traps that arise when an average level of development is reached, especially at this rate. It is likely that a further expansion of welfare, not only in the fifth but also in the fourth and third quintiles of the income ladder, will be necessary to put the process of improving lifestyles on a more sustainable footing.

5. New development model and projections

"The transition to lower GDP growth rates in recent years is associated in China with the concept of "new normal" (xin changtai), which indicates a gradual shift in the dynamics of the Chinese economy following the global economic crisis of 2008-2009. At the official level, Xi Jinping first announced the beginning of the "new normal" period in the Chinese economy in May 2014 during an inspection tour of Henan Province [Ostrovskiy, 2020, pp. 68-69]. There are many opinions among economists about what this concept means in the context of the Chinese economy in today's reality. Some believe that it is a difficult situation in the real estate market, others see a new normal in the establishment of relations between China and the United States. According to Chinese economist Cai Fan, the "new normal" is a combination of a shrinking population, "greying" buyers (ageing population) and fussy employers (rising unemployment) [The Economist, 2023].

An important paper by the Asian Development Bank provides a comprehensive picture of China's growth potential [Peschel D. & Liu W., 2022]. The comprehensive review of theories, statistics, growth drivers, and competing forecasts provides a generally expected result, as it is based on

estimates of growth in fixed capital, labour and expected growth in total factor productivity. Contrary to the media, which mainly discuss the real estate "crisis", this report predicts some slowdown in growth based on growth factor considerations. The authors forecast (page 19 - Table 2) a growth rate of around 3.5% until 2030 and then 2.7% until 2035, although a number of authors provide higher growth rates. An interesting feature of modern forecasting is the reliance on the Cobb-Douglas function and the standard methods of growth theory. Most development advice, however, relates to institutional factors: reducing the role of state-owned enterprises, measures to lengthen credit periods, and the development of education and human capital. For all its development achievements, China is still a middle-income country and the scope for efficiency gains is considerable.

The Chinese government's overall forecast dates back to 2020. President Xi Jinping stated at the time that the goal of the 14th Five-Year Plan (2021-2025) was to double GDP per capita over the next 16 years. Chinese economist Justin Yifu Lin explained the logic behind this optimistic plan as follows. In 2019, China's GDP per capita (PPP) was only 22.6% of the US level. Germany was at this level in 1946, Japan in 1956 and South Korea in 1985. The annual growth rates of these countries over the next 16 years averaged 9.4%, 9.6% and 9% respectively. Lin concluded that even with low population growth and a trade and technological war with the US, China's potential annual growth rate of 8% in 2019-2035 and 6% in 2036-2050 could easily translate into real annual growth of 6% and 4% respectively [Fuxian, 2023]. In March 2024, the CPC leadership announced a growth target of 5% for 2024. Obviously, China will maintain a high growth rate by current global standards and try to gradually solve the problems that have arisen by increasing resources and special measures. We have already seen a significant increase in investment in high-tech industries, so China will continue to compete with developed countries at a new level.

In our paper we have shown not only the important aspects of the growth of the Chinese economy, the parameters of overtaking other countries (in cluster analysis), the factors of such growth, but also the structure of a number of problems, which are largely the consequences of the speed of growth and the institutional mechanisms chosen. In the longer term, the country's transition to developed status (second cluster - from \$22,000 PPP 2017) will be achieved at \$35,000 per capita. This will be a colossal success and will provide new generations of Chinese with huge resources for welfare, large environmental projects and participation in solving global problems of humanity.

In terms of theory development, we will not take it upon ourselves to propose a formula for China's success in the jargon of institutionalism. The country's development continues with a complex combination of market advantages and the tangible role of central planning, even after

reaching a middle level of development. Strictly speaking, we see a fork in the road for scholars: either scholars recognise that the Chinese case defies the basic logic of development theorems, but then the greatest and most interesting success remains the unique good fortune of the Chinese leadership. Or scholars could recognise the important role of state intervention in open market affairs at various stages and bring the Chinese case into the mainstream of institutional theory.

Appendix

Appendix 1. Consumption statistics

There are two reasons for the slow transition from China's investment- and export-led growth to growth driven by domestic consumption (rebalancing the economy): the population's propensity to save heavily; household income is a small share of national income [The Economist, 2023].

According to Michael Petty, while household income in the West averages 70-80% of GDP, in the PRC it is only 55%. Economists have long believed that China has a statistical problem, particularly in recording household income and expenditure. Surveys probably fail to capture the unreported 'grey' income of the rich, and national accounts still underestimate the hidden 'rent' that homeowners pay themselves when they live in their properties. In addition, social transfers in kind (STIK) are not separately categorised (unlike in OECD countries). STIK have been included in government expenditure rather than in Chinese household income. As a result, China's household disposable income was only 62% of national income in 2020 (and only 56% in 2010). If the euro area countries had also excluded STIK from disposable income, the figure would have been similar to that of China (less than 64% in 2020). The inclusion of STIK in China's disposable household income contributes to an increase in the share of disposable income in national income to 69%. The share of personal consumption including these transfers will rise from 39% of GDP in 2010 to 45% in 2019. [The Economist, 2023].

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