
Structural Change and Mid-Income Trap – Under which conditions can China succeed in moving towards higher income status?¹

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Abstract

After two decades of very high economic growth rates, China has now reached the so-called mid-income range or ‘trap’, i.e. a development level where it has to expect slower economic growth rates (a ‘New Normal’) for the future. Associated with that is a structural change towards tertiarization which requires some fundamental rebalancing of China’s economy. Overcoming this mid-income trap and further catching up to the most advanced countries in the world is a very demanding task. In order to succeed China has to efficiently manage the mentioned rebalancing (structural change) process towards tertiarization and to undertake many fundamental structural reforms.

JEL-Classification: O1, O4, O5, P2, P5

Keywords: Middle-income trap, economic development, China, structural change, tertiarization, rebalancing

1. China’s Recent Development Success

China’s development during the last three decades has been very successful and admirable. China was a very poor country in 1978 when it decided to reform its country towards a modern, more efficient economy. China’s per capita GDP in purchasing power parity (PPP) terms was then lower than India’s per capita GDP. It was only in 1992 that China overtook India in terms of GDP per capita. Since then, the country developed in an astonishingly quick and positive way.³ The following summarizes progress from 1990 until 2014:⁴

¹ I would like to thank Linda Glawe and Michael Murach for their help in proofreading, searching for literature and improving some passages of the paper. I would also like to thank for the comments from participants at guest lectures I gave at Harvard University (Fairbanks Center) and Xiamen University (Center for Macroeconomic Research) in 2014 and 2015.

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³ Between 1990 and 1992 almost all former communist countries with centrally planned economies, which until then formed the so-called ‘Eastern Bloc’, decided to give up central planning and gradually reform towards open market economies. This was the starting point of ‘globalization’ which enabled many developing countries to develop their economies faster than before.

⁴ See IMF, World Economic Outlook Database, April 2015; The World Bank, World Development Indicators.

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- Real income (on a PPP basis) increased by more than 14 times.
 - Real income per capita (on a PPP basis) increased nearly twelve-fold.
 - Poverty headcount ratio declined significantly from 60.73 per cent in 1990 to 6.26 per cent in 2011.
 - Number of poor at \$1.25 a day (on a PPP basis) was reduced from 689 million to 84 million during the same period.
 - In 2014, China represented 16.48 per cent of global GDP – more than four times as much as it did in 1990 – making China the worldwide No. 1.
 - Exports of goods increased by almost 2677 per cent from 1992–2014.
 - Annual FDI flows to China grew from \$2bn in 1985 to (an estimated) \$127bn in 2013.
 - The secondary gross school enrollment ratio rose from 37.77 per cent in 1990 to 88.98 per cent in 2012.

This shows: China is on its way to regaining its old strength. According to a study by Maddison, China was the world's largest economy in 1820, accounting for an estimated 32.9 per cent of global GDP. By 1952, China's share of global GDP had fallen to 5.2 per cent and by 1978 to 4.9 per cent.⁵ Since then, China has started to reform and restructure its economy and to catch-up so that it has regained global economic power, and in 2014 it succeeded in becoming again the world's largest economy (see above).

Therefore, China has succeeded in developing from a very poor country in the 1970s/80s to a relatively rich mid-income country or Emerging Market Economy (EME) within an astonishingly short period of time. Of course, China can be proud of having reached this. Indeed many countries which were as poor as China was 30 years ago would be more than content with this development. But China is still 'hungry' and wants more, since it regards itself not as being any emerging economy country. China has a great history/past. It was in former times one of the richest countries in the world, not only absolutely but also in per capita measures. And it wants to reach this level again.

There are at least two understandings of a positive or successful future development for China, namely:

- a) A rise in absolute wealth (or eradication of poverty) = a modest goal
- b) Catching-up to Advanced Market Economies (AMEs) such as the USA in output/income **per capita** = an ambitious goal

China aims at reaching the ambitious goal b), and it wants to reach it as soon as possible. But, in order to reach b), a country has to overcome the mid-income range significantly and durably. That implies, in order not to stay caught in (or fall back to) the

⁵ Maddison (2007a, 103; 2007b).

so-called ‘mid-income trap’ (MIT)⁶, it has to undertake sustainable reforms.⁷ According to the empirical literature, there are several factors of success (for escaping or avoiding the MIT). Eichengreen et al. (2013) show that growth slowdowns are less likely in countries with a high share of population with secondary and tertiary education and where high-technology products account for a large share of exports. Aiyar et al. (2013) identify several determinants such as institutions, demography, infrastructure, the macroeconomic environment, output structure and trade structure (among others).

2. The Challenge of Overcoming the Mid-Income Trap

Surpassing the mid-income range (MIR) or, catching up to advanced countries in income per capita, is a very ambitious goal, since many or most former developing countries which had reached a development level which is comparable to China’s current development level, have failed to overcome this range and have stayed caught in this trap. In other words, they have not succeeded in significantly and quickly catching up to the advanced countries in terms of income per capita.⁸

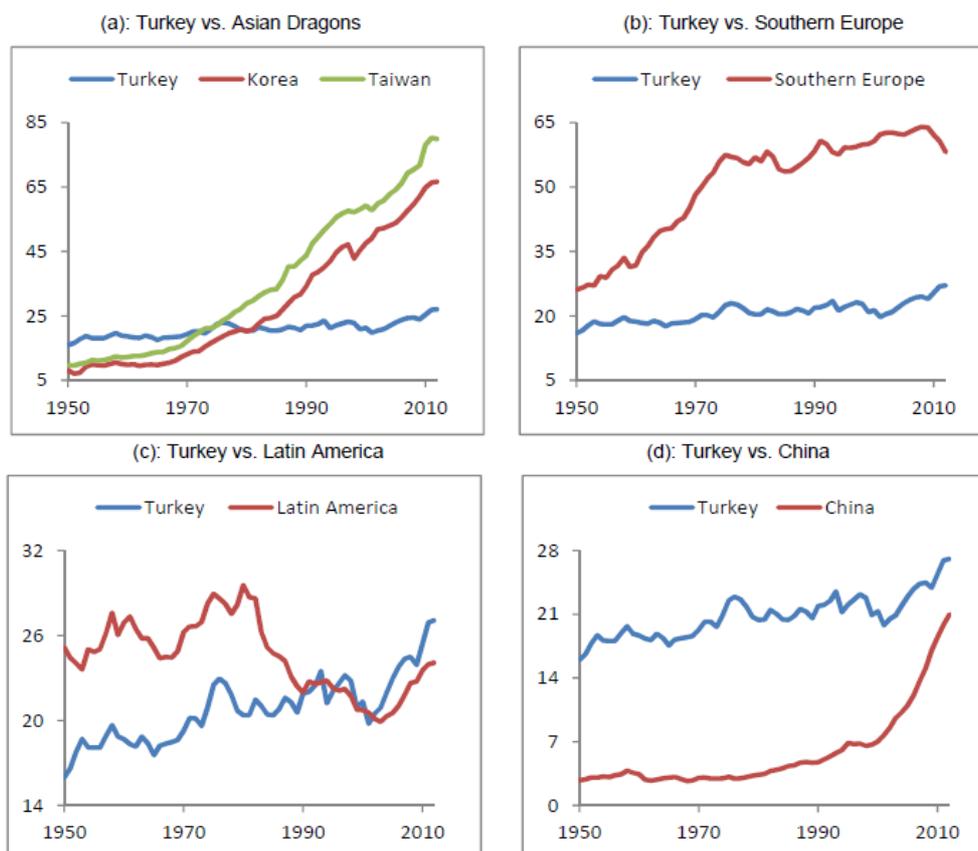
A good example in that respect is Turkey which has been a dynamic, fast-growing economy over the last decade and is often regarded to be a success story. However, seen over a longer perspective, its development has rather been disappointing, and even its most recent development success has not been comparable with China’s over the last few decades. Another example is Latin America, in particular Brazil (see Figure 1 for per capita GDP developments).

