

Agricultural competitiveness in China

Assessment, challenge and options – a summary of CAER-IFPRI 2017 Annual International Conference

Qihui Chen, Yitian Xiao, Ling Ma and Baozhong Su

1. Background

The 9th CAER-IFPRI Annual International Conference was held on October 18-20, 2017 in Beijing, China. The conference was hosted by the China Agricultural University and was co-organized by the journal *China Agricultural Economic Review* (CAER) and the International Food Policy Research Institute (IFPRI). During the conference spanning two and a half days, leading scholars and policy makers discussed pressing issues related to China's agricultural competitiveness and rural development, as well as a wide range of other topics in agricultural economics.

The 2017 conference received 187 paper submissions and attracted more than 180 researchers from various institutions worldwide, including the Beifang University of Nationalities, Beijing Normal University, China Agricultural University, Chinese Academy of Agricultural Science, Chinese Academy of Sciences, Guangdong University of Foreign Studies, Hefei University of Technology, Huazhong Agricultural University, Hunan Normal University, Hokkaido University, Inner Mongolia Agricultural University, IFPRI, Jinan University, Lithuanian Institute of Agrarian Economics, Michigan State University, Nanjing Agricultural University, National Taiwan University, Northern Ireland Queen's University Belfast, Northwest A&F University, Peking University, Pennsylvania State University, Purdue University, Qilu University of Technology, Renmin University of China, Shanghai University of Finance and Economics, Shenyang Agricultural University, Sichuan Agricultural University, South China Agricultural University, University of Aberdeen, University of British Columbia, University of California, Davis, University of Georgia, University of Göttingen, University of International and Business Economics, University of Kentucky, University of Kiel, University of Lethbridge, University of Minnesota, Wageningen University, Xiamen University, Zhejiang University, Zhejiang University of Technology and Zhengzhou University.

Besides six keynote speeches, a total of 66 accepted papers were assigned to 16 concurrent sessions exploring important issues in agricultural economics, such as agricultural market and trade, agricultural technology, innovation and productivity, agribusiness and supply chain management, food consumption, food security, food safety, nutrition and health, labor transition, family welfare, rural development, institutional transformation, rural finance, resource utilization environment and climate change, computable general equilibrium (CGE) modeling of agri-food, resource and economic systems, as well as China-Africa economic relationship and new opportunities for African development.



2. Invited presentations

Six renowned speakers were invited to deliver keynote presentations. The first speech was delivered by Mr Xiwen Chen, a Member of the Standing Committee of Chinese People's

Political Consultation Conference (CPPCC) and the Deputy Director of the Economic Committee of CPPCC. His speech (Chen, 2017b), entitled “How to improve China’s agricultural competitiveness in the new era?” discusses the key challenges faced by China’s agriculture and possible options to improve its competitiveness. Mr Chen opened by pointing out a structural problem stemming from the lack of international competitiveness of China’s agricultural products – despite the existence of an excess supply of maize in the domestic market, China still imported a massive amount of maize. He then analyzed the reasons for the lack of agricultural competitiveness in China, including rising domestic factor prices, lowered energy prices and thus transportation costs, changes in exchange rates, as well as government policies aiming to protect farmers’ welfare. He suggested that to enhance agricultural competitiveness, China should rely more on the market to determine grain prices, redirect policies from price support to income subsidy and support technological and institutional innovations (e.g. encourage land right transfers).

Dr Shenggen Fan (2017), the Director-General of IFPRI, delivered the second speech, focusing on the need and possibility to reshape existing agri-food systems to deliver multiple social and development goals. Dr Fan first discussed emerging challenges threatening future agricultural and rural development around the world, including domestic-international grain price disparities, changing diets, nutrition imbalance, environmental degradation, as well as food safety concerns. He argued that to address these challenges, a new agri-food system – which is nutrition- and health-driven, productive and efficient, environmentally sustainable, inclusive and business friendly – is needed. He then highlighted potential innovations that can help reshape existing agri-food systems, including to develop climate-smart agricultural technologies, to link smallholders to consumers using information and communication technologies, to help smallholders move up the productivity ladder, and to convert subsidies into income and nutrition supports. Dr Fan remarked that given its growing shares in global food production and consumption, China can be a leader in reshaping global agri-food systems.

