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The Chinese Economic Experience, 1978 to Today

Nancy Qian*

One of the most striking phenomena in the past three decades is China's economic liberalization and rapid growth. This has directly affected the lives of its 1.3 billion people, not to mention the millions living within the boundaries of its trading partners. Thus, the Chinese growth experience is of first-order importance for understanding today's economy and can provide useful insights for development in other contexts. My research uses a variety of empirical strategies to study the underlying mechanisms of the Chinese growth phenomenon.

The first theme of my research is demographic change, which is one of the most salient features of the Chinese economy. Several striking facts include the following: 1) total fertility declined rapidly from approximately 2.7 births in the 1970s to 1.9 births per woman by the 1980s, 2) sex ratios at birth increased from approximately 105 males per every 100 females in 1970 to 120 in 2000, and 3) the cohort of prime age adults during the reform era was born or grew up during a famine that killed over 30 million people. I show that these demographic features are outcomes of both government policy and economic change, and have significant consequences for the Chinese economy today.

I first conduct several studies to show that rising sex ratios are related to economic policy and development. When the government increased the relative procurement price of cash crops in 1979 in an effort to diversify agricultural production, and allowed households to make decisions on production in the "Household Responsibility Reform," it raised the relative price of female labor in regions that

produce tea. Women have comparative advantage in producing this crop. I compare the sex ratios of cohorts born before and after the reform, between regions that have geo-climatic conditions for tea production and regions that do not, and find that the increase in the relative price of tea led to an increase in the survival rates of female children. This is consistent with parents valuing productive children or with an increase in the bargaining power of mothers if they have less preference for sons than fathers have. The results also imply that rising sex ratios are in part attributable to changes in the gender wage gap, which has been rising steadily since China moved away from a command economy that did not differentiate wages of men and women to a market economy where wages are more closely tied to the marginal product of labor.¹

I also study variation in the enforcement of family planning policies in rural China and estimate that the policy-driven reduction in fertility increased the fraction of girls in the population by as much as 10 percentage points in some regions.² Another important contribution to rising sex ratios is the introduction of sex-selective abortion, which began in the 1980s in China. Using the legalization of abortion (when prenatal sex-detection was already available) in Taiwan as an exogenous increase in the accessibility of sex-selective abortion, I show that sex-selective abortion significantly increases sex ratios at birth. However, my results also show that banning sex-selective abortion in a context with strong preferences for sons can have the serious adverse consequence of lowering the survival rates of girls who are born.³ Together, these studies show that economic and family planning policies, as well as advances in medical technology, have contributed significantly to the rise in sex ratios in China.

Second, I study the effects of family planning restrictions on urban fertility

and use it as a source of exogenous variation for studying the contribution of fertility to China's very high household saving rates, which reached between 35 and 40 percent in 2008. I show that the introduction of policies to restrict fertility that began in the early 1970s reduced the average number of children from around two to around one child per household. Households restricted to one child save much more than those with more children. The policy-induced fertility changes can explain one-third of the increase in urban household saving rates. The reduction in fertility increases savings mostly for households without sons. The results are consistent with the reliance of parents on children, and particularly on sons, for old age support.

Moving beyond this evidence, I explore how a change in aggregate fertility will affect household savings, recognizing that rising fertility will reduce the capital-labor ratio and therefore increase interest rates. I find that these general equilibrium forces can offset up to two-thirds of the partial equilibrium negative relationship between fertility and savings. Thus, abandoning the One Child Policy will likely lead to moderate declines in urban household saving rates.⁴

Institutional change is the second theme of my research on China. In particular, I have studied the role of formal and informal institutions in affecting economic performance in rural China. Drawing on my interest in demographic shocks, I first study the causes and long-term consequences of the Great Famine in China, which killed at least 30 million individuals in 1959–61. I show that aggregate production during the famine was very high and unlike famines in market economies, the Great Famine was more severe in regions that produced more food per capita. Neither the pursuit of Great Leap Forward policies nor political radicalism, which have been the

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focus of much of the existing literature on famine, can explain these patterns. I use historical evidence to show that the famine was an outcome of a moderate fall in production of between 13 and 18 percent (relative to 1958) across regions, and the centrally planned procurement policy that garnered from each region a fixed amount which was set based on past harvests. I use archival sources to document that the inflexible policy was implemented to resolve the problem of peasants and local bureaucrats, neither being residual claimants of production, being incentivized to misreport true production. This procurement policy could not respond to shocks in a timely manner, and its operation explains 40 to 45 percent of the mortality during the famine. These findings illustrate the vulnerability to shocks of a system that does not allow laborers to be residual claimants to production.⁵ I also find that in addition to resulting in millions of deaths, the famine had long-run adverse effects on millions of survivors. In particular, exposure to the famine in utero or during early childhood caused stunting and reduced educational attainment, and reduced labor supply 30 years afterward.⁶ These results suggest that providing for famine survivors could constitute a significant portion of public expenditures for the recently created rural social security system.