⁶ There is a broad range of literature on the problem of MITs, e. g. Gill and Kharas (2007), Jankowska et al. (2012), Agénor and Canuto (2012), and on how to overcome it, e. g. Kharas and Kohli (2011), Shijin et al. (2012), Xiaohe (2012), Aiyar et al. (2013) and Flaeen et al. (2013).

⁷ Insofar China’s development has been specific China might need to implement reform steps/measures which are different from those that are highlighted in the (general) literature. See below on the challenges China is confronted with.

⁸ The World Bank (2012, 2013); IMF (2013); The World Bank and the Development Research of the State Council, P. R. China (2013).

Figure 1: Development of Turkey in comparison to some other countries
(GDP per capita as a percentage of the US-level)



Source: Figure taken from Üngör (2013).

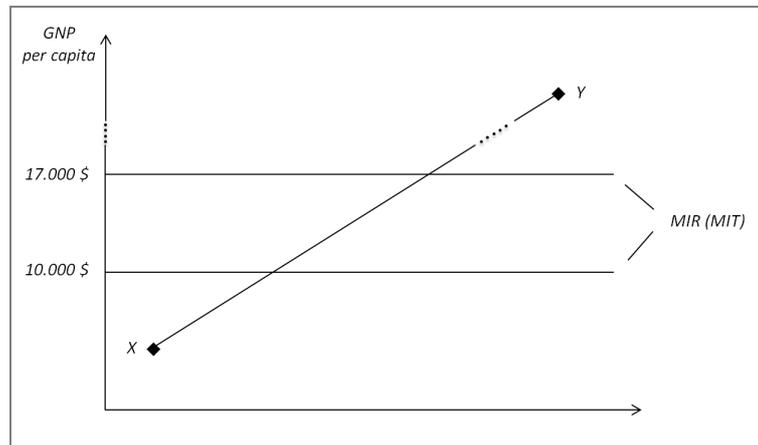
To sum up, over a long period of time, countries like Turkey and Brazil have disappointed as they have not succeeded in durably overcoming the mid-income trap. But also most other emerging market countries have not been successful. In a joint study by the World Bank and the Development Research of the State Council, P. R. China (2013), it has been shown that only 13 of the 101 middle-income economies in 1960 overcame the mid-income trap by 2008.

South Korea is a typical example of a country that has managed the successful transition from an upper middle-income country which it became in the second half of the 1980s to a high-income economy in 2000.⁹ Besides South Korea, the other members of the so-called “Four Asian Tigers” (namely Hong Kong, Singapore and Taiwan) experienced exceptionally high growth rates as well, transforming their economic status to high-income countries.

⁹ See e.g. Tran (2013). According to Chung 2011 the key factors of Korea’s economic success are technological innovation, the well-educated and well-disciplined workforce and the Korean government’s “outward-looking development strategy”.

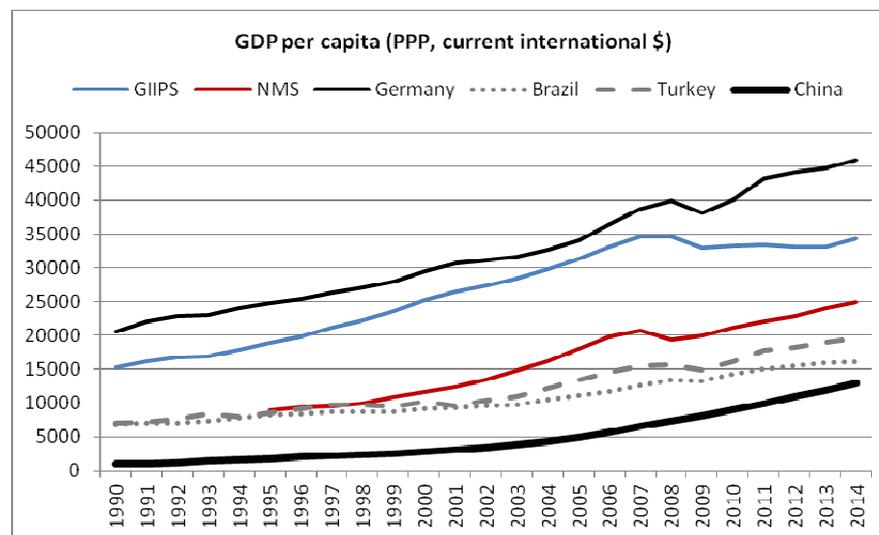
How about **China**? China has so far only reached the lower bottom of the so called mid-income range or ‘trap’ (here understood as a range of \$10,000 to \$17,000 PPP per capita as displayed in Figure 2).¹⁰

Figure 2: The mid-income range (MIR)



In PPP, China’s 2014 per capita GDP was about 23.60 per cent of the US-level; in absolute terms \$12,880.¹¹

Figure 3: GDP per capita (PPP, current international \$)



Note: GIIPS here stands for **G**reece, **I**reland, **I**taly, **P**ortugal and **S**pain. NMS here stands for the East European (post-communist) **N**ew **M**ember **S**tates which entered the EU between 2002 and 2004.

Source: IMF, *World Economic Outlook Database*, April 2015.

¹⁰ I refer here to Eichengreen, Park and Shin (2011) who have come to a similar definition of the mid-income trap and also define it as a range between (approximately) \$10,000 and \$17,000 per capita.

¹¹ IMF, *World Economic Outlook Database*, April 2015.

As shown in figure 3, this is a level nearly comparable to Latin American countries as Brazil; however, this is only a little more than one quarter of Germany, slightly more than a third of South Korea, and one half of Eastern European (post-communist) EU-countries.¹²

That is, history has shown that many EMEs have failed in steadily overcoming the MIR. However, some have succeeded. Why?

And: Is China going to succeed, too? What preconditions are required?

3. The Role of Structural Change in Reaching and in Overcoming the Mid-Income Trap

China has reached its mid-income status by mainly fostering industrialization (esp. heavy industry) over the past decades. The question is how long focusing mainly on industrialization can effectively be extended and when it is time to ‘rebalance’. ‘**Rebalancing**’ is currently the magic word in China. It implies that an intelligent strategy of structural reforms is needed to overcome the ‘structural transformation barrier’ and to catch-up to the advanced economies and thus converge to a high-income status.

Here it has to be recognized that the transition path (from X to Y) in Figure 2 is accompanied and is influenced by frequent (economic and socio-political) **structural changes**. One major structural change I will focus on is the ‘natural’ consecutive transition from dominance of agriculture to manufacturing towards services (‘tertiarization’).

This structural change is a common feature of development (in all countries).

There are three common explanations for this process:¹³

- a) Income elasticity of demand for services,
- b) Baumol’s cost disease,
- c) The costs of industrialization that force countries/governments to foster tertiarization.

With respect to a): Because of a high income elasticity of services demand, a country with a rising income level will show a higher private demand for services (see Kongsamut, Rebelo and Xie, 2001). With respect to b), Baumol and Bowen (1965, 1966) previously described that some sectors of the economy are exposed to an increase in labor costs because they do not benefit from increased efficiency. Sectors such as health care or other public services tend to suffer from this *cost disease*. With respect to c): There are significant negative side-effects of industrialization (such as rising income disequilibria, and other undesired distortionary effects) which tend to induce

¹² IMF, World Economic Outlook Database, April 2015. On the convergence/divergence path of the GIIPS and NMS countries compared to Germany see Wagner (2013b, 2014).