The following speech, entitled “Insurance subsidies and crop supply: evidence, trade impacts and WTO implications,” was delivered by Professor Daniel Sumner (2017). Professor Sumner began by summarizing experiences of crop insurance programs in the USA, which suggest that premium subsidies have a much larger supply impact per dollar of subsidy than price or input subsidy. Noting that shifting subsidy insurance may increase trade distortion, he then discussed potential WTO implications of crop insurance: crop insurance becomes a WTO issue when a large member provides subsidies to an inelastically demanded product that is large enough to stimulate production and the product has sufficiently large export shares to affect the world prices. He predicted that while the current issue is focused on the USA, an increase in crop insurance subsidy by China could raise concerns for commodities that China plays a large role in the international market. Thus, although China just began to promote crop insurance, more research should be conducted to understand the impacts of insurance availability and premium subsidy in it.

Next, Professor Kenneth Thomson (2017) delivered his speech entitled “Research for rural development and competitiveness: some general issues”. He first pointed out several key differences between rural development and agricultural development. Compared to agricultural development, there are more sectors (e.g. forestry, tourism, etc.) and agents (e.g. off-farm workers, visitors, etc.) involved in rural development, whose environment is also more varied than that of agricultural development. Thus, research on rural development may have relevance to more ministries and/or agencies and a wider range of policy implications. Given these differences, Professor Thomson then discussed theories and approaches that may be useful for research on rural development, including theories of property rights, transaction costs and endogenous rural development, as well as environmental, political, social and cultural approaches. In closing, Professor Thomson highlighted several implications for

research and policies for rural development: to account for two-way linkages between upstream and downstream sectors, to take into account competition for local resources and seasonality in inputs and to enhance rural-urban communications to improve market access and income transfers for rural residents.

Professor Awudu Abdulai's speech focuses on the impact of cooperative membership on Chinese smallholders' investment in soil quality (Abdulai *et al.*, 2017). Drawing on data collected from Northern China, he showed that cooperative membership has a significantly positive impact on farmers' investment in organic soil amendments; so do farmers' access to credit and tenure security. Based on these findings, Professor Abdulai suggested that the government should continue encouraging smallholders to join cooperatives and improve their access to credit and land rights. By stimulating more investment in soil-improving measures, these measures will help achieve the multiple goals of high productivity, high value-added, environmental sustainability and international competitiveness.

Professor Rick Barichello delivered the last invited speech, entitled "China's agricultural competitiveness: does increased agricultural productivity increase agricultural exports?" (Barichello and Fercovic, 2017). Given the important role agricultural productivity growth plays in strengthening economic growth for low- and middle-income countries, Professor Barichello aimed to assess Asian countries' agricultural performance, paying attention to China's competitiveness. His assessment involved four countries, namely, China, Indonesia, Malaysia and Vietnam, for the period from the early 1990s to early 2010s. Using four indicators, i.e. the (decline in the) share of agricultural GDP in total GDP, agricultural GDP growth, total factor productivity (TFP) growth and agricultural exports, he showed that China's performance was the most remarkable among these countries with respect to all four indicators, but its agricultural export growth was usually slower than the other three in the study period. He then examined how these indicators, especially TFP growth, contributed to these countries' agricultural exports. Results show that TFP growth was dominant over alternative indicators throughout the study period and China's agricultural exports were quite responsive to the TFP growth. These findings lend support to a greater investment in agricultural research as a means to enhance China's agricultural competitiveness.

3. Session presentations

The preceding section provided highlights of the invited speeches. This section provides a summary of the contributed papers presented in the breakout sessions, focusing on their key findings.

