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The Chinese Food Industry: development, constraints and policies

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Abstract
Given the phenomenon of growing urbanization, the pressure on food demand for a rising population as well as changing diets, China has had to resort to imports, becoming a net importer of food. In absence of external flows, this scenario is set to continue and could then materialize in a future Malthusian scenario. Improved efficiency and productivity, reform of land use rights, but also the policy of "going out" or land grabbing are some of the plausible strategies that the country could improve to avoid an inexorable stabilization or, at worst, a decline in domestic production, as well taking into account the impact of climate change on agricultural commodities.
Starting from these premises, the paper aims to analyze the existing scenario identifying constrains and policies that could prevent the development of the Chinese food industry.

Keywords
Food demand, Food supply, China, Food industry, Food security, Food safety

JEL Codes
Q11, Q15, Q18, Q31, O13, R14

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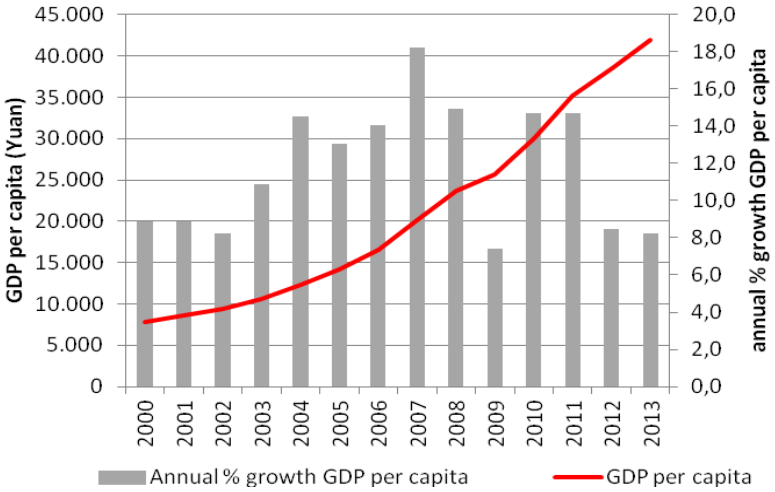
1. The context

China recently became the second world largest economy and its role in the global economy is increasing and becoming more and more important and influential. In the years China, thanks to a gradual transition from a centrally planned to a market based economy, has experienced a rapid economic development with strong social changes.

Figure 1. GDP per capita and GDP annual growth per capita



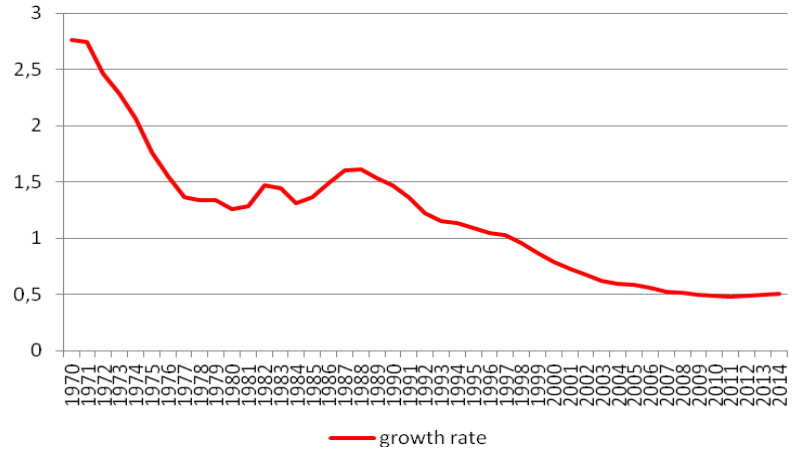
Source: Authors' elaboration on China Statistical Yearbook data, 2014

As shown in Figure 1, after years of constant economic growth, recently China seems to be facing a new phase, characterized by deceleration: GDP in 2012 and 2013 has grown at the lowest rate achieved in the past 14 years. Moreover, 2015 is the year of the Chinese stock market crash, started on 12th June, and still not solved. China seems to have entered a new era, as it seeks the transition from an investment and export-led economy to a consumption-led growth. Despite the inevitable bumps and backtracking along this path, this transformation is expected to result in economic growth that could be more sustainable in the long term (USDA, 2015).
Beside the growth of GDP per capita (that has quintupled its value between 2000 and 2013, with an annual growth rate that reaches 10% on average, see Figure 1), important socio-demographic changes have occurred. The Chinese population, while continuing to grow (passing from 500 million in 1959 to 1,370 million in 2014, equal to 19.48% of the world´s population), has slowed its growth rate since the 1970s (from an average of 6 children to 1.4 children per woman in 2013 and the birth rate from an average of 44 births per 1,000 inhabitants in 12 birth) due to the one-child policy[1] (一胎制, yītāizhì) adopted by the Chinese government (Figure 2). The progressive aging of the population is one of the side effects of the one-child policy, as well as the imbalance of the country's overall sex ratio toward males (roughly between 3 and 4% more males than females). A third consequence was instances in which the births of subsequent children after the first went unreported or were hidden from authorities. Those children,

[1] China began promoting the use of birth control and family planning with the establishment of the People's Republic in 1949, though such efforts remained sporadic and voluntary until after the death of Mao Zedong in 1976. A voluntary program was announced in late 1978 that encouraged families to have no more than two children, one child being preferable. On September 25, 1980, a public letter—published by the Central Committee of the Chinese Communist Party to the party membership—called upon all to adhere to the one-child policy, and that date has often been cited as the policy's "official" start date. Since 2013, there has been a gradual relaxation of China's family planning laws that already allowed minority ethnic families and rural couples whose firstborn was a girl to have more than one child and in 2015 China announced the intention of scrap its one-child policy, allowing all couples to have two children for the first time since draconian family planning rules were introduced more than three decades ago.

most of whom were undocumented, faced hardships in obtaining education and employment.
In 2015, China announced its intention to abolish the one-child policy: Chinese families could have two children without incurring the payment of penalties.

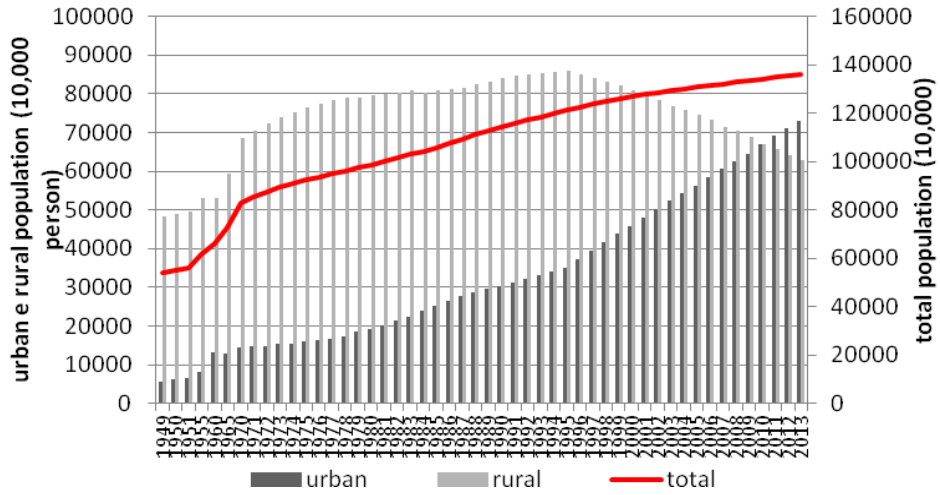
Figure 2. Population growth rate (1979-2014)



Source: Authors' elaboration on World Bank data, 2014

Furthermore, there has been a progressive population shift from rural to urban areas (Figure 3); in particular, the population living in urban areas, which has steadily continued to rise over time, exceeded those living in rural areas (in marked decline from the mid 90s).
In 2014 the Chinese authorities adopted the National New-type Urbanization Plan (2014-2020) aiming at moving 250 million rural residents to newly built cities over the next twelve years to set off a new wave of growth, the effects of which could weigh on generations to come. The ultimate goal of the government's modernization plan is to integrate 70% of the Chinese population into cities by 2025 and, as a consequence, land disputes by farmers who do not accept the transfer could exponentially increase.

