

! NOTE: This is mostly preliminary and subjective to change.



**Credit Rationing and Institutional Constraint:
An Evidence from Rural China**

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1 Introduction

Credit is essential in development strategies in a variety of ways. Credit promotes seasonal agricultural investments and adoption of technology. A better access to credit smoothes consumptions. In the presence of underdeveloped formal insurance system, credit cushions the risks to agricultural households. The availability of credit access is therefore occupying a central place of development strategies. In consequence, we find ubiquitous government intervention in rural credit market to redress the urban-biased macroeconomic policies. Government-led credit institutions, earmarked credit programs and subsidized interest rate, together with other variants of intervention, are widely implemented in developing countries. The performance of government-driven rural finance institutions and programs, however, has fallen short of expectations and many of the credit programs have become a costly drain on government budgets. Rather than fulfilling policy objectives of equalizing the economic benefit, the inappropriate intervention has a disproportionately beneficial impact against the poor.

With the limited natural resources, China deserves applause for its feeding over one-fifth of the world population and lifting millions of poor out of poverty. Agriculture, however, had been downplayed in national economy and was tapped in favor of industry. It is from 2006 onwards that Chinese leaders wage the “New Rural Campaign” to overcome the long-lasting depression in the rural economy and ease the increasing political unrest due to the mounting inequality. Credit policies, believed often as effective and guided tools to deliver money to groups of interest, gain a great deal of appeal. Given the widely existing failure of government-driven rural credit programs in other developing countries: What are the outcomes of the current intervention? Is credit policy a candidate to promote agricultural development? What are the appropriate interventions to redress the informational problems rooted in credit market? Why dysfunctional institutions often “lock in” and it is so hard to induce efficiency-improving institutional changes? This study assesses the current state of the intervention on rural credit markets in China and throws light on the appropriate intervention.

The aim of this monograph is to provide a systematic exposition of several important classes of theoretic and empirical studies on rural credit market, plus policy implication for institutional change. The topics covered in the chapters include agricultural transformation in China, the evolution of rural financial market, theories of rural credit in developing countries, agricultural household model with missing credit market, the measurement credit rationing in different observabilities with survey data and the interlinkage between formal and informal credit markets (and various post-estimation), agrarian institutions, and state’s role in institutional change.

This monograph is organized as follows. Though focusing on rural credit rationing, I start with a retrospective review on the agricultural transformation in Chapter 2. The agriculture in China experiences a compelling growth in the early 1980s, a buoyant upbeat in the early 1990s, and a long lasted stagnation since 1995. Institutional reforms, market reforms and public investments play critical role during the process. Since rural credit policies were coupled with other macroeconomic reforms and were put forth exogenously, a review on agricultural transition facilitates the analysis on the rural credit market itself.

In Chapter 3, I explore the evolution of rural financial market and the ongoing reforms. By presenting the origin, changes and performance of each formal credit institution, a highly centralized rural financial system is examined. By exploring the interlinkage between various institutions and ongoing reforms, the policy-led financial institutions in rural China are found ending up as a disbursement window. Incentives and oversight mechanisms are not fully shaped for a sustainable rural financial system.

While the preceding chapters address the evolution of agricultural policies and rural financial market in China from a macroeconomic viewpoint, Chapter 4 centers on theoretical discussion of the informational problems which lead to credit market failure. Further, the innate disadvantages of rural credit market are highlighted. Based on several controversial arguments which underpin government intervention, various practices and corresponding outcomes are assessed.

Chapter 5 sets the stage for empirical analyses. As a multi-topic survey, the background knowledge is offered and the sampling is reported. Agricultural households are mixture of consumers, producers and labors, and various decision-makings are endogenous from household characteristics. In consequence, a detailed description of the indicating variables precedes the econometric analyses in chapters afterwards. For too long, exploratory data analyses at the earlier stage are not given sufficient attention, while econometric regression has been intensively used in exploring complicated and user-specified hypotheses. Nonetheless, the preliminary statistical analysis, in simpler form but demanding substantial knowledge, identifies the potential correlation and examines data's properties on which the econometric analyses normally hold.

Chapter 6 analyses the determinants of credit rationing with various specifications. Since the analysis is conducted at the farm-level, a theoretical discussion of agricultural household model precedes the empirical estimation. Yet I primarily focus on the decision making in the scenario of missing credit market. The chapter proceeds by comparing various model specifications with different observabilities. It, therefore, sheds light on the importance of consistent model specification with the survey sampling.

Chapter 7 examines the credit rationing in a scenario of interlinked market. Studies on rural credit market abound in the literature. While these studies have advanced our standing of the failure of rural institutional lenders and the informational advantages of informal lenders, few efforts have been made to explore the relationship between the institutional and informal lending. In the presence of missing land and formal insurance market, informal lending is of different nature from the traditional thinking. Is the informal credit a substitution for the rationed institutional lending? Or does it server different credit demands? How are the credit market fragmented in rural China? The answers are illuminating for further study, as well as for policymakers to design appropriate interventions which tailor to the local economic and social circumstances.

Although this monograph focuses on rural credit rationing, in chapter 8, the discussion is extended to broader sense. Institutional change has been perceived as a source of economic development, but dysfunctional institutions often “lock in”. Efficiency-improving institutional changes are often retarded because of distributive conflicts and various interest groups. The role of the state in institutional changes is vaguely decisive. Since many of the agrarian institutions have developed in response to the specific materials and informational conditions of agriculture, the local organizations and institutions are claimed to be able to fill the gaps between the state and market. In Chapter 8, the state’s role in institutional change and rural financial development are elaborated.