Agricultural technology, innovation and productivity

Two sessions revolved around agricultural technology, innovation and productivity issues. The first began with Tomas Balezentis' study on technical and environmental efficiency among hog farms in China. Based on farm-level data collected from five provinces, his analysis points toward the necessity of government support, especially over the subsidization of transport and storage facilities, to improve the participation of small and medium-size hog farms in manure markets (Balezentis *et al.*, 2017). Next, Abraham Tezera Gessesse showed that the average technical efficiency of tea production among smallholders in Ya'an, Sichuan, is only 68 percent, but secure property right and farm inputs help raise it (Gessesse and Ge, 2017). Stavroula Malla reviewed the evolution of Canada's canola industry and suggested several policies that could accelerate growth of that sector and the Canadian economy, such as public provision of basic research and subsidization on R&D costs (Malla and Brewin, 2017). Finally, using panel data covering 31 provinces, Ling Yao found that while price risk negatively impacts both input intensity and yield of rice production, it has little impact on acreage (Yao *et al.*, 2017).

The second session began with Meilin Ma's (2017) study on the hybrid structure of farmers' cooperatives in China and the resulting economic efficiency. Modeling Chinese

cooperatives as a hybrid between traditional western cooperatives and investor-owned firms, her study highlights a tradeoff between obtaining financial subsidies by following the law and retaining economic efficiency by centralizing decision-making power. Next, Yuepeng Zhou showed that both the share of contracted land and the possession of land certificates serve to improve technical efficiency of grain production in Jiangxi and Liaoning (Zhou *et al.*, 2017). Huang Chen (2017a) showed that while productivity decreases with land size among farm households in Northern China, this inverse relationship is greatly mitigated by crop insurance. Finally, Mengjie Zeng illustrated how to apply hierarchical simulation modeling to study supply chain operations of fresh agricultural products. Her model shows that the overall supply chain efficiency cannot simply rely on maximizing the efficiency of a single node, but should also rely on the unified coordination of both upstream and downstream nodes (Zeng and Lv, 2017).

CGE modeling of agri-food, resource and economic systems in China

The CGE model has been widely adopted in modeling macroeconomic policies and their impacts worldwide. Linking two global general equilibrium models (GTAP and GDYN) with a provincial-level model for China, Jun Yang (2017) showed that the China-Australia Free Trade Agreement will foster China's economic growth. However, while China's industrial sectors will gain remarkably, its agricultural sector will confront challenges as imports surge. Next, Wei Xie showed that the impact of climate change on crop yields is less significant in China than in its major trading countries. Market and trade, as climate adaption measures, help increase food supply for some countries (Xie *et al.*, 2017). Then, linking a regional CGE model with a water-resource model for China, Yumei Zhang showed that the overall impact of China's water "redline" policy on its national economy is limited. In contrast, improvements in water use efficiency, especially for industrial water, can relieve water shortage and promote economic growth (Chen, Zhang, Zhu and Zhang, 2017). Finally, Kevin Chen assessed possible impacts of investments and policy scenarios being considered by the government on the provinces along the Yangtze River Economic Belt. He showed that enhanced productivity growth of the manufacturing sector can greatly promote economic linkages with the East and foster growth of both Sichuan and Chongqing, making them new growth engines along the Belt. However, due to increased regional competition, enhanced transportation will benefit Sichuan but hurt Chongqing (Chen, Shi, Li, Zhang, Zhang and Zhang, 2017).

Agricultural market and trade

Three papers presented in this session examine trade issues faced by China; the other two concern its agricultural market. The first paper on trade, presented by Xinran Liu, assesses the impact of China's export tax rebate (ETR) policy on its fishery industry, taking into account farm-retail linkages in simulation. Results reveal that the ETR effect on domestic producers depends on the relative magnitude of export supply and import demand elasticities of the exporting country – a more elastic export supply implies a smaller ETR effect (Liu, Tan and Hannaway, 2017). Jing Zhang's (2017b) gravity model shows that while trade facilitation of the "One Belt One Road" countries has a positive effect on China's agricultural import, that of Asian countries has a negative impact on its agricultural export, and that of European countries has positive effects on both its agricultural import and export. Finally, Hai Lin's analysis reveals that China's agriculture, especially its meat products, will suffer from the cessation of the Trans-Pacific Partnership, but its raw milk output will increase if tariffs are cut (Lyu and Lin, 2017).