¹³ For a more detailed analysis see Wagner (2013a).

governments to take counter-measures favoring tertiarization.¹⁴ Success in overcoming the MIR depends upon how EMEs manage this structural change.

However, one has to recognize that there is no standard model of the transition path associated with the structural change process. Nonetheless, economic modelling of EMEs has to take into account the impact of structural change on the transition path from X to Y (in Figure 2), and the country-specific dynamic interrelationship between economic and political/social development relevant for the specifics of the transition process in a country.

Moreover, there is no standard model of how to politically steer the transition path either. The optimal or appropriate way to politically steer the transition path in a country is dependent upon the politico-economic system and the corresponding optimal speed and optimal sequence of economic and political liberalization/deregulation measures of and in this specific country.

Last but not least, one should mention that within China there currently seem to be two types of this structural change:

- a) In the East: beginning de-industrialization
- b) In the West: beginning industrialization

This was apparently planned or intended a long time ago as a consecutive, step-by-step development of the country (going back to a strategy developed in the 1980s by Deng Xiaoping).

In retrospect, China has chosen a clever way to quickly approach the MIR by slowing down structural change and thus retarding the de-industrialization process. The relevant question is: is this also the best/most clever way to steadily overcome the MIR?

China has recently been criticized by some organizations (IMF, OECD and others) for slowing or retarding the tertiarization process. It has been claimed that the share of the services sector in China is too low.¹⁵

However, China here may refer to Germany, because Germany had also previously chosen this strategy of slowing down (retarding) the tertiarization process and was successful in doing this, as well as with respect to overcoming the MIR.¹⁶

In the following, I illustrate the similarity between Germany and China with respect to the developments of sector shares (% of GDP).¹⁷

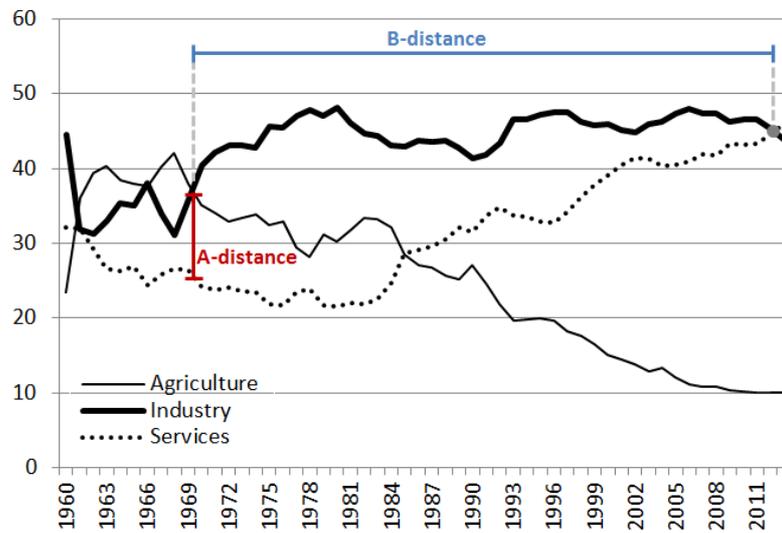
¹⁴ See below in more detail.

¹⁵ See, e.g. Australian Government (2005), Blanchard and Giavazzi (2006), Li and Zhang (2008), Zheng et al. (2010).

¹⁶ Wagner (2013a). This paper also showed that the two most dynamic large economies in Asia – China and India – have followed different structural development routes that resembled two types of strategies: China → Germany; India → USA, GB.

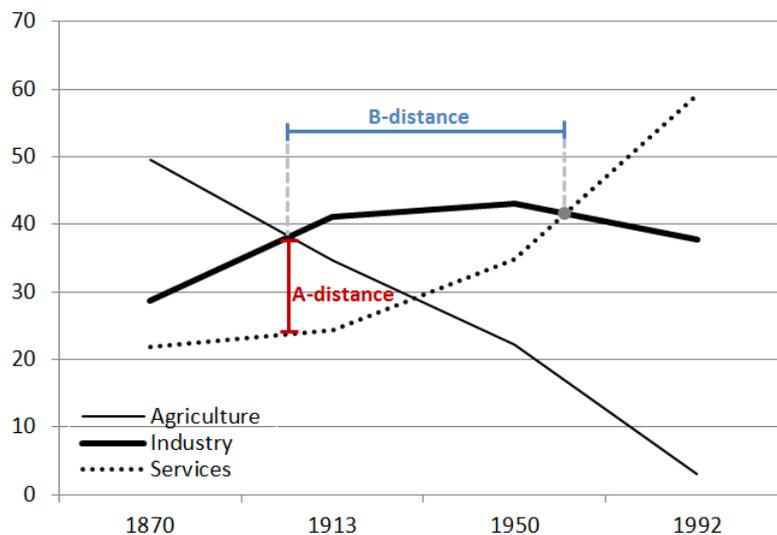
¹⁷ Wagner (2013a) also shows the difference to other countries such as India or the US.

Figure 4: China



Source: The World Bank, World Development Indicators.

Figure 5: Germany



Source: Maddison (1995).

Compare the A-distance and B-distance in figures 4 and 5 to detect the mentioned similarities in the structural change (management) process of the two countries. The A-distance measures the gap to the service sector at the time when the industrial sector overtakes the agricultural sector. In addition, the B-distance shows how long it takes from this point until the service sector passes the industrial sector. The main results are as follows: both countries had a rather underdeveloped service sector when the industrial sector started to dominate, Germany at the beginning of the 20th century and China in 1970, respectively. The industrial sector in Germany dominated for more than

half a century. Nevertheless, Germany did not lose its competitiveness within the world economy. Around 1960 the share of the service sector in Germany started to increase significantly and from 1970 onwards it dominated the industrial sector. China has seen a similar development from at least 1996 onwards. In 2013, the service sector finally surpassed the industrial sector for the first time. As the A-distance and B-distance illustrate, Germany's structural change process before 1980 is similar to the development China has faced during the last decades.

Indeed, this is in sharp contrast to the development in the United States and in other developed economies (OECD), as well as in emerging economies such as India. In those countries, the service sector had dominated the other sectors even before the industrial sector passed the agricultural sector.¹⁸

I have argued above that China has been successful in retarding the de-industrialization process so far. The reason is that industrialization and the technical change associated with it led to a re-allocation of labor from low- to high-productivity activities and thus to an increase in overall productivity. However, particularly in emerging market economies there are some negative side-effects of a rapid (unrestrained) industrialization process, namely increasing inequalities in income distribution, exploitation of labor, and high macroeconomic imbalances and volatilities. As history shows, such increasing inequalities in income distribution and exploitation of labor in particular lead to complaints and revolts among the persons or groups concerned in the poorer part of the population. As this can threaten the legitimacy of the prevailing economic and political system, it often induces the ruling state or government to introduce redistribution and welfare policies such as higher minimum wages, investment in health care, social services and unemployment insurance. There are many historical examples for this.¹⁹

But such institutional reforms in the welfare system and social policy usually lead to an increase in the state share of production and to an expansion of the tertiary sector (esp. consumer services). These parts of production or of the tertiary sector, however, show a relatively low(er) level of productivity so that an extension of these welfare activities will go along with a reduction of overall/average productivity growth, and thus with a decrease of the economic growth rate. It triggers what I called above 'A New Normal', meaning that a country which enters the stage of tertiarization or deindustrialization has to accept some other negative side-effects, in particular a decreasing economic growth rate.

