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## Chinese firms entering China's low-income market: Gaining competitive advantage by partnering governments

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**No. 147**

**Chinese firms entering China's low-income  
market: Gaining competitive advantage by  
partnering governments**

by Genia Kostka, Jianghua Zhou

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## Abstract

This paper investigates poverty alleviation efforts in China and the nature of government-enterprise partnerships there. We argue that firms partnering central and local governments can be an effective strategy to overcome resource-based obstacles in low-income markets. In China, local and central governments are owners of rare and valuable resources, thus offering better access to finance, infrastructure, technical and planning expertise, advocacy through government marketing and distribution channels, and links to other stakeholders. The findings are based on 16 case studies of firms entering the low-income market in China, of which two cases in the agricultural and telecommunication sector are studied in depth.

Key words: Partnerships, government, poverty alleviation, China, base of the pyramid

JEL classification: M19, O18, R51, R59.

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# 1 Introduction

The concept of designing economically viable ventures to serve the low-income group has gained considerable prominence (Prahalad and Hart, 2002; Prahalad, 2004). In China, the low-income group is widely defined as people who live below the national poverty line, which different estimates define as ranging from an income of 3.3 RMB (0.5 USD) a day (China National Statistical Bureau, 2009) to the expenditure of 6.7 RMB (1 USD) a day (UNDP, 2008). The above-mentioned market-based solution for poverty focuses on integrating the low-income group as both consumers (Prahalad and Hammond, 2002) and producers (Karnani, 2007; Seelos and Mair, 2007; Nielsen and Samia, 2008; London et al., 2010). The literature has stressed the importance for firms to foster voluntary partnerships and joint ventures with a wide range of actors, including village committees, non-governmental organizations (NGOs), research institutions, governments or other enterprises (London and Hart, 2004; Hammond et al., 2007; London et al., 2007; London et al., 2010) to ensure their survival in the unique contexts of markets that serve the low-income group.

The purpose of this paper is to examine partnerships between for-profit (e.g., private and state-owned enterprises) and non-profit (e.g., governments) organizations. The primary objective is to highlight various models of partnerships used to enter low-income markets. This will be analyzed in the context of China, which is characterized by a powerful government that influences and, as argued in this paper, often drives business operations in low-income markets. The motivation for the study is to highlight the unique characteristics of partnerships in China and the resources gained by cooperating with the government.

Findings from qualitative interviews carried out between 2008 and 2010 are used to show whether and how enterprises form partnerships to enter low-income markets in China. Sixteen cases are examined, of which two cases are studied in depth. The first case study examines the state-owned enterprise China Mobile, which the government chose to set-up an Information Network Platform for Rural Areas (INPRA), while at the same time creating a profitable mobile phone business. The second case study analyzes the privately-owned company Nanjing Jiukang Biological Technology Company Ltd, which developed a bio-pesticides business in rural areas and established a joint-venture company with the Nanjing local government.

This paper argues that due to China's authoritarian decentralized economic and political structure (Landry, 2008), forming partnerships with the government can create competitive advantages for enterprises entering the country's low-income market. The resource-based view (RBV) argues that because local and central governments in China are owners of rare and valuable resources, they make suitable partners for firms wanting to enter such markets. Local governments' localized resources offer enterprises particular benefits. The case studies from across China highlight that partnering governments can improve an enterprise's access to finance, infrastructure, technical and planning expertise, advocacy through government marketing and distribution channels, and links to other stakeholders. The study selects a state-owned and an initially private-owned enterprise to illustrate how Chinese firms operate in partnership with central and local governments. Furthermore, the case studies show that local and central governments benefited from state-owned or privately-owned enterprises' managerial, operational, and technical skills, while the central and local governments provided strategic resources and partners. This suggests that complementarily in financial, physical, human, organizational, technological, reputational, and information resources and capabilities is an important basis for partnership formation.

This topic is timely, because many firms operating in low-income markets enter partnerships with central or local governments. Nevertheless, few case studies have specifically explored government-enterprise partnerships in China's low-income market (UNDP GIM Case Studies 2008, see, e.g., Shi, 2008). In addition, there are more than 750 million people living in areas designated as rural (Chinese Statistical Yearbook 2009), presenting an interesting market opportunity for firms. In addition to market size, firms have been encouraged by numerous support and subsidies programmes that the Chinese government has initiated to develop rural areas, such as the 'sending computer and training to rural areas' initiative in 2009 (Xinhua, 2009; China News, 2009).

The paper proceeds as follows: The next section links the RBV with the literature on partnerships and networks in low-income markets and summarizes the market characteristics of China's low-income market. The paper then explains the research design and methodology used to collect data. This is followed by a presentation of the empirical evidence from the 16 cases in general and specifically from the two case studies on a telecommunications and a bio-pesticide company. The final section concludes by highlighting the implications for business research and discussing the limitations and areas for future research.

## 2 Related Literatures

The literature review begins with an overview of the resource-based view (RBV) and key previous studies on partnerships and networks in low-income markets. This is followed by a description of the low-income market in China and the particular circumstances faced by firms, NGOs, and governments when operating in this context.

### 2.1 Resources and Partnerships

This study uses the RBV as a theoretical lens to examine government-firm partnerships in low-income markets. The RBV of enterprises explains sustained competitive advantage and suggests that firms can accelerate their development path by employing resources that are scarce, valuable, inimitable, and unsubstitutable (Nelson and Winter, 1982; Wernerfelt, 1984). Enterprises have different financial, physical, human, organizational, technological, and reputational resources (Barney, 1991; Grant, 1991). Additional 'invisible assets', which Itami and Roehl (1987) introduced as information-based resources such as management skills and experience, distribution control, corporate culture, consumer trust and brand image, are important.