The first paper on agricultural market, presented by Yuquan Chen, tests whether China's centralized slaughtering policy, which allows only licensed plants to provide slaughtering service, creates market power for these plants. Results based on monthly data suggest that the policy did raise entry barriers and squeeze out small incumbents in China's pork

industry (Chen and Yu, 2017). Then, Haiyue Guo, drawing on data on “cross-border investment firms” provided by the Ministry of Commerce of China, argued that China’s outward foreign direct investment in the agri-food sector becomes more diversified over time. Besides a resource-seeking motivation, Chinese investors also invest in grain production in countries where hunger persists (Guo *et al.*, 2017).

Agribusiness and supply chain management

This session began with Shih-Hsun Hsu’s study, which examines China’s food dollar series using data from input-output tables for 2002, 2007 and 2012. Results show that the farm share value decreases over time. The four supply chain industries with highest value-added shares are “farming and agribusiness”, “food processing”, “food services” and “food transactions”. Primary factors are allocated, from the highest to lowest in shares, to “salary and benefits”, “operating surplus”, “depreciation of fixed capital” and “taxes on production” (Hsu *et al.*, 2017). Next, Mengmeng Zhang assessed how an organization’s position in its relationship network affects its commercialization innovation decisions in China’s seed industry. Her analysis of organization-level panel data suggests that organizations with more direct connections in closed relationship networks tend to adopt more commercialization innovations in the next period; those with higher brokerage rates between dense organization groups in open relationship networks tend to adopt fewer commercialization innovations (Zhang, Howard and Li, 2017). Then, Huaqi Zhang presented an enterprise budgeting study on supply chain costs in single- and multiple-feedstock systems, which shows that the cost is lower in the latter system. Diesel price, discount rate and the throughput of harvest machines are the top three important factors affecting supply chain costs in both systems (Zhang, Yu and Chen, 2017). Finally, Jiawu Dai found that subsidies in China’s rice processing industry weaken the market power of those subsidized, rather than strengthening it (Dai and Li, 2017).

Labor transition and family welfare in rural China

The papers organized in this session examine how the development of China’s rural labor markets affects individuals’ education, subjective well-being and marital outcomes. Using data from the China Labor-Force Dynamic Survey, Yunfan Yang (2017) found that migrants who returned to their villages are less subjectively satisfied than those staying in the cities. The following four papers are all based on data from the China Rural Development Survey (CRDS) covering five Chinese provinces. Qijia Lyu found that previous off-farm work experience postpones females’ age at first marriage but brings forward that of males (Lyu and Lin, 2017). Yongqing Dong (2017) found that the gender gap in children’s education narrows as their parents’ education level increases. Lina Zhang found that the incidence of employment switch in China is low, the main barrier being the lack of human capital (Zhang and Zhang, 2017). Yunli Bai (2017) found that female, married, young and poorly educated migrants are more likely to return to their home villages. One-third of them do not work and 40 percent migrate out again within five years after returning.

Rural development and institutional transformation

Two sessions concern China’s rural development and institutional transformation. The first began with Wenbo Zhu’s study on how changes in maize price and subsidies for maize production impact China’s economy. Results suggest that the decline in maize price has a positive effect on China’s industries in general. However, while the maize industry and its downstream industries benefit from subsidies for maize production, other industries suffer losses (Zhu *et al.*, 2017). Next, Yong Hu estimated the poverty-reduction effect of trade liberalization in rural China. Using data from the Chinese Family Panel Studies (CFPS),

he found a significant “economic growth” effect of trade liberation but found no “public expenditure” effect (Wang and Hu, 2017). The following two papers were more methodologically focused. Exploiting the notion of geographical isolation, Binlei Gong (2017) showed that family background factors (e.g. parental education) are suitable instrumental variables for schooling in wage-equation estimation for migrant workers but not for local off-farm workers. Compiling data from over 300 studies, Wuyang Hu’s meta-analysis shows that while willingness-to-accept questions did lead to a higher hypothetical bias, the bias might be driven by a few outlier studies in the sample (Penn and Hu, 2017).

