Rural Gentrification in Desakota

Farmland Politics, Alternative Food Networks, and the Emergence of New Farmers in Taiwan

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DEPARTMENT OF HUMAN GEOGRAPHY | LUND UNIVERSITY

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Chia-Sui Hsu

LUND
UNIVERSITY

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Abstract

After post-war land reform that took place between 1949 and 1953, most Taiwanese farmers became owner-cultivators working on small landholdings. Post-war land reform paved the foundation for economic development and industrialization, processes that squeezed the agricultural sector and created changes in farming villages. When Taiwanese agriculture showed signs of stagnation in the 1970s, farmers' perceptions of farming and landholding gradually altered, and resulted in changes in livelihood strategies. Although farmland was highly regulated and only allowed to be traded among farmers, farmland at peri-urban areas was often legally and illegally used or rented out by rural residents as sites for factories to help generate non-farming income. This situation changed after the amendment of the Agricultural Development Act in 2000, which opened up the eligibility of individuals with non-farming backgrounds for purchasing farmland — a small portion of which could then be used to build a farmhouse. Since a large proportion of the population was involved in agricultural production during the post-war period, this change in the use of farmland has created controversies over how farmland should be used and who should reserve the right to do so. This dissertation analyzes the relations between the farmland politics that emerged in the late 1990s and diverse rural in-migrations in Taiwan. It analyzes how deregulation of farmland policies have contributed to two processes of rural gentrification. On the one hand, rural gentrification is part of a continued process of deagrarianization, which has happened when farmers/landholders were given the opportunity to accumulate capital and change their social mobility during the farmhouse boom. On the other hand, farmland policies have allowed a small group of urbanite newcomers with limited experience with farming to adopt ecological farming. On social media, these newcomers are termed Smallholder Farmers (*Xiao Nong*) and New Farmers (*Xing Nong*). This dissertation suggests that the emergence of New Farmers in Taiwan constitutes a local response to the global alternative food movement, and that the New Famers' enthusiasm for an agricultural lifestyle is a special case of rural gentrification. This dissertation is based on fieldwork in Yi-Lan and Hualien. Both counties are located in the eastern part of Taiwan and, over the past two decades, have witnessed in-migrations of both affluent households who have purchased farmland in the countryside to construct single-family villas (farmhouses) for their second homes, and New Farmers who move to the countryside to realize their dreams of becoming alternative food producers. These processes challenge us to think about the transformation of farming practices and the roles of farmland in regions that have highly mixed agricultural and non-agricultural uses of land, referred in East and Southeast Asia countries as *desakota* regions. New farmers' experiences and challenges are mirrors that are useful for reflecting on Taiwanese agricultural development.

Key words: Alternative Food Networks, desakota, farmhouse, new farmers, rural gentrification. Taiwan

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To my grandparents

Contents

Acknowledgements

This PhD project has taken me a long time. Without friends who generously offered their time and energy to read my early drafts and patiently asked me to explain what I mean, I would not have been able to make it this far. My research interest in rural gentrification grows from my curiosity into creative newcomers who sought alternative ways of living in my hometown. As an old periphery, opinions on development of Eastern Taiwan have been mixed: Politicians and the old generation see economic growth and increased cooperation with capitalists from China as opportunities to boost the local economy while the young generation and newcomers believe that "slow" and locally-based development is the way to ensure the good life. Because of this PhD project I have been privileged to study the good life that newcomers embrace and the implications of such to local development.

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laughter and challenges. I am thankful to my wonderful parents-in-law, Gunvor Stenlund and Lars Göran Harsten, for their wealth of love and support. Thank you for collecting Benjamin from school during the intensive writing periods. Lastly, I want to thank my grandparents for moving to Hualien (*Houshan*). This beautiful place has taught me so much.

Abstract

After post-war land reform that took place between 1949 and 1953, most Taiwanese farmers became owner-cultivators working on small landholdings. Post-war land reform paved the foundation for economic development and industrialization, processes that squeezed the agricultural sector and created changes in farming villages. When Taiwanese agriculture showed signs of stagnation in the 1970s, farmers' perceptions of farming and landholding gradually altered, and resulted in changes in livelihood strategies. Although farmland was highly regulated and only allowed to be traded among farmers, farmland at peri-urban areas was often legally and illegally used or rented out by rural residents as sites for factories to help generate non-farming income. This situation changed after the amendment of the Agricultural Development Act in 2000, which opened up the eligibility of individuals with non-farming backgrounds for purchasing farmland — a small portion of which could then be used to build a farmhouse. Since a large proportion of the population was involved in agricultural production during the post-war period, this change in the use of farmland has created controversies over how farmland should be used and who should reserve the right to do so. This dissertation analyzes the relations between the farmland politics that emerged in the late 1990s and diverse rural in-migrations in Taiwan. It analyzes how deregulation of farmland policies have contributed to two processes of rural gentrification. On the one hand, rural gentrification is part of a continued process of deagrarianization, which has happened when farmers/landholders were given the opportunity to accumulate capital and change their social mobility during the farmhouse boom. On the other hand, farmland policies have allowed a small group of urbanite newcomers with limited experience with farming to adopt ecological farming. On social media, these newcomers are termed Smallholder Farmers (*Xiao Nong*) and New Farmers (*Xing Nong*). This dissertation suggests that the emergence of New Farmers in Taiwan constitutes a local response to the global alternative food movement, and that the New Famers' enthusiasm for an agricultural lifestyle is a special case of rural gentrification. This dissertation is based on fieldwork in Yi-Lan and Hualien. Both counties are located in the eastern part of Taiwan and, over the past two decades, have witnessed in-migrations of both affluent households who have purchased farmland in the countryside to construct single-family villas (farmhouses) for their second homes, and New Farmers who move to

the countryside to realize their dreams of becoming alternative food producers. These processes challenge us to think about the transformation of farming practices and the roles of farmland in regions that have highly mixed agricultural and non-agricultural uses of land, referred in East and Southeast Asia countries as *desakota* regions. New farmers' experiences and challenges are mirrors that are useful for reflecting on Taiwanese agricultural development.

Sammanfattning

Efter en landreform, som genomfördes i slutet av 40- och i början av 50-talet, blev de flesta taiwanesiska bönderna hemmansägare och odlade marken på små lantegendomar. Denna efterkrigsreform banade väg för en ekonomisk utveckling som väsentligt påverkade och förändrade bondesamhället. När det taiwanesiska jordbruket visade tecken på stagnation på 1970-talet, förändrades böndernas syn på markinnehav, vilket resulterade i förändrade försörjningsstrategier. Trots att innehav av jordbruksmark var strängt reglerad och endast tillät bönder att bruka marken, så utarrenderades eller utnyttjades stadsnära jordbruksmark av landsbyggdsbefolkningen, såväl legalt som illegalt, för industrianläggningar som kunde bidra till att generera extra inkomster till jordbruket. Denna situation förändrades efter ändringen av lagen om jordbruksutveckling (Agricultural Development Act) år 2000, som öppnade upp för att även individer utan jordbruksbakgrund kunde ges möjlighet att köpa jordbruksmark, där en liten del av marken kunde användas för att bygga en lantegendom. En stor del av befolkningen var involverade i jordbruksproduktionen under efterkrigstiden, vilket innebar att denna förändring av användningen av jordbruksmark gav upphov till kontroverser om hur jordbruksmark skulle användas och vem som skulle ha rätten att odla/bruka jorden.

