

New Institutions for a New Development Model

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New Institutions for a New Development Model

If China's economy and per capita income is to continue to catch up to the levels of the world's high income economies, China will require a very different approach from the model that has dominated the country's extraordinary development over the past three plus decades. The model of the past in essence involved three basic components during these three decades and a fourth component during the most recent decade. The first component involved the dissolution of the Soviet style system of centrally planned command economy and collective agriculture and replacing it with an economic system governed to a large degree by market forces. The second component was the opening of the economy to foreign trade and foreign direct investment and the rapid expansion of manufactured exports in the rapidly growing manufacturing sector. Most of the dynamism in this manufacturing sector came from the domestic and foreign private sectors together with township and village enterprises that first were collectively owned and then mostly privatized. The third component facilitating the rise of export oriented manufacturing was the shift of a large part of the rural labor surplus to urban industry and services, a shift that helped keep wages low and labor intensive manufactured exports competitive.

Beginning to some degree during the world financial crisis of 1997-1998, the fourth component involved the massive expansion of infrastructure investment and the equally rapid expansion of urban housing investment, in effect removing the last major feature of a Soviet type system that neglected both housing and transport infrastructure. This last component was to a large extent made necessary not only by the weaknesses of housing and transport, but also by the fact that the labor surplus economy produced very low levels of household consumption as a share of GDP. This low share in turn necessitated an unprecedented rise in the share of investment in GDP in order to maintain a high rate of GDP growth.¹

These components of the post 1978 economic model produced more than three decades of high GDP and per capita income growth and created what in many respects is a first world infrastructure. Institutional change, however, mostly involved the dissolution of the institutions of the Soviet style system and the partial dissolution of some controls such as the household registration (*hukou*) system that had been used to restrict rural to urban migration. The incomplete dissolution of the regulations of the centrally planned command economy and of the household registration system left a large residue

¹ For my views on how inadequate aggregate demand represented by low household consumption as a share of GDP necessitated the large infrastructure and housing investment program, see Dwight H. Perkins, "China's Investment and GDP Growth Boom: When will it End," Masahiko Aoki and Jinglian Wu, editors, 2012, *The Chinese Economy: A New transition* (International Economic Association, Palgrave MacMillan) .

of regulatory controls administered by government officials who retained much of the discretionary authority of the old system. Only now, in the privatized market context, these officials had far wider latitude for discretion than under the old tightly controlled command system.

What is required going forward is a very different system for controlling the economy, a system that can build on some of the institutions that have begun to develop but requires replacing or substantially modifying many of the other institutions that today still govern China's economy and society. In this brief essay I will focus on two areas where fundamental changes in these institutions are required and will briefly discuss a third area where the outlines of what needs to be done are well known and progress is already well underway. The first of these areas involves a variety of interrelated institutions including the regulatory system, the nature of the political system as it relates to government economic decision making, the legal system, the land ownership system and inadequate decentralized sources of government revenue. These systems as they operate today are responsible for a large share of the widespread corruption that threatens political stability and hence economic performance. The second area of interconnected institutions that will be discussed involves the relationship between urbanization, the social welfare system, and the changing Chinese demographic structure. The third area I will label technical institutions for lack of a better term. This involves continued modernization of the financial system, the steady improvement and expansion of research and development in engineering and the sciences, the continued upgrading of the universities, and other institutional changes designed to maintain a high rate of growth in productivity.

Regulation, Politics, Law, and Corruption

The dismantling of the Soviet style system of centrally planned commands over the economy has left a very large residual of regulations governing all aspects of economic activity both public and private. Access to land on which to build a factory or office tower is controlled by urban governments. Large scale investments must be approved by the National Planning and Reform Commission and lesser projects must be approved at lower levels of the planning hierarchy. Access to electricity is regulated as is access to any other utility that is controlled by local governments. Then there are all of the regulations that all countries have that are designed to make sure that a building is safe for its occupants, that companies are fair to their workers, that a factory doesn't pollute its neighborhood, and much else. All countries, for example, have customs authorities that determine whether and with what taxes goods and services can enter the economy.