The second session on rural development and institutional transformation started with Mateusz Filipowski’s presentation, which illustrates how to assess the economy-wide impacts of aquaculture in the rural economy using a local economy-wide impact evaluation approach (Filipowski and Belton, 2017). Analyzing the CRDS data, Weidong Wang found obvious wage premiums associated with migration in China. Also found in his research was that schooling returns were significantly higher for migrants than for local off-farm workers (Wang *et al.*, 2017). Then, Yanling Peng investigated the impacts of income quality and its components (i.e. income adequacy, structure, growth, cost and literacy) on rural households’ entrepreneurship choice in Northern China. She showed that while income adequacy plays a key role in promoting survival-oriented entrepreneurship, income structure and growth help promote development-oriented entrepreneurship, and income cost and income literacy matter for profit-oriented entrepreneurship (Peng *et al.*, 2017). Finally, Xianlei Ma found that landlords in Jiangxi and Liaoning are more likely to rent out their land to tenants residing in the same village than to their relatives not living nearby. Also, perceived tenure security plays a more important role than the actual land certificate in informing landlords’ contract choices – insecure land tenure induces them to choose informal contracts (Ma *et al.*, 2017).

Family and health relationships in China

Health is influenced by not only one’s own behavior but also other household members’ behavior. The papers presented in this session provide insights into the effects of parents’ and grandparents’ behavior on child health in various contexts. Xiaoyue Liu found in Anhui and Henan that parental migration has detrimental effects on left-behind children’s health, cognitive and non-cognitive outcomes (Liu, Zhan and Chen, 2017). Jifei Yu found in the same data set that fathers’ smoking behavior undermines their children’s cognitive and non-cognitive outcomes, and raises their children’s propensity of smoking in the future (Yu *et al.*, 2017). Analyzing data from the China Health and Nutrition Survey (CHNS), Willy Benson found that grandparents’ enrollment in the New Rural Pension Scheme raises their grandchildren’s body mass index by 3.76 percent (Benson and Chen, 2017). Also using the CHNS data, Junfei Bai showed that the presence of senior members in the household leads to healthier diets for all other members (Bai *et al.*, 2017).

Food consumption and nutrition

The first two papers presented in this session focus on food demand. Chen Zhen examined whether scanner data from the consumer network of Information Resources, Inc. and house survey data from the Consumer Expenditure Survey (CES) of the US Bureau of Labor Statistics yield different price and income elasticities. Results showed that income gradients for Hicksian price elasticities found in the former are more pronounced than those found in the latter (Zhen *et al.*, 2017). Then, drawing on data from various sources, Qi Cui showed that income elasticities of rice demand are positive in rural areas but negative in urban areas in both rice- and wheat-producing regions in China. The impact of urbanization is, however, negative in rice-producing regions and positive in wheat-producing ones (Cui *et al.*, 2017).

The next two papers examine the impact of information on consumer behavior. Using data on Beijing consumers, Yin Wang identified four segments of consumers based on their usage

of information channels: multi-channel users, internet users, moderate and low information users. These consumer segments also differ significantly with respect to the consumers' interest in nutrition information, diet-health awareness, socio-demographic characteristics and food consumption frequency (Wang, 2017). Finally, based on a choice experiment conducted in ten Chinese cities, Cheng Liu found that the traceability information is the most preferred informational attribute provided by food safety apps, followed by product rating and consumers own knowledge of food-safety standards (Liu and Fang, 2017).

Food security and food safety

David Ortega presented the first paper in the session, which investigates the effects of *ex ante* hypothetical bias-mitigation methods (i.e. cheap talk, the solemn oath and honesty priming) on Chinese consumer's online food purchase behavior. His choice experiment reveals no significant difference in consumers' willingness to pay for selected product attributes (e.g. food origin, product rating, number of reviews, etc.) across the treatment groups and the control group (Lin *et al.*, 2017). Next, Xinran Yang showed that only 47.7 percent of Inner Mongolian dairy households adopted milk safety measures. Also, while compliance cost discourages farmers from adopting milk safety measures, milk price and farm size serve to encourage their adoption (Yang and Chen, 2017). Mingzhe Pu's simulation suggests that in order for China's public grain buffer stocks policy to meet its goals, including producer support, market stabilization and food security, a narrow symmetric price band should be adopted (Pu and Zheng, 2017). Finally, using data collected from 16 Chinese provinces, Jinhua Zhang (2017a) showed that China's subsidy policy has encouraged farmers to participate in farmers' specialized cooperatives, thereby increasing their net income and promoting their usage of agricultural machinery.