I denna avhandling analyseras relationen mellan den jordbrukspolitik som utvecklades i slutet av 90-talet och landsbygsdsinvandringen i Taiwan. Analysen visar hur avregleringen av markinnehav bidrog till två processer av gentrifiering av landsbygden. Å ena sidan, en kontinuerlig deagrarisationsprocess, där bönder/markägare successivt avvecklade jordbruket, genom att de fick möjlighet att ackumulera kapital och förändra sin sociala status tack vare ”bondgårdsboomen” (dvs - det stora intresset att bygga små lantgårdar). Å andra sidan gav den nya jordbrukspolitiken möjlighet för en liten grupp stadsinvånare – nykomlingar – med begränsad jordbrukserfarenhet att utveckla ekologiskt jordbruk. På sociala medier kallas dessa nykomlingar ”småbrukare” (Xiao Nong) och ”nya bönder” (Xing Nong). Denna avhandling visar att uppkomsten av nya bönder i Taiwan utgör ett lokalt svar på den globala rörelse som verkar för alternativ livsmedelsproduktion. De nya böndernas entusiasm för en agrikulturell livsstil utgör en särskild form av lantlig gentrifiering.

Avhandlingen baseras på ett fältarbete i Yi-Lan och Hualien. Båda landskapen ligger i den östra delen av Taiwan, som under de senaste två decennierna fått vara med om inflyttning av såväl välbärgade hushåll, som köpt jordbruksmark för att bygga små enfamiljsbostäder (bondgårdar) som ett andra hem, en fritidsbostad, som av ”nya bönder”, som lyckats etablera sig som alternativa livsmedelsproducenter. Dessa två processer utmanar oss att problematisera över hur omvandling av jordbruksmetoder kan förändras och hur jordbruksmark kan användas i regioner som består av mycket blandad jordbruksmark, syftande på det som i östra och sydöstra Asien kallas *desakota*. Nya bönders erfarenheter och utmaningar utgör här värdefull kunskap att ta vara på och reflektera över, då den speglar det taiwanesiska jordbrukets utveckling.

Abstract in Chinese

台灣在二次大戰後進行土地改革，產生大量的自耕農，普遍來說耕作面積與規模都很小，絕大部分居民的生計與農業息息相關，因此早期整個社會基礎都奠立於上，自1970年台灣農業出現停滯現象，農民對農事與土地的想法出現轉變，雖然農地使用仍受到高度限制，且農地買賣僅侷限於農民，城市周邊的農地仍被鄉村居民以合法與違法的方式作為工廠用地以增加非農收入；上述改變在2000年農業發展條例（農發條例）修正案通過後更加劇，非農身分的個人得以合法購買農地，並且將該農地的一小部分興建農舍，此舉引發農地該如何使用與由誰使用的一系列爭論。本論文探討1990年代末的農地政治與多元遷徙入鄉的關聯，並分析農地去管制的政策如何影響鄉村仕紳化。本研究以宜蘭與花蓮的田野出發，這兩個縣市均位於台灣東部，過去二十年來吸引了兩類新移民，其一是有經濟資本可購買農地與興建農舍作為休閒別墅為主，其二是投入另類食物生產的新農。鄉村仕紳化在台灣以兩種形式進行，其一，以2000年後大量出現的農舍為例，鄉村仕紳化應視為持續離農的過程，農民/土地持有人透過農發條例第十八條（農民得在自有農業用地興建農舍）累積資產與提升社會移動的可能。其二，農地政策也促使一小群非農背景的都市人得以從事生態農業耕作，在社群媒體上，這群新移民被稱之為小農與新農，本論文建議將新農現象視為地方對全球另類食物運動的呼應，並將新農追求農業生活風格且入鄉耕作視為鄉村仕紳化過程的一部分。這些鄉村變遷的過程刺激我們思考農業如何進行轉型與 Desakota 區域（高度混合的農與非農土地）中農地所扮演的角色。新農的經驗與挑戰可做為台灣農業發展的借鏡。

Glossary

Agricultural Lifestyle	Defined in this dissertation as a lifestyle-approach to farming, rather than relying on farming as the main source of income.
Agriculture	Defined in this dissertation as including crops, fruit and vegetable production, rather than the broader usage that includes forestry, hunting and fishing which is used in the agricultural census in Taiwan.
Alternative Food Networks	Production and distribution of food that is built on the spatial proximity between producers and consumers and via venues such as Farmers' Markets, Community Supported Agriculture and initiatives of direct buying from farmers. Producers within AFNs tend to demonstrate high commitment to environmental ethics and sustainable development. Jarosz (2007) suggests to see AFNs not as a thing to be described (i.e. its attributes), but rather as practice that emerged from political, cultural and historical *processes.*
Capitalized Farmer	Defined in this dissertation as farmers who expand their livelihood strategy from sole farming to the provision of services to other farmers (such as hiring out of heavy farm machinery).
Conventional agriculture	Conventional agriculture, also known as industrial agriculture, refers to farming practices which include the use of chemical fertilizers, pesticides and herbicides.
Desakota	The term *desakota* is derived from the Bahasa Indonesian words for village (*desa*) and city (*kota*). McGee (1991) employs the term to analyze urbanization in Southeast and East Asian countries.
Earth Friendly Farming	The term earth friendly farming (*Youshan gengzuo*) refers to growing food without the aid of synthetic

	pesticides or chemical fertilizers and avoids using genetically modified organisms. Earth friendly farming refers to a farming method practiced by a small group of farmers, mostly new farmers. It can be classified as a type of alternative food production.
Family Farm	A farm owned or operated by a single family.
Farmer	Person directly engaged in agricultural production.
Farmhouse	House in which farm householders live. In this dissertation, this term denotes the type of rural house that was constructed after 2000 under the permission from the agricultural authority and municipality.
Feng	A unit of Chinese measurement equivalent to 66.6 m^2 or 1/10 Jia.
First Crop	First crop refers to the rice planted between January and April and harvested within the same year.
Intellectual	The Chinese term *Zhishi fenzi* (Intellectual) refers to an educated person. The term *Zhishi fenzi* is commonly translated to an "Intellectual" in English. Yet, the meaning of *Zhishi fenzi* is not fully translated. He (2006, p. 263) defines "an intellectual is one who commands knowledge and cultural symbols and who is able to use reason to go beyond the restrictions of his or her family, class and locality." Additionally, "an intellectual is understood as man of ideas, that is, who works on ideas and cultural symbols, and who is able to contribute to cultural production and circulation."
Jia	Unit of Chinese measurement equivalent to 0.97 ha.
New Farmer	Individuals who have little farming backgrounds and who have recently adopted an agricultural lifestyle.

Non-toxic Agriculture	The term Non-toxic Agriculture (*Wudu Nongye*) refers to growing food without the aid of synthetic pesticides or chemical fertilizers. This farming practice is suggested by the agricultural authority in Hualien, and as a way to distinguish itself from conventional agriculture.
Owner-Cultivator	"Farmer who carries out his own agricultural production, practices group farming or participates in managing a cooperative farm making use of his own labour, draft animals or farm machines. A farmer who has his work down by custom farmers shall be regarded as an owner-cultivator" (SAD, CAPD 1983:4, English version, cited in Bain (1993: xxxiv))
Part-time Farm Household	A part-time farm household refers to a farm family of which one of more members engage in part-time or full-time non-farm work.
Ping	*Ping* is a unit derived from traditional Japanese unit of measurement. The unit ping is commonly used for measuring the floor space of an office or apartment. One *ping* is about 3.3 m^2.
Second Crop	Second crop refers to the rice planted between May and September and harvested within the same year.
Smallholder Farmer	Smallholder farmer refers to farmers owning small plots of land on which they grow cash crops relying exclusively on family labor.