For companies operating in low-income markets, access to resources is one of the main barriers, as resources may simply not be available or tradable in these markets (Prahalad and Hart, 2002; Seelos and Mair, 2007). Businesses face unfamiliar contextual constraints in terms of formal and informal institutional barriers (e.g., a deficient regulatory framework), new customer groups (e.g., customer often lack financial resources or knowledge), culture (e.g., language hurdles), or the environment (e.g., a lack of distribution channels, a poor physical infrastructure). Firms can address these constraints by adapting or innovating products, investing in local infrastructure, creating new distribution channels, and changing their organizational structures (Nutt and Backoff, 1997; Anderson and Markides, 2007; Gradl et al., 2008).

To survive in the unique contexts of low-income markets, firms can also form voluntary partnerships and joint ventures with other for-profit organizations (e.g., private or state-owned enterprises) or non-profit organizations (e.g., governments, NGOs, or universities) (Das and Teng, 2000; BarNir and Smith, 2002). Previous studies show that those firms which collaborate with non-traditional partners, such as village communities and NGOs, have better access to local resources, thereby lowering the initial investment costs and increasing the long-term viability of projects (Gulati et al., 2000; London and Hart 2004; Sanchez et al., 2004; Seelos and Mair, 2007; Badry 2009). Success factors and the characteristics of partnerships between different stakeholders highlighted in previous studies include a win-win situation, a specific plan and a shared vision, clear responsibilities and unique resources offered by each partner, a high degree of commitment, open communication and trust, willingness to compromise and collaborate, community outreach, financial and political support, expert advice and review, and risk awareness (London and Hart, 2004; Seelos and Mair, 2007; Jacobson and Choi, 2008).

When discussing the application of different partnership models between for-profit and not-for-profit actors, attention needs to be paid to country-specific particularities. Actors need to be analyzed in their regional context, as they manoeuvre in different structures with variation

in market size, political and economic institutional structures, firm ownership, and in the resource that they have at their disposal.

## 2.2 Regional context China

Compared to other developing or transitioning countries, China's market size and its political and economic systems are unique, which, as argued in this paper, leads to a different form of relationship between for-profit and not-for-profit actors. The country's rural population of 750 million people is very large; their average annual expenditure was 5,915 RMB in 2008 (even the lowest 20% of the rural population had an average annual expenditure of 2,145 RMB) (Chinese Statistical Year Book, 2009). This huge market potential is an additional incentive for firms to enter China's rural market. Furthermore, the country's political structure is a single-party authoritarian system, and, as a result, the roles of firms, NGOs, and government vary in terms of resources and freedom to operate, affecting the partnerships between for-profit and non-profit organizations in its low-income market:

- *Firms*: In other countries, private enterprises are at the forefront of entering low-income markets, but this is not necessarily true in China, because the private sector is small and lacks the investment resources that larger state-owned enterprises have (Huang, 2008). State-owned enterprises and firms with mixed forms of ownership play a dominant role in the economy (Sun 2003), with state-owned firms alone still accounting for 28% of all industrial output and 31% of total employment in 2008 (Chinese Statistical Yearbook, 2009). Another China-specific characteristic is that, in some sectors, foreign firms' market entry is still limited by regulatory restrictions, for example, foreign banks and insurance companies are not allowed to enter rural areas (Leung and Chan, 2006).
- *NGOs*: In many countries, NGOs are attractive partners to enter low-income markets, because they mobilize resources directly or indirectly through their networks ties (Webb et al, 2009). In China, NGOs play only a nominal role, because they are tightly controlled by the government and predominantly focus on community-based service (Saich, 2000; Ho 2001).
- *Governments*: China economic structure is highly decentralized, providing local governments with more fiscal and administrative power than in other countries (Landry, 2008). Local governments control access to markets, finance, information, and other resources, which can lower or increase the barriers to entering low-income markets in China. Local government officials often act as gatekeepers and by offering access to localized knowledge and by helping to win the trust of local farmers, they often take over the role played by NGOs in many other developing countries.

From this regional context, some implications can be drawn for actors' scope to act and the subsequently adopted market-entry strategies. In China's 'big government' context, business models that work in other markets might not be applicable. For instance, introducing small-scale mechanical water pumps, which are successful in India (Simanis and Hart, 2006; World Economic Forum, 2009), might only be a second-best solution in China. Rather than relying on mechanical pumps or other small-scale business models, a more effective and feasible solution is to introduce large government-led irrigation projects (Tong et al., 2009). Companies



can cooperate with central and local governments and align their business strategies by, for instance, developing irrigation equipment for large-scale projects.

The following proposition will guide the analysis: In China, an economy with a strong government and a high level of economic decentralization, partnerships with central and local governments are an effective strategy to acquire the resources needed to enter low-income markets. Local governments are particularly important actors because they offer valuable resources and capabilities, such as access to finance, infrastructure, help with technical and planning, advocacy, and links to local partners and stakeholders. Firms that partner governments can lower their market entry risk and improve the scalability of their business model in low-income markets.

### 3 Methodology

Given this study's objective to analyze partnerships in China's low-income market, the authors adopted an exploratory research strategy, suitable for the relatively unexplored nature of this research topic (Yin, 1984; Eisenhardt, 1989). Qualitative research allows implicit assumptions to be analyzed and new relationships, abstract concepts, and operational definitions to be examined (Bettis, 1991; Weick, 1996). Researchers examining firm strategies in emerging economies regard an exploratory methodology as particularly helpful (Hoskisson et al., 2000).