For the past decade the World Bank has attempted to calculate a number of measures designed to estimate the ease or difficulty of doing business in each country. China in the 2013 World Bank publication ranks 91st out of 185 countries which by itself does not seem so bad except that countries only ten or so places below China include Zambia, Papua New Guinea, and Pakistan, countries that most would consider highly corrupt and difficult places to do business. China, to be sure, has been steadily improving its regulatory environment—it ranks 12th out of the 50 countries that have made the most progress in improving their regulatory environment (World Bank, 2012, p. 9). China ranks well or fairly well at enforcing contracts, registering property, and trade across borders (customs) (19th, 44th and 68th respectively) but poorly or abysmally with respect to getting credit (70th), resolving insolvency (82nd), protecting investors (100th), getting electricity (114th), paying taxes (122nd), starting a business (151st),

and dealing with construction permits (181st). Given the vast amount of construction that has gone on in China during the first dozen years of the twenty-first century, the last number is particularly striking.

The fact that China ranks among the worst five countries in construction permits, but has by far the most construction activity of any country in the world in recent years, presents a paradox. In China it takes a long time to get the necessary permits (270 days) (in Singapore it is 26 days) and in China there are a large number of procedures involved (28) (Hong Kong requires 6 procedures). The number of procedures puts China near the bottom with the worst performers on this measure where only 9 countries have more procedures although the length of time required in China is well below that of the worst ten performers that range from Mozambique at 377 days to Haiti at 1,129 days. The cost of permitting is also high for China at 3.75 times the country's per capita income but that is far below Zambia at 17 times or Chad at 51 times per capita income.

This paradox of obstructive procedures but large amounts of construction is no doubt partly due to the fact that companies can make large profits from construction (and in many other areas of business) in China and so it is worth the wait and the expense. But it is also likely the case that the permitting process is predictable for those with the right connections and the willingness to do what is necessary above or below the table to get through that process. What is true for construction permits is also true for a wide variety of other regulatory barriers. It is very profitable once one has gotten through them and the path through them is predictable at least as long as one has the right connections or is willing to develop them.

There are straightforward ways of trying to eliminate some of these regulatory obstruction issues although they do not by themselves fully solve the problem. One key is to remove as much discretion as possible from the officials deciding whether to issue a license or permit or not. The rules for issuance should be clear and made public and the process itself should be transparent. If an applicant complies with all of the rules, the permit should be issued automatically. To prevent delaying tactics by officials as a means of extracting rents, there should be time lines set during which a decision by the permitting agency must be made. The whole process of what is required and where a given application stands can be put online where the applicant (and a government monitoring agency) can readily check on the progress of the application. For simple straightforward procedures such as issuance of a driver's license this method will go a long way toward solving the problem of delays by the issuing official designed to extract rents. Where the procedure involves more complex problems requiring official judgment as to the desirability of the project or the character of the applicant these simple procedures are not likely to be sufficient, however.

When judgment and discretion on the part of the issuing office are involved, the problems of removing regulatory barriers are much more difficult. In the Chinese case the problem begins with the fact that the Chinese Communist Party and its key members at both the local and higher levels have discretionary power over a wide variety of issues including many that determine whether a company or individual can receive permission to go ahead with a project or program. If the Party leadership strongly supports a project or program, it can cut through regulatory barriers and get the necessary authorization to proceed. One problem, however, is that the Party can be on both sides of a transaction. Local and higher level party officials can have a major say in the appointment of the government official in the regulatory office and a similar say in the appointment of the enterprise manager (or party secretary) in the applying for regulatory relief. Similarly, when it comes to finding financing for a project, local Party

officials in the past have had an influence both over the local branch of one of the national banks making the loan and the managers of the company or the local government officials applying for the loan. When there is more than one applicant for permission that can only be given to one, the applicants with the best connections to local or higher level officials have an obvious advantage.