Acronyms and Abbreviations

ADA	Agricultural Development Act
AFA	Agriculture and Food Agency
AFNs	Alternative Food Networks
CAFAP	Cropping Adjustment and Farmland Activation Plan
COA	Council of Agriculture
CSA	Community Supported Agriculture
DPP	Democratic Progressive Party
EMR	Extended Metropolitan Regions
GDP	Gross Domestic Product
JCRR	Joint Commission on Rural Reconstruction
KMT	Kuomintang
MOI	The Ministry of the Interior
NGO	Non-governmental Organization
NRRM	New Rural Reconstruction Movement
NTD	New Taiwan Dollar
PGS	Participatory Guarantee System
RRA	Rural Rejuvenation Act
TRF	Taiwan Rural Front
WTO	World Trade Organization

Terms in Chinese

Adjusting cultivated system and reactivating farmland program	調整耕作制度活化農地計畫
Agricultural Development Act	農業發展條例
Agriculture and Farmland Development Association	中華民國促進農業農地發展協會
Agriculture and Farmland Resource Survey	農業及農地資源盤查
Bow-to-the-Land Farmers' Markets	彎腰市集
Conventional Agriculture	慣行農業
Da Hu	大戶
Dagong huan su	打工換宿
Democratic Progressive Party	民主進步黨
Earth-Friendly Farming	友善耕作
Earth-Friendly Smallholder Farmer	友善小農
East Coast Review	東海岸評論
Eastern Taiwan Studies Association	東台灣研究會
Ecological group	生態組
Farmers Academy	農民學院
Farmers' Association	農會
Farmhouse	農舍
Farmland Bank	農地銀行
Farmland Release Plan	農地釋出方案
Food Stabilization Fund	糧食平準基金
God of Heaven	老天爺
Golden Apple Snail	福壽螺

Guesthouse	民宿
He Pu Farmers' market	合樸農學市集
Holy land of Taiwan's democracy	民主的聖地
Hou Shan	後山
Hualien *Haoshi ji*	花蓮好事集
Huan gong	換工
Initiator of Yi-Lan's Agricultural Landscape Preservation Movement	宜蘭守護坊
Intellectual	知識份子
Kuomintang	中國國民黨
Land Expropriation Act	土地徵收條例
Land Law	土地法
Liang Bai Jia	倆佰甲
Mechanized contractor farmers	代耕業者
National Taiwan University Building and Planning Foundation (Yi-Lan Office)	台大城鄉基金會宜蘭工作室
New Farmer	新農
New Rural Reconstruction Movement	新鄉村建設運動
Newcomers	新移民
Nong Di Nong Yong	農地農用
Non-toxic agriculture	無毒農業
Production group	生產組
Regulations for Constructing Farmhouses on Agricultural Land	農業用地興建農舍辦法
Rice Division Program	稻米生產及稻田轉作計畫

Rice Paddy Utilization Adjustment Program	水旱田利用調整計畫
Rice-Fertilizer Barter Program	肥料換穀制度
Sino-American Joint Commission on Rural Reconstruction	中國農村復興聯合委員會
Small Landlords and Big Tenants	小地主大佃農
Smallholder farmer	小農
Suhua Highway Improvement Project	蘇花公路改善計畫
Superior Farm Households Statistics	主力農家經營概況調查
Tea seed pomace	苦茶粕
The Department of Irrigation and Engineering	農田水利會
The National Meeting of the Farmers' Market	農學市集研討會
The Taiwan Rural Front	台灣農村陣線
Three-section compound farmhouse	三合院

List of People's name in Chinese

Chen Meng-Kai	陳孟凱
Chen Ting-Nan	陳定南
Chi Po-Lin	齊柏林
Hsia Li-Ming	夏黎明
Hsiao Tseng	蕭錚
Lai Ching-Sung	賴青松
Liang Shuming	梁漱溟
Peng Tso-Kwei	彭作奎
Tsai Pei-Hui	蔡培慧
Wang Tso-Jung	王作榮
Wen Tiejun	溫鐵軍
Yang Ru-Man	楊儒門
Yu Shyi-Kun	游錫堃

List of Place names in Chinese

Changhua	彰化
Chi-Shang	池上
Dongshan	冬山
Du-Lan	都蘭
Guan-Shan	關山
Hsinchu	新竹
Ji-An	吉安
Kaohsiung	高雄
Lu-Yeh	鹿野
Mei-Nong	美濃
Miaoli	苗栗
Nantou	南投
Nei-Cheng	內城
Pingtung	屏東
Sanxing	三星
Shen-Gou	深溝
Shou-Feng	壽豐
Taichung	台中
Taoyuan	桃園
Yan-Liao	鹽寮
Yuanshan	員山
Zhen-Xiang	蓁巷

1. Introduction

Background

In 2004 I left Hualien, my hometown, to go to university in Taipei. Since then, the peri-urban landscape along the railway between Hualien and Taipei has changed rapidly. Newly-built farmhouses have become icons of desirable countryside living and continue to attract non-local capital investment. In the fields next to these newly built farmhouses, farmers can be seen tilling the land. Fallow farmland waiting to be sold for lucrative residential and industrial development is also common. During my fieldwork I took a bike ride through Ji-An, a township adjacent to Hualien City, and made an interesting observation — land owners had planted banana saplings in front of their newly built farmhouses (Photograph 1). This specific choice, according to a local farmer, serves two purposes. Firstly, it demonstrates that the land is still used for farming, in accordance with regulations set by the Agricultural Development Act [1] (ADA). Secondly, banana saplings were chosen because they are particularly vulnerable to typhoons. In the event of a typhoon, landholders would then become eligible for agricultural subsidies if their banana trees are damaged. And once residency permits are issued, it is likely that the banana trees will be cleared and replaced with well-maintained lawns and gardens. Photograph 2 shows examples of damaged banana trees.

[1] Agriculture in Taiwan was once considered to be the backbone of economic development, whereas the economic importance of agriculture began to diminish during the 1970s. It was against this background that the Taiwanese government implemented the ADA in 1973 to improve the living standards of farmers and sustain agricultural development. Since 1973, the ADA has been amended several times. The amendment dealt with in this study is the one from 2000, and in particular Article 18 of it. The aim of ADA was "to ensure the sustainability of agricultural development, to address agricultural globalization and liberalization, to promote reasonable farmland uses, to stabilize agricultural production and sale, to increase farmers' income and enhance their well-being, and to raise the living standard of farmers."

Photograph 1. Newly-built farmhouse in Ji-An, Hualien.
Source: Author's own photo.

Photograph 2. Newly-built farmhouse with damaged banana trees.
Source: Author's own photo.