The data were collected by following a three-stage process. Firstly, from January 2008 onward, the authors exhaustively analyzed case studies on Chinese enterprises that did business in low-income markets across the country's rural areas. The authors mainly drew on newspaper articles, government documents, research reports, and Internet research. The cases exclude urban areas, because the majority of people below the poverty line live in rural areas (National Bureau of Statistics of China, 2008). Multinational firms were not considered, because this research wanted to specifically explore the role of domestic firms in low-income markets.

As a second step, the types of partnerships formed by domestic companies were analyzed. Sixteen cases were selected for further analysis based on the following criteria: (a) the business concentrated mainly on areas designated as rural, (b) one or more partnerships between for-profit or not-for-profit organizations were formed in the business, and (c) the selected cases had to provide variation regarding sectors. Additional archival materials were collected on each case and, where possible, key informants were interviewed.

As a third step, two of the 16 cases were studied in depth to better understand the partnership models between enterprises and central and local governments. The two cases were selected because they: (a) exemplify a successful partnership between an enterprise and one or more government organization; and (b) differ with regard to the partnership's governance model.

The two cases were analyzed by means of repeated fieldtrips to Beijing and Jiangsu Province. Between 2008 and 2010, a total of 31 interviews were conducted with business managers, employees, farmers, and government officials. Archival documents and government reports were also studied. Tsinghua University and personal contacts provided access to the informants. The interviews were semi-structured, conducted in Chinese, and lasted an average of two hours. To encourage greater disclosure of information, we assured the respondents that their anonymity would be maintained. Data triangulation was used to test the validity of the information; a broad range of stakeholders with varying perspectives were interviewed, and the gathered interview data were double-checked against other studies, industry reports, government documentation, and online information.

#### 4 Case studies

The sixteen cases highlight that 15 of the 16 firms targeting low-income markets in rural areas partnered local or central governments (Table 1). This phenomenon was observed in agriculture, industrial and service sectors. The exception was the enterprise UT Starcom – case study nine – which partnered a state-owned enterprise. By analyzing the different case studies it became apparent that local and central governments offered valuable resources in terms of (1) access to finance, (2) construction of infrastructure, (3) provision of technical and planning expertise, (4) advocacy, and (5) links to shareholders.

**Table 1**

Partnerships in selected sixteen case studies.

Cases	Industry	Business	Characteristics of partnership	
1	Jiukang	Agriculture	Bio-pesticide	Created joint venture with the Nanjing government; case study described in depth in Section 4.
2	Zhilian Renewable Energy	Agriculture	Extracts bio-diesel from Tung tree.	The positive role of local government in Guangxi: (3) technical and planning: trained farmers to plant Tung trees; (4) advocacy: encouraged Tung tree planting; (5) stakeholders: links to village heads and production cooperatives. The negative role of the provincial government: lacked access to land and financial support for tree planting and R&D.
3	Shaoguan Bio-Energy	Agriculture	Produces bio-diesel	Jatropha production initiated by the Guangdong government: (1) finance: 324,000 RMB for tree planting (3) technical and planning: coordinated technical support through university; (4) advocacy: included Jatropha in the government's plan; (5) shareholders: links to villages.
4	Shouguang Vegetable Wholesale Market.	Agriculture	Manages vegetable wholesale market.	The business started as a vegetable market, initiated by the local government in Shandong in 1984. In 2003, a joint venture was set up between the local government and another company to build a vegetable wholesale market. The role of the government: (1) finance: coordinated banks to supply loans; (2) infrastructure: built roads; (4) advocacy: organized the annual vegetable exposition; encouraged other regions to adopt the business models; (5) stakeholders: encouraged other stakeholders to supply agricultural inputs and other services.
5	Shunhua Duck Industrial Company	Agriculture	Duck raising and duck-processing business.	The role of the government: (1) finance: subsidized scale-up of the business through the Government Fiscal Agricultural Fund; worked with the local credit cooperatives to provide micro-credit for farmers to purchase duckling; (2) infrastructure: improved local transportation and electricity grid; (3) technical & planning: set up the Linwu Duck Farmers Association and the Farmers Insurance Foundation (4) advocacy: incorporate duck raising in government's strategic planning.; (5) stakeholders: links with farmer associations.

Cases	Industry	Business	Characteristics of partnership
6 Mengniu Milk Group	Agriculture	Cow raising and milk-product processing.	The role of the local governments: (1) finance: allocated subsidies to raise cows; (2) infrastructure: invested in milk collecting network; (3) technical & planning: created milk association to standardize milk collection and leveraged collaboration of farmers; sent technical experts to villages to train the farmers and introduced technology; subsidized farmers' training courses; (4) advocacy: coordinated farmers to raise cows; advertised the company's virtues in media; promoted the business model in other provinces; (5) stakeholders: links with farmer associations.
7 New Hope Group	Agriculture	Sells feed inputs for farmers' livestock; meat processing.	The role of the local government: (1) finance: started a foundation together with the company, each investing five million RMB to provide micro-credits for farmers; in some areas set up insurance guarantee company; (3) technical & planning: created farmers' cooperatives; trained farmers; coordinated farm services offered by insurance companies and banks; helped to set up the quality and technical criteria, ensured the company protected farmers' interests; (4) advocacy: promoted the company; (5) stakeholders: links to universities to set up R&D.
8 China Mobile	ICT	Information	Joined two ministries to start information platform; case study described in depth in Section 4.
9 UT Starcom	ICT	Offer low-cost mobile services and wireless terminals.	Cooperated with state-owned China Telecom to offer low-cost mobile services (Personal Hand-phone System (PHS)). The positive role of the state-owned enterprise: (2) infrastructure: used China Telecom's fixed phone network to provide mobile service; (4) advocacy: used company's rural distribution channel to promote mobile service to low-income families. The negative role of the government: project was terminated because the product was not aligned with central government's policy and forced the mobile service to quit the market.
10 Haier	Manufacture	Manufactures home appliances.	Aligned its business with government's 'Sending Appliances to Rural Areas' policy and hastened market entry in rural China in 2009. The role of the government: (1) finance: The Ministry of Industry and Information, in collaboration with Haier, initiated a new 'sending computer and training to rural areas' project, provided subsidies for computers and training given to villages; offered 15% subsidy for each appliance sold to rural market; (3) technical & planning: coordinated the existing rural wholesale markets and distribution channels to sell the 'sending to rural market' appliances; (5) stakeholders: links to rural wholesale markets