In general, this means that not only the industrialization process produces some negative side-effects, in particular *socio-political* ones (as seen above), but also the tertiarization process triggers some costs, in particular *economic* ones. One of the most important costs or dangers associated with an unrestrained tertiarization is a decrease in economic growth (due to Baumol's cost disease, etc.).²⁰

Such a decrease in the economic growth rate can be expected if tertiarization goes along with mainly increasing the low-productivity part of the service sector. This is

¹⁸ See Wagner (2013a) for detail.

¹⁹ See Castles et al. (2012); Eichenhofer (2007); Kaufmann (2003); Wagner (2013a).

²⁰ Other dangers or potential costs are elaborated in Wagner (2013a).

exactly the case if the government fears a legitimization crisis of the economic and/or political system because of complaints about increasing inequalities in income distribution and exploitation of workers. In this case it may be induced to increase the social welfare system in order to calm the waves of protests and complaints. As the activities in such a social welfare system are usually activities with low productivity growth, such an increase in the social welfare system will tend to weaken the aggregated economic growth process.

In the following section a simple arithmetic or growth “forecast” will be developed for the case of an ongoing tertiarization.

4. Tertiarization and Economic Growth

In Section 3 I argued that tertiarization can result in a decrease in economic growth in China. Here productivity growth in the service sector is decisive.

In this sector it can be shown in a simulation study that China can only expect high future growth when it succeeds in avoiding a slowdown of labor productivity growth in the service sector in particular. As long as labor productivity growth in the service sector is maintained at a reasonable level, it can to a certain extent compensate for a labor productivity growth slowdown in, for instance, the industrial sector. Hence, finding the right mix for the service sector will be a key challenge for China in the future.

The simulation study (which is joint work with Michael Murach) is based on a simple arithmetic which is not just a basic, uniform extrapolation, but a classification in scenarios that makes it possible to look at potential effects of de-industrialization in China.²¹

Procedure

Firstly, possible shares of the agricultural, industrial and service sector are forecast for the year 2030 by extrapolation (linear and non-linear) using data of employment for the three sectors.

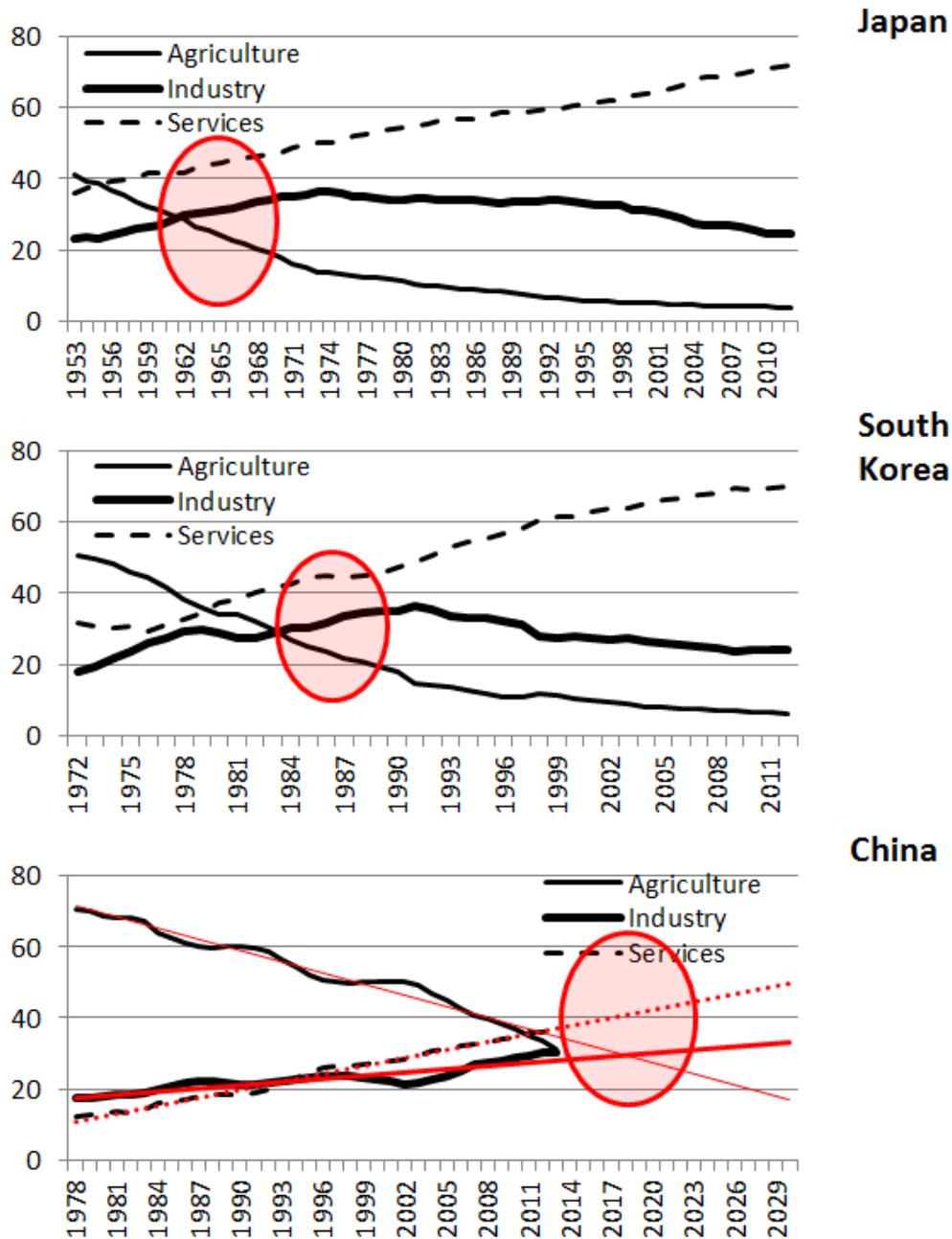
For 2030 we roughly get (with linear extrapolation): 18% in the agricultural, 32% in the industry, and 49% in the service sector. Contrary to these extrapolations, a decrease in the employment share of the industry sector is expected. Hence, we assume that in 2030 the agricultural sector will account for about 18 per cent of total employment and the industry and service sectors will account for about 25 per cent and 57 per cent, respectively. If structural change proceeds faster (non-linear extrapolation), shares of 8 per cent, 22 per cent and 70 per cent are taken into account.

Secondly, we make assumptions about labor productivity growth rates for each sector. Instead of again using extrapolations we here consider the developments in other countries (Japan and South Korea). Figure 6 shows that in terms of employment shares, China is now at a stage of de-industrialization where Japan and South Korea were at the beginning of the 1960s and 1980s, respectively. In terms of labor productivity growth (measured as output per employed person), the examples of Japan and South Korea

²¹ Because of space limits, I just present the main aspects and results of the study here.

show that there may be periods of slowdown in labor productivity growth and in extreme scenarios even with decreasing labor productivity growth rates. Also, developments in sectors need not be uniform, but may diverge considerably.

Figure 6: Changes in sectoral employment shares



Sources: Statistics Bureau Japan; U.S. Bureau of Labor Statistics, National Bureau of Statistics of China, own calculations.

We calculate productivity growth rates for the three countries.

Based on the above mentioned calculations as an optimistic scenario, 10 per cent labor productivity growth is assumed, while in the case of a decrease in productivity it amounts to 5 per cent, or even only 1 per cent as a worst-case scenario.