Lastly, science claims to be objective. A central criterion for objectivity is inter-subjective traceability; in other words, other people should be able to confirm the results, using the same methods, or to criticize them on the grounds of problematic details (Kohler & Kreuter, 2005, p7&p27). Replicating study finding is a necessary and desirable aspect of science (Baum, 2002). Therefore, in this monograph, I put the syntax for data management, descriptive analyses and econometric estimation in the appendix. As the survey data covering various topics and serving multi-research teams, the raw data are transformed and processed many times during the data analysis period. To facilitate replicating, I keep a very detailed record of each and every decision made along the way. With the Do-files of STATA, readers are able to find a straightforward, reproducible, and documented record of this study. The “raw data” and corresponding survey questionnaires (in both Chinese and English) of this study, mainly the household survey data, are available upon request.

8 Institutions, States and Rural Finance

Increasingly, it has become generally recognized that “institutions matter” and the underdevelopment in many developing countries is attributed to an institutional failure. Nevertheless, we find persistent “lock-in” of inefficient institutional arrangements. Many of the local organizations and institutions have been found being able to fill the gaps between markets and the state because of their institutional advantageous. These institutions are contained by certain social norms within communities. Some of the informational problems still exist though. As environment changes with economic growth, especially in the presence of social and economic inequality, can the local-level institutions enforce common agreements? This chapter aims at elaborating on institutions, institutional changes and rural financial development.

The chapter is structured as follows. First, what is institution is introduced. Second, the reasons for the persistence of dysfunctional institutions (inter alia, interest groups and the state’s role in institutional change) are elaborated, Third, agrarian and local institutions are discussed. Lastly, how rural financial institutions contribute to rural development and which role does the state play in rural financial development are concluded.

8.1 What Is Institution

What is institution? Although there exist a variety of understandings, institutions are defined by Douglass North as

“the humanly devised constraints that structure human interaction . . . and together they define the incentive structure of societies and specifically economies . . .” (North, 1994, p360)

I borrow this definition because it (a) clarifies the nature of institutions as a *humanly devised series of rules* in a society, (b) emphasizes the function of institutions, i.e. influencing the structure of *economic incentives* in society, (c) highlights the interaction of different agents and collective choices, and thus includes the *distribution* of welfare and resources and conceived *social conflict*.

What is a good institution? Acemoglu et al, based on Acemoglu’s series studies, think good economic institutions are “those that provide security of property rights and relatively equal access to economic resources to broad cross-section of society”, generating economic growth meanwhile (2005, p395).

³¹ By contrast, Bardhan claims, carefully, that the Western mechanisms that

³¹ They authors also acknowledge that there are a variety of evidence that a well-secured property rights for a broad cross-section promote no economic growth. Therefore, a well-secured property rights is not the sufficient condition for economic growth. There are limits

involve self-binding rules by securing private property rights are neither necessary nor sufficient for economic development.

[T]hey are neither necessary nor sufficient for economic development. They are not sufficient because there are other (technological, demographic, ecological, and cultural) constraints on the development process, not all of which will be relaxed by the rulers' disabling themselves. They are not necessary . . . As a few non-Western success stories . . . suggests [that] . . . major economic transactions in the successful East Asian cases have often been relation based rather than rule based. Although charges of cronyism have been bandied about in the diagnosis of the recent Asian financial crisis, the long-term success stories, even with relation-based systems, cannot be denied (Bardhan, 2001a, pp 276-277).

Lin and Nugent (1995), in their reviewing studies on institutions and economic development, explain two conceptual pillars in the New Institutional Economics (NIE), transaction costs and collective action, as the demand and the supply of alternative institutional arrangements, respectively. It is the changes in relative abundance of factors of production and the origin in production technology demand the emergence of evolution of institutions by influencing the transaction costs and uncertainty. But as the authors highlight, "because of [imperfect] information and *transaction costs*, there is no guarantee that an institutional disequilibrium will trigger an immediate move to the new equilibrium structure . . . [and the final] institutional change . . . are posed by the theory of *collective action*" (Lin & Nugent, 1995, p2325).

Transaction costs are far beyond the purely cognitive cost of organizing and monitoring transactions and are specifically tied to one individual transaction (Matthews, 1986, p906). The objective of economic agent is not to minimize transaction costs as much, but to minimize the sum of transaction costs and production costs. Many agrarian institutions are self-initiated to reach the tradeoffs between these two. For example, the decollectivization of farmers in China reduces the monitoring costs of collectivization at the price of the economies of scale.

On the supply side of institutional arrangements, it is collective choice that shapes societies, in which there is a conflict of interest among various groups over the choice of economic institutions. Why institutions differ depends on the political power of the groups (Acemoglu et al., 2005). Institutions promote economic growth when political institutions allocate power to groups with interests in broad-based property rights enforcement. As North stated (1994, p365)

to self-enforcing (or self-containing) agreements and "different institutions are associated with different distributions of political power, and there is impartial party with the will and the power to enforce [such] agreements" (Acemoglu et al., 2005, p430).

Creating the institutions that will alter the benefit/cost ratios in favor of cooperation in impersonal exchange is a complex process, because it not only entails the creation of economic institutions, but requires that they be undergirded by appropriate political institutions.

8.2 Why Inefficient Institutions Exist Persistently

Institutions have been alleged to promote economic growth, as that of technological change, capital accumulation, and the other standard sources of growth. However, why dysfunctional institutions often “lock in” for so long time? Why are those distorted policies adopted? Why the states in many of countries persist in development policies and public expenditure patterns that inhibit efficiency and waste natural resources? In this section, the reasons are explored.

8.2.1 A survey

Institutional change is not likely to be merely a matter of Pareto-improving innovations and adaptations. Instead, inefficient institutions are often adopted. Very difficult can the pursuit of self-interest tend to promote the evolution of efficient institutions *because of the involvement of state, non-voluntary interactions (externalities), inertia and complexity of institutions* (Matthews, 1986).

