

State-led Food Localization, Farm Migration and Urban Food Security in Nanjing, China

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Outline

- Research gaps of the nexus between migration and food security
- State-led food localization in China
- Migrant farmer and food production
- Migrant vendor and food retailing
- Effect on urban food system and security
- Concluding remarks

What does “Food localization” mean?

- **What’s meaning**

- ✓ Food localization is regarded as a counter movement to globalization
- ✓ Highlighting local food and local production of food

Research gaps

- **Gaps in food localization studies**

- Has focused on the proliferation of alternative food networks such as farmers' markets and community supported agriculture (CSA).
- From the perspective of food quality rather than food security.

- **Gaps in the nexus between migration and food security**

- Investigating the impact of migration on migrant's their own food security.
- Examining the impact of migration on migrant's families' food security.
- Little attention paid to the impact of migration on urban food system, contributing to urban food security

State-led food localization in China

- **“Rice bag” policy**

- ✓ The provincial governors and governments responsible for ensuring grain supply and price stable

- **“Vegetable basket” policy**

- ✓ City mayors responsible for ensuring non-grain food supply their price stability

- **Consequence due to failure**

- ✓ Degrading political performance assessment

- **What’s meaning “local”**

- *For provincial governors and governments*

- ✓ “local” is a province-level region

- *For city mayors and prefectural government*

- ✓ “local” is a prefecture-level region

State-led food localization in China: A case of Nanjing

➤ 4 medium-term plans for “vegetable basket project” (VBP)

✓ 1989-1992 plan, 1993-1997 plan, 1996-2000 plan and 2008-2012 plan

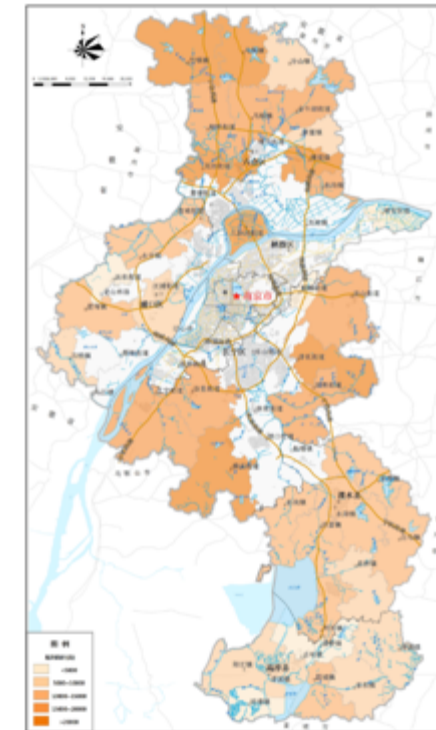
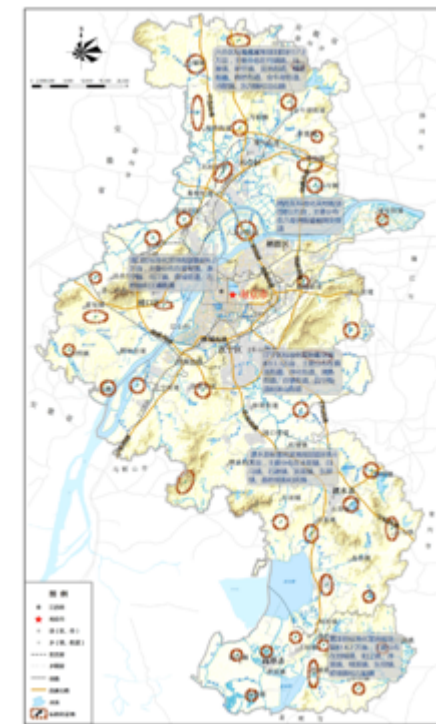
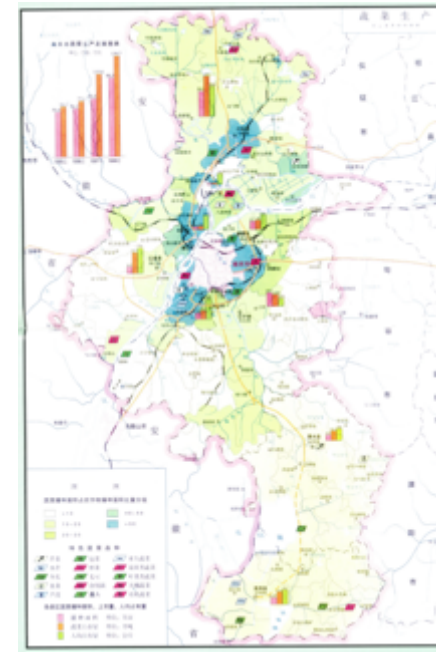
➤ 2 annual plans