I begin this dissertation by exploring the intertwined issues of land use change, agricultural history, and the rapid residential development of newly-built farmhouses in the peri-urban areas of Eastern Taiwan. I focus on the emergence of an ideal of attractive countryside living that real estate agents and developers are working hard to sell to middle-class urbanites. A farmhouse typical of this kind of development includes a modern and newly-built villa with a neat, well-maintained lawn and garden in the front yard. On January 4, 2014, I interviewed a woman who had moved into a farmhouse typical of this kind of development in Hualien in 2011. I was trying to understand their countryside lifestyle along with the types of farming that were established by these newcomers in their everyday life. In the front yard of this woman's house, as with the other newly-built farmhouses that I had seen, was a neatly maintained lawn. In their backyard, they kept a plot of farmland that had been left to lie fallow. This woman talked about how her everyday life had changed since they moved. Taking care of the front yard and a hobby vegetable garden took up most of her spare time. She and her husband had become *weekend farmers*:

> What we grow is like what those *You Shan* (earth-friendly in Chinese) [farmers do], we avoid using chemical fertilizers and pesticides, unless it is needed…For me, the dwelling part of a farmhouse should maintain some connection with agriculture. It should not only have an aesthetic appearance and provide enjoyment of life…I feel it should include… a living that is based on the farmhouse. For example, the "food miles" [from the vegetable garden to our kitchen] is very short.

For her, the luxury of living in a farmhouse is not only about the spacious house and lawn that everyone talks about; it is about the possibility of growing one's own food. Her and her husband can easily harvest fresh vegetables from their garden. Although far from being self-sufficient, they are satisfied that they can grow their own food in a manner different from conventional agriculture[2] (*Guan xing nongye*) that depends largely on the use of chemical fertilizers and pesticides. This woman's approach to the farmhouse is not unusual, at least from what I saw in Hualien. She is one of many Taiwanese people who were inspired by the grassroots alternative food movements that

[2] Conventional agriculture refers to farming practices that include the use of chemical fertilizers, pesticides and herbicides.

emerged during the late 2000s that were encouraged regaining one's food sovereignty through bringing fallow farmland[3] back to cultivation.

The gentrified peri-urban agricultural landscape is what attracted me to carrying out this study in the first place. Taiwanese agriculture has changed significantly over the past 70 years, from a time when a large proportion of the population was involved in small-scale, family-based farming, to the current situation where farmers struggle to survive from agricultural activities. Agriculture was once perceived as the backbone of economic development in Taiwan (Ho, 1978; Huang, 1993). After World War II, the agricultural sector accounted for one-third of the country's net domestic product, more than half (56 percent) of the total employment, and 92 percent of the total exports (Mao & Schive, 1995). It was widely believed that extensive land reforms[4] in Taiwan, South Korea and Japan in the late 1940s and early 1950s paved the way for subsequent agrarian change and economic development (Byres, 1986; Ho, 1978; Kay, 2002). The land reforms were based on the belief that family farming is more efficient and productive than leasing farmland to tenants. After the land reform that was enacted between 1949 and 1953, Taiwanese agriculture became dominated by many owner-cultivators that cultivated relatively small pieces of land. After this, Taiwanese agriculture enjoyed a period of rapid growth until it showed signs of stagnation in the early 1970s (Ho, 1978; Huang, 1993).

During the late 1970s the agricultural sector gradually became marginalized due to rapid industrialization and an increase in non-farming employment opportunities and urbanization. Since then, farming has rarely been viewed as an economically viable activity and farmers who left farming did one of two things: they either moved to cities in search of better economic security, or

[3] In the dissertation, the terms "fallow land" and "set-aside land" refer to arable land that is not under rotation, there being reasons to let it recover its fertility. Green-manure crops are usually planted in set-aside land so as to improve the soil chemistry and increase the biodiversity of the arable land. This practice is introduced so as to reduce the costly surpluses produced under the regime of international agricultural trade.

[4] There were two land reforms in post-war Taiwan. The first, which in land reform studies is known as the Land Reform Experience of Taiwan, consisted of a rent reduction program (1949), the sale of public land (1951), and the Land-to-the-Tiller Act (1953). Landlords were permitted to retain up to 3 ha of tenanted paddy fields. The aim of this land reform was to redistribute ownership rights, sustain self-sufficient family farms, and promote societal reform. The second land reform was not as well-known as the first. See Bain's (1993) discussion for details on the second land reform in Taiwan.

they stayed in rural areas and became dependent upon the employment opportunities that arose through rural industrialization (e.g. factory work) (Gallin & Gallin, 1982; Niehoff, 1987; Sando, 1986). In 2017, the contribution of agricultural production only accounted for 1.72% of the Gross Domestic Production (GDP) and jobs in agriculture account for only 4.91% of total employment (Council of Agriculture, 2017a).

The gentrified peri-urban agricultural landscape is a result of the marketization of farmland that was facilitated by the amendment of the Agriculture Development Act (ADA) in 2000. The background to this amendment has to do with the state's intervention in rice production. Rice farming used to be one of the main economic activities in Taiwanese agriculture. Before the 1970s the state's rice policy was to produce as much rice as possible from limited agricultural resources. Rice was largely seen as the main staple food and an important source of foreign exchange earnings. The state played an important role in rice production, and their intervention ranged from cultivation and use of fertilizer[5] to stabilization of the market price of rice (Chen, Hsu & Mao, 1974). The scale of rice production in Taiwan was approximately 750,000 hectares between the mid-1950s and the mid-1960s. In 1974, as a response to the world energy crisis (accompanied by a serious worldwide shortage in rice production), the Taiwanese government introduced the Food Stabilization Fund[6] (*Liangshi ping zhun jijin*) to stabilize the price of rice. With a budget of 3 billion NTD, the fund supported rice farmers through purchasing rice at prices exceeding market prices (Council of Agriculture, 1999). The rice price guaranteed purchase program created an incentive for farmers to participate or stay in rice farming, thus resulting in a persistent rice surplus. In 1976, the rice production reached its peak, accounting for 49.64 % of the total crop production in Taiwan (Council of Agriculture, 2017a).

The success of rice production did not last long, however. The Taiwanese government quickly found that the rice surplus challenged its storage capacity and budget plans. Although the government adjusted its price support program by limiting planned purchases to 970 kilograms per hectare and

[5] This includes the Rice-Fertilizer Barter Program, which began in 1948 and ended in December 1972. The rice-fertilizer barter ratios were officially set at levels that made chemical fertilizers expensive for rice.

[6] The Food Stabilization Fund was implemented between 1974 and 1998.

instructed farmers' associations in each county to directly purchase rice from farmers (Council of Agriculture, 1999), rice surplus remained a big issue. The rice surplus became even worse when per capita consumption of rice decreased rapidly during the 1980s[7]. Instead of encouraging farmers to produce more rice, the state began to implement various programs that curtailed rice production. This included programs that encouraged farmers to adopt the cultivation of other high-valued grains and crops, as well as the creation of set-aside farmland subsidies. The subsidized set-aside programs started with the Rice Division Program (1983-1996) and was followed by the Rice Paddy Utilization Adjustment Program (1997-2010). As a result of the effective set-aside programs as well as the rapidly changing food consumption patterns, the scale of rice production in Taiwan has rapidly decreased since the 1980s (Figure 1). From the 2000s onwards, the scale of Taiwanese rice production has been maintained at a level of around 250,000 hectares.