As a result of concern about distribution of income, the effect of institutional changes promoted by the state has not all been to shape institutions so as to accommodate more efficiently changes signaled by non-institutional forces but on the contrary has served to frustrate those forces. (Matthews, 1986, p911)

The significance of complexity in the context of economic change is that complexity and inertia reinforce each other. Complex arrangements are difficult to alter radically, so they foster inertia. Inertia makes it easier to respond to changing circumstances and incorporate new institutional ideas by patching up existing institutions and so making them more complicated still rather than by starting again from scratch (Matthews, 1986, p915).

In the same vein, Acemoglu *et al* attribute the persistence of inefficient institutions to *holdup* and *political loser problems* (2005, pp 430-433).³² The holdup problem refers to the difficulty of the society to opt for a set of economic institutions ensuring optimal investments. Imagine two players in the game: a state which holds political power granting property rights and a producer undertaking productive investments. For the producer, once

³² Although economic losers problem is regarded as one additional cause for the inefficiency of institutions, the holdup and the political losers problems are believed more important than the economic losers problem (Acemoglu *et al.*, 2005, pp 435-436).

investments are undertaken, the state has the chance to hold him/her up for returns from the sunk investments. Unless property rights are secure, the producer is discouraged and the productive investments are not undertaken, retarding economic growth. Then the question goes to why the state does not provide secure property rights out. The authors attribute it to political consequences; changes in economic institutions are blocked if the economic growth enriches groups which threaten against the political power in the future.

Similarly from the angle of political institutions, Bardhan explains the failure of efficiency-improving institutional change from a viewpoint of *distributive conflicts*. Distributive conflicts constitute an important factor behind the persistence of dysfunctional institutions at the level of the central state agencies, local governments and community organizations (Bardhan, 2001a). The author attributes some success in East Asia to relative egalitarianism, under which “it is somewhat easier to enlist the support of most social groups—and isolate the extreme political wings of the labor movement—for short-run sacrifices in times of macroeconomic crises and for coordination of stabilization and growth-promoting policies”. Furthermore, by highlighting the distinct institutional landscape in India, he claims

When society is extremely heterogeneous and conflict-ridden, as in India, . . . the internal organization of such a state may exhibit what sociologists call “institutionalized suspicion” and a carefully structured system of multiple veto power [borne from and enhanced by colonists] . . . [I]n the Indian context of a plurality of contending heterogeneous groups, a close liaison and harmonization of the interests of the state with private business would raise an outcry of foul play and strong political resentment among the other interest groups . . . It is difficult for the ruling groups in India to have what Olson (1982) called an “encompassing interest”, that is, a structure that can internalize the distortions caused by its own policies. In general, at the level of the macro political economy, *inefficient and uncoordinated state interventionism is often a symptom of deeper conflicts in society* (Bardhan, 2001a, pp 280-281).

All the abovementioned findings suggest that the “induced institutional changes”, under which the “demand” for institutional innovations is based on technological improvement and the “supply” of corresponding institutional changes (Ruttan & Hayami, 1998), are artificial because the changing is heavily influenced by distributive conflicts and various interest groups (Bardhan, 1989b).

8.2.2 Interest groups

To facilitate the understanding of collective actions and interest groups in agrarian economy, the groups fall into four broad categories: agricultural producers, rural elites, formal urban sectors, and informal urban sectors.³³

³³ I am borrowing the ramification from two illuminating studies (Binswanger & Deininger, 1997; Ray, 1998). While Binswanger and Deininger focus mainly on rural sector

Agricultural producers, as I mentioned in preceding Chapters, share the characteristics of seasonality, geographical dispersion, covariant risk, and corresponding institutional problems (i.e. commitment failures, asymmetric information and transaction costs). The lack of education and infrastructure make them less vocal for either political voting or market bargaining.

Rural elites are relatively better educated and have greater access to modern communication technologies, granting them an informational advantage over the decentralized agricultural producers (e.g. in rural China). Though rural elites are remarkably diversified in terms of profession, they are easily forming clubs because of limited members and homogenous ties.

Formal urban sectors, though varies from country to country, operate under the umbrella of accepted rules and regulations imposed by government. They enjoy steady incomes and are less vulnerable to risk. By contrast, the informal urban sectors escape the cover of many of regulations and do not receive access to privileged facilities. They receive little government support and accordingly do not pay taxes (or underpay taxes)

Agricultural policies, especially food policies, have distinct impacts on the four groups. Though an increased food price potentially reduce the living standards of agricultural producers, once the income effect outnumbers the increased living expenditure, higher food prices and trade protection are persistently pursued by agricultural producers (Anderson & Hayami, 1986). By contrast, formal urban elites have strong economic interest in low food prices and are more politically vocal to lobby, especially in developing countries where they account for small faction of the total population. Rural elites and informal urban sectors are ambitiously affected by agricultural policies. High food prices might better them off by the incremental profit along with the food chains, or worsen the living standards. These two sectors are highly relevant to poverty and inequality, especially in transitional economies.

To sum up, the profile of interest groups over countries shapes different political institutions and thereby determines the distinct paths of institutional change. A mode of institutional arrangement in one country can hardly be copied to another without tailoring into the local settings.

and accordingly group the population into agricultural producers, rural elites, and urban dwellers, Debraj Ray, mainly from a rural-urban-interaction viewpoint (in Chapter 10), disaggregates economy into formal urban and informal urban sector.

8.2.3 State

Douglass North describes state as a contract between the ruler and its constituents, and accordingly groups the explanations for the state into contract theories and predatory theories (North, 1981, pp 21-23). The basic service of the state consists in development and enforcement of a constitution, specification of property rights (with private ownership or common property), and competition with other states. All these see state as a device created to provide public goods and to reduce transaction costs that arose once economic relations became too complex to be handled within personalized networks of exchange (North, 1990).