China-Africa economic relationship and new opportunities for African development

This session began with Tade Okediji's presentation. Using data for 42 Sub-Saharan African countries from 1970 to 2010, he showed that ethnic diversity does a moderately better job than linguistic diversity in explaining the effect of ethnicity on economic growth (Okediji, 2017). Next, analyzing data from the Inter-University Consortium for Political and Social Research project, Isaac Anane discovered a number of determinants of Ghanaian farmers' credit access, such as location, marital status, gender, family size, food constraint, literacy, as well as ownerships of truck, land, house and cattle (Anane and Zhang, 2017). Then, drawing on data collected from the Kibera slum in Nairobi, Kenya, Jackline Chebet identified inadequate funds and knowledge as the biggest challenges for those practicing sack farming, a form of urban agriculture (Chebet and Liu, 2017). Finally, using data from the Nigerian General Household Survey, Raheem Aminu showed that 33.7 percent of Nigerian farm households are multidimensionally poor. Location, gender, household size and non-farm income are the most important determinants of multidimensional poverty in Nigeria (Aminu and Si, 2017).

Rural health

Drawing on data from the National Report on Migrant Worker Monitoring and Survey (2013), Marie Parker (2017) argued that the creation of an accessible multi-level healthcare system may best serve China's goal of universal healthcare coverage. Zhou Mi (2017) found in the CFPS data that parental migration contributes greatly to left-behind children's depression severity. Assessing the impact of migration from another angle, Chunchen Pei found that co-residing with left-behind grandchildren not only reduces left-behind elders' meat and clothing expenditures, but also undermines their health (Pei *et al.*, 2017). Hengrong Luo found using the CHNS data that Chinese adults on an average gain 1.2 kg of weight during the

National Day holiday – such an effect remains for about two weeks (Luo and Yu, 2017). Finally, Yuehua Zhang exploited the Chinese Cultural Revolution as a natural experiment and found a significantly positive effect of education on one's cognitive ability in old age, using data from the China Health and Retirement Longitudinal Study (Cai and Zhang, 2017).

Rural finance

In the session on rural finance, Yuxin Wang first showed that agricultural-related services have a positive effect on the operational performance of rural credit cooperatives in Anhui (Wang *et al.*, 2017). Next, Shuang Lin showed that capital does not flow from rich to poor areas in China. While capital return, savings rate, institutional quality and human capital all positively affect capital inflow; the size of the government, TFP and GDP growth have negative effects (Lin, 2017). Employing a choice experiment, Tao Ye found that farmers in Hunan prefer crop insurance products with high liabilities and low premium. Government spending on premium subsidy is also crucial for maintaining farmers' participation in crop insurance (Ye *et al.*, 2017). Finally, Yuanfeng Zhao found no significant impact of cattle insurance on dairy farmers' anti-risk inputs in Inner Mongolia (Zhao and Zhang, 2017).

Climate change and environment

Using data on Japanese municipalities from 1995 to 2002, Atomu Nitta showed that climate change is likely to decrease Japan's agricultural net revenue, although an increase in agricultural net revenue is predicted in the northernmost municipalities (Nitta *et al.*, 2017). Ling-Yun He first quantified the contributions of SO₂ emission of different industrial sectors in China and then estimated marginal abatement costs of SO₂ for industrial sectors at various levels. He showed that the lowest SO₂ shadow price is 2,000 yuan/ton at the national level and that shadow prices should be set differently at the provincial level in the emission trading system (Ou and He, 2017). Finally, Bo Liu showed that while social capital significantly influences elder herders' grassland rental decision in Inner Mongolia, it has little influence on younger herders' decision (Liu, Tan and Hannaway, 2017).