From the viewpoint of the applicant for permits or regulatory relief, there are a variety of solutions to overcoming another applicant's political advantage—they can, for example, make illegal payments to the official or to others with influence over that official, they can hire a close relative of the official or of the Party Secretary of the official and pay that person a high salary or give them a large consulting contract. China has no monopoly on these practices—they are common throughout the world including in most high income countries. Straightforward payment of bribes can be dangerous for both the payer and payee and one can sometimes identify official malfeasance of this sort by requiring officials and other senior political people to report fully to a higher authority on their financial and other assets, a practice that has been used to a degree in China. In a country like China where success or failure of a project or enterprise can depend on making one's way through a maze of regulations, however, there can be no need for formal bribes. One can place a person with powerful political connections on the board of directors or place them in some other conspicuous position. The individual so employed may not have to actually contact the regulatory officials dealing with the company or do anything whatsoever to overtly help the company with the regulators. The mere knowledge that that individual is supporting the company will influence a lower level regulator to try to be helpful. The possibility that the powerful consultant or member of the board of directors might criticize the regulatory official and thereby damage or end that official's career is sufficient. Many officials will not be willing to take the chance that this will happen.

It is not surprising, therefore, that the family members of some high party officials have ended up making large fortunes. Many of these officials have no doubt made these incomes because they have skills that have contributed in a technical sense to the companies they work with, but there are clearly numerous examples where the main thing the family member brings to the table is his or her political connections. The problem is not just or even primarily at the top of the pyramid, however. It exists right through the system down to the local level.

There are three ways of trying to deal with the relationship between regulatory power, political influence, and rent seeking. One way, the one that has dominated Chinese practice throughout the last three decades, is to have stiff punishments including even the death penalty for financial crimes. The problem with that approach is that in a highly regulated economy such as China's where all officials have a great deal of discretionary decision making power, it is difficult to find and convict enough law breakers to make a difference to the overall problem. China is a country with 1.3 billion people, 80 million party members, tens of millions of officials, and over 2000 county level governments plus even more numerous townships and villages. It is noteworthy that China has prosecuted high level officials and not just low level rent seekers, but the task of discovering whether a crime of corruption has actually occurred or whether it was just the excessive use of political influence, receipt of a personal gift that was a little too large, or a trip that was a little too lavishly funded. In a sense the kind of massive surveillance system that existed in the 1960s and early 1970s could control these forms of corruption, but at the price of far worse abuses of power in non-financial areas. Short of massive police surveillance, simply proving that a crime of corruption was committed is likely to be difficult. Few who

take illegal payments have a spouse that murders a business associate and even that case was successfully covered up for a time. Going after officials who are only suspected of malfeasance but where firm proof is missing leads to other kinds of abuses. Inevitably it is seen as motivated by a desire to eliminate political opponents.

The second most straightforward method for controlling this kind of corruption is to reduce the number of regulatory barriers that companies and individuals must get through in order to prosper. The fewer regulations there are to deal with, the less a company needs to spend in time and money in getting through those regulations. A well functioning market system can control many forms of behavior that harm the economy without the need for regulation of any kind, but even in the most market oriented economy, Hong Kong being a good example, there is a need for some regulations. But if one reduces the number of regulations and hence the opportunities for rent seeking, it is easier for public security and prosecutors to identify and try the smaller number of violations that do occur. It is no accident that the two economies with the lowest level of corruption in Asia, Singapore and Hong Kong, are the economies most regulated by market forces rather than government regulations. Even in Hong Kong, a market economy did not immediately produce a lack of corruption in some areas, notably in the police where a high degree of discretionary authority was inherent in the job. In Hong Kong it also took a major anti-corruption drive orchestrated by the Independent Commission Against Corruption founded in 1974, but the task before the commission was a much simpler one than any commission responsible for the entire People's Republic of China would face.

There thus must be a third way of combating corruption and a critical step in that third way would be to change the role of the Chinese Communist Party in the economy. In essence, as long as the Party plays a role of determining the rules of the economic system, follows that by appointing most of the government officials that administer that system, and then also directly appoints, monitors and replaces those leading major producing units in that economy including all enterprises with a substantial degree of government ownership, the system will be riddled with conflicts of interest. Success in that system will depend more on one's political relationships than on anything else.