✓ 2017 plan and 2018 plan

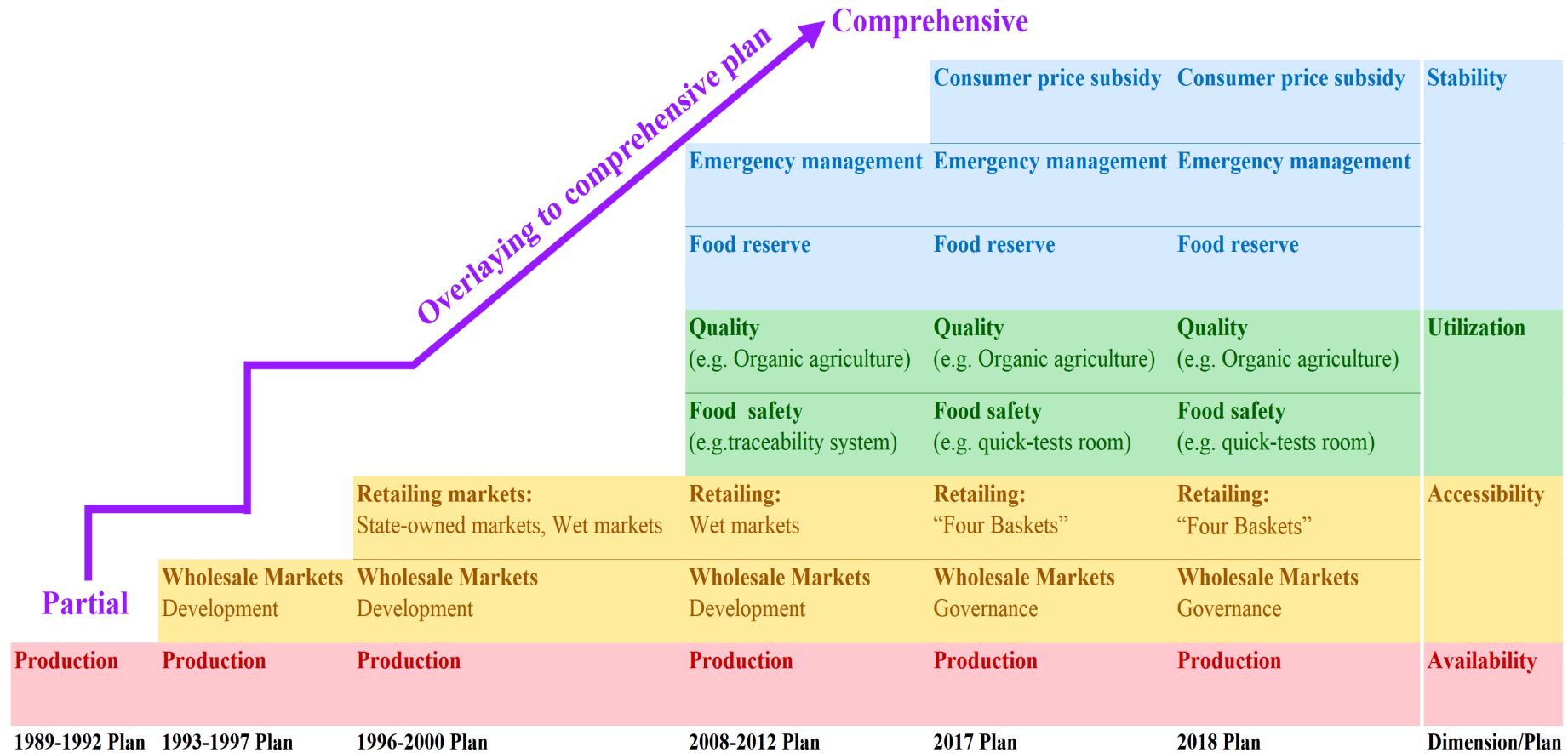
➤ The recent agriculture spatial plan pertinent to VBP