Resources utilization and agricultural development

Fujin Yi presented the first paper in this session, which estimates that the total damage caused by surface ozone pollution in China's agricultural sector accounts for one-fifth of its agricultural revenue in 2014. An ozone reduction by 30 percent was estimated to benefit the agricultural sector by 678 billion yuan (Yi, 2017). Next, helping to explain Chinese farmers' intensive use of fertilizer, Dave Abler found in Jiangsu that the marginal value product of fertilizer exhibits a U-shaped pattern as fertilizer use increases, which attracts farmers to continue applying fertilizer until they reach the upward-sloping portion of the U-shaped curve (Sun *et al.*, 2017).

The last two presentations concern water scarcity. Zihan Nie found in the Hongshui River Irrigation District in Gansu that water scarcity not only induces better irrigation management practice, but also fosters a stronger norm of cooperation (Nie and Yang, 2017). Complementary to this finding, Jingjing Cai's agent-based simulation model shows that governmental support, including financial subsidies and the entitlement of property rights of irrigation infrastructure, plays a critical role in forming irrigation cooperation. In contrast, the number of initial participants matters little for the formation of cooperation. Neighborhood effects are also weak compared to the influence of governmental support (Cai and Xiong, 2017).

4. Conclusion

This paper provides a summary of the outcomes of the 2017 CAER-IFPRI Annual International Conference. While some presentations touched on other topics, the theme

“Agricultural competitiveness in China: assessment, challenge and options” remained the central thesis of the conference. Attempting to address the issues related to China’s agricultural competitiveness, some experts argued that China’s lack of agricultural competitiveness is caused by a set of complex factors such as high production cost and governmental price policies. Others provided options that may help improve China’s agricultural competitiveness, such as to expand crop insurance programs, to provide income subsidies and technical assistance to smallholders and to boost farmers’ participation in agricultural cooperatives. Given China’s role in international trade, some experts reminded that there are TWO implications involved while China attempts to enhance its agricultural competitiveness. It is clear from these discussions that governmental policies will continue to play a role in enhancing China’s agricultural competitiveness. More policy research in this area is certainly desirable.

Contributed papers

- Abdulai, A., Ma, W. and Goetz, R. (2017), “Agricultural cooperatives and investment in soil quality measures in rural China”.
- Aminu, R.O. and Si, W. (2017), “Sources of inequality and multidimensional poverty among farm households in Nigeria”.
- Anane, I. and Zhang, Y. (2017), “Factors affecting farmers access to microfinance credit in Ghana”.
- Bai, Y. (2017), “Return migrants and their employment behavior: recent evidence from rural China”.
- Bai, J., Yuan, M. and Zhu, C. (2017), “Living with seniors, eating healthy”.
- Balezentis, T., Hou, L. and Kuhn, L. (2017), “A non-parametric approach for measuring technical and environmental performance of Chinese hog farms and its determinants”.
- Barichello, R. and Fercovic, J. (2017), “China’s agricultural competitiveness: does increased agricultural productivity increase agricultural exports?”.
- Benson, W. and Chen, Q. (2017), “Impacts of the New Rural Pension Scheme on grandchildren’s nutrition status in rural China”.
- Cai, J. and Xiong, H. (2017), “An agent-based simulation of cooperation in irrigation use”.
- Cai, Q. and Zhang, Y. (2017), “Does education affect cognition at older ages? – a natural experiment based on the Great Cultural Revolution”.
- Chebet, J. and Liu, Y. (2017), “The contribution of sack farming to the income of the urban poor in Kenyan slums”.
- Chen, H. (2017a), “Agricultural risk, insurance, and the land productivity inverse relationship”.
- Chen, K., Zhang, Y., Zhu, T. and Zhang, S. (2017), “Macro-economic impacts of water scarcity and water pollution in China”.
- Chen, K., Shi, M., Li, N., Zhang, Z., Zhang, Y. and Zhang, S. (2017), “Modeling regional impacts of increasing market integration in Yangzi River Economic Belt”.
- Chen, X. (2017b), “How to improve China’s agricultural competitiveness in the new era?”.
- Chen, Y. and Yu, X. (2017), “Does the centralized slaughtering policy create market power for pork industry in China”.
- Cui, Q., Huang, J. and Bai, J. (2017), “Income growth and rice consumption pattern change in China”.
- Dai, J. and Li, X. (2017), “How does subsidy change a firm’s market power – the case of China’s rice processing industry”.
- Dong, Y. (2017), “Parental off-farm employment and the educational attainment of their children: evidence from rural China”.
- Fan, S. (2017), “Reshaping agri-food systems to deliver multiple social & development goals”.
- Filipski, M. and Belton, B. (2017), “Give a man a pond – modeling the impacts of aquaculture in the rural economy”.