In Marxism, the state is regarded as an arena of class competition, by which the ruling class claims economic welfare against over the conflicted groups. By contrast, the neo-institutional economists concede the distributive conflicts between different interest groups and social classes, but regard the state as a coordinator of collective actions. As the state is a social planner to maximize a social welfare function, the supply of institutions and of changes depends on collective action (Lin & Nugent, 1995). To highlight the decisive role of political structural in institutional arrangements and changes, Acemolu *et al* (2005) describe economic institutions as the outcome of political institutions and *de facto* political power.

The reexamination of the states' role in economic growth derives from the New-Keynesian School. States, once abrogating more exclusive rights and powers, have a distinct comparative advantage relative to community groups to offer institutional arrangements (Stiglitz, 1989). But in many centralized states, it is easier to mobilize national capital for technological change than promoting institutional changes which are politically and economically costly, at least in the short run. The successful cases of East Asian development make active role of the state very convincing and telling. As Pranab Bardhan acknowledges, "institutional economics will be richer if we admit the possibility of a more nuanced theory of the state, beyond the oversimplifications of either the Marxist theorist's class-driven state or the public choice theorist's rentier or predatory state" (Bardhan, 2001a, p 275).

The pendulum of state-versus-market had swung from the state-dominated development model of the 1960s and 1970s to the minimalist state of the 1980s. Rethinking the role of the state became a special landscape in economics.³⁴ After that, it has been increasingly a consensus that the mere fact of market

³⁴ In the 20 century, the state activism was initiated during the Great Depression, which was seen as a failure of capitalism. Then state intervention was reinforced by the Marshall Plan and Keynesian demand management. After the collapse of the formal Soviet Union, the vigorous East Asian economies ignited the resurgence of state activism (Stiglitz, 2001).

failure does not mean that only the state can resolve these problems. While the state's unique strengths are its power to finance the provision of public goods, its power to secure property rights, and its power to require participation to minimize free riding, the state has to in face of its unique challenges, i.e. (a) powerful special interests continually try to direct the focus of government in their favor and (b) the state is lack of requisite capacity of coherence for appropriate action (WDR, 1997). To enhance the state's ability to clarify its objective and to ensure the implementation, World Development Report (WDR, 1997, p25) suggested a two-part strategy: (a) to match the state's role to its existing capability to establish the institutional rules and norms that will enable the state to provide collective goods and services efficiently and (b) to reinvigorate the state's capability through rules, partnerships, and competitive pressures outside and within the state.

With the advanced knowledge about imperfect information and incomplete markets, how to improve the efficiency and effectiveness of state interventions has been at the center of discussion. The government-plays-an-role statement has been shiny and been echoed by the slash on "Washington Consensus", whose original conception was popularized as "neoliberalism, stabilization and privatization". Stiglitz's best-selling book, *Globalization and Its Discontents* (Stiglitz, 2002), peaks the debates and advances the rethinking of the active role of the state. Nevertheless, we perhaps have to be also aware of the distorted Stiglitzism and the overselling role of the state.³⁵ As Stiglitz acknowledges

Between socialist heavy state planning model and the Washington consensus laissez-faire, there is a wide spectrum. There is a growing consensus that successful development requires active government involvement, but that it is important to improve public interventions so that they promote welfare . . . The role of the state will change with a country's stage of economic development as well as changes in the external environment . . . It is important to recognise that the extent of market failure will vary from country to country and so will the extent of collective action failure. *So it is important to reduce the impact of both kinds of failure.* Another key aspect of the change in philosophy on this question is a movement away from seeing the issue as an 'either or' situation between markets and government. The question is not whether a government should get involved in an economy, *but what forms of intervention are most appropriate.* Today economists are looking at how markets and government can work together in a complementary way, and seeing the relationship between government and markets in terms of a partnership (Stiglitz, 2001, pp 71-72).

Institutional change has been perceived as a source of economic development because that is the source of change that the states have comparative advantage in bringing about (Matthews, 1986). By reviewing a

³⁵ In an interviewing article (by Brian Snowdon), the role of the state, rethinking of the concept of development, and the essence of Stiglitz's findings are summarized (Stiglitz, 2001). This article can also serve as a reference guideline for readers who are interested in further knowledge.

variety of studies, however, Lin and Nugent (1995) argue that *discretionary authority of rulers, ideological rigidity, bureaucratic discretion and interest group conflicts* undermine the role of states in initiating institutional change as a source of economic development. The supply of institutions from states, in most cases, is likely to be retarded by the middle-level agents of the bureaucracy (Winiecki, 1990). Formed by interest groups, explicitly or implicitly, the request to institute changes is often in favor of the redistribution to these groups.³⁶

8.3 Agrarian and Local Institutions

As I mentioned repeatedly in this monograph, agricultural production is characterized by spatial dispersion, seasonality, covariant risk and corresponding informational problems and high transaction costs. All these features imply that *many of the institutions in rural areas have developed in response to the specific material and informational conditions of agriculture*; lands are not only productive factors but also of the importance of income distribution and the overall efficiency of the whole rural economy (Binswanger & Deininger, 1997). Many agrarian institutions in developing countries that are seemingly inefficient are found functional and rationale.³⁷ Many of local organizations and institutions are also found being able to fill the gaps between markets and the state.