✓ “Plan for 1115 Agriculture Project”

✓ Planning period of 2011-2020



State-led food localization in China: A case of Nanjing



“Vegetable basket project” planning over the past three decades in Nanjing

State-led food localization in China: A case of Nanjing

- **More than localizing production**

- ✓ Localized food retailing

- Mandatory requirement of wet market construction in new residential community development

- Wet market dominated food retailing system



Migrant farmer and urban food security: **Supporting food local production**

Local production of main food items in Nanjing

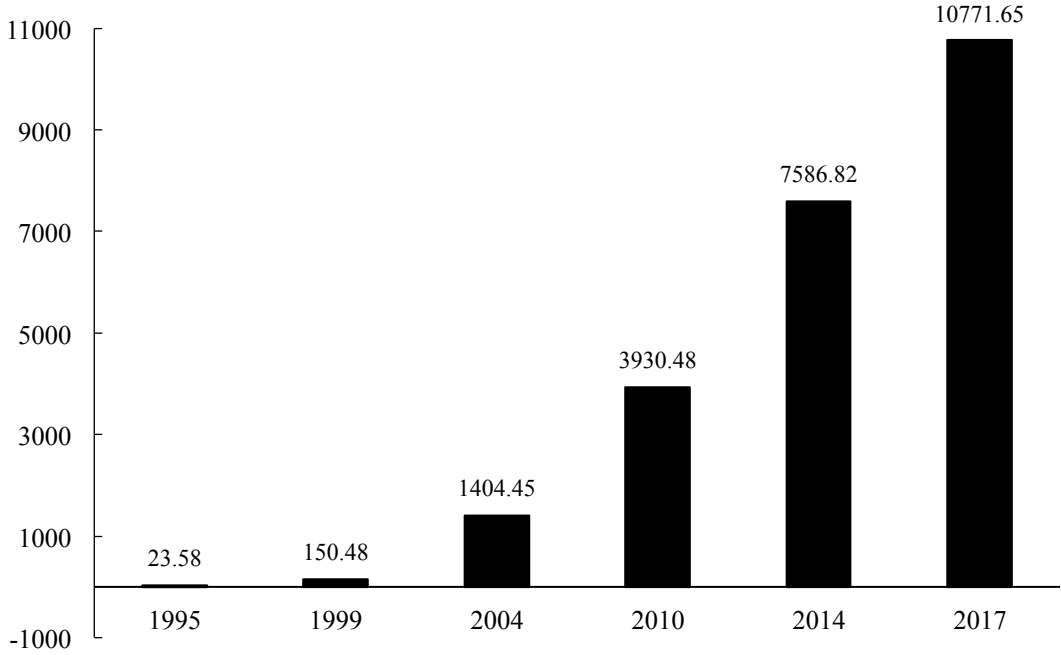
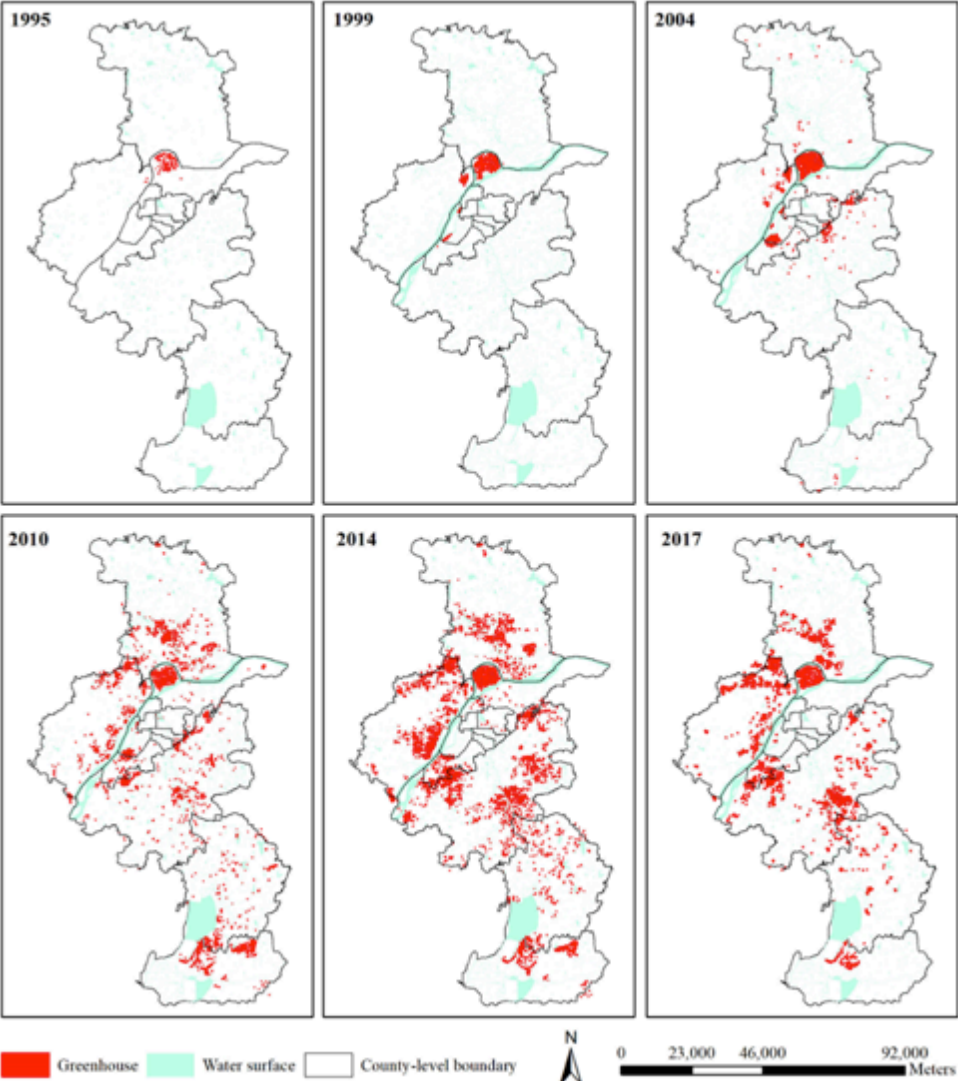
Year	Grain ↓	Cooking oil	Vegetable ↑	Pork ↓	Beef & mutton	Poultry meat ↓	Fishery ↑	Egg	Milk	Fruit ↑
1988	166.11	54137	772552	96062	1459	40571	40694	53058	21153	8379
1990	173.26	96797	893368	97910	2251	36674	46947	54879	23929	8526
1995	168.57	144872	1121074	108144	3709	73118	74570	70068	25224	13639