Scenarios and Results

Several scenarios with differing assumptions on the future development path of structural change and/or the development of labor productivity growth are used, these are summarized in Table 1 (see below). The Scenarios 1 to 7 assume that structural change continues with the same speed as before until 2030, but we assume different labor productivity growth rates. The very optimistic baseline scenario is that labor productivity growth is 10% in all sectors (see scenario 1). Scenarios 2 to 7 then stepwise relax this optimistic assumption even considering a simultaneous and drastic slowdown in the industry and service sector productivity growth in Scenario 7. In less detail the following scenarios combine labor productivity growth scenarios with a slow down (scenario 8 to 10) and a speed up (scenario 11 to 13) in structural change.

Table 1: “Simple Arithmetic” – Scenario Descriptions and growth forecasts

Scenario Description		Average growth per year in %	
		with structural change	without structural change
Structural change as before [Employment shares in 2030: 18, 25 and 57%]			
1	Labor productivity (LP) growth of on average 10 percent in all sectors	10,6%	10,0%
2	as above, but LP growth falls to 5 percent in the industry sector	9,3%	8,3%
3	as above, but LP growth falls to 1 percent in the industry sector	8,7%	7,4%
4	as above, but LP growth falls to 5 percent in the service sector	8,0%	8,1%
5	as above, but LP growth falls to 1 percent in the service sector	6,5%	7,2%
6	as above, but LP growth falls to 5 percent in the industry and to 5 percent in the service sector	6,0%	5,7%
7	as above, but LP growth falls to 1 percent in the industry and to 1 percent in the service sector	2,5%	2,7%
Structural change slows down [Employment shares in 2030: 28, 29 and 43%]			
8	Labor productivity (LP) growth of on average 10 percent in all sectors	10,2%	10,0%
9	as above, but LP growth falls to 5 percent in the industry and to 5 percent in the service sector	5,8%	5,7%
10	as above, but LP growth falls to 1 percent in the industry and to 1 percent in the service sector	2,6%	2,7%
Structural change accelerates [Employment shares in 2030: 8, 22 and 70%]			
11	Labor productivity (LP) growth of on average 10 percent in all sectors	11,1%	10,0%
12	as above, but LP growth falls to 5 percent in the industry and to 5 percent in the service sector	6,2%	5,7%
13	as above, but LP growth falls to 1 percent in the industry and to 1 percent in the service sector	2,4%	2,7%

Source: National Bureau of Statistics of China, own calculations.

This simple arithmetic shows that in most cases structural change has a small positive effect on economic growth. In case of a drastic slowdown in productivity growth in the service sector (especially scenarios 5, 7, 10 and 13) structural change has a negative effect. In the other cases these negative effects of de-industrialization (in combination with a labor productivity growth slowdown in the service sector) are often mitigated by productivity gains from labor reallocation between the agricultural and service sectors. A singular slowdown of labor productivity growth in either the industry sector (2 and 3) or the service sector (4 and 5), leads to lower growth, while a slowdown in the service sector is more relevant for overall economic growth than a slowdown in the industry sector. A simultaneous slowdown in industry and service sectors' labor productivity growth leads to the lowest growth rates (especially scenarios 7, 10 and 13, but also 6, 9 and 12).

The importance of the service sector is emphasized by scenarios 2 and 3: as long as labor productivity growth in the service sector is maintained at a reasonable level, it can to a certain extent compensate a labor productivity growth slowdown in, for instance, the industrial sector.²²

Policy Implications

The policy implications of the results can be seen as follows.

Particularly with regard to economic growth it is crucial for China with respect to the service sector to focus on fostering the more productive industry-related activities (such as industry-related corporate services, e.g. IT-services) instead of expanding the less productive state activities (such as social or welfare services) too much.²³ Furthermore, it is important for China to channel more investments into new technologies which aim at launching its own innovations on the world market ('Made in China 2025')²⁴ instead of continuing to follow its so far export-driven economy as the world's workbench.

5. Further Challenges for Overcoming the Mid-Income Trap

It is important to understand that overcoming the MIT is eventually a **social** task (not only an economic one). A number of challenges have to be mastered simultaneously, due to unintentional side-effects, externalities and spillovers. That is, the

²² It is important to keep in mind that this is just a simple arithmetic to illustrate possible effects of structural change and de-industrialization in China. The projections should not be taken literally. There are many other (demographic, political and social) factors which will influence economic growth in China in the coming years. See section 5 below. Furthermore, the simulation could be carried out at a more disaggregated level. This is left for future research.

²³ However, in particular aging, i.e. an aged population, may demand low-productivity services (especially health-care services), at the expense of (the expansion of) high-productivity services in China.

²⁴ The "Made in China 2025" plan is issued by the State Council of the People's Republic of China (2015) in Chinese (online available at: http://www.gov.cn/zhengce/content/2015-05/19/content_9784.htm). An English summary of the main points is available at the State Council Website (available at http://english.gov.cn/policies/latest_releases/2015/05/19/content_281475110703534.htm). [The strategy is also mentioned in the Report on the work of the government by Keqiang (2015) at the Third Session of the 12th National People's Congress on March 5, 2015.]

effectiveness of attempts to organize the structural transformation process, and thereby to overcome the mid-income trap depends upon simultaneously succeeding in mastering further costly challenges.

Such **further challenges** are to build up/improve missing/weak institutions and to reduce imbalances or negative externalities built up over the past years as legacies of the rapid industrialization process in China, such as:

- Pollution (China is a large emitter of greenhouse gases)
- Rising inequality (associated with growing social dissatisfaction)
- Over-capacities and distortions in some sectors, branches or (state-owned) enterprises
- Lack of social security (in the context of ageing)
- Weak development of the financial sector
- Corruption and widespread lack of rule of law (e.g. due to influence of local power groups on local courts)
- Very high private debt and local government debt; and high bad loans²⁵

To master these further challenges, China will have to upgrade its institutions and governance structures.

If we use the World Bank's 'World Governance Indicators' (WGIs) as a measure to compare countries with respect to their institutional quality, we see an alarming picture for China. In the following I compare the institutional quality development in China with that of the East European post-communist **New EU-Member States** (NMS) and with that of Germany (as benchmark regions for EMEs and AMEs).

The **WGIs** are a long-standing research project of the World Bank and consist of six composite indicators capturing governance perception. The six dimensions are Voice and Accountability, Control of Corruption, Government Effectiveness, Political Stability and Absence of Violence, Rule of Law, and Regulatory Quality. The WGIs cover more than 200 countries and territories and are composed of several hundred variables which are obtained from 32 data sources, e.g. surveys of firms and households, non-governmental organizations, multilateral organizations and other public sector bodies (see Kaufmann et al. 2010). This data has been collected since 1996, first biannually, and from 2002 onwards updated on a yearly basis for all these countries.

The **NMS-group** comprises seven countries which represent the majority of the post-communist countries in the EU, namely Bulgaria, Czech Republic, Hungary, Latvia, Lithuania, Poland and Romania.

²⁵ This includes the question of how to control/regulate the rising shadow banking sector.