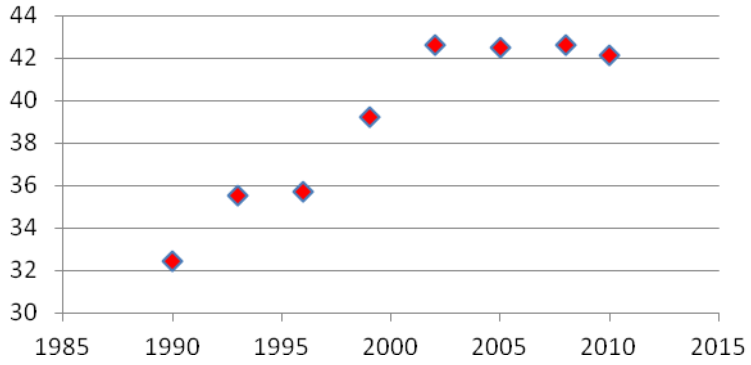
Figure 3. Population trend (1949-2013): total population (dx) and urban/rural population (sx)



Source: Authors' elaboration on China Statistical Yearbook data, 2014

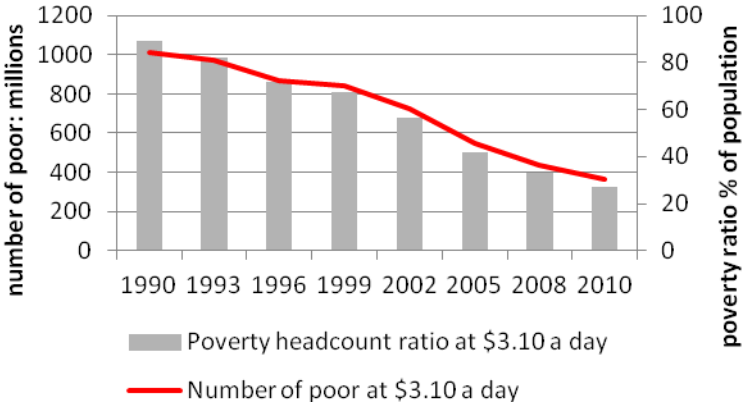
Urbanization is only one of the challenges that the Chinese rapid economic ascendance has brought, together with natural resources exploitation and consequent environmental issues, social inequality and external imbalances.

Figure 4 China inequality trend: GINI index



Source: Authors' elaboration on World Bank – Poverty and Equity databank, 2014

Figure 5 People living on less than $3.10 a day in China



Source: Authors' elaboration on World Bank – Poverty and Equity databank, 2014

Despite the rapid economic growth, China still remains a developing country, with a per capita income that is still a fraction of those in advanced countries and with a highly and increasingly unequal distribution of this among the population. Although the number of poor is steadily declining - but still high (Figure 5), social disparities are rising, as shown by GINI index[2] trend (Figure 4) and by the distribution of income among population: in 2010, the richest held 47% of the total income compared to 40.7% in 1990.

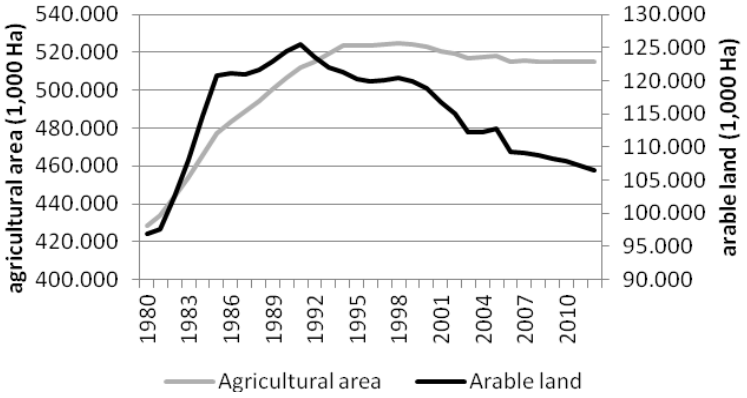
1.1 Food supply

China is the third world's largest country by total land area behind Russia and Canada, with a land area equal to 9.4 million km², but just 10% of the world's agricultural land and 7% of the world's fresh water (ANZ, 2013). Severe pollution issues exacerbate this scarcity, particularly in North China.

2 The Gini index measures the extent to which the distribution of income (or, in some cases, consumption expenditure) among individuals or households within an economy deviates from a perfectly equal distribution. A Lorenz curve plots the cumulative percentages of total income received against the cumulative number of recipients, starting with the poorest individual or household. The Gini index measures the area between the Lorenz curve and a hypothetical line of absolute equality, expressed as a percentage of the maximum area under the line. Thus a Gini index of 0 represents perfect equality, while an index of 100 implies perfect inequality.

Analyzing Chinese arable land is complicated because of data accuracy and because of the discrepancy among data provided by different sources. In this Chapter, we referred to FAOSTAT data, because we are interested more, than in the absolute figures, in the trend over the time. It is worth to note that FAO statistic on arable land highlights a lower dimension than that reported by the Chinese government, (equal to 121.7 million hectares in late 2012), and in the so-called "redline" (**耕地** 红线, *gēngdìhóngxiàn*) equal to 120 million hectares (OECD FAO, 2013), ensuring food self-sufficiency.
Beyond the absolute value of the data, the trend, from 1990 to 2010 of arable land in China (Figure 6) is steady decreasing, while agricultural area is overall stable. Arable land represents 10% of the total land and less than 0.1 ha per capita (less than 40% of the world average).

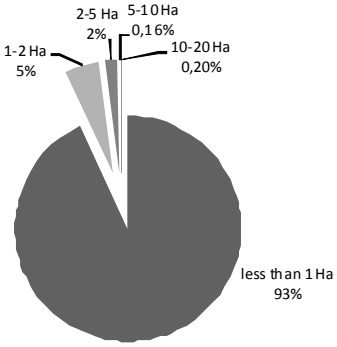
Figure 6 Agricultural land*and arable land in China, trend**



* Agricultural land refers to the share of land area that is arable, under permanent crops, and under permanent pastures. Land under permanent crops is land cultivated with crops that occupy the land for long periods and need not be replanted after each harvest, such as cocoa, coffee, and rubber. This category includes land under flowering shrubs, fruit trees, nut trees, and vines, but excludes land under trees grown for wood or timber. Permanent pasture is land used for five or more years for forage, including natural and cultivated crops.
** Arable land includes land defined by the FAO as land under temporary crops (double-cropped areas are counted once), temporary meadows for mowing or for pasture, land under market or kitchen gardens, and land temporarily fallow. Land abandoned because of shifting cultivation is excluded.
Source: Authors' elaboration on FAOSTAT data, 2015

According to the Chinese Constitution land is collectively owned by farmers but contracted at individual households (Chen Xiwen, 2006) and, as consequence, the Chinese agricultural sector is characterized by an extreme fragmentation. According to the agricultural census in 1997 (Figure 7) in China there were almost 200 million farms (FAO, 2013), most of them (93%) sized less than 1 ha, 5% had a dimension between 1 and 2 ha, 2% between 5 and 10 ha, only 0.4% of the farms were larger. Farming in China has always been very labor intensive.

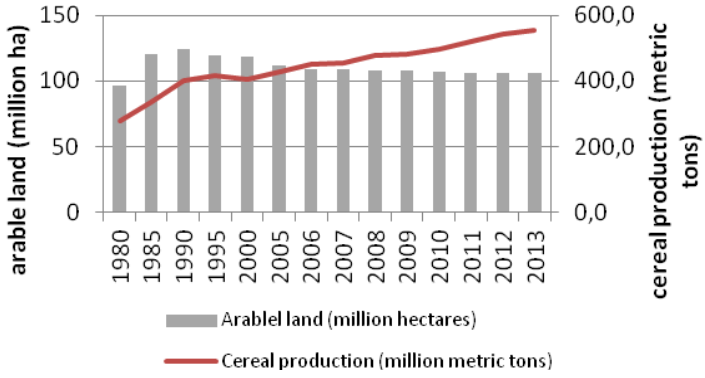
Figure 7: Farms by land size class (1997)



Source: Author's elaboration on FAOstat data

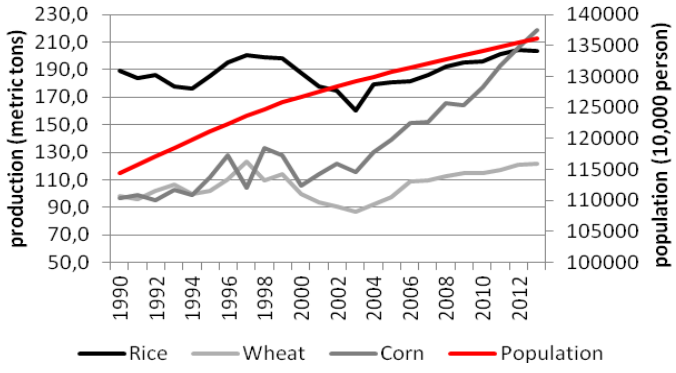
Despite the shortage of actually usable natural resources, agriculture has played a very important role in China's record of economic growth since economic reforms began in 1978. In the first reform period (1978-1984) agricultural GDP grew very fast and also yields and labor productivity in agriculture grew by 5-10% per year (Park, 2009), so China became one of the world's largest producers; despite the decline of surface, total cereal production is steadily growing (Figure 8) - in particular corn production is recording the highest growth (Figure 9) - and China is still self-sufficient in a number of basic strategic crops and food sources, providing food security and ensuring social stability.