2000	143.37	220119		106953	9648	63393	129342	68560	67087	23625
2005	96.54	211685	3116210	120039	13374	64649	180414	83265	138034	42495
2010	110.64	117697	2663232	70068	5094	47404	204183	74756	86071	85273
2015	114.06	108415	3048126	56052	4166	44310	228662	72044	79668	154459
2017	102.71	62749	2568891	36545	2354	30107	210500	49670	47022	163181

Migrant farmer and urban food security : **Maintaining self Sufficiency**

Percentage of locally supplied non-grain food in Nanjing since late 1980s

Year	2018 ^a	2012	2007	1995	1992	1988
Pork (%)	20.0	30.0	20.0	21.4	21.7	19.1
Vegetable (%)	30.0	30.0	40.0	74.3	74.0	90.0
Fish (%)	20.0		10.0	51.4	45.8	28.2
Egg (%)	30.0	21.0	15.0	28.1	25.5	16.2
Beef and mutton (%)	<1		<20			
Milk (%)	30.0	34.0		73.7	94.6	78.0

Migrant farmer and urban food security: **Greenhouse expansion**



The area of farmland used for greenhouse cultivation since 1995

- Rapid increase in the area of farmland used to greenhouse cultivation since 2000s
- Greenhouse cultivation has expanded outward
- Multi-center diffusion.