- Gessese, A.T. and Ge, H. (2017), "Studying the technical efficiency and determinants of Ya'an smallholder tea production: a frontier and structural equation modeling combined analysis".
- Gong, B. (2017), "Control variable or instrumental variable? Revisiting the effect of family background on wages in China".
- Guo, H., Jin, S., Delgado, M.S. and Wang, H. (2017), "'Going global': determinants of Chinese outward foreign direct investment in the agri-food industry".
- Hsu, S.-H., Huang, P.-H.-P., Lin, H.-C. and Chang, C.-C. (2017), "A study on China's food dollar series".
- Lin, S. (2017), "Determinants of capital flows across regions in China".
- Lin, W., Ortega, D.L. and Caputo, V. (2017), "Are ex-ante hypothetical bias calibration methods context dependent – evidence from online food shoppers in China".
- Liu, B., Tan, S. and Hannaway, D. (2017), "Can social capital help younger herders rent grassland areas".
- Liu, C. and Fang, X. (2017), "Chinese citizens' preference for informational attributes of agri-food safety apps: a discrete choice experiment".
- Liu, X. (2017), "Who benefits from the export tax rebate policy – evidence from the Chinese fishery sector".
- Liu, X., Zhan, Q. and Chen, Q. (2017), "China's migrant and left-behind children: correlation of parental migration on health, cognitive and non-cognitive outcomes".
- Luo, H. and Yu, X. (2017), "Holiday and weight gain: evidence from the National Day holiday in China".
- Lyu, Y. and Lin, H. (2017), "Time as a barrier to trade facilitation: assessing the impact of possible variants of TPP on China's agriculture".
- Ma, M. (2017), "Economic efficiency of producer cooperatives in China".
- Ma, X., Heerink, N., Shi, X. and Zhou, Y. (2017), "Tenure security, social relations and contract choice – endogenous matching in the Chinese land rental market".
- Malla, S. and Brewin, D. (2017), "Crop research, biotech canola and innovation policy in Canada – challenges, opportunities & evolution".
- Mi, Z. (2017), "Parents migration and left-behind children's depression: Estimation based on a nationally-representative panel dataset".
- Nie, Z. and Yang, X. (2017), "Water scarcity and cooperation – evidence from rural China".
- Nitta, A., Sawauchi, D., Chen, Y., Akahori, H. and Yamamoto, Y. (2017), "Economic impact of climate change on Japanese agriculture".
- Okediji, T.O. (2017), "Ethnicity and economic development in Sub-Saharan Africa".
- Ou, J.-J. and He, L.-Y. (2017), "Pollution emissions, negative externalities, and marginal abatement costs – how to set SO₂ shadow prices in China?".
- Parker, B.M. (2017), "Determinants of rural migrant workers' health insurance participation in China".
- Pei, C., Zhao, Q. and Chen, Q. (2017), "Left-behind grandchildren and the health of left-behind grandparents in rural China".
- Peng, Y., Su, L.-L. and Kong, R. (2017), "Does income quality affect farm households' entrepreneurship – empirical evidence based on 1373 cases in rural China".
- Penn, J. and Hu, W. (2017), "Hypothetical bias from willingness to accept elicitation – is it bias in the outliers?".
- Pu, M. and Zheng, F. (2017), "Evaluating public grain buffer stocks in China – a stochastic simulation model".
- Sun, F., Yu, X. and Abler, D. (2017), "Crop allocation and increasing returns to fertilizer use in China".
- Sumner, D. (2017), "Insurance subsidies and crop supply: evidence, trade impacts and WTO implications".
- Thomson, K. (2017), "Research for rural development and competitiveness: some general issues".
- Wang, J. and Hu, Y. (2017), "The impact of trade liberalization on rural poverty reduction in China".
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