If the Party is to get control of corruption, therefore, it has to remove itself from the direct administration of the central and local government and of large parts of the economy. There is a precedent for doing this in recent Chinese history. The Party effectively removed itself from the day to day management of agricultural production when it abolished the Rural People's Communes. The large scale privatization of large parts of the urban economy, both industry and services, also has meant that management personnel decisions in this sector are mainly made by the private owners, foreign and domestic. Most large private units have party committees and no doubt many party members, but the Party does not determine company priorities and day to day management in any direct way. Even in the state owned enterprises including those shareholding enterprises where the majority shares are held by government, there has been some success in separating the role of the Party from the technical operation of the enterprise. What is needed is to complete the process of removing the Party as the main vehicle determining senior employment throughout the system. The Party would instead become a body that set the rules of the system, gave it its overall direction, and then monitored whether officials and economic units were following the rules and implementing the broad goals. It would play a role more like the traditional censorate in the various imperial dynasties but with a much broader mandate than that of the censorate because it would also replace the policy making role played by the emperor.

If the Party were to remove itself from the day to day management of the economy and society, certain other institutions would have to be greatly strengthened from what they are today. Foremost among these institutions is the legal system. China has made progress in rebuilding the legal system after its dismantling during the Cultural Revolution, but it is far from adequate for what would be required in a system where Party leaders and government officials were no longer the ultimate settlers of disputes between economic parties. In a full market economy, most economic disputes are handled through the courts and the courts are themselves largely independent of the parties to those disputes including government officials and units. By having independent, competent, and honest judges deciding disputes, political considerations are largely eliminated from the verdict and it is decided on its legal merits.

The legal system in China today is neither independent of higher political authority, fully competent or consistently honest. The easiest to fix is competency. When the legal system was reconstituted after the Cultural Revolution there were few people trained in the law and hence the judges appointed had no legal background. In 2010 China's law schools graduated 26,165 lawyers² and the total stock of lawyers numbered in the hundreds of thousands. Making judges independent so they can make decisions strictly according to the law and the facts of the case is far more difficult. Higher level government and Party officials often feel they can overrule or ignore court decisions. Even company managers with sufficient political influence can often do so. Furthermore, the judges are appointed by the government and the Party and are expected in general to carry out the goals of the Party and can be removed if they do not do so. Truly independent justices must have a credible commitment to long tenure as long as they themselves do not violate the law and they cannot be removed for a verdict disapproved of by higher authorities. In the absence of that kind of commitment, judges will be influenced by the political winds blowing at any given moment and the legal system will be seen by most as unfair.

It will probably be a long time before courts in China will be independent of politics in areas where there are perceived threats to the state or the rule of the Chinese Communist Party, but the Party has no obvious interest in letting political considerations govern economic verdicts. Individual government and Party members will have their own interests including those of the rent seeking variety, but those interests can be a bigger threat to the rule of the Party than judges who are sometimes seen as too independent. If one can remove overt political biases from the legal process, it will also be easier to remove the problem of corrupt courts. Paying judges well and monitoring their personal assets would also go a long way toward eliminating judicial decisions driven by corrupt practices.

If China is ever to get full control of corruption and to have a well functioning economic system driven by market forces combined with regulations designed to compensate for real market failures, therefore, there are fundamental changes needed in the institutions governing China's economy and society today. The changes are interrelated. To summarize the discussion above, there needs to be a substantial reduction in the role played by government regulations as contrasted to market forces and the discretionary authority of those government officials in implementing those regulations must be greatly reduced or eliminated. There must be a further withdrawal of the Party from the day to day operation of government agencies and economic units and a focus of the Party instead on setting the

² National Statistical Office, *China Statistical Yearbook 2011*, p. 746.

goals for the system, translating those goals into legislation, and monitoring progress in their implementation but doing so from outside government agencies and economic units, not as day to day managers within them. There are other kinds of political institutions that could play this same role, but most of them are likely too far in China's future. Failure to make major progress in these areas will foster a continued rise in corruption that will steadily undermine the ability of the Party to govern the country.

Rural Land and Local Government Revenues

A major source of political instability in China over the past decade and longer has been the perceived corruption of the process whereby agricultural land is taken from those farming that land at low prices and sold to developers at much higher prices with the fund from difference between these two prices going to local governments and sometimes to local officials for personal use. Unlike the issue of the role of the Party being overly involved in the day to day operation of government agencies and economic units, this rural land problem can be solved to a substantial degree by technical reforms that do not involve a change in the role of the Party or anything else that would be politically sensitive.