8.3.1 Agrarian institutions

By examining the rental contracts in Philippines, Otsuka, Kikuchi and Hayami find the lease hold contract is common in the urban metropolis and the share contract (i.e. both parties are the residual claimant) is common in rural areas (Otsuka *et al.*, 1986). In urban economy, due to the formation of a wider and more stable market and corresponding reduced risk, the welfare levels of both owner and tenant, as well as the total economic efficiency, are higher than those in rural economy. The close and stable personal ties, which are determinant in rural economy to form the share contracts, turn out to be costly in urban economy. One revealing implication for this study is that “no contract form is universally efficient; relative efficiencies of various contracts depend on the social and economic conditions that *determine risk and transaction costs*” (Otsuka *et al.*, 1986, p295).

³⁶ Even in voting societies, states attempt to use the delegated authority to benefit one part of the constituent (e.g. the sugar and cotton farmers in USA), at the expense of the other groups whose wills are difficult to be identified.

³⁷ Several rich literature on agrarian institutions are collected in two illuminating publications (Bardhan, 1989a; Hoff *et al.*, 1993).

In an introductory essay for a symposium of sub-Saharan African markets, Marcel Fafchamps (1997), after summarizing a series of studies, concludes that the market landscape in sub-Saharan Africa is far more market-oriented than that in developed countries; many individual transactions are prevalent, but in small size. The decentralized markets do not reach efficient outcomes though. However, none of the series explores (a) why collective actions are so difficult to be fulfilled to form enterprises in big scale, (b) why are these “inefficient” institutions so persistently rooted in market settings, and (c) can government intervention speed up the modernization and shape the structure of economies?

If we move our insight to rural China, the landscape of market is distinct. While a great deal of rural households and companies are highly decentralized since the Households Responsibility System (HRS) and market liberalization, parastatal enterprises are still playing overriding role in the rural economy. In such context, why are collective actions (similarly to the counterpart in sub-Saharan Africa) absent to form competing companies or organizations? What are the effects of income distribution in such market settings? What government interventions are favorable for speeding up the modernization without discriminating the poor? Unfortunately, such studies have received scant attention and have been underexplored.

It is well known that, in many developing countries where institutional insurance is missing, land prices exceed the capitalized value of farm profits, and land provides additional services, serving as an inflation hedge or a tax shelter (Binswanger *et al.*, 1995). Binswanger, Deininger, and Feder thus emphasize the higher overall efficiency of owner-operated farming in communal land property rights (than that of sharecropping). The egalitarian rural land property rights in China were set up within such knowledge (the operators, *de facto*, contract rural lands from the collectives). With the burgeoning urban economy, however, the capitalized rural land prices soar remarkably. The ambiguously defined rural land property rights (namely collective-owned) reduce the bargaining costs and facilitate the expanding urbanizations. Unfortunately, on the other side of the coin, farmers can not claim the capitalized revenues and the expropriation of rural lands leads to increasing landless farmers and social unrests.

Where institutional insurance is missing, many institutional arrangements in agrarian economy resort second-best strategies and many of them can be considered as insurance-substitute.³⁸ Informal credits in a reciprocal way (as

³⁸ Large numbers of literature have been drawn on this topic, from which I have to exclude many valuable contributions and references. Stiglitz examines the incentives and insurance of sharecropping (Stiglitz, 1974); Rosenzweig and Wolpin draw insights on the investments of draft animals against risks (Rosenzweig & Binswanger, 1993); informal credits are found to depart from standard credit contracts and function as insurance mechanism (Fafchamps, 1999; Udry, 1994).

found in this study), which can be accomplished at low cost in confined economies because of the local informational advantages, are no longer sufficient once the communities are becoming open and bigger because of the increased transaction costs and free-riders. In consequence, court system, standardized production system, public-shared database from which defaulters can be traceable, and various institutions which are able to facilitate contracting are crucial for a well-functioning market.

“It is the interaction between institutions and organizations that shapes the institutional evolution of an economy ” (North, 1994, p 361). Since millions of scattered rural households can not be identified by organizations, the interaction is blocked and the evolution is retarded. Institutions are not necessarily or even created to be socially efficient and are created to serve the interests of those with the bargaining power (North, 1994). Once set up, some institutional alternatives are eliminated from the feasible set by historical precedent (Basu *et al.*, 1987).

The past thirty years’ agricultural transformation in China brings about negligible benefits to the rural population, though agricultural taxes has been lifted and farmers get better access to market integration. The vivid evidence from China suggests that it is not adequate for increasing agricultural productivity. How shall we explain the relatively lacklustre performance of China’s agricultural transformation since decollectivization and liberalization becomes a crucial issue not only to the policy makers in China, but also to agricultural economists and development economists in the world.

8.3.2 Local organizations and institutions

In the post-reform period in many developing countries, public investments in agriculture wane out, and local financing and management of existing public services demand robust local organizations and institutions, which are by and large run by local bureaucratic agencies with poor efficiency. Well functioning local institutions address some of the gaps between the state and market, voice local citizens’ concerns, and deliver some local public goods. Local institutions also play a significant role in group lending programs (as they can overcome the innate information problems and enforcement failures affecting formal credit units), in promoting input and output marketing, and in disseminating technical knowledge and market information.

Nevertheless, institutional failure at the local community level in many developing countries is often overlooked and bypassed (Bardhan, 2001b). Well-functioning institutions of local self-government are often nonexistent, and development programs are usually administered by a distant, uncoordinated, and occasionally corrupt central bureaucracy that is unaccountable and insensitive to the needs of the local people (Bardhan, 2001a). The community-

based and community driven development projects by the World Bank have been carried approximately 7 billion dollar in the portfolio. But recent study finds the community participation has not been particularly effective at targeting the poor and most of such projects are dominated by elites (Mansuri & Rao, 2004).