Figure 8 Arable land and cereal production, trend (1980-2013)



Source: Author's elaboration on FAOstat data

Figure 9 Main cereals production (10,000 tons)

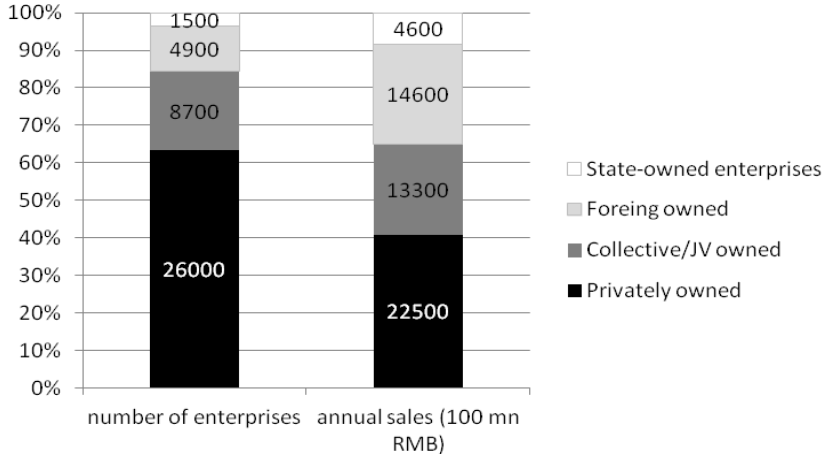


Source: Author's elaboration on FAOstat data

Due to rapid urbanization and industrialization, the importance of agriculture declined over time, passing from 70% of employment and 30% of output in 1980 to little more than 30% of employment and less than 10% of total output in 2014. Pollution (of water and soil) has contributed to this trend, too. This has led to higher food inflation increasing imports of a number of soft commodities. Despite improving quality and safety at all levels, China has been (and is) facing a number of criticisms about the quality and safety of its domestic and export food markets.

Even if modern forms of retailing are growing, Chinese agricultural production is predominantly purchased directly from farmers, often just after harvest and on the roadside, by hundreds of thousands of private traders who cruise villages and the surrounding countryside in small trucks. State-owned enterprises no longer monopolize the wholesale (processing/marketing/distribution) part of the supply chain (Figure 10). This has resulted in a diversified ownership structure of the manufacturing industry and competition. Private enterprises in 2011 now constitute 63% of the number of manufacturing enterprises, but only 41% of annual sales. The popularity of private small-sized manufacturers in the industry is likely to constrain further development.

Figure 10 Ownership structure of food and beverage manufacturing industry in 2011



Source: ANZ, Chinese National Bureau of Statistics

Development of the food manufacturing industry is uneven between coastal and inland regions.

A substantial portion of manufactured food is produced and consumed in coastal areas. This is due to urbanization and higher consumer purchasing power in these regions, where population density is higher than that in inland areas. In inland areas, where there is less urbanization and comparatively lower levels of disposable income, high-valued processed foods are consumed mainly in big cities. A rule of thumb is that the majority of food is produced in the North (above Shanghai) and consumed in the South.

The food industry structure is dualistic: a huge amount of small business is matched by large companies with predominantly Chinese capital and whose market is dominated by domestic demand. The top 10 food and beverage companies are as bellow reported.

No 1 COFCO Group

COFCO Group is the largest supplier of diversified products and services in the agricultural products and food industry in China. It is devoted to utilizing renewable natural resources to provide healthy and nutritious food, high quality lifestyle and

services, as well as contributing to improve people's living standards, social prosperity and stability.

No 2 Inner Mongolia Yili Industrial Group Co Ltd

Inner Mongolia Yili Industrial Group Co Ltd is a dairy company. It is engaged in processing and manufacturing of milk products, including ice cream, milk powder, milk tea powder, sterilized milk and fresh milk under "Yili" brand. It is headquartered in Hohhot. The company was an official sponsor of the 2008 Beijing Olympics.

No 3 Shuanghui Group

Shuanghui Group is a privately owned meat processing company headquartered in Luohe, Henan, China. The company's businesses include hog raising, consumer meat products, flavoring products, and logistics. It is the largest meat producer in China. On May 29, 2013, Shuanghui announced it would purchase American pork producer Smithfield Foods Inc.

No 4 China Mengniu Dairy Co Ltd

China Mengniu Dairy Co Ltd is a manufacturing and distribution company of dairy products and ice cream in China. The company is based in Inner Mongolia and manufactures dairy products under the Mengniu brand.

No 5 Bright Food (Group) Corp Ltd

Bright Food (Group) Co Ltd is a multinational food and beverages company headquartered in Shanghai. Bright Food has four listed subsidiaries, Bright Dairy & Food Co Ltd Shanghai First Provisions Store Co Ltd, Shanghai Maling Aquarius Co Ltd and Shanghai Haibo Co Ltd

The company acquired a 60 per cent stake in the British breakfast cereals manufacturer Weetabix Ltd in 2012 and agreed to acquire a 56 per cent stake in the Israeli Dairy producer Tnuva in 2014.

No 6 Hangzhou Wahaha Group Co Ltd

Hangzhou Wahaha Group Co Ltd is a private company, and the largest non-alcoholic beverage producer in China. The company is headquartered in Hangzhou, Zhejiang province. Wahaha has roughly 150 subsidiary companies and 60 manufacturing bases scattered throughout China. It employs about 60,000 staff.

No 7 Wuliangye Yibin Co Ltd

Wuliangye Yibin Co Ltd is a Chinese alcoholic beverage company. It specializes in manufacturing baijiu, and best known for Wuliangye, made from five organic grains: Proso millet, corn, glutinous rice, long grain rice and wheat. Headquartered in Yibin, Sichuan Province, the company distributes its products all over the domestic market, and exports to overseas markets. The company has eight major subsidiaries.

Wuliangye reportedly ranks first in terms of market share compared with other baijiu brands.

No 8 Tsingtao Breweries Co Ltd

Tsingtao Brewery Co Ltd is China's largest brewery. Founded in 1903 by a German, now claims about 15% of domestic market share. The beer is produced in Qingdao in Shandong province and it gets its name from the old transliteration of the city's name. The beer's present-day logo displays an image of Zhan Qiao, a famous pier on Qingdao's southern shore.

No 9 Kweichow Moutai Co Ltd

Kweichow Moutai Co Ltd is a State-owned company in China, specializing in the production and sales of Maotai liquor, together with the production and sale of other beverages, food and packaging material. Its A shares were listed on the Shanghai Stock Exchange in 2001. It is one of the stocks listed in Shanghai whose share price is over 100 yuan.

No 10 Yurun Group Ltd

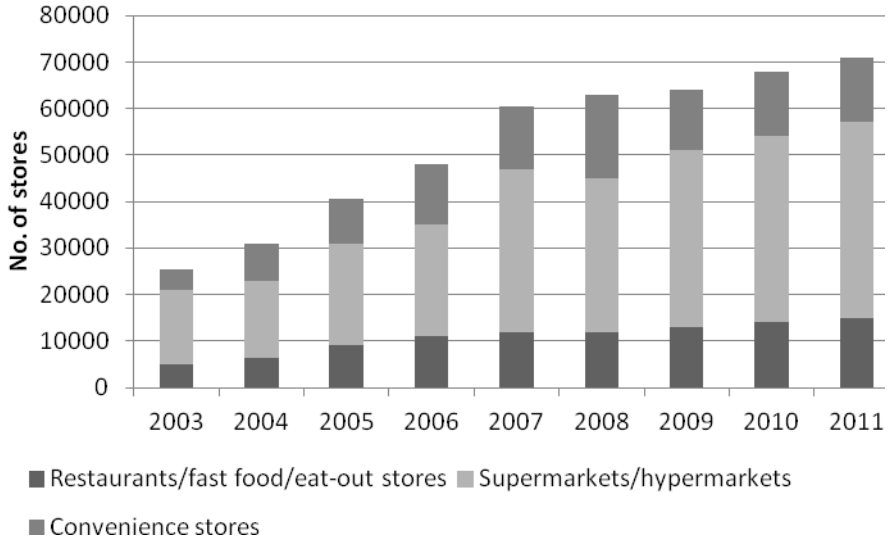
Yurun Group Ltd is the second-largest meat supplier in China. It is headquartered in Nanjing, Jiangsu. It operates in two sectors, chilled and frozen meat, and processed meat products, which are marketed under the brand names of Yurun, Furun, Wangrun, and Popular Meat Packing.