The expansion of greenhouse cultivation across Nanjing

Migrant farmer and urban food security: **Greenhouse expansion**

Key agents:

- **Government:** municipal government, county-level governments, township-level governments, and village committee
- *Municipal and county-level government:* Planning, making policy and providing subsidy for greenhouse cultivation development
- *Township-level governments and village committee:* facilitating farmland renting for greenhouse cultivation, by establishing company acting as land broker or just playing a coordinator
- **Migrant farmer:** Renting-in high tunnel or farmland & building low tunnels
- **Local farm household:** Renting-out farmland

Key elements:

- **Farmland:** Renting-out and renting-in,
 - *Farmland:* An annual rent of CNY ¥ 500-800 (USD \$70-115) for farmland without greenhouse structure
 - *Tunnels:* or 1200-1500 CNY (USD \$170-215) for farmland with greenhouse structure with an area of about 1 mu (about 666.67 square meters)
- **Labor:** Migrant farmer family, local aged farmer
- *Daily wage:* around 100 CNY (about USD \$ 15)
- **Subsidy:** included in the scope of subsidy, including greenhouse construction, high tunnel construction, road and water facilities construction in the base of “vegetable basket project”

Migrant farmer and urban food security: **Greenhouse expansion**

There are two methods for township-level governments and village committee to involve in farmland rent.

- First is to establish a company or collective cooperative to rent in farmland from local farm households whose land holding is averagely around 6 mu (0.4 ha) . The company or collective cooperative could directly rent out those rented-in farmland to migrant farmers or construct greenhouse structures (including greenhouse and high tunnels) then rent out those farmland with greenhouse structure.
- The second is to play a coordinator between the local famers renting-out farmland and those farmers renting-in farmland for greenhouse cultivation.

The first one is a typical mode for greenhouse vegetable farming in Nanjing (Yang et al, 2014).

Migrant farmer and urban food security: **Greenhouse expansion**

- Migrant farmers have facilitated farmland use transition to greenhouse cultivation, contributing to increase land productivity.
- Creating seasonal job opportunities for the local aged.
- Around 90 per cent of farmers involved in greenhouse cultivation are migrant worker in 2011 (Yang et al, 2014).
- About 47% of farmers in Jianye District, Nanjing were migrant farmers in 2006 (Zou and Guo, 2009) .



Migrant farmer and urban food security: **Greenhouse expansion**

The subsidy connects migrant farmers, village collectives and local government. Migrant farmers have directly or indirectly benefited from the subsidies.

The frequency of response to the question of whether receiving subsidy

Item	Total	Missing	Yes	No	Don't know
Total	519	166	177	166	10
Local farmer	431	166	168	87	10
Migrant farmer	88	0	31	21	36

Source: Calculated from farm household questionnaire survey conducted in 2017; Local farmer- random sampling, migrant farmer- snowball sampling.