The first step to solving this problem would be to allow land to be sold on the open market at prices set by that market and giving the farmers tilling that land either ownership of that land or very long term user rights with the right to sell the land or their user rights similar to what is the case for companies that lease urban land. Government officials could then no longer take land away from the farmers without paying them a fair market price, or, if they still managed to do so it would be seen as theft and prosecuted as such. There would still occasionally be the need for what in many high income countries is called "taking the land by eminent domain" to serve a public purpose such as building a road, but there would be a reference price set by the market, not by some administrative rule. Ideally there would also be independent courts that could decide whether the land was taken at a fair price and for a legitimate public purpose or not.

If one pays a fair price for the land and if one allows land to be taken by eminent domain, however, there need to be two additional changes in related institutions. The first such institutional reform would be a need to change and expand the social safety net as it affects not only the rural population but also the population registered as rural that is in fact working in non-agricultural occupations mostly in the cities. The issue of urbanization and rural migrants will be taken up at length below but it is mentioned here because rural land today in China is an important part of the safety net for these migrants as well as those actually living in rural areas. Allowing migrants to sell their land rights will give them funds that will ease their permanent transition to urban life, but it will also remove the fall back position of returning to their land that many have used when employment in the cities has fallen through. A new fallback position or safety net is required.

The second institutional change required is the need to provide local governments with sources of revenue commensurate with the level of expenditures that they are required to make. In recent years, notably during the large stimulus spending designed to maintain high GDP growth in the face of a world recession, the central government pressured local governments to carry out and pay for a large part of this stimulus. That, together with the fact that local government officials get promoted in part on the basis of the GDP growth in their area, led local governments to run up very large debts estimated at around RMB20 trillion. It is now widely recognized that the local governments do not have the

revenue sources to pay for these expenditures or to service these large debts even if they continue to earn revenue by paying low prices for local land and then selling the land to developers at a much higher price. If the land market is reformed and land prices become true market prices, this source of local revenue will disappear making the revenue shortfall that much worse.

One modest way of raising local revenues would be to charge a land tax on developer land other than agricultural land. One could also tax agricultural land but the government only recently abolished the agricultural tax as part of an effort to raise disposable income to the rural population. The other way is for the central government to take over even more local expenditures or alternatively expand the subsidies it pays to local governments from central revenues. Whatever the ultimate solution, continuing to allow local governments to buy land cheaply and sell it at high prices will have to end if China wants to maintain rural stability.

Urbanization, Migration, Aging and the Hukou System

China in many respects is following the pattern of urban development characteristic of all countries that have achieved middle income status and are heading toward becoming high income nations. China, after two decades prior to 1978 trying to tightly restrict the growth of the urban population, is rapidly becoming a nation where a rising majority of the population is no longer in farming and a large share of that non-agricultural population now resides in cities. Officially the registered urban population in 2011 was 51.3 percent of the total up from only 17.9 percent in 1978. The figure for 2011 includes some migrants (those who had been in a city for over six months) but excludes others. The urban figures also include some farmers who reside within the urban district but this would be a small number in the major cities today. The population still in farming is much smaller than the population listed as residing in rural areas—employment in agriculture in 2011 was under 35 percent of the population, down from a little under 70 percent in 1978.³ Most of the people actually doing farm work as their major occupation today are over the age of 40.

There are three major challenges connected with the fast pace of urbanization that China faces today and going forward over the next one or two decades. The first is keeping the growth rate of urban employment at a level sufficient to absorb the increases in the labor force, both rural and urban. That number is perhaps 14 million a year if most of the increase in the labor force is absorbed by urban employment.⁴ Since those urban workers reaching retirement age and leaving the labor force are likely to be around 10 million a year, the net increase in employment needed to absorb these new entrants into the labor force is quite small relative to the past and will become a negative figure over time. When one adds the fact that the share of the service sector in this new employment is likely to rise and that of manufacturing begin to fall, that will also tend to ensure that the labor market will remain tight and wages will rise. The service sector will grow more rapidly because China has already reached the point

³ The official figure for the primary sector in 2011 is 34.8 percent but this includes employment in mining. These data are from National Statistical Office, 2012, *Zhongguo tongji zhayao 2012* (Beijing: Statistics Press).