Figure 7-12: Various Governance Indicators

Figure 7

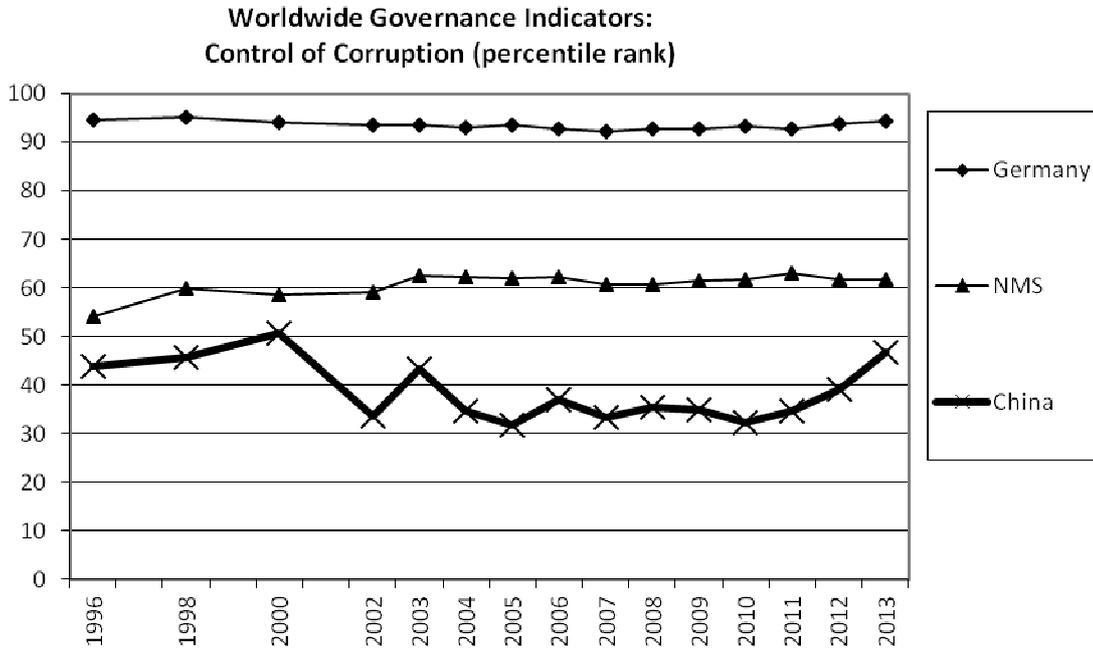


Figure 8

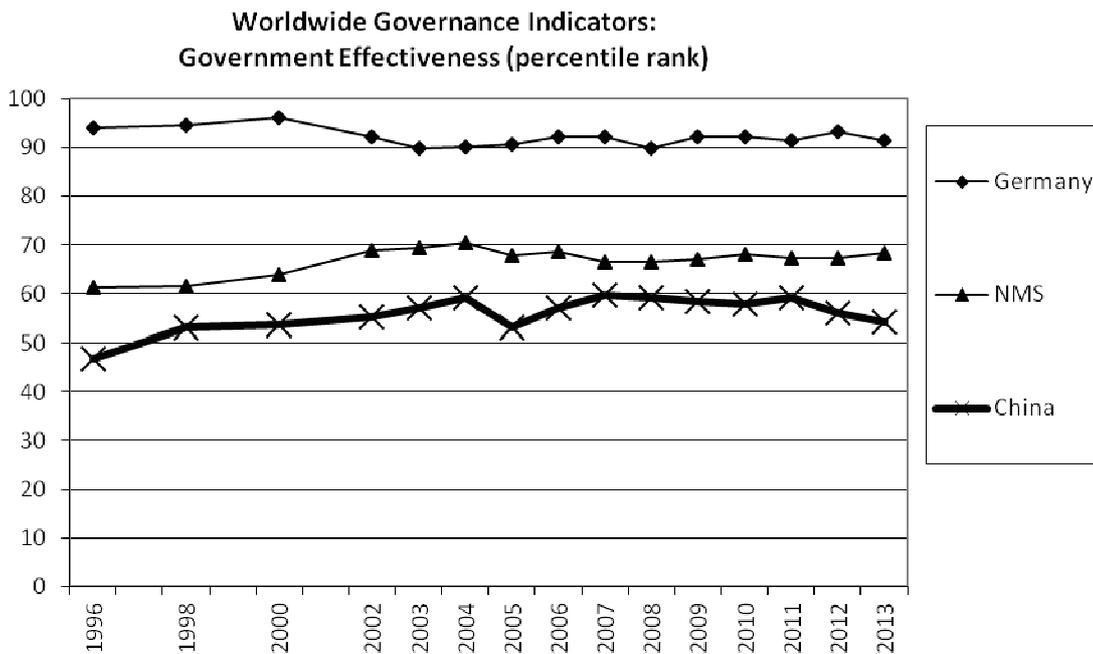


Figure 9

Worldwide Governance Indicators: Political Stability and Absence of Violence/Terrorism (percentile rank)

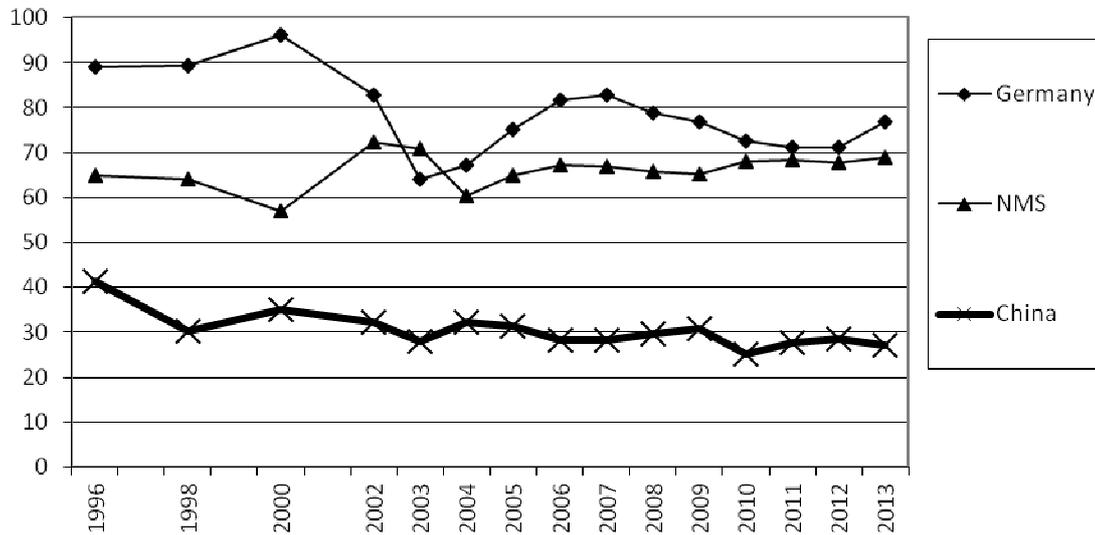


Figure 10

Worldwide Governance Indicators: Regulatory Quality (percentile rank)