In agrarian society in many developing countries, social norms can be used as social capital to enforce various contracts. However, social norms are subject to depreciate due to the increased opportunism and weak commitment. Thus cooperatives can achieve only in short period of time (Nugent, 1993). With urbanizations and increased mobility, the local organizations are getting more complex and heterogeneous. Many collective action failures are attributable to free-ride in the provision of the local public goods. The concerns in many local institutions are often for certain ethnic groups and the accountability is limited. The resources are as well constrained (WDR, 1997, p25). Furthermore, as environment changes, group membership and group objectives are all changing over time. The long-run viability and success of such collective action depend on whether it is so costly as to encourage desirable improvements.

In the presence of high social and economic inequality, local governing agencies are captured by elites. Bardhan (2001a) claims that the problem of capture at local level is more serious than at the national level because collusion among elite groups is easier at the local level. In consequence, community-level institutions work better in enforcing common agreements and cooperative norms *when the underlying property regime is not too skewed and the benefits are more equitably shared.*

Many factors that are conducive to success could be substantiated to enhance local organizations and institutions and to foster economic development. By summarizing the findings of comparative institutional analysis, Nugent recommends (a) strong culture that can play a vital role in lowering the transaction costs; (b) assistance in developing local problem resolving and research capabilities, including a better understanding of state and market; (c) networking with other civil societies and local institutions; (d) the provision of club goods, rather than pure public goods, so that nonmembers are at least potentially excludable; (e) mutual monitoring; (f) imposing serious sanctions on observed rule violators (Nugent, 1993, p626&p628). Most important, such local institutions are best undertaken in a “context-specific-manner” with a long time horizon and with careful and well-designed monitoring and evaluation systems (Mansuri & Rao, 2004).

For exploiting the informational and concomitant management advantages of local organizations and institutions, some preconditions (or “sequencing” called by Bardhan) are crucial for the final performance of such institutional

changes.³⁹ Before removing market regulations, a market-determined-price system should be pursued firstly. In addition, robust investments on various public services (infrastructure, education, technological extension, risk underwriting) should be in place because there are fixed costs and externalities in building local community organizations. *The state can function as a catalyst at the initial stages of such institution building.*

³⁹ The sequencing of reforms are discussed by Bardhan (2001b).

8.4 Rural Financial Development

8.4.1 Does Financial Development Contribute to Economic Growth

Economists disagree sharply with the contribution of financial sector to economic growth. Robert Lucas, in his widely cited lecturing paper *On the Mechanics of Economic Development* (1988), claimed financial development as mere an “over-stressed” determinants of economic growth. Even those pro-finance economists disagree about the mechanism by which financial development contributes to economic growth.

The earlier strand of thought related to finance and economic growth can be backdated to the Goldsmith-McKinnon-Shaw view, in which financial superstructure accelerates economic growth by placing funds in usage with the highest social return. Neoclassical theory suggests that financial systems influence growth by easing information and transaction costs and thereby improving the acquisition of information about firms, corporate governance, risk management, resource mobilization, and improvement in R&D (Levine, 2004). By using data about 80 countries from 1960-1989, King and Levine (1993) found the level of financial development is strongly and robustly correlated with growth by increasing the rate of capital accumulation and by improving the efficiency with which economies use that capital. In the same vein, Aghion *et al* (2005) illustrated that financial development does exert positive impacts on real per capital output. The influence, however, is diminishing. And there is no direct effect on steady-state growth.

After summarizing an array of studies, Levine demonstrates a positive link between the functioning of the financial system and long-run economic growth, though there exist countervailing theory and evidence. The author elaborates five broad functions provided by the financial system in emerging to ease information, enforcement, and transaction costs.

[Financial development] can (1) produce information *ex ante* about possible investments and allocate capital, (2) monitor investment and exert corporate governance after providing finance, (3) facilitate the trade, diversification, and management of risk, (4) mobilize and pool savings, (5) ease the exchange of goods and services (2004, p5).

But, as the author acknowledges, these are arguments in favor of well-developed banks, but are not reasons for favoring a bank-based financial system. There is more than one optimal institutional structure for providing growth-enhancing financial functions to the economy. Furthermore, there has not been consistent and fully convincing theories and corresponding evidence to demonstrate the mechanism by which financial development contributes to economic growth positively. The pieces of existing empirical evidence are fragmented and countervailing. This field still demands convincing theory

which can explain the mechanism by which financial development promotes endogenous technological change and thereby contributes to economic growth.

8.4.2 The State's Role in Financial Development

In the preceding section, the dispute about financial development and its contribution to economic growth was briefly reviewed. Increasingly, it has been recognized that financial markets function more than merely intertemporal trade and the intermediation of exchange, but more with risk and information. To put it in a simple way, financial development promotes economic growth by mobilizing (obtaining and processing) information and disseminating technological progress. In consequence, given the imperfect information, financial markets are mired with informational problems.

There are several key manifestations of market failure in financial markets (Stiglitz, 1994): (a) monitoring, like other forms of information, is a public and is therefore undersupplied; (b) there exist sever (positive and negative) externalities of credit selection and lending within (and even across) markets; (c) market is incomplete because information is imperfect and costly to obtain (i.e. adverse selection and moral hazard); (d) imperfect competition because the collection and procession of information involve fixed costs; (e) discrepancy between social returns and private returns of projects; (f) imperfect knowledge and capability of investors to process disclosure information and regulations.

Government interventions should be attempting to address the market failure described above. Given the existing failure of financial market, in some instances the state take actions to create financial institutions and redirect the capital to projects with high social returns. Different than other infant-industry-protection practices, the state banks, even though unable to allocate funds efficiently for a moment, own the information which is the paramount assets for competition once the financial market is open internationally.