Cases	Industry	Business	Characteristics of partnership
11 Shifeng Group	Manufacture	Manufactures rural transportation equipment.	Shifeng Group, a state-owned company, received various types of support from the Shandong provincial government: (1) finance: subsidies provided for the 'sending automobiles to rural areas' government programme, encouraging the sale of trucks for rural use; R&D funding to upgrade to electricity-powered cars; (3) technical & planning: trained farmers; received car-manufacturing licence from the central government; (4) advocacy: helped sell equipment through village governments ; (5) stakeholders: links to central government and villages.
12 Huangming	New energy	Sells solar heater in rural areas	The company partnered several local governments in Shandong Province to build solar-heater-based public bathing rooms in rural areas. The role of the government: (2) infrastructure: building bathing rooms; (3) technical & planning: issued regulation that buildings in cities needed to have room for a solar-heating system; set up solar valley (industrial park); (4) advocacy: ran solar valley festival.
13 Yingli Green Energy	New energy	Solar voltage generators.	The role of the government: (1) finance: provided farmers with subsidies to buy the solar voltage equipment; (3) technical & planning: trained farmers; (4) advocacy: leveraged the governments' social network to organize the farmers and provided products.
14 Qinghai New Energy Group	New energy	Manufactures tailored solar voltage equipment.	Project initiated by government to offer the farmers an integrated solar-voltage solution. Qinghai New Energy Group was invited to act as the technology and product provider. The role of the government: (1) finance: invested 373 million RMB as part of the 'sending electricity to rural areas' government programme; provided farmer with subsidies to purchase electricity operators; (2) infrastructure: provided grid service; (3) technical & planning: coordinated the solar-voltage and wind-based electricity generator projects for non-electrified villages.
15 CreditEase	Services	Micro credit for farmers.	CreditEase partnered state-owned institutions, NGOs, and local governments to lend low-income users money. The role of local governments and NGOs: (3) technical & planning and (4) advocacy: trained farmers how to use micro-credit.
16 Sugu Super Market	Services	Selling farming products to rural / urban markets.	The role of the government: (3) technical & planning: coordinated farmers and distributors' activities to ensure stable product delivery; helped set up distribution and logistics channels in under-served areas; (4) advocacy: built communication platform to promote the company's experience; (5) stakeholders: links to universities to develop food-safety-supervision system.

Of the 16 cases, four employed farmers both as consumers and producers for example, as they bought and sold agricultural products (case studies 1, 4, 7, and 16); four cases incorporated farmers as producers, for example, tree planting or duck raising (cases 2, 3, 5, and 6); while the remaining eight cases involved farmers as consumers, for example, selling computers or solar heaters. Local governments were particularly active in offering technical and planning expertise, advocacy, and links to shareholders (Table 2).

**Table 2**

Resources and capabilities via central and local governments.

	Finance	Infrastructure (investment)	Technical and Planning	Advocacy	Share- holders
<b>Case 1: Jiukang</b>	√	√	√	√	√
<b>Case 2:</b>			√	√	√
<b>Case 3</b>	√		√	√	√
<b>Case 4</b>	√	√		√	√
<b>Case 5</b>	√	√	√	√	√
<b>Case 6</b>	√	√	√	√	√
<b>Case 7</b>	√		√	√	√
<b>Case 8: China Mobile</b>			√	√	√
<b>Case 9:</b>					
<b>Case 10</b>	√		√		√
<b>Case 11</b>	√		√	√	√
<b>Case 12</b>		√	√	√	
<b>Case 13</b>	√		√	√	√
<b>Case 14</b>	√	√	√		
<b>Case 15</b>			√	√	
<b>Case 16</b>			√	√	√

Company partnered the local government to produce bio-diesel from Tung trees in Guangxi. The strategic partnership failed because the company did not receive sufficient resources from the government. Although the local government encouraged farmers to plant Tung trees, it simultaneously provided farm subsidies to plant quick-growing plants other than Tung trees. In addition, the firm did not receive permission to use fertile land, nor could it access bank loans for the required R&D activities. In the second case (case nine), the company UT Starcom partnered the state-owned enterprise China Telecom to offer low-cost mobile services that enabled formerly fixed phones to work without a fixed line (Personal Handyphone System (PHS)). The business flourished in the rural areas due to the extensive use of China Telecom's rural distribution channels to promote PHS, but the project was later terminated due to the central government's decision to develop China's own 3G technology. The 70 millions PHS users (most low-income users) are likely to be transferred to the 3G network at a discounted price.