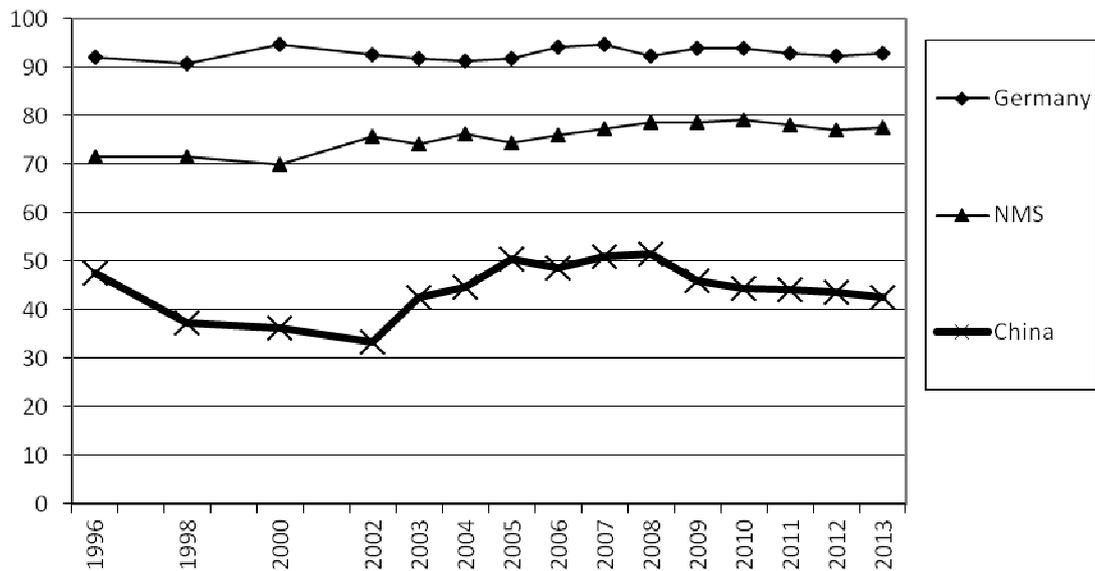


Figure 11

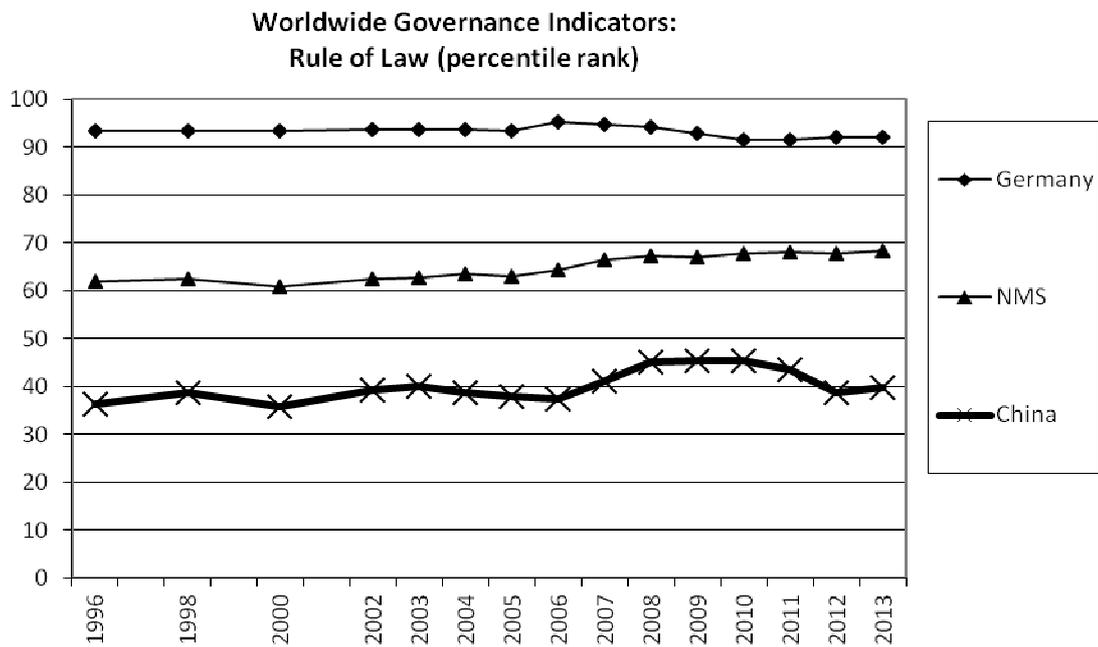
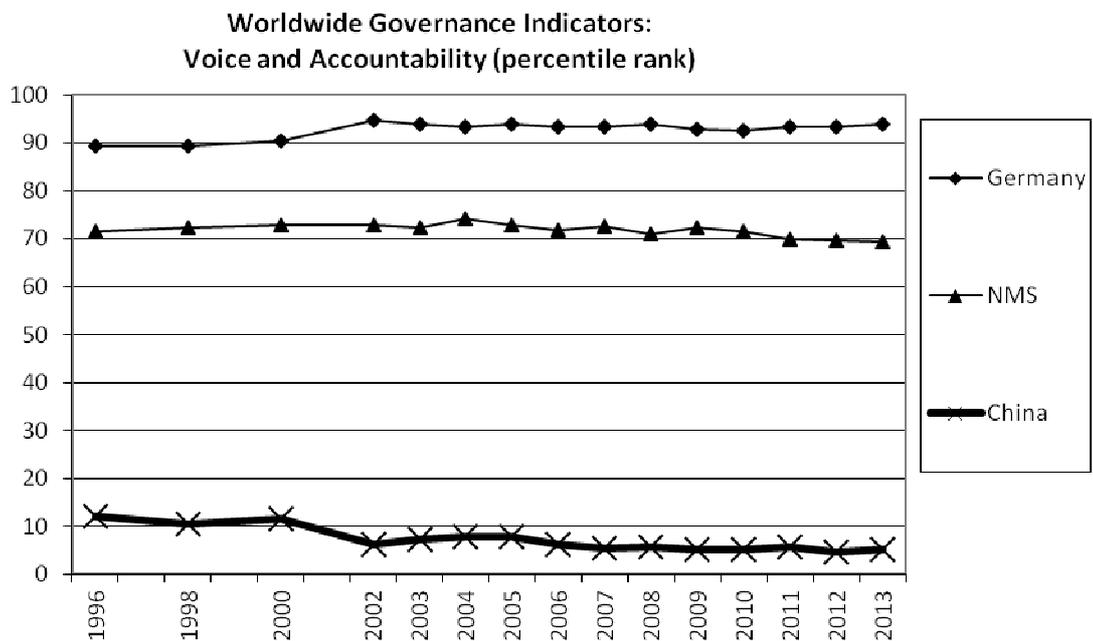


Figure 12



Source (for all indicators): The World Bank (2014 Update), at:
<http://info.worldbank.org/governance/wgi/index.aspx#home>.

These alarming pictures may be interpreted as institutional hindrances to China for making further progress in catching up to the high-income status of the advanced countries (as aspired by China) and, therefore, as a hindrance for further economic development in China.

This interpretation could be based on the findings in the literature that there are many positive correlations between institutional quality and economic development over many emerging market economies.²⁶

However, on the other hand, we could argue that China is not a democracy, and it is no pure market economy either, but it is still highly regulated. Nonetheless, when the economic and political systems are opened up in the future, the institutional indicators showing institutional deficiencies in China will play a role in hindering further economic development and the process of catching up.

Two more challenges China has to master are its sheer size and the occurrence of asset price bubbles. These challenges can also only be mastered by upgrading institutions and governance structures.

Asset Price Bubbles

Rapid growth in EMEs usually leads to large capital inflows. This creates credit booms (often with original sin phenomena) and eventually asset price boom-bust cycles. Moreover, an increasing middle-income class like in China produces over-saving in assets/houses/stocks, and thus triggers asset price boom-busts (at least as long as domestic savers have only limited options to invest their savings due to a relatively closed and insufficiently developed financial market).

China has already experienced similar developments or exuberances on its asset markets. House prices have tripled between 2003 and 2012²⁷ and the Shanghai Stock Exchange (SSE) Composite Index has more than doubled from 2217.2 in August 2014 to 5160.35 in the middle of June 2015 before the boom broke down in summer 2015.²⁸ Such booms or exuberances can only be kept in check (so that a very costly bust can be avoided) if regulatory governance in China is improved, for example by installing efficient macro-prudential policy measures. This will not be easy, as the development of such efficient macro-prudential policy measures is still in its infant stage.²⁹

²⁶ See North (1981, 1990); Beck and Laeven (2006) and references therein; for positive implications of institutional development (in particular, regulatory governance) on financial stability/development see, e.g., Mohr and Wagner (2013).