Even financial repression, which had been regarded as welfare-decreasing government interventions in the market, was found being able to improve the efficiency with which capital is allocated (Stiglitz, 1994).⁴⁰ Moreover, competition in financial market is a vaguely decisive role because the limitations on competition increase the stability and reduce the risk of insolvency (op. cit.). The success of the rapidly growing economies in East Asia is attributed to the extensive government interventions in financial markets. Given the pervasive market failures, government should take an active role in

⁴⁰ As the author claims, depressed interest rate could increase the expected quality of borrowers and could also be used as the basis of an incentive scheme. Nevertheless, given the government failure to distinguish the beneficial effects and deleterious effects of financial depression on the economy and the limited capability of government, the success in Japan and South Korea used by Stiglitz is anecdotal.

creating financial institutions, in regulating them, and in directing credit to enhance the stability of the economy and growth prospects. As Stiglitz claims

[M]uch of the rationale for liberalizing financial markets is based neither on a sound economic understanding of how these markets work nor on the potential scope for government intervention. Often, too, it lacks an understanding of the historical events and political forces that have led governments to assume their present role. Instead, it is based on an ideological commitment to an idealized conception of markets that is grounded neither in fact nor in economic theory (Stiglitz, 1994, p 20).

Nevertheless, a marked disadvantage of government, as I discussed in the preceding sections, is rent-seeking from special interest groups which might redirect the allocation of capital in favor of their own. To promote an economic growth in the long run, the state may have to take deliberate actions to promote competition, even though other objectives of public policies might be compromised. Regulatory failure, as market failure, leads to economic stagnation and even to debacle. Therefore regulation should be nicely designed with great discretion. *It is necessarily to acknowledge and appreciate the limits on both sides, market failure and state failure.*

8.4.3 Rural Financial Institutions

Rural financial institutions share the basic function as that of general financial institutions, but they have broader and extended functions. A rural financial institution mobilizes savings, agglomerates capital for lump investments, screens out and monitors projects, facilitates seasonal agricultural inputs, promotes marketing, disseminates technological and market information.

The imperfect information and enforcement afflicted in rural financial markets are truly existed. Government, no matter in which manner to intervene, has to be in face of them. Market failure does not necessarily mean government is potent enough to be the candidate to redress the imperfect afflicting markets.

Criticism has lead to considerable rethinking about how interventions can be used to make up for the shortcomings of formal and informal markets to allocate credit. It is an increasing consensus that public credit is costly to target the rural poor. A different set of policies is required. Braverman and Guasch (1989) suggest that specific incentives should go hand in hand with sensible monitoring procedures for information gathering.

The main challenge ought to come in the design ofthe institutional structure and the incentive schemes most appropriate to induce the desired objectives along with a strong enforcement policy. Unfortunately, little conceptual work to date has been devoted to this task in the economic profession. In general, [institutional reform was] treated as exogenous element seldom analyzed with any rigor (Braverman & Guasch, 1989, p20).

As institutional arrangements are the outcome of collective action, the distribution of bargaining power has strong implications for the degree of credit

rationing, effort levels, and efficiency. Social policies which empower the borrower and increase his bargaining strength are likely to increase efficiency. Government could be more active in the congenial regulatory framework which facilitates community-based intermediaries.

The experience of the Unit Desas of Bank Rakyat Indonesia (BRI-UD) and the Grameen Bank in Bangladesh demonstrates that it is possible to reduce or even eliminate the need for any subsidies.⁴¹ Both of them show that losses are not inevitable. Substantial and consistently increasing outreach can be achieved in a self-sustaining manner. Rural finance can be highly profitable, even when it serves low-income clients. Policy environment in favor of agricultural and rural development, improved legal and regulatory framework, and improved management training create more promising approach to rural finance (Yaron, 1998).

Financial transactions are implicit with, and often behind, many contractual and organizational forms in the rural economy. Financial innovation therefore can have dramatic consequences on the ownership and governance structures of agricultural firms and community institutions.

Governments have a crucial role to play in the creation and support of reasonably impartial courts to enforce private contracts and arbitrate or settle disputes, records offices to register and title property and increase the collateralizability of assets and the registration of liens, credit bureaus to record and share credit histories, and external audit mechanisms to solve problems of verifiability. Some of these institutions can be run as government offices, some can be supported as private enterprises, while others might be private but depending on government supervision (Conning & Udry, Forthcoming, 2867)

To sum up, the mere injection of funds with subsidized interest rates into the rural economy will not necessarily work out because funds are not the only constraining factor. *Knowledge and human capital* which enable the rural households to exploit the lending, and *institution-building* which is innovative and efficient in tackling the information problems entailed in lending, should be the focus of government interventions.

⁴¹ Grameen Bank's successful lending practices can be attributable to (a) imposing a form of joint liability within very small groups of borrowers, (b) inducing an external effect on the group enforced by strong peer pressure and group counsel, (c) lending at market rates of interest, and (d) disbursing loans only for income generating (Braverman & Guasch, 1989).

References (used in introduction and Chapter 8)