⁴ There were 222 million people aged 14 and under in 2011 or an average of 16 million for each year of age. A few of these people when they finish schooling at whatever level will stay in agriculture and a few will not enter the labor force. I have assumed that these two categories would amount to 2 million people a year with the rest all looking for work in the urban work force.

where in most countries manufacturing output as a share of GDP and employment in manufacturing falls even more rapidly than the share of output.⁵ Thus if China maintains a GDP growth rate of 5 to 7 percent a year for another one or two decades, wages should continue to rise, possibly and hopefully faster than GDP.

The second and third challenges are not so easily met and they will require fundamental changes or improvements in the institutions currently in existence. The second challenge is the need to finally get rid entirely of the household registration system (the *hukou* system) as it is currently configured. The system no longer is used to restrict the entrance of workers into the cities but key features of the system ensure that the population working in but not registered in the urban areas is discriminated against in ways that are ultimately harmful to Chinese society. There is widespread acknowledgment that this is the case among a wide range of Chinese scholars and others who have thought about the problem. There are even a few urban districts that have taken steps to deal with important aspects of the issue, mainly cities that wanted to attract migrants rather than repel or ignore them.

The problem with the way the current system is administered starts with the fact that there is little affordable housing of any quality that is available to migrant workers from the countryside. That in turn leads workers to live on construction sites, others are crowded into a single rented room in a distant suburb, and young women often reside in factory dormitories. The poor housing conditions then lead large numbers of migrant workers to leave their children back in the village with their grandparents instead of having them attend generally higher quality urban schools that would better prepare them for urban life. The government does now make urban schools open to migrant children but few can afford the high fees and related expenses that go with most of the urban schools. The central government has a large public housing program for the registered urban poor but on the national level there is still no such program for the migrant population. There is also a greatly improved program for rural health insurance and urban health insurance but again the migrant population has to return to the villages where they are registered to take advantage of this program. Finally, the university entrance quotas based on the national exam are biased in favor of registered urban residents, what is in effect a reverse affirmative action program for the well off.

Few if any of these migrants are going to return to farm work. There are still far too many workers in agriculture and that keeps incomes for farm work low although those wages have certainly risen substantially over the years. The children of these migrants are also not going to be farmers. The system needs to figure out ways to support rural migrants as they move to the cities with housing, real access to schooling for their children, and a social welfare system and pension system that includes them. And these systems or institutions need to be created over the next one or two decades. To accomplish such an ambitious goal, the government following standard Chinese practice will have to experiment with what kinds of housing would be appropriate, what kinds of health care will be both

⁵ Manufacturing employment in 26 OECD countries plus Taiwan began declining on average when they reached a per capita Purchasing Power Parity Income of \$13,300 (or within a range from \$7,000 to \$17,000 per capita). Barrt Eichengreen, Dwight H. Perkins, and Kwanho Shin, 2012, *From Miracle to Maturity: The Growth of the Korean Economy* (Cambridge: Distributed by Harvard University Press), p. 87. This decline in manufacturing employment is often referred to as deindustrialization although manufacturing output in most cases continues to grow.

affordable and will meet as many real needs as possible, and what kinds of education would also be affordable and meet what the migrant families really want. Creating these institutions is not a simple matter. As the United States among others has demonstrated, high rise apartment buildings may not work as well for poor migrant families as for the urban middle class. Similarly the educational needs of children from the rural areas where their parents had limited education are different from the needs of urban families with well educated parents, to mention only two areas of potential differences in the kinds of support required for migrants.

The third challenge has some things in common with the second challenge but it is relevant to the entire urban population and not just to recent migrants from the countryside. It is the challenge of China's aging population in the context of a society that is becoming mostly urban. There are two quite different aspects to the impact of a rapidly aging population on Chinese society. The one that typically gets the most attention is the fact that in China the enforcement over a long period of the one child family policy has created a situation where the old age dependency ratio will rise rapidly and fewer and fewer people of working age will be available to support those who have retired from the labor force. The second aspect is that urban life in most countries typically ends the practice of several generations of one family living under the same roof (or in a house next door in the village built by the families themselves). Grandparents instead live separately from their adult children and the nuclear family is the norm. The working age children may in fact live in a completely different city from their grandparents, something that is common in most high income countries. Traditional ways of taking care of aging grandparents thus no longer apply.