²⁷ “On average their residential house prices have steadily increased from 2426 yuan/m² in 2003 to 7718 yuan/m² in 2012. This implies a more than tripled property value in 9 years, or a 13.7% nominal compound annual growth rate.” (Feng and Wu, 2015, 376).

²⁸ National Bureau of Statistics of China. According to Fang et al. (2015), housing prices in first-tier cities such as Beijing, Shanghai, Guangzhou and Shenzhen had an average annual real growth rate of 13.1% between 2003 and 2013.

²⁹ See, for example, ESRB (2014a).

Its Size

Size can be an advantage. It actually has been an incentive for attracting Foreign Direct Investments (FDIs) to China; this in turn made it easier for China to cheaply import technical knowledge. But size can also be a threat to stability as/when it goes along with regional (economic, social and cultural) divergence.

Two major forms of interprovincial inequality in China must be distinguished: first, there is a rural-urban income gap which has widened continuously since 1995. However, divergence in income also occurs across the Eastern, Western and Intermediate Zones. The Eastern Zone has not only the highest average real wage compared to the Intermediate and Western Zones, but also the largest gap between the provinces with the highest and the lowest average real wage (see the Appendix for more details). In particular when rising economic divergence goes along with cultural heterogeneity, it gets very complicated or difficult to politically manage this divergence. Analyzing this aspect would go beyond our focus in this article.

6. Conclusions

China has experienced a very successful economic development process over the past three decades, from a very-low-income country to a middle-income country. But, in order to reach its goal of catching-up to the most advanced (rich) countries, there is still a long and arduous road for China. China is currently in what is called the mid-income range or 'trap'; 'trap' because only a few mid-income countries have succeeded in going beyond this range and moving to a high-income status over the last fifty years. Most have got stuck in this trap despite many efforts and attempts at reform. In order to overcome the mid-income trap, China has to succeed in fundamentally rebalancing its economy and successfully managing the next step of structural change, namely to take the structural transformation from industrialization towards tertiarization, simultaneously becoming a frontier state for innovation. Focusing on the industry sector as has been the case so far tends to produce after a while negative side-effects which force the government to change course and support structural change towards tertiarization. To manage these negative side-effects (such as pollution, health and insurance deficiencies, income inequalities associated with social dissatisfaction, macroeconomic disequilibria, exploitation of (migrant) workers, etc.) the government needs to install and expand social (welfare) services. Many of these services suffer from Baumol's cost disease, i.e. they have low productivity growth. This leads to a decrease in economic growth which aggravates the tendency of growth reduction due to China approaching the technological frontier (which means that it can no longer profit to the same extent from cheap technology and knowledge import via joint-venture-constrained foreign direct investments of foreign companies from advanced countries).

The real challenge for China is to build up not only low-productivity social (welfare) services (to counteract social dissatisfaction), but also and in particular to expand and concentrate on higher-productivity services such as industry-related corporate services (IT-services, etc.). As shown in a simple simulation study described in this paper, only high productivity growth within the service sector is able to mitigate negative effects of a labor productivity growth slowdown in the industry sector. Hence, finding the right mix for the service sector will be a key challenge for China in the future. Moreover, it is important for China to direct its investments in the industry

sector more towards new technologies which aim at launching their own innovations on the world market ('Made in China 2025'), instead of continuing to follow its so far export-driven economy as the world's workbench.

Such economic reforms are crucial, but they are by far not sufficient. Equally important are institutional or governance reforms with respect to counteracting current major challenges in China, such as corruption and widespread lack of rule of law, the rising influence of the shadow banking sector within the financial system, etc. The World Governance Indicators, collected at the World Bank for all member countries, show that China is still very weak in institutional quality compared to other emerging or transition countries such as the East-European post-communist transition countries. This institutional weakness will show its relevance when China starts to open up its financial market as announced and will be a great hindrance to implementing the above-mentioned necessary economic structural reforms (rebalancing) in order to further catch-up and move towards higher income status.

That is, economic reforms alone will not be enough, or will not be implementable or sustainable, unless there are accompanying institutional or governance reforms.

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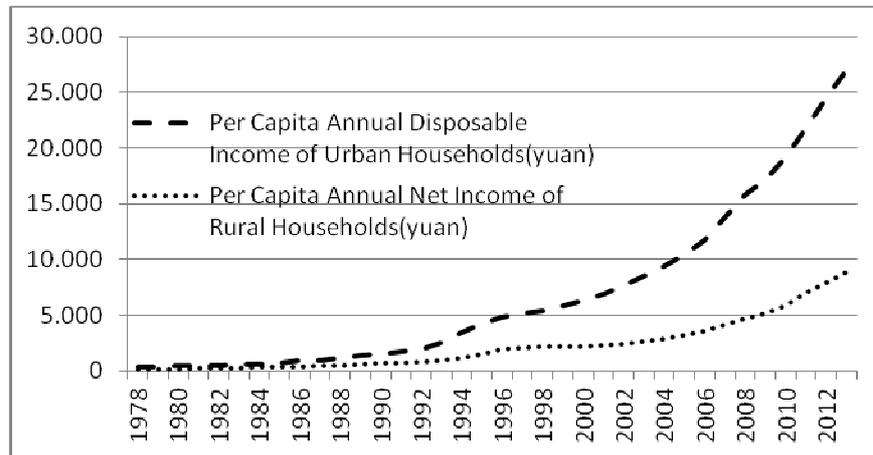
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Appendix: General Relevance of Regional Divergence

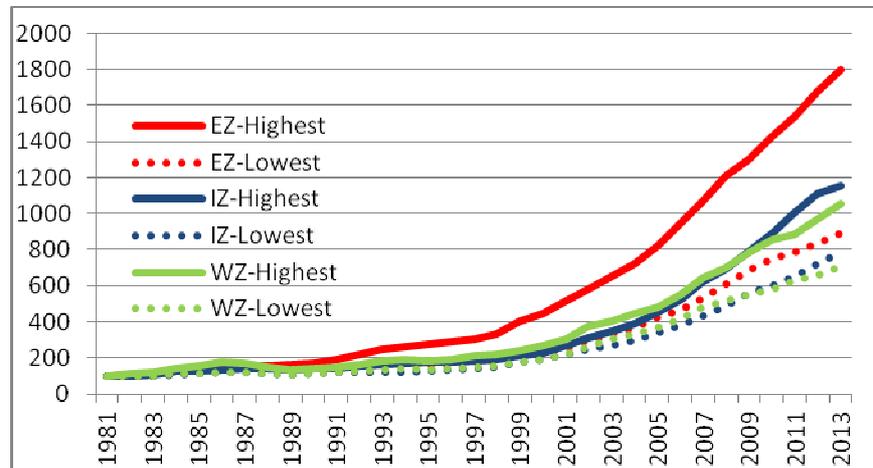
Two major forms of interprovincial inequality in China must be distinguished:

Figure 13: Increasing income inequality in China (rural vs. urban areas)



Source: National Bureau of Statistics of China, own calculations.

Figure 14: Inequality across Eastern, Western and Intermediate Zones



Source: National Bureau of Statistics of China, own calculations.

Figure 13 shows the per capita annual income of urban/rural households. It can be noted that there is income inequality between rural and urban areas. In addition, Figure 14 presents the average real wage indices of staff and workers in urban units (base year 1981 = 100), indicating that the Eastern Zone has not only the highest average real wage compared to the Intermediate and Western Zones, but also the largest gap between the province with the highest and the lowest average real wage. Beijing and Shanghai in particular are responsible for the extremely high values in the Eastern Zone.