In the Village Democracy Project, I collect the *Village Democracy Survey* (VDS, 2008)⁷ to document the history of rural political and economic reform and economic performance of the post-Mao era. This unique survey relies on historical administrative records kept by village governments and is nearly nationally representative; it includes over 200 villages in 29 provinces. It is the first attempt to systematically document the political economy of rural China.

A key focus of the VDS is to understand the timing and the detailed implementation of elections for the village committee, which governs village life alongside the Communist party branch. These elections were introduced by the central government to address the difficulty of monitoring local government

performance, which had become particularly pronounced after the economic decentralization of the early reform era led to greater heterogeneity in economic and social conditions across regions. In particular, the central government was concerned about the low provision of local public goods, and rising corruption and income inequality. The timing of the introduction of elections was staggered across counties, but now has been fully rolled out.

I find that the introduction of village committee elections shifted the accountability of the local government to the upper government exclusively (that is, the Communist Party) to both the upper government and citizens.⁸ The introduction of elections increased public good provision, reduced corruption, and reduced income inequality within villages. The increase in spending on public goods was entirely driven by an increase in the amount of taxes paid by villagers. Thus, the results suggest that increased accountability increases the government's capacity to finance public goods because it increases the willingness of voters to pay taxes.⁹ This finding goes against the conventional wisdom that democratically elected leaders are typically less able to finance public goods investment because of the short-term consumption demands of their constituents. From the perspective of the central government, local elections had mixed effects. While they probably increased citizen satisfaction with the regime, they also reduced local government enforcement of unpopular central policies such as family planning policies or permanent land expropriation of village land for uses such as highway construction and city expansion.¹⁰

I also investigate the importance of informal institutions and social capital in the provision of public goods. Robert Putnam and other political scientists have long argued that high social capital is a key determinant of successful democracies because social capital facilitates collective action. In the context of rural elections, the interaction effect of social capital and elections is not obvious ex ante. On the one hand, social capital

can complement the introduction of elections in increasing public good provision because high social capital reduces free riding, and because citizen monitoring of the elected politician is itself a public good. On the other hand, since both elections and social capital serve to aggregate the preferences of citizens, they can be complementary institutions. I measure a village's social capital in rural China with a proxy variable: the presence in the village of temples that are open to all villagers (as opposed to family- or religion-specific groups). I collected a second wave of the VDS in 2011 to document the presence, history, management, and financing of these temples. The data show that they are mainly citizen-managed and citizen-financed, and that their presence changes slowly over time. I find that elections lead to larger increases in public good spending in villages with temples than in villages without temples after controlling for a large number of correlates such as religiosity and population distribution.¹¹ Finally, I also examine how the effects of the introduction of elections vary with religious fragmentation across villages. I find that elections improve public goods more in less fragmented villages. To the extent that fragmentation reduces social capital, this is again consistent with the notion that social capital facilitates establishment of democratic institutions.¹²

In urban China, I explore the effect of institutional changes in the state sector on the wage structure. During the 1980s and 1990s, the state untied access to urban housing from working for the state sector. Using old newspapers from library archives, I determine the time of the reform in different Chinese cities and then use this information to show that the reform dramatically increased the labor supply in the private sector as workers who formerly had to work for the state in order to have any housing now moved into the private sector. Then, using this as an exogenous shock on the private labor supply, I estimate the labor demand elasticity for the private sector. I find that the increase in labor supply caused moderate reductions in wages that lasted for several years. The persistence of the wage decline

suggests that it takes time for other factors of production that complement labor to flow into the private sector. This suggests that large sudden shifts of labor into the private sector, for example as a result of downsizing of state-owned enterprises, could cause significant wage losses for private sector workers in the short and medium run.¹³

Finally, I study the importance of institutions that restrict factor mobility on growth through a quasi-experimental study about the effects of access to transportation infrastructure on GDP and growth during the reform era. To address the endogeneity of a region's proximity to transportation infrastructure, I exploit the fact that major modern infrastructure is found along railroads that were originally built by foreign powers for the purpose of quickly deploying foreign troops from ports to historically important cities. The fact that ports were places that were not otherwise important to China historically means that distance in a straight line between the ports and historical cities is unlikely to be correlated with the growth potential of regions along the line. I find that access to transportation infrastructure provides little added benefit for growth during economic liberalization. I argue that this is likely because of the immobility of the factors of production in China, caused by policies such as the *hukou* system which severely restricts labor migration. These results suggest that it is difficult to take advantage of the benefits of infrastructure if other restrictions

of factor mobility are in place.¹⁴

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¹³ L. Iyer, X. Meng, N. Qian, and X. Zhao, "The General Equilibrium Effect of China's Urban Housing Reforms on the Wage Structure," Mimeo, Yale University.

¹⁴ A. Banerjee, E. Duflo, and N. Qian, "On the Road: Access to Transportation Infrastructure and Economic Growth in China," NBER Working Paper No. 17897, March 2012.