- Acemoglu, D., Johnson, S., & Robinson, J. A. (2005). Institutions as a fundamental cause of long-run growth. In P. Aghion & S. N. Durlauf (Eds.), *Handbook of economic growth* (Vol. 1): Elsevier B.V.
- Aghion, P., Howitt, P., & Mayer-Foulkes, D. (2005). The effect of financial development on convergence: Theory and evidence. *Quarterly Journal of Economics*, 120(1), 173-222.
- Anderson, K., & Hayami, Y. (1986). *The political economy of agricultural protection: East asia in international perspective*. London: Allen and Unwin.
- Bardhan, P. (1989a). *The economic theory of agrarian institutions*. Oxford: GB: Clarendon Press.
- Bardhan, P. (1989b). The new institutional economics and development theory: A brief critical assessment. *World Development*, 17(9), 1389-1395.
- Bardhan, P. (2001a). Distributive conflicts, collective action, and institutional economics. In G. M. Meier & J. E. Stiglitz (Eds.), *Frontiers of development economics: The future in perspective*. New York: Oxford University Press (for the World Bank).
- Bardhan, P. (2001b). Institutions, reforms and agricultural performance. In K. G. Stamoulis (Ed.), *Food, agriculture and rural development: Current and emerging issues for economic analysis and policy research*. Rome: Economic and Social Department, Food Agricultural Organization of the United Nations.
- Basu, K., Jones, E., & Schlicht, E. (1987). The growth and decay of custom: The role of the new institutional economics in economic history. *Exploration in Economic History*, 24, 1-21.
- Baum, C. F. (2002). Why should you avoid using point-and-click method in statistical software packages?
[Http://fmwww.Bc.Edu/gstat/docs/pointclick.Html](http://fmwww.bc.edu/gstat/docs/pointclick.html).
- Binswanger, H. P., & Deininger, K. (1997). Explaining agricultural and agrarian policies in developing countries. *Journal of Economic Literature*, 35 (4), 1958-2005.
- Binswanger, H. P., Deininger, K., & Feder, G. (1995). Power, distortions, revolt and reform in agricultural land relations. In J. Behrman & T. N. Srinivasan (Eds.), *Handbook in development economics* (Vol. 3B). Amsterdam: Elsevier.
- Braverman, A., & Guasch, J. L. (1989). *Rural credit in developing countries* (Policy, Planning, and Research Working Papers No. WPS219). Washington, D.C.: The World Bank.
- Conning, J., & Udry, C. (Forthcoming). Rural financial markets in developing countries. In R. E. Evenson, P. Pingali & T. P. Schultz (Eds.), *Handbook of agricultural economics* (Vol. 3).

- Fafchamps, M. (1997). Introduction: Markets in sub-saharan africa. *World Development*, 25(5), 733-734.
- Fafchamps, M. (1999). Risk sharing and quasi-credit. *Journal of International Trade & Economic Development*, 8(3), 257-278.
- Hoff, K., Braverman, A., & Stiglitz, J. (1993). *The economics of rural organization: Theory, practice and policy*. London: Oxford University Press.
- King, R. G., & Levine, R. (1993). Finance and growth: Schumpeter might be right. *Quarterly Journal of Economics*, 108(3), 717-737.
- Kohler, U., & Kreuter, F. (2005). *Data analysis using stata*. College Station, Texas: Stata Press.
- Levine, R. (2004). *Finance and growth: Theory and evidence*: NBER Working Papers, No 10766.
- Lin, J. Y., & Nugent, J. B. (1995). Institutions and economic development. In J. Behrman & T. N. Srinivasan (Eds.), *Handbook of development economics* (Vol. 3A): Elsevier Science B.V.
- Lucas, R. E. (1988). On the mechanics of economic development. *Journal of Monetary Economics*, 22(1), 3-42.
- Mansuri, G., & Rao, V. (2004). Community-based and -driven development: A critical review. *The World Bank Research Observer*, 19(1), 1-40.
- Matthews, R. C. O. (1986). The economics of institutions and the sources of growth. *Economic Journal*, 96(384), 903-918.
- North, D. C. (1981). *Structure and change in economic history*. New York and London: Norton.
- North, D. C. (1990). *Institutions, institutional change, and economic performance*. New York: Cambridge University.
- North, D. C. (1994). Economic performance through time (alfred nobel memorial prize lecture in economic science). *American Economic Review*, 84(3), 359-369.
- Nugent, J. B. (1993). Between state, markets and households: A neoinstitutional analysis of local organizations and institutions. *World Development*, 21(4), 623-632.
- Otsuka, K., Kikuchi, M., & Hayami, Y. (1986). Community and market in contract choice: The jeepney in the philippines. *Economic Development & Cultural Change*, 34(2), 279-298.
- Ray, D. (1998). *Development economics*. New Jersey, USA: Princeton University Press.
- Rosenzweig, M. R., & Binswanger, H. P. (1993). Wealth, weather risk and the composition and profitability of agricultural investments. *Economic Journal*, 103 (416), 56-78.

- Ruttan, V. W., & Hayami, Y. (1998). Induced innovation model of agricultural development. In C. K. Eicher & J. M. Staatz (Eds.), *International agricultural development (3rd edn)*. Baltimore and London: The Johns Hopkins University Press.
- Stiglitz, J. (2001). Redefining the role of the state. *World Economy*, 2(3), 45-86.
- Stiglitz, J. E. (1974). Incentives and risk sharing in sharecropping. *Review of Economic Studies*, 41(126), 219-256.
- Stiglitz, J. E. (1989). On the economic role of the state. In A. Jeertje (Ed.), *The economic role of the state*. Oxford: Blackwell.
- Stiglitz, J. E. (1994). *The role of the state in financial markets* (Proceedings of the World Bank Annual Conference on Development Economics, 1993). Washington, D.C.: The World Bank.
- Stiglitz, J. E. (2002). *Globalization and its discontents*. New York: Norton&Company, Inc.
- Udry, C. (1994). Risk and insurance in a rural credit market: An empirical investigation in northern nigeria. *Review of Economic Studies*, 61(208), 495-527.
- WDR. (1997). *World development report: The state in a changing world*. Washington, D.C.: The World Bank.
- Winiiecki, J. (1990). Why economic reforms fail in the soviet system - a property rights-based approach. *Economic Inquiry*, 28(2), 195-221.
- Yaron, J., McDonald Benjamin, and Stephanie Charitonenko. (1998). Promoting efficient rural financial intermediation. *The World Bank Research Observer*, 13(2), 147-171.