



## **CASE STUDY: CHINA**

# **TSINGHUA TONGFANG AND THE CHANGFENG COMPUTER: INNOVATIVE TECHNOLOGY AND ENLIGHTENED APPLICATION**

### **Summary**

China has the largest agricultural population in the world—900 million people. But rural Chinese have far less access to and knowledge of computers than do their urban counterparts. This digital divide inhibits human development in rural areas, impeding the country's economic development. Tsinghua Tongfang, a high-technology computer company based in Beijing, partnered in 2005 with Beijing's municipal government to develop the Changfeng computer, designed for rural users. Key features made these systems more accessible to rural people than standard personal computers: a low-cost operating system, customized software and hardware based on thorough research on rural users' needs and innovative rural training centres for farmers. That software includes agricultural software to provide farmers business guidance and specialized knowledge. The case examines how the private sector and the public partnered for mutual benefit: Tsinghua Tongfang entered the untapped rural computer market and the government promoted its rural digital development goals.



### **Positive Outcomes for the Poor**

- Rural population have more access to computers and the internet.
- Free computer training is available through the Information Centers.
- Minority students get quality courses taught in their native languages.
- Agriculture software provides business guidance and specialized knowledge to farmers.
- Rural children receive pre-recorded courses taught by high-quality teachers.

### **Positive Outcomes for the Business**

- By taking a higher risk with market exploration THTF is able to benefit by having the first mover advantage.
- Able to open the untapped rural market.



## Key Constraints

- *Market information:* Lack of information about consumer preferences and needs.
- *Physical infrastructure:*
  - Lack of internet service providers in rural China (low internet coverage).
  - Lack of consistent electricity.
- *Knowledge and skills:*
  - Rural potential users unfamiliar with computer and internet, lack of specific agriculture sources online to build capacity.
  - Lack of computer literacy and awareness among rural customers.

## Key Strategies

- *Adapt products and processes:* CF computers had a simplified user interface with targeted agricultural programs pre-installed with online linkup, long distance education programs and skill development software.
- *Invest in removing constraints:* THTF undertook three rounds of market research.
- *Combine resources and capabilities:*
  - Partnership with Beijing municipal government brought resources to the region.
  - THTF also had an innovative marketing strategy through building information centers in rural areas in partnership with the government to showcase computer potential.



## Strategy Matrix

		Strategies					
		Tsinghua Tongfang	Adapt Products and Processes	Invest in removing market constraints	Leverage the strengths of the poor	Combine resources and capabilities with others	Engage in policy dialogue with government
Constraints	Market information						
	Regulatory environment						
	Physical Infrastructure						
	Knowledge and skills						
	Access to financial services						

## Opportunities and Challenges for Scaling Up

- The fast growth of agricultural information will enhance the rural population's demand for computers.
- More customers will consider buying computers after learning how to use them and appreciating their benefits.
- Price is still a major barrier for rural customers. It will be difficult to encourage large scale purchasing if rural household's purchasing power does not increase.
- The main future challenge for CF computers growth is in how to approach individual rural buyers without support from the government.