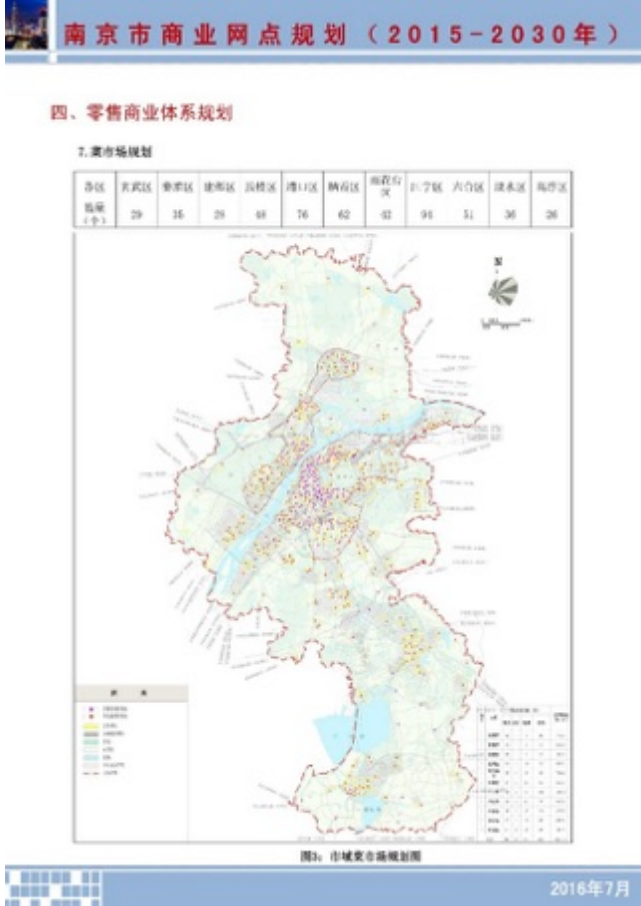
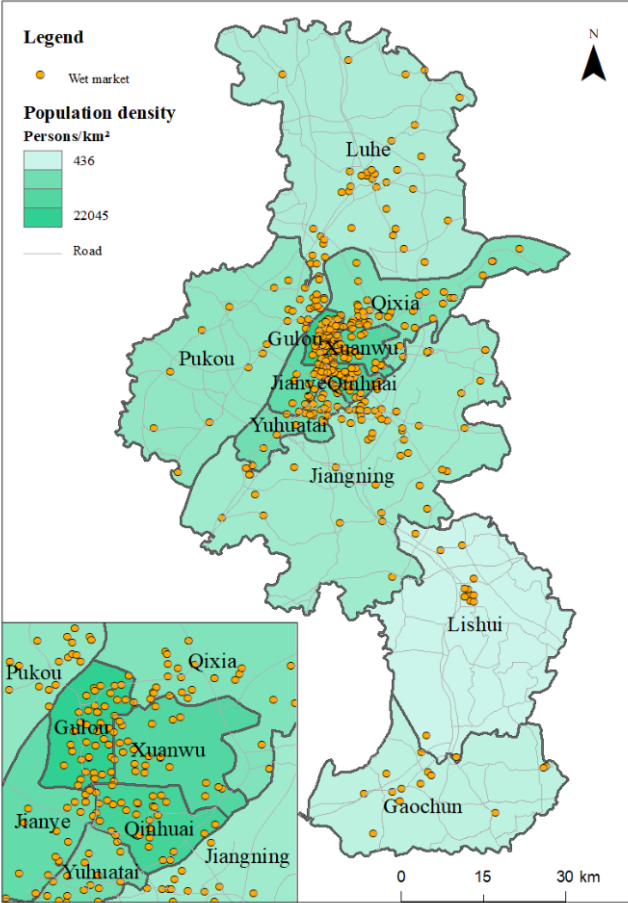
Migrant vendor and urban food security: **Improving access**

➤ Localized food retailing-**wet market**

Frequency of local and non-local vendors within wet markets in Nanjing

Local/non-local	Wet Market	Food Store (Outside Wet Vendor Markets)	Street Vendor	Total
This city	223	49	26	298
Another city in this country	115	17	9	141
A rural area in this country	297	78	40	415
Total	635	144	75	854

Source: Calculated from retailer questionnaire survey conducted in January and February 2017.



Migrant vendor and urban food security: **Improving access**

➤ Localized food retailing-**wet market**

- The mean profit every month of vendors within wet markets are 8146 CNY (about USD \$1150)
- There are notable difference of the profit between local and non-local, urban and rural vendors.

In the last month, what was the net profit you earned at this business

Local/non-local	Mean	N
This city	10413.84	112
Another city in this country	7474.91	56
A rural area in this country	6554.41	136
Total	8145.87	304

Source: Calculated from retailer questionnaire survey conducted in January and February 2017.

Migrant vendor and urban food security: **Improving access**

➤ Localized food retailing-**supermarket**

The number of supermarket companies and their shops in Nanjing

	N of companies	N of shops
Foreign	5	15
Local	2	126
Domestic	5	29
Total	12	170

Source: Calculated from supermarket survey conducted in 2019.