During the 1990s, discussions around agricultural and farmland policies were driven by international agricultural trade. Set-aside farmland policies on paddy fields were mainly used to prepare the agricultural sector for dealing with the impacts of a liberalized agricultural trade policy after Taiwan joined the World Trade Organization (WTO) in 2002. The withdrawal of the protective intervention in rice production that such an important ban brought about created economic uncertainties for rice farmers. On the one hand, the Council of Agriculture (COA), the Agricultural Authority in Taiwan, continued to subsidize and support farmers. On the other hand, the agricultural authorities began to take a more liberalized approach to the use of rural space. The idea was to search for alternatives that could utilize the countryside and farmland better and improve farmers' living standards in an era of a rapidly changing market situation. The amendment of ADA in 2000, which included measures that contributed to the marketization of farmland and deregulated the strict usage of farmland, and the Farmland Release Plan (implemented in 1997) are both examples of this.

[7] This is mainly due to changing food consumption patterns after the economic situation improved. Rice was consumed three times a day by the majority of families in Taiwan during the 1960s and 1970s. The average consumption of rice per capita was as high as 131 kilogram in 1972 (Chen, Hsu, Mao, 1974). From 2010 on, the average rice consumption per capita per year has been about 45 kilograms (Council of Agriculture, 2017a).

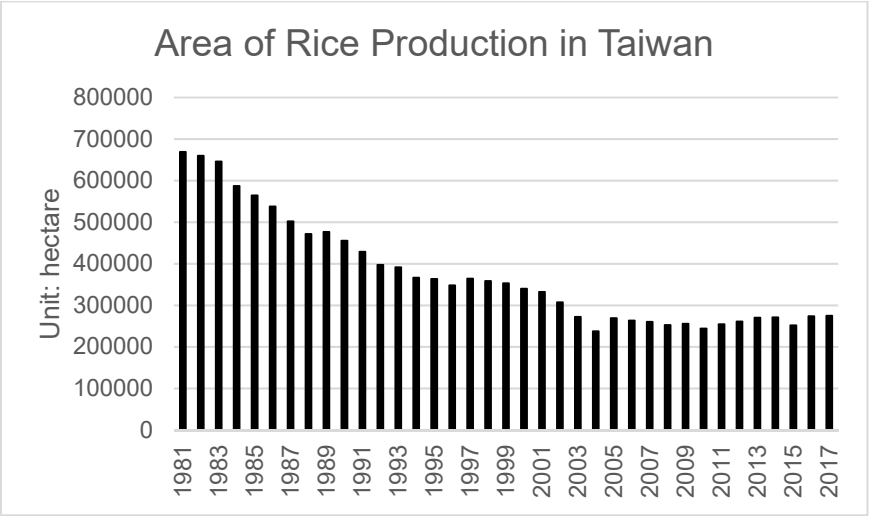

Figure 1. The area of rice production in Taiwan.
Source: Agriculture and Food Agency, COA.

Prior to the amendment of ADA in 2000, agricultural land was only allowed to be traded among farmers, the conversion of agricultural land to urban-residential land was generally prohibited, and the use of farmland was highly regulated[8]. This situation changed after 2000, when individuals without farming backgrounds became able to purchase farmland[9]. In addition, the amendment allowed *farmers* to use a small portion of their farmland for residential development. The only requirement for building new farmhouses is that the farmland where the house was located should continue to be used for agriculture and the farmhouse should not affect agricultural production or the development of farming villages. To avoid farmhouses becoming sought-

[8]According to the Land Law, the transfer of private farmland was only valid when it was between farmers. However, the trade of farmland between farming and non-farming individuals became common after the 1970s, due to rapid urban residential development and industrial development. Although it was illegal to purchase farmland without having a farming background, the interest in the potential value of farmland (in residential and industrial development) has played an important role in local politics. This regulation was abolished after the amendment of ADA in 2000 (Huang, 2002, p.78-79).

[9] The landholders of farmland in Taiwan are thus categorized into two types: those who acquired/owned farmland prior to 2000 and those who did so after 2000.

after housing commodities, there were strict regulations put in place around the buying and selling of these newly-built farmhouses[10].

Since 2000, the amendment of ADA and the related boom in newly-built farmhouse in the Taiwanese countryside had led to intense debate. Controversies around the amendment of ADA have centered on the eligibility of individuals to own farmland and on how farmland ought to be used. Although there are strict regulations, it is difficult to ensure that farmland will continue to be used for agricultural production. Prior to the amendment, Peng Tso-Kwei[11], the former Minister of the Council of Agriculture (COA) warned that such changes brought about by the amendment could bring forth a new group of rural residents who would be registered as "farmers." This would make them eligible for subsidized farmers' welfare, tax reductions and agricultural subsidies. He predicted that these newcomers would seek these benefits even though they might demonstrate little interest in engaging in or entering agricultural production. Unable to repel pressure from politicians (since both parties were in favor of this amendment), Peng resigned to demonstrate his deep belief that farmland should be reserved for agriculture, as illustrated in the Chinese phrase *Nong Di Nong Yong*. The development of Taiwanese agricultural policies such as in the amendment of ADA in 2000 shows that the state had shifted its farmland policies from highly protective and regulated, to a more liberalized land market. The marketization of farmland has directly and indirectly meant introduction of new groups of rural residents.

[10] In terms of the amendment of ADA, farmhouse owners who purchased land after 2000 were allowed to build a farmhouse after owning the land for two years and to sell their farmhouses after owning it for five years.

[11] All Chinese names used in this dissertation are presented in the order of surname then personal name (as is convention in Chinese).

Returning Home to the Countryside

Since the year 2000, ideas of rural living have been idealized as desirable lifestyles for many Taiwanese people. Owning a small plot of land, growing one's own food, and establishing better social connections with neighbors have become popular draws to the countryside for urbanites. The pursuit of a countryside lifestyle has taken two forms. One of these is often practiced by the "baby boomers", a generation of six million Taiwanese who were born between 1946 and 1966. They view moving away from the city as an important part of their retirement projects (Lin, 2006). With higher economic capital, this rural in-migration often involves the trading of farmland and the construction of new farmhouses. After the amendment of ADA in 2000, several peri-urban and rural areas in Taiwan have become popular destinations for pursuing the Chinese poet Tao Yuanming's (AD 365 – AD 427) call to return home to the countryside (*Gui yuan tian ju*). Before 2006, there were about 1500 housing permits for farmhouses issued annually. Applications for construction of farmhouse permits[12] (construction licenses) increased rapidly from 1632 in 2009 to 4532 in 2011. These new farmhouses are concentrated in Yi-Lan, Nantou, Miaoli, Taoyuan, Hsinchu, and Hualien Counties.