Concerning food retailing, there are a number of different formats in China:

Hypermarkets (major hypermarket players are Carrefour, Wal-Mart, Metro, Lotus, Auchan, and Tesco); Supermarkets (Major supermarket players are Lianhua, Wellcome, ParknShop, China Resources Vanguard and Suguo);
Specialty Supermarket Stores and Boutique Stores (Major specialty supermarket players are City Shop Supermarket (Shanghai), City-Super, CRV Ole, BHG (Beijing Hualian Supermarket), Hisense Plaza in Qingdao, and Jin Bou Da in Zhengzhou);
Convenience Stores (such as 7-Eleven, Family Mart (Japan ItoYokado), Sincere (Hong Kong), C-Store (Taiwan), and Lawson's (Sino-Japan JV); Online Sales (one company Taobao reportedly has a 75% market share at the moment; Traditional Markets (Figure 11).

Euromonitor (2014) and official statistics show supermarkets/hypermarkets are now dominating the retail landscape, with a market share of around 50%.

Figure 11 Structure of China's food distribution network



Source: EUSME, The Food & Beverage Market in China, 2015

China is the world's largest consumer market for food and beverage products (Table 1) surpassing the United States from 2011 and the second-fastest growing F&B market in Asia with an average annual growth rate of 30% between 2009 and 2014. Modern retail formats are profiting from this development

Table 1 Top10 Foodservice Markets Worldwide in 2013, (sales volume, US$ Billions)

Country	Retail sales
China	510.8
United States	492.5
Japan	214.7
Brazil	141.3
Italy	100.2
India	96.1
Spain	96.0
United Kingdom	86.9
South Korea	67.3
France	62.7

Source: Euromonitor International, 2014

Table 2 Top5 Foodservice Companies Worldwide, US $ Millions

Company	International Foodservice Sales	Foodservice Sales in China
1. McDonald's Corp	89,126.0	3,197.2
2. Yum! Brands Inc	44,140.0	8,316.5
3. Doctor's Associates Inc	20,137.0	106.4
4. Seven & I Holdings Co Ltd	18,026.2	21.0
5. Burger King Worldwide Inc	17,885.8	169.4

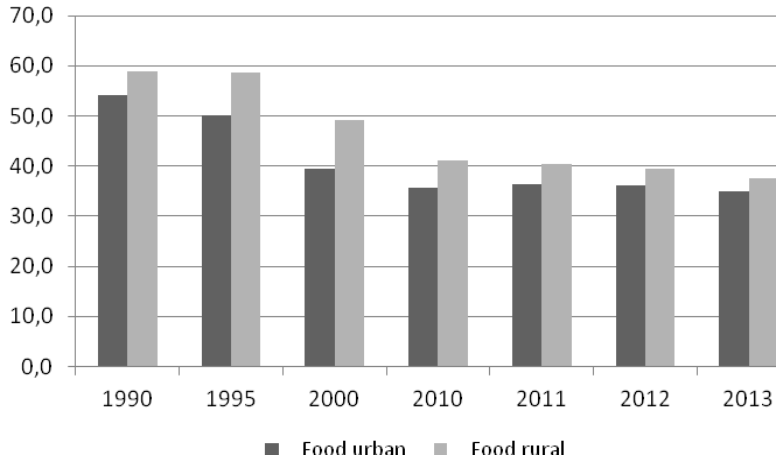
Source: Euromonitor International, 2014

As well known, expanding food service expenditure is a result of greater disposal income and of new and modern ways of life. According to Euromonitor (2014), the Chinese food service sector is the largest worldwide with 7.3 million outlets and sales valued at US$ 510 billion in 2013. In foodservices sector two international companies are at the top or the list (Table 2): McDonald's and Yum!. The first is the largest chain of hamburger fast food restaurants in the world, founded in the United States in 1940. The American company is adopting a new business model in Asian countries using larger franchising methods. Yum! Brands, Inc. (previously Tricon Global Restaurants, Inc.) is a USA fast food company. It has very well known brands such as KFC, Pizza Hut and in May 2011, Yum! agreed to purchase mainland Chinese hot pot chain Little Sheep. This, even with sales on the international market of about half those of McDonald's, in the Chinese market holds first place with a turnover of more than twice

1.2 Consumption

Until the 1980s the average Chinese household devoted more than 50% of their income to food (Tables 4 and 5), reflecting its importance in Chinese culture and their historic vulnerability to food insecurity. Food's share of spending remains the single largest item for both urban and rural households, but has shrunk as a proportion of budgets. In 1990 food expenditure (Consumption expenditure index=100) was 54.2 of the total per capita consumption in urban areas and 58.8 in rural areas. The indices have been decreasing over the time and disposable income spent on food currently averages around 35 for urban households and 38 for rural households (Figure 12) in 2013.

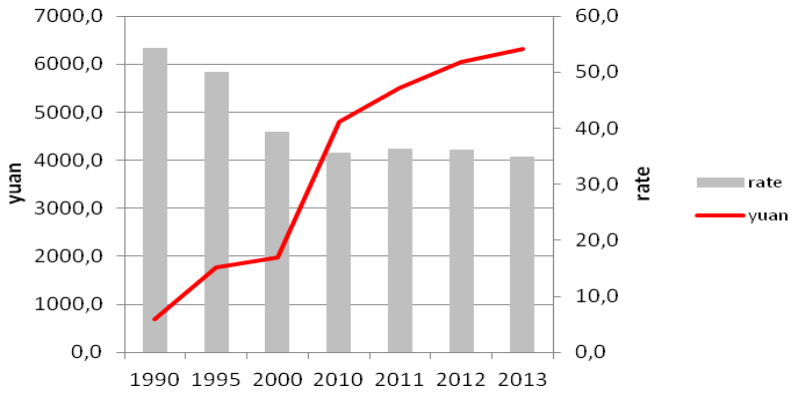
Figure 12 Food Consumption Expenditure per capita (index=100). Urban and rural households



Source: Authors' elaboration on China Statistical Yearbook, 2014

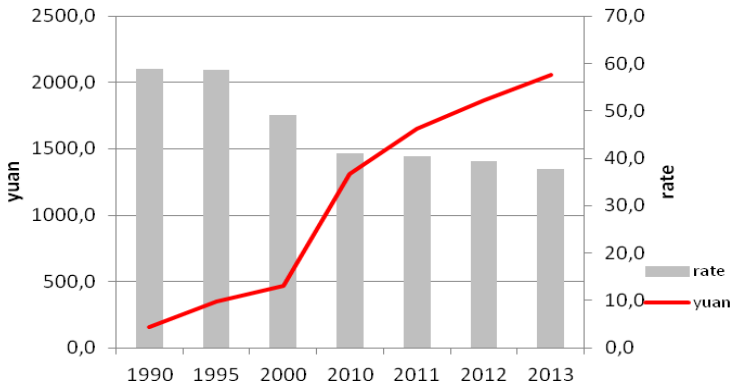
As the Engel law suggests, there is a wide range, depending on the income levels of different households. The wealthiest 20% of urban households, which account for 10% of all Chinese households, spend less than 22% of their disposable income on food. At the other hand of the spectrum the poorest 10% of urban households (accounting for 5% of all Chinese households) spend more than 40% of their disposable income on food, and 66% for their rural counterparts (ANZ, 2013).
Some changes have been occurring in population habits and consumptions: in urban areas expenditure for clothing, the second most important item after food in the 1990s (equal to 13%), has been surpassed in recent years by "transport and communications" (15.2% in 2013) and "education, culture and recreation" (12.7% in 2013) items. In rural areas, instead, expenditure for residence is confirmed in the years as the second highest expenditure after food (with a percentage between 15% and 19%), followed by "transport and communications" (12% in 2013) and "health care" (7% in 2013). People's habits changes are mainly connected to rising disposable incomes: per capita income passed in urban areas from 1,500 yuan in 1990 to quite 30,000 yuan in 2013 and in rural areas from 700 yuan in 1990 to 9,000 yuan in 2013 (Figures 13 and 14). It is worth noting that in the year the ratio between per capita income in rural areas and that in urban areas has expanded, passing from about a half to one third. Analyzing data concerning consumption, we can see a different trend in rural and urban households: in the first case the share of consumption on total income has been increasing over the years (54.6% in 1990, 68.7% in 2013), in the second consumption share has been decreasing (from 84.3% in 1990 to 61% in 2013).
Urbanization, brand exposure and consumer affluence, food safety concerns, health consciousness, demand for convenience, improved infrastructure, development of the retail industry are other aspects that affect consumption patterns. In particular, food consumption patterns in China have changed significantly with improved standards of living. More consumers are exposed to a greater diversity of consumer products, both locally and when travelling abroad. Chinese consumers are increasingly discerning, and many now seek the following qualities when making purchases: confidence in food safety and ingredients' integrity; high quality; excellent nutritional value; better lifestyle through a variety of food and beverages; modern packaging; freshness; convenience.