- About 68 % of employee are local person (compared with 35% within wet markets)
- The mean wage per month of supermarket employee is about CNY ¥ 2550 (about USD \$ 360), compared with the mean profit of USD \$ 1150 per food stall within wet market.

Migrant vendor and urban food security: **Improving access**



<http://www.iyiou.com/p/21865>

Fast delivery of cooked food has ensured 24 hours available in south China, most delivers are rural migrants.

Migrant vendor and urban food security: **Improving access**

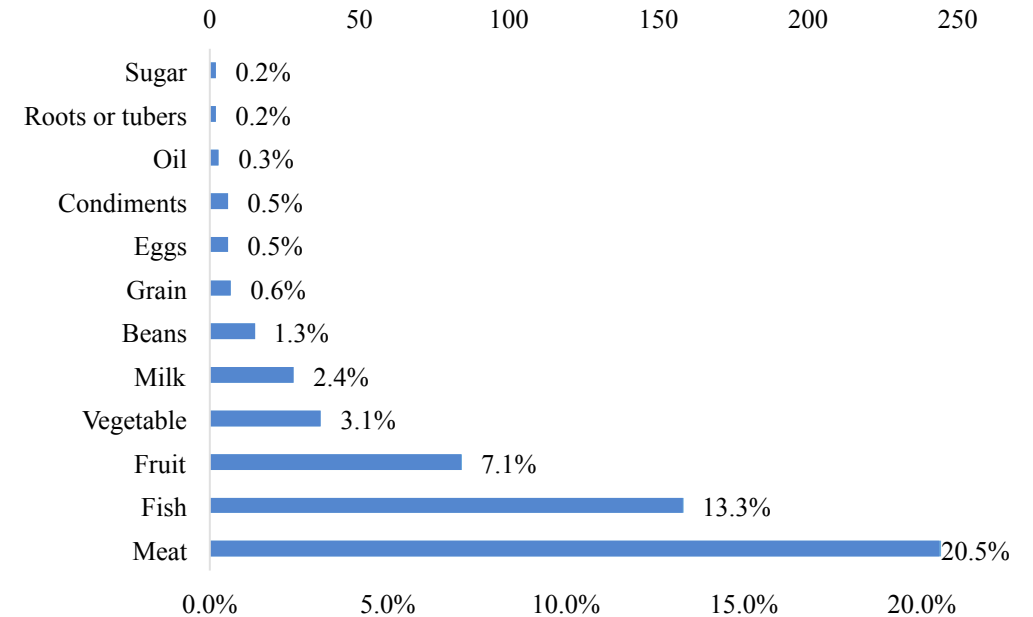
Good physical access: In 2015, 80% of surveyed urban households in Nanjing had a network distance to the nearest wet market or supermarket of less than two kilometers (Zhong et al., 2018).

Good time access: In Nanjing, supermarkets and wet markets are commonly open seven days per week and about 14 hours per day. Business hours are from around 6:00 to 20:00 for wet markets and 8:00 to 22:00 for supermarkets (Zhong et al., 2019).

Migrant vendor and urban food security: **Improving affordability**

• **Impacts on food affordability**

- ✓ According to our city-wide random survey of household food security conducted in Nanjing in 2015 (N=1210), about 67.5% (817) of surveyed households reported that they did not meet unaffordable issue over the past six months (Si and Zhong, 2018).
- ✓ About 22.2%, 5.6%, 1.9% and 0.9% of households had the issue of unaffordability with the frequency of once a month, once a week, more than once a week and every day, respectively;
- ✓ 16.3%, 9.6% and 2.7% out of 1210 surveyed households came across 1, 2 and 3 unaffordable food groups, respectively.



Unaffordable food groups reported by surveyed households in 2015

Concluding remarks

- Unlike bottom-up food localization in the Western countries, food localization in China is typically state-led.
- State-led food localization not only includes localizing food production but also localizing food wholesaling and retailing.
- State-led food localization has involved migrant, especially rural migrant into food provisioning system.
- Rural migrants have contributed to ensuring urban food security through the role of migrant farmers and migrant vendors, contributing to improving food availability and accessibility.

Thank you for your attention!

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