The second form of rural in-migration has been undertaken by a young generation of farmers. Over the past decade, these newcomers have attracted enormous interest on social media. Their motivations have been wide, ranging from being drawn to certain lifestyle aspects and taking advantage of certain entrepreneurial opportunities, to a desire to live in accordance with specific political and environmental ideologies. Many of them use the concept of a social enterprise [13] to run an agricultural business. The proliferation of

[12] http://cpabm.cpami.gov.tw/FarmStatistical/Farm.html and the Statistical Yearbook of Construction and Planning of Taiwan and Fuchien Area from Construction and Planning Agency, MOI http://www.cpami.gov.tw/

[13] The term "social enterprise" is used here to refer to enterprises that have both business and social goals. The social goals embedded in New Farmers' farming business include the reduction of differences in resource allocation between urban and rural areas, school lunch projects and revitalization of the rural economy.

initiatives like farmers' markets, Community Supported Agriculture[14] (CSA) and Direct Buying from farmers have both had important impacts on this movement and are a result of this movement. By using social media as a marketing tool, rural life rapidly becomes a fashionable example of combining certain lifestyle aspects and work. Social media also has begun to use terms like *Xin Nong* (New Farmer[15]), *Xiaonong* (Smallholder Farmer) and *Youshan Xiaonong* (Earth-Friendly Smallholder Farmer) to illustrate urbanites' interest in the pursuit of certain kinds of agricultural lifestyles. In the cities, these terms are used as new labels for ecologically friendly agricultural products, since they indicate a specific type of farming. This interest and engagement in agriculture that is shown by young and university-educated individuals is a recent phenomenon in Taiwan. Few academic studies have addressed the emergence of New Farmers and their potential implications for agriculture and for rural communities (Cheng, 2014; Chu, 2015; Kuo, 2012; Tsai, 2016). Tsai (2016) uses the term *Agricultural Renaissance* (*Nongyi fuxing*) to illustrate the increased enthusiasm of Taiwanese urbanites in farming and their artistic approach to farming culture and agriculture.

In Yi-Lan and Hualien (the study area of this research) (Figure 2), rural in-migrations by these two groups have created an intriguing peri-urban landscape. The farmland rented by these new farmers was mostly either abandoned or fallow land found in undesirable locations (with poor accessibility to irrigation water or to machines). On more fertile land or land found in better locations, individuals or households with sufficient economic capital have often constructed new farmhouses. The marketization of farmland facilitated by the amendment of ADA in 2000 has produced a highly mixed peri-urban agricultural landscape. According to *Yi-Lan Shou Hu Fang*, the initiator of Yi-Lan's Agricultural Landscape Preservation Movement, the number of newly-built farmhouses in Yi-Lan has steadily increased since 2010 by an average of 700 houses per year. Most of the newly-built farmhouses are

[14] Community Supported Agriculture is a food production and distribution system that directly connects farmers with consumers.

[15] For the definition of "New Farmer", see p.20 of the glossary. In social media, newcomers to farming also adopt the term "Smallholder Farmers" (*Xiao Nong*) to distinguish themselves from conventional farmers. In this dissertation, I use the term New Farmer to highlight their recent entry to agricultural production.

concentrated in peri-urban areas and were constructed after 2006[16]. These villa-like luxury farmhouses add new elements to the patchwork of peri-urban agricultural landscapes. The highly mixed agricultural and non-agriculture land-uses and economic activities that characterize peri-urban areas have been studied by Terence McGee who coined the concept of *desakota*[17], an urban model of Southeast Asia (Ginsburg, Koppel, & McGee, 1991). *Desakota* refers to a region of highly mixed agricultural and non-agricultural economic corridors extending between big city cores, and characterized by "agriculture, cottage industry, industrial estates, suburban development and other uses existing side by side" (McGee, 1991, p.17). The farmhouse booms investigated in this study are part of the processes of *desakotasasi* (urbanization in Southeast Asian countries) and gentrification. The uniqueness of the gentrification in the *desakota* regions is in the increased capital investment and rent-seeking behaviour in the smallholding-oriented farmland market by various actors that happens in connection with different economic activities (like organic agriculture, rural tourism and residential development).

[16] After the completion of the Hsueh-Shan Tunnel in 2006 (the longest road tunnel in Taiwan), the travel time between Taipei (the capital city of Taiwan) and Yi-Lan was reduced to one and a half hours. This has made rural areas more accessible to urbanites. As a result, those who prefer to live in rural localities and who are willing to commute to the city for work can live in the countryside.

[17] The term *desakota* is derived from the Bahasa Indonesian words for village (*desa*) and city (*kota*) (McGee, 1991).

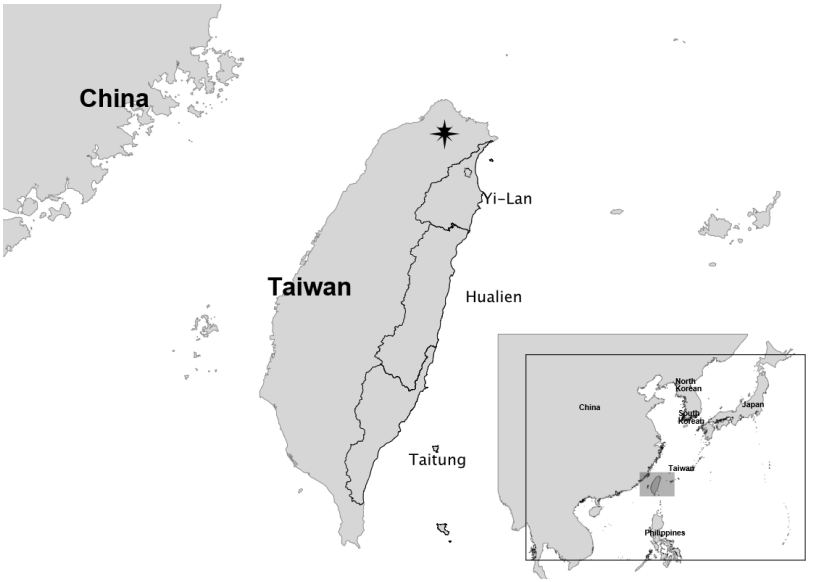

Figure 2. Counties along the eastern part of Taiwan
Note: This map was produced by Dennis Raylin Chen for this dissertation.

In Western countries, changing social composition and changing means of production in the countryside have been studied as processes of rural gentrification (Phillips, 1993; Smith& Phillips, 2001; Solana-Solana, 2010; Stockdale, 2010). The processes were mainly brought about by in-migration of the affluent and were characterized as involving the refurbishment of rural properties and the increased consumption of natural amenities. There has been little attention directed at debates concerning the revitalization of agriculture and farmland more generally. Most studies of rural gentrification assume that gentrification occurs in the post-industrial or post-productivist countryside (Bryson & Wyckoff, 2010; Hines, 2012). This neglect is probably due to the fact that studies of (rural) gentrification have been based upon the assumption of there being distinctive boundaries between the urban and the rural. In this study, I challenge this assumption by reporting on a case of gentrification characterized as involving the pursuit of agricultural lifestyles in *desakota* areas. I argue that rural gentrification in a *desakota* context involves investment in new land-uses including changes in built environments and upgrading in connection with agricultural production. The former, which can

be characterized as capital investment and rent seeking in farmland markets and changes in the built environment, is part of continued processes of deagrarianization in *desakota*. The latter, which involves the upgrading of agricultural practices through the application of ideas of alternative food networks[18] (AFNs), presents a special case of gentrification in agriculture.

In this study, I use the term farmland politics to refer to controversies concerning farmland and related rural in-migrations that surfaced in Taiwan after the year 2000. I examine how agricultural and farmland policies have contributed to or deterred rural gentrification in Taiwan. I unpack one of the key ideas circulated in farmland politics in Taiwan, that of reserving farmland for agriculture, *Nong Di Nong Yong*, an ideology critiqued by Huang (2002) but shared by many *Zhi Shi Fen Zi*[19] (Intellectuals in Chinese), to examine a series of associations and entanglements in the Taiwanese countryside. I argue that the analysis of rural gentrification in Taiwan needs to consider the emergence of alternative food movements. The emergence of interest in having greater control over one's food sources is hardly mentioned in farmland politics in Taiwan as a pull factor in attracting the urbanite newcomers to the countryside. Undertaken by a new generation of producers originally from the cities, the emergence of AFNs in Taiwan has developed in a close relationship with intellectuals' responses and actions around *solving* the crises of farming villages[20] from *within* (TRF, 2012a, 2012b).