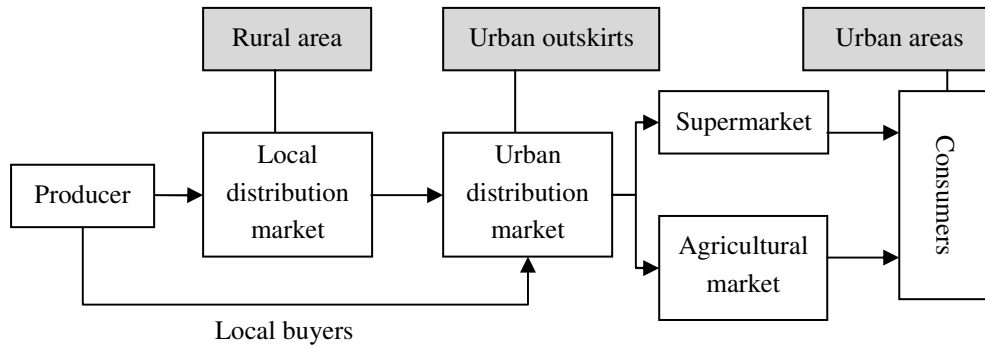
In the following, the study focuses on two businesses which successfully entered low-income markets. The first business (case one) is Jiukang, an example of a joint venture between a private enterprise and the municipal government, which also included farmers as consumers and producers. The second business (case eight) is China Mobile, an example of a strategic partnership between a state-owned enterprise and the central government to provide telecommunication services, which includes farmers as consumers.

## **4.1 China Mobile: Building an Information Network Platform for Rural Areas**

### **4.1.1 A successful partnership**

The Information Network Platform for Rural Areas (INPRA) was first initiated in 2004 by the Ministry of Information Industry (MII) and the Ministry of Agriculture (MoA). INPRA's purpose was to address the information asymmetry problem in rural markets and improve the farmers' access to information technology. The ministries partnered the state-owned enterprise China Mobile, which was perceived to have the best technological, financial, and managerial capabilities of all China's telecommunication companies, to develop the rural telecommunication market. It is interesting to note that the central government selected a partnering firm and not vice versa. The INPRA system provides farmers with information on agricultural prices, which increases their negotiation ability with distributors. Users of the INPRA can also use cell phones to sell directly to their distributors or the final customers. In addition, the INPRA provides farmers with up-to-date information on weather and technical support. Before the INPRA was initiated, distributors provided farmers with no or only limited information on prices and buyers' demand; consequently, farmers were often ill-informed and based their planting schedule on the previous year's information, which led to over-supply or under-supply problems (Fig.1).





**Fig.1. Market Structure for Agricultural Outputs in China Prior 2004**

*Source:* Adopted from Chen (2004)

By 2009, INPRA's success surpassed China Mobile's expectation. Within the first five years, the INPRA service grew at an annual rate of 30% (China Information Yearbook, 2009). By the end of 2008, INPRA covered 97% of rural areas, and its users exceeded 40.3 million (China Mobile, 2008). By 2007, China Mobile's business in the rural markets was profitable, despite the large initial investment of 19.5 billion RMB and the below-average charge fees (Interview, Beijing, August 2009). A manager in a China Mobile branch office summarizes its success:

“At first, we started this business as a social responsibility service, but we learned that it not only provides social benefits, but also considerable economic returns. The rural market business unit accounts for most part of our recent business growth.” (Interview, Beijing, August 2009)

Given this achievement, China Mobile started offering additional services for low-income markets. The company initiated a call line for INPRA, labelled [www.12582.com](http://www.12582.com), which links farmers directly to the corresponding experts and provides information on new job openings for farmers. The China Mobile subsidiary in Jiangsu Province further extended the platform by, for instance, integrating INPRA with a new, cooperative-driven medical service, offering farmers medical services when they brought a cell phone. The success in rural areas motivated China Mobile to venture overseas and purchase the Pakistan cell phone company Paktel as well as launch the Zong cell phone brand in rural Pakistan in 2007. China Mobile's first overseas investment illustrates that the company regarded its expertise in entering rural areas as its competitive strength in the international market (China Mobile Website, Press Release 5 April 2008).

#### 4.1.2 Addressing resource constraints

Prior to the partnership between the Ministry of Information Industry (MII), the Ministry of Agriculture (MoA) and China Mobile in 2004, rural markets were regarded as unprofitable markets. Despite these markets' great growth potential due to the millions of people living there, the large state-owned telephone service providers – China Telecom, China Mobile and

China Unicom – had little investments in those areas, because the farmers’ income was perceived as too low to create a profitable cell phone business (Interview, Beijing, August 2009).

The main resource and market constraints when implementing the INPRA in rural areas were: (1) the existing gaps in local cell phone network coverage, (2) the lack of tailored and up-to-date agricultural information services to provide the information service, and (3) the farmers’ unawareness of the benefits of a mobile information service. The partnership between the different ministries and China Mobile was key to overcome these constraints.

The first constraint – low cell phone coverage – arose due to telephone service providers lacking profit incentives to invest in poor rural areas. The MII and MoA asked China Mobile, the largest cell phone service provider in China, to invest 19 billion RMB (approximately two billion USD) to build a cell phone network in rural areas. China Mobile’s agreed to this plan, partly to fulfil upper government’s mandates, and partly to expand its market share in rural areas. The top leaders at China Mobile were unavailable for interviews and on the basis of interviews with middle-level management, the authors could not conclude whether China Mobile had voluntarily entered this partnership or whether it had been obliged to do so.

Another constraint was that an information gathering process was required to ensure that the information platform could provide farmers with tailored and up-to-date information. The MII persuaded China’s largest state-owned media group Xinhua, the Agriculture Science Academy, and the China Agriculture University to provide China Mobile with agricultural information. As a result, China Mobile could send the farmers regular research updates on pesticides, fertilizer selection, seed varieties, planting technology via text messages. Moreover, China Mobile integrated the INPRA service with the local agricultural administration departments’ (LAAD) message processing system in order to offer farmers regional-specific and bundled information.