China's population's overall dependency ratio has fallen steadily over the past three decades and has only recently begun to level off. The reason is that due to the one child family policy the share of children below working age fell sharply while the share of the elderly outside the labor force grew rapidly (by roughly 50 percent over the past two decades) but from a very low level (from 8.3 percent of the population in 1990 to 12.3 percent in 2011). The share of children as of 2013, however, has leveled off and may even rise modestly if the one child family policy is finally abandoned or modified as many in China are advocating. The share of the aging will definitely continue to rise and do so rapidly as people live longer and as China's own "baby boomers" (the population born after 1949 but before the one child policy) begin to retire. Of the 133 million people who were 0 to 9 years old in 1950, 94 million are still alive today and are aged 60 to 69 and are already retired or will soon be retired. The next age cohort that was 0 to 9 years old in 1960 totaled 192 million in that year and 161 million of those were aged 50 to 59 in 2010 and many of the women in this group have already retired and the men will soon be approaching retirement. In addition to these people, in 2010 there were 71 million people 70 and over still living, up from only 30 million as recently as 1980. And the largest age cohorts of retirees come in the decades immediately after those who were 0-9 years in 1960. In 2010 there were 225 million people at an age (15 to 24) when they would be eligible to enter the labor force compared to the 161 in the 50-59 about to retire age group. Ten years later (in 2020) there will be roughly 225 million in the 50-59 about to retire age group and the same number in the 15-24 about to enter the labor force group.⁶

⁶ The figures in this paragraph were taken from United Nations, 2011, *World Population Prospects, The 2010 Revision* online at esa.un.org/wpp/Excel-Data/population.htm.

The burden of this demographic change, as pointed out above, is usually expressed as the dependency ratio that has fewer and fewer people in the work force supporting more and more retirees. In a rural peasant society, however, this burden is mainly one of more mouths to feed around the dinner table, most of the food comes from the family's land and they build their own houses on that land. This is hardly an ideal existence since the cultivated land is small and illness can make it difficult to cultivate even that small amount. Generally there were no institutions that intervene in this process—one either grew enough food and stayed reasonably healthy or one starved and got sick and died.

In an urban environment and in a modern economy where families are mobile and go where their work takes them, the elderly retired from the workforce must have a steady stream of money to pay the rent on their apartment, buy food from the market, and to pay for other activities. Those other activities are typically much more extensive than in a peasant village in part because more activities in an urban environment must be paid for with cash and people in urban centers are also used to a higher standard of living than those in rural villages. For people with sufficient funds, a variety of institutions can be created to meet their needs starting with independent housing but moving on to assisted living facilities and then to nursing homes, hospitals, and hospices toward the end of life. China is creating these kinds of institutions and it is being done commercially for those who can afford it.

The problem is that most urban residents in China, let alone the migrants from the countryside, do not have the retirement incomes that can support institutions of this sort. Many have very meager pensions or none at all because the company they depended on did not provide those benefits or it became bankrupt and could no longer honor commitments it had made in more prosperous times. Thus China faces the challenge of ensuring that its urban population has an adequate source of income in retirement and a wide range of institutions to support their aging needs and a health insurance system capable of paying for it. And all of this has to be created in the next one or two decades when China will still be a far from rich nation. The one saving grace is that family ties in China are still strong and adult sons and daughters will take responsibility for their parents when they can, but as countries such as Korea (or the United States before social security and medicare) demonstrate, in the absence of a strong safety net for the elderly, a very large number of the elderly will live out the remaining years of their life in poverty.

Institutions Promoting Growth in Productivity

The institutional changes that get the most attention from policy makers and the educated public in China are those connected with sustaining a high GDP growth rate. Only a brief summary of what is required can be presented here. China's potential GDP growth rate will decline from the 9 to 10 percent rates of the past three decades even if China does everything right in the economic sphere. This decline appears to be underway as this essay is being written but will almost certainly be underway within the coming decade. A major stimulus for infrastructure and housing going forward similar to what occurred in 2009-2011 may keep the GDP growth rate up for a few years longer but this kind of spending at levels similar to the recent past is already facing diminishing returns. Maintaining a high growth rate of say 5 to 7 percent a year over the next one or two decades will require steady and

substantial increases in total factor productivity.⁷ High rates of growth of total factor productivity over the first two decades of the reform period were sustained by the steady dismantling of the many barriers to efficiency and growth thrown up by the Soviet type economic system. Going forward, however, productivity growth will depend on the creation of ever more efficient new and improved economic institutions, not the dismantling of old ones. Creating new and improved institutions is inevitably more complex and more difficult than simply getting rid of institutions that do not work.