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[18] In the 1990s, farmers' markets and CSAs emerged in Europe and North America. The emergence of these alternative food networks (AFNs) involved a new type of relationship between producers and consumers, one that builds on spatial proximity and trust (Goodman, DuPuis, & Goodman, 2012; Jarosz, 2008).

[19] The term "*Zhishi Fenzi*" refers to an educated person and is commonly translated to "intellectual" in English. Yet with use of the term "intellectual" the meaning of "*Zhishi Fenzi*" is not fully translated. He (2006, p. 263) defines *Zhishi Fenzi* as "an intellectual is one who commands knowledge and cultural symbols and who is able to use reason to go beyond the restrictions of his or her family, class and locality" and as one who "works with ideas and cultural symbols, and who is able to contribute to cultural production and circulation."

[20] In the dissertation, I use the term *crises of farming villages* rather than referring to an *agricultural crisis* generally. An agricultural crisis is associated with low productivity, poor farmers, and other internal problems for agricultural development. In using the idea of the "crises of farming villages", I refer to broader structural issues in agriculture, such as the farm family life cycle, the frequent lack of incentive for young people to take up farming, farm households' insufficient income from agricultural production and the use of farmland for non-agricultural purposes.

In this study, I use two lines of thought to analyze processes of rural gentrification. First, I use the farmhouse booms in Yi-Lan and Hualien as case studies in examining relationships between the marketization of farmland and rural gentrification. Secondly, I focus on a small group of urbanite newcomers who have little farming experience and have adopted a farming life and strive to become New Farmers in Yi-Lan and Hualien. This two-layered analysis provides insight that is key to understanding the challenges of agricultural development in contemporary Taiwan, as well as the opportunities and challenges that alternative food producers face. The grassroot alternative food movement[21], parallel to the housing boom of newly-built farmhouses, offers a counter perspective on how farmland in the *desakota* regions can continue to be used in agricultural production.

In researching and writing this dissertation, it has become increasingly clear to me that farmland politics from the 2000s onward have played a major role in the rise of rural in-migration and capital investment in the Taiwanese countryside. I find liberalized farmland and agricultural policies in the 1990s and 2000s to have loosened a once highly controlled grip on access to farmland and (directly and indirectly) encouraged the emergence of two different groups of new rural residents: farmhouse owners who have little intention of entering agriculture and New Farmers who proliferate as AFN producers. This examination of a wide range of rural gentrification processes contributes to a clearer understanding of the roles of farmland and agriculture in *desakota* regions.

[21] In starting this research, I focused on the landscape of newly-built farmhouses that urbanite newcomers wished to have. Following debates on farmland politics that took place, I found that farmers had mixed attitudes toward the amendment of ADA in 2000. Those who became active in organizing events for discussing the impact of the amendment of ADA were largely those with urbanite and higher educational backgrounds.

Study Aims and Research Questions

My curiosity about how and why a countryside lifestyle has become desirable for Taiwanese urbanites and how these rural in-migrations are related to agrarian change has inspired this research project. The aim of this study is to examine how changes in farmland and in agricultural policies have contributed to rural gentrification and what the consequences of these processes are. I use agricultural history as a basis for mapping out changes in rural households' social mobility that took place after the post-war land reform. This background is crucial to understanding the conflicts that have been brought about by the amendment of ADA in 2000 and by the rural gentrification that has taken place. The aim of the study is three-fold: firstly, I seek to explore why and how a countryside lifestyle has become desirable for a small group of Taiwanese urbanites and how the pursuit of a countryside lifestyle may contribute to rural gentrification; secondly, I aim to examine a specific kind of rural in-migration that has been associated with food sovereignty and ecological farming practices, together with the impacts that this wave of in-migration has had on Taiwanese agriculture; and thirdly, I critically examine the farmland policies involved and their relations to the alternative food movement. The following research questions have guided me:

1. How have agricultural and farmland policies contributed to or deterred rural gentrification in Taiwan's eastern counties?
2. How does Taiwanese urbanites' interest in a countryside lifestyle relate to the emergence of alternative food networks?
3. How do urbanites' interest in alternative food provisioning and active participation in alternative food production relate to processes of rural gentrification?
4. What are the challenges and opportunities of alternative food production in desakota regions?
5. Does gentrification help or harm agricultural development and what are its implications for agricultural policies?

Structure of this dissertation

Chapter 2 presents a contextual background on the history of family farming, farmland development, and agriculture in Taiwan. In particular, I present the dynamic social mobility changes that occurred in relation to the structure of small-sized landholdings that developed after the post-war land reform. I also present a history of the state's intervention in rice production and inquire into how this intervention relates to farmland policies since the 1980s. This overview provides a useful background for analyzing different rural in-migrations and the state's intention of overcoming the low food self-sufficiency rate. Chapter 3 presents the theoretical framework that has guided me throughout my research and analysis. The theoretical framework builds upon the core concepts of *desakota*, rural gentrification and AFNs. Chapter 4 presents methods that were used for collecting, analyzing, and interpreting the empirical material.

Empirical findings and their analysis and discussion are presented in Chapter 5, 6, and 7. Chapter 5 examines the increased capital investment and the in-migrations that have occurred in Yi-Lan and Hualien in relation to the farmhouse boom that took place after 2000. I employ the concept of *Hou Shan* (behind the mountain) to examine the implications of disinvestment in a region that has been viewed as lagging behind other parts of Taiwan. I employ the *desakota* concept in analyzing the case of rural gentrification in a Taiwanese context. I analyze how farmland and transportation infrastructure have been a part of the discourse concerning the production of a rent gap in which investors, developers, real estate agents, and newcomers can cash in. I conclude the chapter with an analysis of the main actors involved in a farmland preservation movement and its relation to farmland politics. Chapter 5 answers the first and the fifth research questions.

Chapter 6 presents an analysis of why and how an agricultural lifestyle has become desirable for a small group of Taiwanese urbanites. I start with the events and initiatives in the city that have directly and indirectly nurtured the emergence and development of AFNs. Following this, I turn to the motivations of New Farmers' and their experiences and challenges of living an agricultural lifestyle. Based on the interviews I have had with urbanite newcomers who have recently adopted a farming life, I build an explanation

of why and how farming has become attractive to young and highly-educated urbanites. Chapter 6 answers the second and the fourth research question.

Chapter 7 provides an analysis of the relationship between rural gentrification and alternative food production using a case study from Nei Cheng Village, Yi-Lan. I analyze how the urbanites' increased interest in alternative food production and distribution can gentrify agriculture. I direct attention to the roles of social and cultural capital in transforming farmland from once marginalized land into sites of experience production. I examine the relationship between the rent gap and highly-valued agricultural produce that has been cultivated and distributed within AFNs. Chapter 7 answers the third research question.

Chapter 8 summarizes general conclusions and the key contributions of the study.