A third challenge was to improve the farmers’ awareness of cell phone usage and to create demand for the INPRA service. Initially, many farmers were reluctant to use the information platform and preferred to rely on word-of-mouth information or the village’s official broadcasting channel. To gain the trust of the farmers, the MII and MoA asked different local governments to start pilot schemes. China Mobile was introduced to selected village governments, which offered their village broadcast and other channels to advertise the INPRA. An employee of China Mobile explains how acceptance was created among farmers:

“Farmers thought that cell phones were an unnecessary investment, and INPRA was just a trick to obtain money. The local governments contacted the village leaders for us, who closely followed instructions from the upper-level government. This was a very effective snowball effect; for example, one local government organized seven villages to test INPRA before it was rolled out.” (Interview in Beijing, August 2009).

In addition, the INPRA service was offered below market price to make it acceptable and affordable for farmers. While the average China Mobile user was charged between 10 to 60 RMB per month for using mobile services, users of INPRA were charged only two RMB per month (approximately 0.25 USD). When farmers called the inquiry centre, the fee was 0.1 RMB per minute, lower than the average market price of 0.2-0.4 RMB per minute (Interview in Beijing, August 2009).

In addition, after the pilot trial, the partnership also helped China Mobile scale up its business. When entering the markets of different provinces, China Mobile collaborated with the local agricultural administration departments (LAAD), which are branches of the Ministry of Agriculture, to expand its business. China Mobile helped LAAD set up an information system and, in return, LAAD persuaded the farmers to use INPRA. Since it was linked to LAAD, this lowered China Mobile's risk of being rejected by the farmers and helped the company scale up the business quickly.

### **4.1.3 Factors of Success**

The partnership illustrates a win-win situation, with the MII and MoA achieving their social policy objectives to increase farmers' income, and China Mobile accessed resources and partners needed to operate in rural areas. The actors took their respective competence and resources advantages into account, creating a rationale for their strategic partnership. The MII competently provided access to the media group and research institutes, the MoA linked the project with the relevant local agricultural departments, while China Mobile used its managerial and operational expertise in the cell phone industry to develop the technology to support the platform. The actors maintained separate organizational forms, but worked closely together in project teams.

China Mobile benefited from partnering the two ministries by gaining access to their resources, technical and planning expertise, advocacy, and links to stakeholders. In terms of technical and planning expertise, the strategic partnership was initiated and coordinated by the two ministries, a solution that helped overcome coordination problems that could have arisen if there had been no clear governance structures. Local governments also supported China Mobile by sending agricultural experts to rural areas to train the farmers, thus improving the farmers' capability to use INPRA. The local governments used their vertical administrative structures to encourage farmers to use the platform, helping China Mobile win acceptance from potential platform customers. Specifically, the lack of pre-existing distribution channels was solved by village governments employing their own channels to promote the platform. Finally, different levels of government linked China Mobile to other stakeholders, ensuring that the company received support from LAAD, village committees, research institutes, and the media (Fig.2.). By collaborating with LAAD, China Mobile lowered its risk of being rejected by local users, which allowed it to start simultaneous pilots in different provinces, thereby scaling up the business quickly.

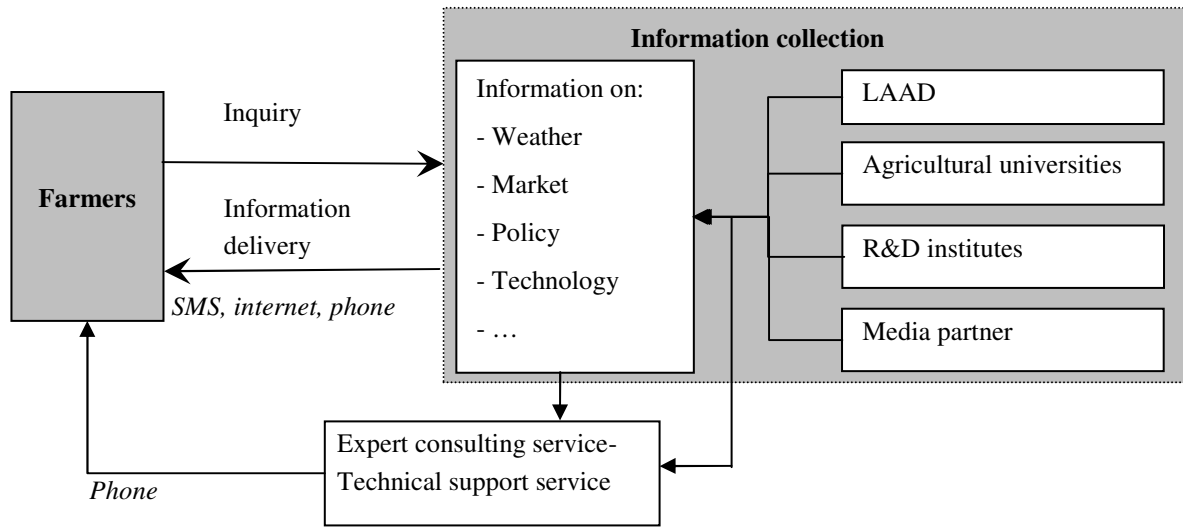


Fig. 2. China Mobile Information Network Platform for Rural Areas, 2005

Source: Adopted from Luo (2007).