Figure 13 Food expenditure per capita (yuan and rate) in urban households



Source: Authors' elaboration on China Statistical Yearbook, 2014

Figure 14 Food expenditure per capita (yuan and rate) in rural households



Source: Authors' elaboration on China Statistical Yearbook, 2014

If the rate of increase tends to decrease as income rises, not so the food expenditure in absolute terms that passes for urban households from nearly 694 in 1990 to 6,311 yuan in 2013, and for rural households from 156 in 1990 to 2054 yuan in 2013 (Figures 13 and 14).
Looking at the trend three periods could be identified. In the first (1990-2000), food expenses in absolute values and growth rates move in the opposite direction, but with equal magnitude, more pronounced in populations of urban areas The index, which in 1990 amounted to 54.2, switches to 39.4 in 2000 for urban household and, in rural areas, from 59 to 49 in the reporting period.
The years 2000-2010 represent the period of great growth of expenditure on food consumption in absolute terms. For urban households, from 1,971 in 2000 we move to 4.8 and for rural from 464 to 1,313 yuan with, however, more and decreasing index movements, but less conspicuous over the previous period. In the last period of time (2010-2013), the indices show a relative stability in urban areas, while decreasing most significantly in rural populations against, however, an expense, in absolute values, increasing and that exceeds 6.3 yuan per capita between city residents and 2.0 in rural ones.

1.3 Trade

Until the middle of the first decade of 2000, China is a food exporter (Table 3).

Table 3 China food trade 1980-2014 (US Dollar, million)

	China food trade		
	Imports	Exports	Trade balance (exports-imports)
1980	3.206,3	3,128,9	-77,4
1984	2,363,3	3,798,1	1,434,7
1985	1,755,6	4,274,7	2,519,1
1986	2,049,7	5,286,2	3,236,5
1987	3,178,3	5,761,0	2,582,7
1988	4,301,1	6,943,2	2,642,1
1989	5,396,5	7,316,9	1,920,4
1990	4,618,7	7,867,5	3,248,8
1991	3,904,9	8,821,2	4,916,3
1992	3,941,0	9,636,8	5,695,8
1993	2,982,2	9,940,4	6,958,2
1994	5,077,9	12,178,5	7,100,6
1995	9,236,4	12,299,1	3,062,7
1996	8,191,2	12,427,4	4,236,2
1997	7,182,4	13,050,4	5,868,0
1998	6,684,6	12,181,6	5,497,0
1999	6,725,8	11,733,6	5,007,8
2000	9,042,6	13,559,3	4,516,8
2001	9,366,2	14,222,1	4,855,9
2002	9,891,2	16,163,5	6,272,4
2003	14,970,5	19,241,8	4,271,3
2004	21,121,1	20,815,2	-306,0
2005	21,540,7	24,635,4	3,094,6
2006	22,917,3	27,862,6	4,945,4
2007	32,422,3	33,160,8	738,5
2008	49,521,7	35,887,5	-13,634,2
2009	45,248,4	35,318,6	-9,929,8
2010	59,556,2	44,152,5	-15,403,7
2011	75,455,2	54,167,8	-21,287,4
2012	90,650,4	56,311,9	-34,338,5
2013	98,646,3	59,977,6	-38,668,7
2014	105,263,6	63,490,9	-41,772,7

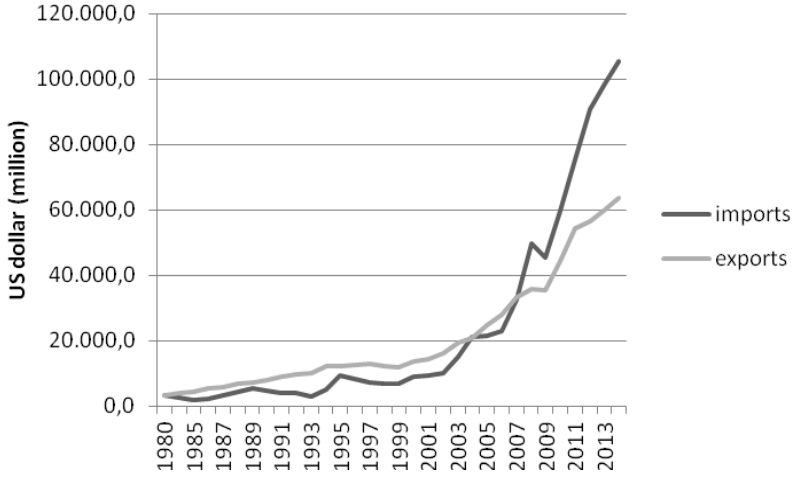
Source: Authors' elaboration on WTO data, 2014

From that time, partly because of the increase in population, income and urbanization, domestic production has not always been capable of meeting domestic demand.

The trade deficit of the agricultural balance consolidated in 2008 and the deficit gradually widened until it reached 41.8 million dollars in 2014. In particular, since China joined the World Trade Organization in late 2001, agricultural exports to the country have grown exponentially (WTO, 2015). In recent years, China's imported food source has become increasingly

international. In 2014, China's imported food products came from 192 countries and regions.

Figure 15 China food imports and exports (1980-2014)



Source: Authors' elaboration on WTO data

The top 10 importing sources in terms of import value were the EU, ASEAN; New Zealand; US; Australia; Brazil, Canada, Russia, Argentina, South Korea. In 2014, these areas accounted for over 82% of China's imported food trade.
The top 5 EU countries importing to China were France, the Netherlands, Germany, Ireland and Italy.

Table 4 Top 10 Agrifood and seafood importers Worldwide, 2013*

Country	**Imports US$ billions**	**Top suppliers and market share**		
		1	**2**	**3**
United States	127,4	Canada	Mexico	**China**
China	118.0	United States (22.6%)	Brazil (19.1%)	Australia (7.3%)
Germany	106,8	Netherlands	France	Italy
Japan	76,5	US	**China**	Canada
Netherlands	71,5	Germany	Belgium	Brazil
United Kingdom	68,8	Netherlands	France	Ireland
France	64,9	Spain	Netherlands	Belgium
Italy	54,8	Germany	France	Spain
Belgium	42,0	Netherlands	France	Germany
Russia	39,7	Brazil	Germany	Ukraine

*For the EU countries is the provision of the Community preference principle
Source: Authors' elaboration on Euromonitor International, 2014

Among the top ten list of importers of agrifood and seafood worldwide, China ranks second, after the United States and ahead of Germany. Analyzing of Table 4 it can be seen that the exchange between European countries is carried out mainly between EU countries (a consequence of the Community preference clause), while trade in other countries appears more diversified. As far as international trade is concerned, Market Economy Status (MES) has, recently, come to the top of international Agenda because China is asking for an automatic acquisition of MES after 11 December 2016. Achieving MES at the WTO is one of China's core strategic goals. For China, among other benefits, it would make it far more

difficult for the US or EU to impose steep tariffs on Chinese companies for unfairly dumping low-cost goods on their markets. As one would expect, the recognition of market economy to China is hampered by the EU (Southern Europe countries especially) and the US worried about having to face an unfair competition based on low cost of products. More, according to the WTO, China still applies price control to commodities and services with a direct impact on the domestic economy and people's livelihoods. Agricultural and food products are sensitive for a number of reasons. Trade could dramatically change in the next years.
Moreover, concerns in the food trade between China and the EU, for European countries derived from recognition of a geographical indication products (European Commission, 2013), whose specifications are continuously source of conflicts.

Table 5 a Ten renowned European products registered in the official AQSIQ* Chinese GI register

Designation	Country	Type of product
Comté	France	Cheese
Grana Padano	Italy	Cheese
Priego de Córdoba	Spain	olive oil
Prosciutto di Parma	Italy	Ham
Pruneaux d'Agen/Pruneaux d'Agen mi-cuits	France	dried fruit
Roquefort	France	Cheese
Scottish Farmed Salmon	United Kingdom	Salmon
Sierra Mágina	Spain	olive oil
West Country Farmhouse Cheddar	United Kingdom	Cheese
White Stilton Cheese/Blue Stilton Cheese	United Kingdom	Cheese

*General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China
Source: European Commission 2013

To support better protection of these products, the EU has signed various multilateral and bilateral agreements. Among these initiatives, we should point out the project "10 plus 10" (European Commission 2012) started in July 2007 when both the EU (European Commission) and China formally lodged` applications for the protection of 10 agriculture GIs in each other's territories (Tables 5a and 5b). With regard to European products as Geographical Indications in China and as part of the so-called "10+10 project", the list shows 5 cheeses, 2 oils, 1 ham, 1 salmon and 1 dried fruit. In terms of countries, France and the UK have featured with three products each, Italy and Spain with two. In parallel, the European Commission has examined and registered 10 Chinese food names with the last 2 Chinese names "Pinggu da Tao" (peach) and "Dongshan Bai Lu Sun" (asparagus) receiving protected status in the EU as Geographical Indications (European Commission, 2013).