The key economic institutions needed to sustain a high GDP growth rate are thus those that raise the productivity of both capital and labor. Sustained increases in the efficiency of capital are mainly dependent on steady improvements in the financial system, further reforms of state owned enterprises in general and those with state monopolies in particular, and in the strategy of development pursued. There is a large literature on how to improve the financial system and another essay in this volume is devoted to the subject. Here it is simply noted that China has already moved a substantial distance from a financial system made up almost exclusively of large state owned commercial banks that lent mainly to state owned enterprises. There are many more banks, there are other important financial institutions ranging from insurance companies to the two stock exchanges and beyond, and privately owned companies and individual citizens do have an important degree of access to bank loans. There is still too much politics in lending decisions and many of those promoting the most innovative enterprises have little or inadequate access to the capital markets. There are thus still major improvements possible and if pursued vigorously these improvements should substantially raise the efficiency of capital.

Reforming the state owned enterprises is likely to be a more difficult challenge in large part because the political power of these enterprises is formidable. It took considerable political courage to implement the major reforms of these enterprises that occurred in the late 1990s. Monopolies produce large profits that benefit powerful people, but they also reduce the incentive to promote efficiency in these critical sectors. The slowing of the massive infrastructure and housing investments will also create a situation where industries such as steel will face years of financial difficulties because of earlier decisions to build capacity beyond any plausible future domestic demand. The large state construction companies that have built much of this infrastructure will also have to be cut back. The alternative, such as that followed by Japan, of continuing large state construction projects designed to keep these companies busy will lead to results in China not dissimilar from what has contributed to Japan's anemic economic growth rate. China's infrastructure investment of the past decade made a major contribution to economic growth and the efficient use of capital, but the number of projects of this sort that will contribute to raising growth and the efficient use of capital is declining. As China moves into an economy increasingly dominated by the service sector, the temptation to support numerous inefficient service providers at the expense of new more efficient service providers, a pattern pursued for years by both Japan and South Korea, also needs to be resisted.

Finally the efficient use of capital depends on getting the right balance between reliance on market forces and the need for some regulatory interventions to correct for important market failures.

⁷ For a systematic analysis demonstrating the relationship between a continued high growth rate and total factor productivity, see Dwight H. Perkins and Thomas G. Rawski, 2008, "Forecasting China's Growth to 2025," in Loren Brandt and Thomas G. Rawski, *China's Great Economic Transformation* (Cambridge: Cambridge University Press), pp. 829-886.

This essay began with a discussion of many of the major issues connected with this challenge and they are also discussed in the essays on the environment and reforms in the financial system among others.

Improving the efficiency of labor is equally important as raising the productivity of capital. At the low skilled end of the labor force, and to a degree for the entire labor force, the need is for healthy and increasingly well educated workers. There is also a need to remove the remaining barriers to the movement of that labor to its most productive uses. Those issues in essence were the subject of the second major part of this essay. At the higher skilled end of the labor force, the main issues have to do with steadily raising the quality of education at the university level in general and at the post-graduate level in particular. Steady advances in the quality of research produced whether in universities, companies, or research institutes is critical for continued growth in the economy. China's progress in this latter area is considerable, but as per capita incomes rise, sustained economic growth depends more and more on innovation through research and development that moves from small improvements in products and production processes to completely new products and services.

Conclusion

The challenge facing China over the next one or two decades, and the essence of the new model of growth that is required, therefore, is to create the institutions of a truly modern economy and society. Creating new institutions and fundamentally restructuring old ones is inherently more difficult than the dismantling of inappropriate institutions. It is also more time consuming and thus contributes with other factors to the slowing of GDP growth that is inevitable as per capita incomes rise and the economy and society become more complex. In most of the areas described in this essay where institutional reform is required China has made major progress. This essay, however, has focused mainly on economic reforms and economic reforms usually require accompanying political reforms and the political reforms needed to sustain China's rise to a modern high income society are likely to be an even greater challenge than those in the economic area.