## 4.2 Jiukang Company

### 4.2.1 A successful partnership

Nanjing Jiukang Biological Science Technology Development Company Ltd. (Jiukang, hereafter) is a company in Nanjing, Jiangsu Province, producing Neem-tree-based bio-pesticides. Jiukang was founded in 2002, when a professor from the Chinese Academy of Agricultural Sciences and an investment banker synthesized a new Neem-based bio-pesticide. Two years after the breakthrough in research, the two entrepreneurs set up a joint-venture with the Nanjing Municipal Government. A shareholder company was established under the name Nanjing Jiukang Biological Technology Company Ltd, with the two private entrepreneurs holding 30% and the Nanjing Government 70% of the company's shares. The municipal government's investment illustrates how local governments in China actively engage and invest in businesses that enter low-income markets.

After testing and comparing different Neem-oil-extracting technologies, Jiukang rented 5,000 mu (one mu equals 1/15 of a hectare) of non-arable, hilly land from farmers to start production. Jiukang was able to sell its Neem bio-pesticides for 15 RMB per bottle, almost the same price as most chemical pesticides. Jiukang also made bio-diesel from the leftover parts of the Neem fruits and organic fertilizer from the residuals. The emerging business provided the village with new taxation income. For instance, in 2008, the families in Qiaoli Village, one of Jiukang's Neem-tree-planting sites, received an income of 0.8 million RMB from Jiukang, which was more than a third of Qiaoli Village's GDP (the total GDP was two million RMB). A farmer summarized the benefits as: "Previously, the hills were almost useless. Now I can grow Neem trees and I get paid 1,500 RMB per year. It is good." (Interview in Nanjing, March, 2009).

### 4.2.2 Addressing resource constraints

Initially, Jiukang faced various constraints, which included both resource and market constraints, as an private enterprise operating in low-income markets: (1) insufficient finances to conduct R&D, (2) poor transportation networks and supply chain interruptions through irregular raw material deliveries, and (3) farmers' low acceptance of Neem-based bio-pesticide. The joint-venture with the Nanjing Municipal Government addressed these constraints and helped the company quickly scale up its business.

The first constraint was lack of financial resources to develop new seed varieties that were suitable for local soil conditions and a non-tropical climate zone. As a start-up, Jiukang was unable to obtain sufficient loans from the local state-owned banks to finance the required tests and equipment. This problem was solved when the joint venture was set up and the government-owned Nanjing Hi-Tech Venture Capital Fund invested seven million RMB, enabling Jiukang to use a new grafting and tissue culture technology to cultivate new species of Neem tree that was suitable for local planting.

The second challenge was to overcome the poor transportation infrastructure and supply chain interruptions. Given the competing demands for land for either crops or industrial usage, it was difficult for Jiukang to build Neem tree plantations on a large scale. The Nanjing government linked Jiukang with village governments, which used word-of-mouth communication, street slogans, and public village meetings to persuade farmers to switch from the existing maize or root vegetable crops to Neem trees. The Nanjing Municipal Government also linked Jiukang with governments and agricultural associations in other provinces to scale up its business. As a result of this government-to-government negotiation, Jiukang signed four contracts for large tree-planting areas with agricultural cooperatives in Shandong, thus ensuring that it would have a stable raw material supply. In return, Jiukang agreed to purchase the harvest at a minimum price and provide free seeds and technical support. The Nanjing Government also introduced Jiukang to foreign investors and, as a result, Jiukang won a 100,000 mu planting contract in Malaysia. In August 2009, the local government also started to link Jiukang with decision-makers in Africa, further encouraging Jiukang to expand its business. To improve the local transportation infrastructure was more difficult, but the village governments and the municipal government combined their financial sources and shared the costs of building new roads.

The third obstacle was to promote the usage of bio-pesticide. Chinese farmers are used to chemical pesticides' fast pest-killing effect and did not want to wait for two days for the bio-pesticides' effect to show. The investment in advanced synthesis technology helped develop new bio-pesticides with the ability to kill pests within two hours, addressing the local farmers' preference for a fast pest-killing effect.

### 4.2.3 Factors of success

Similar to the China Mobile case, there was also a win-win situation for the two main actors. Jiukang used its newly developed technology to create a sustainable and profitable business; the local governments aimed to increase the farmers' income and to promote the biological agricultural sector, while also obtaining financial return from the investment. Jiukang recruited and trained village women and old men as part-time workers for the tree planting. Recruiting unemployed local people helped Jiukang establish a good relationship with the village

leadership. The linkage to local governments increased Jiukang's reputation at the local level, a strategy very similar to the one adopted by China Mobile. The production of affordable bio-pesticides also alleviated pressing environmental problems in Jiangsu by decreasing poisonous pesticide residuals, soil degradation, and water pollution.

The two actors offered each other valuable resources and capabilities; Jiukang had the technology and creativity to develop a new business model that included farmers as producers and consumers, while the government provided access to finance, infrastructure, technical and planning advice, advocacy, and links to other strategic partners. The Nanjing municipal government linked Jiukang to other stakeholders, including village committees and agricultural associations, to transfer the model to other provinces. By signing a contract with agricultural associations, Jiukang left the management of the farmers and the tree planting to the associations, thus leveraging the associations' management capability and social influence. The partnership with village committees allowed Jiukang to benefit from local village committees' social network and influence to recruit workers and to use their ability to effectively distribute information. Previous research has emphasized the difficulty of scaling up business initiatives in low-income markets (London, 2007; London et al., 2010), but this case illustrates how the government involvement provided access to suppliers and investors. The Nanjing Government helped Jiukang partner different provinces' agricultural associations and also introduced the company to foreign investors, allowing it to expand its supplier networks beyond China.

Where this case differs from that of China Mobile is that Jiukang and the Nanjing Government adopted a shareholder partnership model with the founders holding 30% and the Nanjing Government 70% of the company's shares. Although the local government held the majority shares, it did not actively interfere with the enterprise's operation. This separation between ownership and management ensured that the municipal government had financial incentives to offer Jiukang strategic resources, while the daily management was left to the entrepreneurs.