Table 5 b Ten renowned Chinese products protected in the EU

Designation	Latin Transcription	Type of product
平谷大桃	Pinggu Da Tao	Peach
盐城龙虾	Yancheng Long Xia	crayfish
镇江香醋	Zhenjiang Xiang Cu	rice vinegar
东山白卢笋	Dongshan Bai Lu Sun	asparagus
金乡大蒜	Jinxiang Da Suan	Garlic
龙井茶	Longjing cha	Tea
琯溪蜜柚	Guanxi Mi You	honey pomelo
陕西苹果	Shaanxi ping guo	Apple
蠡县麻山药	Lixian Ma Shan Yao	Yam
龙口粉丝	Longkou Fen Si	vermicelli/noodles

Source: European Commission 2013

These 10 Chinese names have been added to the more than 1000 names of agricultural products and foodstuffs, which are protected in the EU (among them 13 non-EU GIs). Not only does the GI system provide an important protection against imitations, but also it is a useful marketing tool (European commission 2013).

2. Policies in a nutshell

The analysis of the historical overview of China highlights the great importance given to agriculture by Chinese policy since the proclamation of the Republic of China on October 1, 1949. Meeting self-sufficiently domestic demand for cereals and avoid having to resort to massive imports has always been the main concern of the government.

On 28 June 1950 Liu Shaoqi (刘少奇) implemented the **first agricultural reform** (土改, *tǔgǎi*), called "land to the tiller" (耕者有其田 *gèngzhěyǒuqítián*) addressed to all the propertyless farmers (about 70% of the 500 million people in the countryside). It implied the increased fragmentation of agricultural land and the consequent impossibility of extensive cultivation. Just three years after the land reform was launched the plan for collectivization of the land with the aim of setting up a new production structure based on collective owned companies: land ownership passed to the communities and families were forced to sell to the State surplus of wheat production at prices and quantities set by the government (Zanier, 2010).

The new Chinese countryside arrangement (in 1956 90% of the farmers were enrolled in socialist cooperatives) seemed to give new impetus to agricultural production which recorded an annual increase of 3.5% (compared with the level of production 1952) in cereal thanks to adoption the Grain first policy (以粮为纲, *yǐliángwèigāng)* (Zanier, 2010).

After the first five-year plan (五年计划, *wǔniánjìhuà*), the Chinese leadership opened a new strategy, known as the "Great Leap Forward" (大跃进, *dàyuèjìn*): the object was to "produce more, more quickly and at a better price" (Bergère, 2009 p. 110) to allow China within 15 years to

overtake the United Kingdom (赶上英国十五年, *gǎnshàngyīngguóshìwǔnián*). Actually, agricultural production in 1960 reached only 144 million tons, down 26.4% compared to 1958; only in 1965, there was a resumption of production to previous levels respect to the Great Leap (Bergère, 2009). The decline in production was followed by the contraction of consumption: in 1960 the shortage becomes real famine in the Chinese countryside, where the per capita consumption of cereals falls by 23.7%, passing from 204 kg in 1957 to 156 kg in 1960 (Bergère, 2009) bringing millions of people to death (Brown, 1995).

In 1978 began a new era of reform, with the economic liberalization implemented by Deng Xiaoping (邓小平) after the death of the leader Mao Zedong (毛泽东). Two major new features were introduced: the household responsibility system and township and village enterprises (OECD, FAO, 2013). Thanks to the first one, between 1981 and 1982, about 90% of the farm families returned to become responsible for a plot of land, which was always publicly owned but was given in concession to families for longer and longer periods of time (Zanier, 2010). The second innovation, known with the acronym of TVE or township and village enterprises (乡镇企业, *xiāngzhènqìyè*), led to a significant increase in agricultural production, so that China returned to export cereals and agricultural income tripled between 1979 and 1985.

At the beginning of the 1990s China entered international markets: in 1993-1994 the country's exports marked an increase of 60%, and the amount of investment from abroad was greater than in all fourteen previous years (Zanier, 2010); the entry into the WTO in 2001 and the abolition of import duty increased significantly imports of agricultural goods. In 2008, China, which until then had been a net exporter of agricultural products, became a net importer.

In 2006, the agricultural tax that had been levied for millennia was abolished, bringing savings to farmers of over 21 billion dollars (Ni, 2013). Eliminated taxation, over the years the government has allocated an increasing share of its financial resources to the agricultural subsidy system that could be classified in four main typologies of subsidies:

1. Grants for the improvement of seed (良种补贴, *liángzhǒngbǔtiē*). In place since 2002 to promote the use of new and improved varieties of cultures, accelerating their use and their extension and, starting from 2009, extended to the whole country as far as rice, wheat, cotton and corn (Ni, 2013).

2. Direct payments to producers of cereals (粮食直补, *liángshízhíbǔ*). Adopted since 2004 aiming at coping with the drop in cereal production registered during the previous six years. The stated objective of this measure is to increase the production of cereals promoting self-sufficiency of the country.

3. Subsidies for the purchase of agricultural machinery (购置补贴, *gòuzhìbǔtiē*). With the aims to promote the mechanization of agriculture to increase the level of productivity. The stated goal is to achieve by 2020 the 70% of mechanization of farming methods (DuPoint, 2013).

4. Generic grants to inputs (农资综合补贴, *nóngzīzònghébǔtiē*). This measure was adopted starting from 2006 because of continuing fluctuations in prices of agricultural inputs including fertilizers and gasoline.

Immediately after entering the WTO, the Chinese authorities started to strengthen the policy of supporting market prices to support the income of farmers and encourage production. This policy of support, however, has triggered a mechanism of rising home prices that, combined with the appreciation of the Chinese currency, has eroded the competitiveness of Chinese agricultural goods on the international market (OECD FAO, 2013). A second effect was the increase in imports of foreign products available at

a lower price and therefore more competitive. Although China is expected to become the world's largest producer of rice and wheat, and occupies the second place instead in world production of corn and buckwheat, the export of cereals (including barley, corn, millet, rice, rye, oats, sorghum, wheat and cereal blends) has gradually decreased from 19 million tons in 2002 to only 1.5 million in 2013.
Thanks to the extensive programme of reforms initiated by the government in the decade 2004-2014, grain production has recorded a steady growth year after year, enabling the country to achieve the so-called "Grain Miracle" (Zhang, 2013). The production has increased from 469 million tons in 2004 to 607 million in 2014 for a total increase of 29%.
Recently, the National development plan for the period 2011-2015, the most recent plan (issued in March 2011), has developed policies to boost domestic consumption, improve living standards, develop western and central regions and protect the environment[3].
With regard to the food industry, the plan points out Food Safety as a main concern. With many food safety scandals in the past few years, the government has included points to address this issue. The focus is on improving its agricultural production and attracting foreign technology.

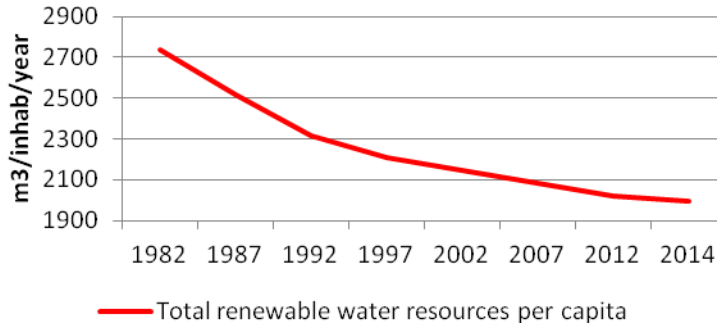
3. Main Constraints

The scarcity of natural resources (land and water) affects the Chinese agricultural productivity. With regard to water, China has to deal with scarcity and pollution issues. According to Aquastat (2014) China, has renewable internal freshwater resources of about 2,000 cubic meters per capita, above the UN definition of water scarcity as 1,000 cubic meters per person. However, China's water resources are not distributed equally: the dry northern and desert western provinces receive only 20% of the country's rainfall. In addition, due to the inevitable (even if controlled) population growth, the climate changes, the increasing urbanization and the many activities that need the use of water resources, per capita availability is continuously decreasing and demand for water is outstripping supply (Figure 16). Agriculture and energy (mainly coal industry) are the two largest consumers of China's freshwater reserves (Figure 17), accounting for nearly 90% of all the water used in China). Agriculture and coal industry are concentrated in China's north, the average water per capita is only around 200 cubic meters. Therefore, although 4/5 of the country's water resources are located in the South of the country, 2/3 of the cultivated land are in the arid North (Hanjira et All 2008). To solve this problem, since 2002 China has been working on a mega-project to bring water from the moisture-rich south to the arid north. Nevertheless, simply supplying more water will not solve the underlying problem of inefficient water use and growing demand. In 2010, China's Communist Party Central Committee and State Council promulgated a "three red lines" (*santiao hongxian* 三条红线) policy intended to establish clear and binding limits on water quantity usage, efficiency, and quality. In early 2012, the State Council announced that the "three red lines" policy would limit total national water consumption to less than 700 billion cubic meters per year, amounting to approximately three-quarters of China's total annual

[3] The plan identifies seven strategic industries which are expected to benefit from special incentives and funding:
- Energy conservation and environmental protection
- Next generation
- •Biotechnology
- •High-end equipment manufacturing
- •New energy
- •New materials
- •Clean energy vehicles

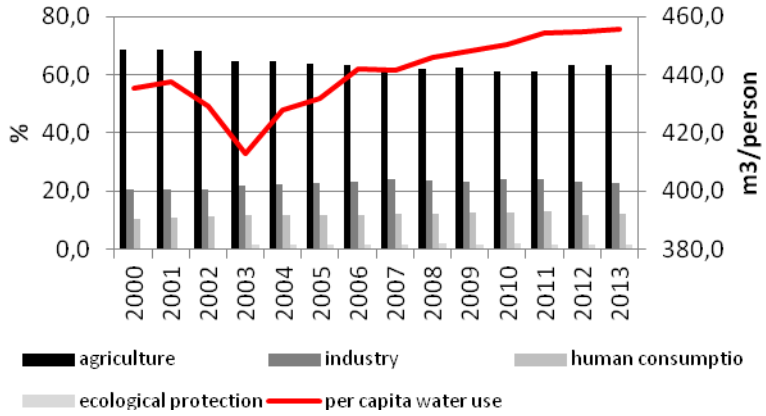
exploitable freshwater resources. In addition, the policy attempts to increase irrigation use efficiency. These headline policies are augmented by increased investment, including 1.8 trillion RMB in 2011-2015, primarily for irrigation infrastructure improvements, rural clean water delivery, and reservoir enhancements (More, 2013). The People's Republic of China's (PRC) 12th Five-Year Plan (2011-2015) focuses on water conservation and environmental protection as national priorities. China's leadership acknowledges in this plan that there is much to be done to limit pollution and secure adequate supplies of energy and water for growing northern and western cities. PRC's major cities, for example, are retrofitting their sewage treatment systems to recycle wastewater for use in washing clothes, flushing toilets, and other grey-water applications. Major industrial plants are required by the Water Law of the People's Republic of China, initially enacted in 1988 and updated in 2002, to show there is adequate water in the region to supply new factories before they are allowed to build (Circle of blue, 2013).

Figure 16 Total renewable water resources per capita



Source: Authors' elaboration on Aquastat data, 2014

Figure 17 Water use



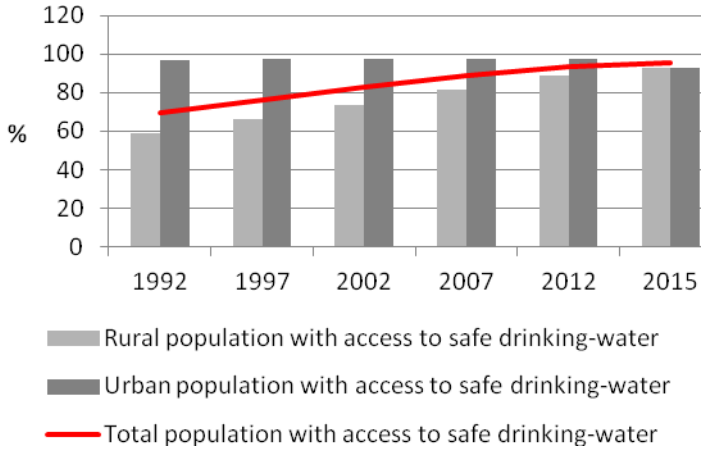
Source: Authors' elaboration on Chinese Statistical yearbook, 2014

Soil pollution is another important issue and a possible constraint for agriculture and food supply.

According to a study on soil pollution commissioned in 2006 by the government, industrial and urban effluent and waste as well as the massive use of fertilizers and pesticides have affected about one-fifth of agricultural land in the country and have caused a loss of about 10 billion kg/year of crop (Cui and Kattumuri, 2011). This loss became even more important remembering that arable land is steady decreasing compared to a growing population.

Climate change can also play a crucial role in determining the country's ability to maintain the viability of production. The frequency and intensity of adverse weather events, such as droughts in the North and Northeast of the country and floods along the Yangtze River, have increased in the last fifty years as well as the relentless advance of the desertification that wastes every year about 666,700 hectares, of which about 200,000 hectares of arable land (Cui and Kattumuri 2011).

Figure 18 Population with access to safe drinking-water



Source: Authors' elaboration on Aquastat data, 2014

Aware of these constraints, China, since the first decade of the 2000s, has progressively tried a new and alternative way to make a secure source of supply by resorting to foreign direct investment (FDI) aimed at agriculture (Smaller, Yalan and We, 2012). Since 2001, the FDI flow in agriculture has gradually increased to reach 5 billion in 2012. Since 2007 foreign investment in the primary sector took the form of the so-called "land grabbing": an acquisition (whether by purchase or rental) of large-scale land for farming, conducted by public actors (states) or private (corporations) that has an average duration of 30 to 99 years (Zolin and Luzi, 2013).

Considering China as an investor country, in the list of favorite target areas, Asia occupies the first place (57.6% of the total hectares), followed by Latin America (28.6% of the total hectares) and Africa (13.6% of the total hectares). The deal gives the investor not only the right to cultivate the land, but also gives the access to natural resources, water and minerals. Establishing the precise number of the agreements signed is not simple. According to Land Matrix[4], an activist group that collects data about the agreements involving agricultural land, total Chinese land investment amounted to more than 1,206 thousand hectares (34% of the total hectares are domestic investments) with 65 agreements signed from 2001 to 2014 (Table 6); 34% of the hectares concerns national borders.

These contracts, often, are negotiated with local governments for the use of land under concession for a length of time, followed by the deployment of one or more production sites. By the Chinese side that should ensure a transfer of technical knowledge, with benefit for local people (especially in the poorest countries), having the ability to export "strategic" agricultural products to China at favorable prices. Although in theory the local people should benefit from this Chinese presence, there have been numerous protests: Chinese companies are in fact accused of appropriating the land of the poor local farmers who once dispossessed of their belongings would

[4] Activist group that collects data about the agreements involving agricultural land.

not have the chance to be taken over in the new Chinese factories that would employ only Chinese labor.

Table 6 China's land investments

Target countries	Number of contracts signed	Investment on land in ha (contracts signed only)	Average size of investments (in ha)	Intention of investments
Asia	**43**	**695.089**	**16.165**	
Cambodia	19	192.706	10.142	Non food agricultural commodities (11), Food crops (3), Agri unspecified (3), Wood and fibre (1), Tourism (1)
China	8	414.054	51.757	Food crops (7), other (1)
Laos	15	48.329	3.222	Non food agricultural commodities (12), Industry (2), Wood and fibre (1)
Philippines	1	40.000	40.000	Biofuels
Africa	**18**	**163.704**	**9.095**	
Angola	3	21.500	7.167	Food crops (3)
Benin	2	4.800	2.400	Biofuels, food crops
Cameron	1	10.120	10.120	Food crops
Congo	1	100.000	100.000	Biofuels
Nigeria	2	5.300	2.650	Food crops
Sierra Leone	4	6.820	1.705	Food crops (4)
Sudan	1	10.000	10.000	Biofuels, food crops
Uganda	2	4.540	2.270	Food crops (2)
Tanzania	2	624	312	Food crops, biofuels, wood and fibre
Europe	**1**	**2.000**	**2.000**	
Bulgaria	1	2.000	2.000	Food crops
South America	**3**	**345.400**	**115.133**	
Argentina	2	333.000	166.500	Food crops
Bolivia	1	12.400	12.400	Food crops
Total	**65**	**1.206.193**	**5.123**	**--**

Source: Elaboration on Land Matrix data, 2015

The "Chinese colonization" involves not only the land, but also the acquisition of great foreign agribusiness empires: the so-called dragon-head enterprises, (龙头企业, *lóngtóuqǐyè*) are in fact encouraged to expand its global presence through acquisitions of companies in key areas of the world

food industry, thus challenging hegemony of the great American groups such as Cargill, Monsanto and ADM.

4. Concluding remarks

China is the world's largest consumer market for food and beverages. Due to the economic growth based on industrialization, the importance of agriculture declined over time with mounting pollution concerns for land and water. Given the phenomenon of growing urbanization, the pressure on food demand for a rising population as well as changing diets, China has had to resort to imports, becoming a net importer of food. If the rate of increase tends to decrease as income goes up, not so the food expenditure in value that, in the period 2000-2010, from 2 thousand yen per capita in 2000, arrived to almost 5 thousand in 2010 for urban consumers. Chinese food industry is profiting from this development, but China is thus facing problems related both to food security and to food safety.