## 5 Discussion and conclusion

China Mobile and Jiukang exemplify two successful partnership models in low-income markets in China. The first case study illustrates how the central government employed the help of a state-owned enterprise – China Mobile – to improve farmers' information access. Two line ministries started the initiative and asked China Mobile to invest in telecommunication networks in rural areas. The case illustrates how two ministries planned and coordinated the project, taking on the overall project management. The second case study highlights how the initially privately owned company Jiukang partnered the Nanjing Municipal Government, with the government accounting for 70% of the total investment. This again illustrates the entrepreneurial role of the government. The China Mobile and Jiukang cases differ in terms of the initiator of the cooperation and the organizational structure adopted to support the partnership. The information platform was initiated by the two line ministries, but they worked with China Mobile from the start, while maintaining their organizational structures as independent profit centers. By contrast, Jiukang initiated the partnership with the government, the joint venture started two years after the business first took off, and a jointly-owned shareholder company was established with a single profit center.

The two cases also highlight their similarities. Both cases show that for enterprises to partner central and local governments is an effective method to overcome resource-based obstacles in low-income markets. In both cases, the market operation in low-income markets was driven by the government, either as the initiator (China Mobile) or as an investor and enabler (Jiukang). The 16 cases analyzed further highlight the importance of local and central governments in China; 15 of 16 companies formed joint ventures or strategic partnerships with local and central governments. The findings suggest that, in China, central and local governments control access to markets, finance, land, and partners, while they simultaneously try to drive rural development. This finding supports the proposition that, in the context of a powerful government, enterprises can effectively partner central and local governments to overcome resource-based obstacles in China's low-income market. A possible implication is that companies such as China Mobile, with its long-established relationships with the government, are in a unique position to establish a well-functioning partnership with the government. This could specifically be true in China where NGOs only play a minimal role and are strictly controlled (Saich, 2000; Ho 2001), and foreign firms have more difficulties in obtaining access to localized knowledge and social networks.

Furthermore, the examples of Haier (case study 10) and the Qinhai New Energy Group (case study 14) illustrate how companies entering low-income markets can align their business strategy with government objectives, increasing their chance of obtaining central and local government support. The Chinese government's No. 1 documents of 2009 and 2010 emphasize the development of under-developed rural areas ('Create a New Socialist Village'), and specific government programmes were set up to encourage business entry in rural areas, such as the 'Sending Appliances to Rural Areas' programme.

The 16 cases also identify various partnership governance forms, ranging from purely strategic partnerships, in which enterprises and governments maintain their respective independence, to joint venture, in which enterprises and governments form a new legal entity with mixed ownership and either the government or the enterprise holding majority shares (Table 3). Partnership models differ, amongst others, due to enterprises and governments' different cha-

racteristics and the convergence of interests. Enterprises might differ regarding their bargaining position and their organizational strengths since, for example, as a large state-owned enterprise, China Mobile might have a better bargaining position and access to its own resources and capabilities than a small, private start-up company such as Jiukang. Projects also differ in important factors such as the stakeholders involved, their investment size, scale, impact on low-income groups, and transferability, all of which influence actors' preferences for a particular governance model.

**Table 3**

Governance models of partnerships.

Cases	Case Example
(1) Independent organization	<b>Case 8 – China Mobile:</b> China Mobile operates INPRA, but the MII and MoA coordinate the overall project and provide access to key partners. Both actors maintain their independence with independent profit centres.
(2) Shareholding with a majority of government shares	<b>Case 1 – Jiukang Company:</b> A start-up private company asked the Nanjing Municipal Government to create a joint venture, with the municipality holding 70% shares and the private enterprise holding 30%. Despite a high government investment, government does not interfere with the enterprise's management and operation.
(3) Shareholding with an enterprise holding majority shares	<b>Case 7 - New Hope Group:</b> The company set up a joint-venture with a municipal government in Sichuan Province to provide farmers with guarantees for loans, with the former holding 60% of the share and the latter holding 40%.



## 6 Limitations and future research

There are a number of limitations regarding the generalization of the conclusions. This study could benefit from additional case studies to extend its results. This could include analyzing a broader range of company sizes, regions, and partnership models, including analyzing partnerships that involve non-governmental actors. This study focused on domestic firms, which are more familiar with the regional context (e.g., language, culture and local business practices). Further research is needed to analyze if the findings are only applicable to domestic firms, or whether they are also valuable for multi-national firms wanting to enter China's low-income market. Additional insights could be gained by extending the scope of this research and analyzing the role of strong governments in countries such as India, Brazil, and Russia.

A number of interesting points that invite further research were raised in this research. The particular dynamics of state-owned enterprises could be analyzed in more depth, including a discussion of power relation issues, trust building, and status. The 16 cases highlight how partnering local governments helped enterprises win 'trust' and acceptance from consumers and producers and it would be interesting to investigate how best to measure 'trust'. The enterprises particularly leveraged village government's social status to win farmers' trust, which is an intriguing finding that invites further analysis. In addition, no evidence was collected on the two partnerships' socio-economic results, and whether China Mobile and Jiukang will increase farmers' income in the long-term remains an open question. It would also be helpful to collect additional data on business profitability and to develop a research method that allows the extent to which the partnerships were voluntary or compulsory to be analysed, although previous research showed that it is difficult to access such sensitive data. Furthermore, while this study examined two cases of successful partnerships, an analysis of failed partnerships would be equally interesting to gain an understanding of the factors hindering the formation of partnerships.

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