As far as food security is concerned, the hugest advances in China's productivity began when the government began to free farms from agricultural communes and allowed them to partially privatize their agricultural production under the household responsibility system. This result is also due to an, (often) excessive, application of fertilizer that polluted land and groundwater with nitrates and caused toxic "red tides" of algal blooms and eutrophication of lakes and rivers. China is one of the earliest countries to use pesticides (WenJun Zhang et al, 2011) and if throughout China pesticides have killed the natural enemies of crop pests, on the other hand, they have poisoned farmers and consumers. Moreover, Chinese agricultural productivity is affected by the scarcity of natural resources (land and water). To counteract the land limitation, China has progressively tried a new and alternative way to make a secure source of supply by resorting to foreign direct investment (FDI) aimed at agriculture, called usually land grabbing. Asia at the first place (57.6% of the total hectares), followed by Latin America (28.6% of the total hectares) and Africa (13.6% of the total hectares) are the favorite target of this new policy: the acquisition, in fact, not only gives the investor the right to cultivate the land, but also gives the access to natural resources, water and minerals.

Climate change can also play a crucial role in determining the country's ability to maintain.

In this Review, we identified important factors limiting agricultural production in China, including conversion of agricultural land to other uses, freshwater deficits, and soil quality issues. Additionally, increased demand for some agricultural products is examined, particularly those needed to satisfy the increased consumption of animal products in the Chinese diet, which threatens to drive production towards crops used as animal feed. Major sources of food poisoning in China include pathogenic microorganisms, toxic animals and plants entering the food supply, and chemical contamination. Meanwhile, two growing food safety issues are illegal additives and contamination of the food supply by toxic industrial waste. China's connections to global agricultural markets are also having important effects on food supply and food safety within the country. Although the Chinese Government has shown determination to reform laws, establish monitoring systems, and strengthen food safety regulation, weak links in implementation remain.

As a global problem, food safety significantly affects the public health in both developed and developing countries, especially in countries with large populations, e.g. China. A 2011 survey (Song et al 2013, Zhang et al 2011) reported that food safety was the most concerned issue in Chinese people, surpassing public security, traffic safety, medical safety, etc. Food contamination can occur by many harmful factors at any step in the process from farm to table. In China, the major harmful factors include toxic

animals and plants (e.g. puffer fish and toadstool), pathogenic microorganisms (e.g. *Salmonella* and *Vibrio Parahaemolyticus),* and chemical contamination (e.g. pesticide and veterinary drug residues). For example, of 174 food safety incidents reported in 2012 in China, most were caused by toxic animals or plants (41.4%), followed by pathogenic microorganisms (32.8%), and chemical contamination (12.1%). In addition, with the rapid industrialization in China, the use of illegal additives and toxic industrial waste in food processing is a growing food safety problem. (Song et al 2013).

Resourcefulness, technology, research, modernization, and sustainability are all factors on which China can and should improve, as these factors will have a key role in determining the ability of China and of the World to feed with safe food their respective population in the future. Improved efficiency and productivity, reform of land use rights, but also the policy of "going out" or land grabbing are some of the plausible strategies that the country could improve on to avoid an inexorable stabilization or, at worst, a decline in domestic production, as well taking into account the impact of climate change on agricultural commodities.

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Appendix

Table Per capita income and expenditure of urban households

	1990	1995	2000	2010	2011	2012	2013
Per Capita Annual Income* (yuan)	**1,516.2**	**4,288,1**	**6,295,9**	**21,033,4**	**23,979,2**	**26,959,0**	**29,547,1**
Per Capita Annual Consumption (yuan)**	**1,278.9**	**3,537,6**	**4,998,0**	**13471,5**	**15,160,9**	**16,674,3**	**18,022,6**
Of which:							
Food	693.8	1,772.0	1,971.3	4,804.7	5,506.3	6,040.9	6,311.9
Clothing	170.9	479.2	500.5	1,444.3	1,674.7	1,823.4	1,902.0
Residence	60.9	283.8	565.3	1,332.1	1,405.0	1,484.3	1,745.1
Household Facilities and Articles	108.5	263.4	374.5	908.0	1,023.2	1,116.1	1,215.1
Transport and Communications	40.5	183.2	427.0	1,983.7	2,149.7	2,455.5	2,736.9
Education, Culture and Recreation	112.3	331.0	669.6	1,627.6	1,851.7	2,033.5	2,294.0
Health Care and Medical Services	25.7	110.1	318.1	871.8	969.0	1,063.7	1,118.3
Others	66.6	114.9	171.8	499.2	581.3	657.1	699.4
Consumption Expenditure index=100							
Food	54.2	50.1	39.4	35.7	36.3	36.2	35.0
Clothing	13.4	13.5	10.0	10.7	11.0	10.9	10.6
Residence	4.8	8.0	11.3	9.9	9.3	8.9	9.7
Household Facilities and Articles	8.5	7.4	7.5	6.7	6.7	6.7	6.7
Transport and Communications	3.2	5.2	8.5	14.7	14.2	14.7	15.2
Education, Culture and Recreation	8.8	9.4	13.4	12.1	12.2	12.2	12.7
Health Care and Medical Services	2.0	3.1	6.4	6.5	6.4	6.4	6.2
Others	5.2	3.2	3.4	3.7	3.8	3.9	3.9

* Per capita income measures the average income earned per person in a given area (city, region, country, etc.) in a specified year. It is calculated by dividing the area's total income by its total population

** Per capita consumption expenditure is the market value of all goods and services, including durable products (such as cars, washing machines, and home computers), purchased by households. It is calculated by dividing the area's total expenditure by its population

Source: China Statistical Yearbook, 2014

Table Per capita income and expenditure of rural households

	1990	1995	2000	2010	2011	2012	2013
Per Capita Annual Income* (yuan)	**686.3**	**1,577.7**	**2,253.4**	**5,919,0**	**6,977.3**	**7,916.6**	**8,895.9**
Per Capita Annual Consumption (yuan)**	**374.7**	**859.4**	**1,284.7**	**3,859.3**	**4,733,4**	**5,414.5**	**6,112.9**
Of which:							
Food	155.9	353.2	464.3	1,313.2	1,651.3	1,863.1	2,054.5
Clothing	44.0	88.7	95.2	263.4	341.1	396.1	437.7
Residence	81.2	147.9	231.1	801.4	930.2	1,054.2	1,169.3
Household Facilities and Articles	30.7	68.1	74.4	233.5	308.6	341.4	384.5
Transport and Communications	8.4	33.7	93.1	461.1	547.0	652.8	795.8
Education, Culture and Recreation	31.3	102.4	186.7	366.7	396.4	445.5	485.6
Health Care	19.0	42.5	87.6	326.0	436.8	513.8	613.9
Others	4.3	23.1	52.5	94.0	122.0	147.5	171.6
Cash Consumption Expenditure index=100)							
Food	58.8	58.6	49.1	41.1	40.4	39.3	37.7
Clothing	7.8	6.9	5.7	6.0	6.5	6.7	6.6
Residence	17.3	13.9	15.5	19.1	18.4	18.4	18.6
Household Facilities and Articles	5.3	5.2	4.5	5.3	5.9	5.8	5.8
Transport and Communications	1.4	2.6	5.6	10.5	10.5	11.0	12.0
Education, Culture and Recreation	5.4	7.8	11.2	8.4	7.6	7.5	7.3
Health Care	3.3	3.2	5.2	7.4	8.4	8.7	9.3
Others	0.7	1.8	3.1	2.1	2.3	2.5	2.6

Source: China Statistical Yearbook, 2014

Top 10 export products in 2014

1. Electronic equipment: US$570.9 billion (24.4% of total exports)
2. Machines, engines, pumps: $400.8 billion (17.1%)
3. Furniture, lighting, signs: $93.4 billion (4%)
4. Knit or crochet clothing: $92 billion (3.9%)
5. Clothing (not knit or crochet): $81.4 billion (3.5%)
6. Medical, technical equipment: $74 billion (3.2%)
7. Plastics: $66.8 billion (2.9%)
8. Vehicles: $64.2 billion (2.7%)
9. Gems, precious metals, coins: $63.2 billion (2.7%)
10. Iron or steel products: $60.6 billion (2.6%)

Source:
http://www.worldstopexports.com/chinas-top-10-imports/4017

Top 10 import products in 2014

1. Electronic equipment: US$425,097,326,000 (21.7% of total imports)
2. Oil: $316,660,509,000 (16.1%)
3. Machines, engines, pumps: $179,631,968,000 (9.2%)
4. Ores, slag, ash: $135,976,286,000 (6.9%)
5. Medical, technical equipment: $105,774,712,000 (5.4%)
6. Vehicles: $89,491,210,000 (4.6%)
7. Plastics: $75,195,997,000 (3.8%)
8. Organic chemicals: $60,552,254,000 (3.1%)
9. Copper: $47,501,633,000 (2.4%)
10. Oil seed: $45,923,198,000 (2.3%)

http://www.worldstopexports.com/chinas-top-10-exports/1952