2. The Family Farm, Farmland Development, and Agriculture in Taiwan

Post-war land reforms[22] have played an important role in transforming Taiwan from an agriculture-based economy into an industrial, technological, and financial-based economy. The land reform that took place between 1949 and 1953, carried out with underlying ideas that were equity-oriented, was largely a tenancy reform, in which the majority of tenants were affected (Apthorpe, 1979). Later, the land tenure arrangement brought about by this land reform – which meant that a large number of cultivators became owners of small-sized farms – was thought to play an important role in rural industrialization[23], a process that took place shortly after the land reform (Hsiung, 1996; Niehoff, 1987). In addition to rural industrialization, many farm households chose to leave to cities for better employment opportunities. Researchers such as Apthorpe (1979) argue that there was a weak relationship between post-war land reform and labor flows from agriculture to industry. Nevertheless, the impact of the size of farms on whether farmers' chose to adopt practices of part-time farming or non-farm employment have been indirectly examined in ethnographic research on sociocultural change in rural villages (Gallin & Gallin, 1982; Sando, 1986). The production costs of farming a small piece of land were high, and the prices of agricultural products

[22] There were two major land reforms in contemporary Taiwan. The first one happened during the late 1940s and the early 1950s. The second one was launched in 1982 with the intention of creating a new land-tenure system that would allow for the enlargement of farm operations. See details on the second land reform in Bain (1993).

[23] Here, the term rural industrialization refers to industrialization that takes place in rural areas, and does not refer to the export processed zones that are commonly found in developing countries.

were low. Many farmers and farmers' children were forced to seek non-farm employment or to let their farmland lie fallow due to an increased income gap between farming and non-farming households (Huang, 1993). As a part of rural industrialization, factories were also built both legally and illegally on farmland[24]. The Agricultural Development Act[25] (ADA) was implemented in 1973 as a response to the worsening situation for Taiwanese agriculture. Then during the late 1970s, the agricultural authorities called for a Second-Stage Agricultural Land Reform[26] (1983-1985) – which was meant to accelerate land consolidation, mechanization and co-operative and entrusted farming (Bain, 1993). The structure of small farms, legacies of post-war land reform, were viewed by planners and politicians as problems that hindered the development of industrial agriculture. Farmland revitalization during the late 1990s was shaped by different agricultural policies, one of them being an extension of the state's intervention in rice production and the other related to the capitalist need to find new sites of capital accumulation. In 2000, issues related to small farms were addressed by the amendments to the ADA – which were designed to encourage the marketization of farmland to facilitate enlargement of farm operations.

In this chapter, I review the history of Taiwanese agriculture, with a focus on post-war land reforms and related rural changes. I begin with an overview of the development of Taiwanese agriculture. Then, I move on to an examination of the land reform that took place between 1949 and 1953 and the rural changes that followed. I pay attention to the relationships between

[24] Rural industrialization has created severe environmental problems such as pollution of irrigation water and fragmentation of agricultural land. According to the COA's agricultural land use survey published in 2017, factories account for the main non-farming use of farmland (13,859 hectares), followed by residential development (6,793 hectares), and farmhouse development (4,930 hectares).

[25] The Agricultural Development Act (ADA) was drafted by the Chinese Agricultural Society based on an intensive study of Agricultural Basic Law in Japan and Germany. The aim of the Act was to encourage cooperative forms of management and entrustment without contravening existing land reform laws (Bain, 1993).

[26] One of the main concerns of the Second-Stage Land Reform (1983-1985) was the inefficiency of small farms and the structure of smallholder farmers, as many aspects were legacies of the previous land reform (1949-1953) (Bain, 1993). The second-stage land reform resulted in the implementation of accelerated land consolidation, loan assistance schemes in the purchase of farmland, co-operative and entrusted farming, and accelerated mechanization. It did not have any immediate influence on the structure of land ownership.

the emergence of rural industrialization, the practice of part-time farming, and the differentiation of Taiwanese farmers. I review a series of debates that emerged around the call for a second-stage land reform during the 1970s. Against this background, I argue that the amendment of the ADA in 2000 should be seen as a land reform that has a direct impact on structures of land ownership and the use of farmland. I discuss the relationship between the amendment of the ADA in 2000 and the state's intervention in rice production (that went from encouraging production to subsidizing farmers to let their land go fallow). I conclude this chapter with a discussion on agricultural policies that characterized a revitalization of farmland during the 2010s.

Before 1949

Over the past 400 years Taiwan has been like a magnet to explorers of diverse backgrounds. Nearly 400 years of colonization in Taiwan defined the history of agricultural developments on the island. Taiwan was first inhabited by the Austronesian Taiwanese (the indigenous people in Taiwan), who made their living by fishing, hunting, and gathering. The Dutch then occupied Taiwan from 1624 to 1662 in order to gain a base for trade in China's market. Under the administration of the Dutch East India Company, the island quickly became a trading point for Dutch, Chinese, and Japanese merchants. At the time, agriculture was primitive. Although rice and sugar were exported, economic activities were mainly focused on hunting (e.g. deerskin). The large-scale and intensively farmed agricultural landscape, in which this study is situated, can be traced back to the 17th century, when Chinese immigrants began to move to the island (Ho, 1978). In 1661, the Min loyalist Zheng Cheng-Gong, also known as *Koxinga*, forced the Dutch from their Taiwanese outposts. Zheng brought his army of 25,000 people, and many began farming in order to sustain the food supply (Ho, 1978). Zheng also encouraged experienced farmers from China to move to Taiwan and motivated potential settlers with the offer of free land and tax exemptions. In order to facilitate land reclamation and taxation, the governance of Zheng carried out a cadastral survey.

In 1683 the Qing court sent an army led by General Shi Lang to occupy Taiwan. In the following two centuries (1683-1895) land was settled following various systems of land tenure and organizations. The Han Chinese used multiple tactics to acquire land that had been used by Austronesian Taiwanese for hunting. Some plots of land were cleared by the Han Chinese who had private ownership while some were cleared under the arrangement of tenant farmers. The Han Chinese grew paddy rice and sugar cane, and turned the former hunting sites of the indigenous people into paddy fields (Hsu & Hsiao, 1999). As can be expected, the process was rarely smooth.

In 1895, Taiwan became a Japanese colony after the first Sino-Japanese War. Taiwan was viewed as an agricultural appendage to be developed. Taiwan exported rice and sugar to Japan, and in return, Japan shipped its manufactured goods and commercial services. During the colonial period, Taiwan's agriculture was dominated by three crops: rice, sweet potatoes, and sugar cane, which accounted for about 85 percent of the value of agricultural production (Ho, 1978, p.148). Agricultural development during the Japanese colonial period (1895-1945) can be characterized as a modernization endeavor (Amsden, 1979; Ho, 1978). The first feature of this transformation was involved changing the three-level tenancy system into a two-level system (Ho, 1978). At the time, the colonial government conducted surveys and identified that the three-level tenancy system was common practice. Under this system, property rights were not clear and, most importantly to the colonial government, it was difficult to collect taxes. In response to this, the colonial government made the tenant landlords the legal owners of the land and they then became directly responsible for taxes. This was implemented after integrated and intensive cadastral surveys. According to Amsden (1979), this reform has much in common with the changes introduced in rural Japan after the Meiji Restoration. The clarification of property rights was judged by the Japanese administration as the key requirement to ensure tax collection and control.

The second feature was the introduction of a more scientific approach to agriculture, including the use of chemical fertilizers, better quality seeds, and new ways of farming. Chemical fertilizers could be seen as one of the legacies from the colonial Japanese government. Before the introduction of chemical fertilizer, Taiwanese farmers mainly depended on organic fertilizer, like compost, animal manure, and green manure, for example. During the Japanese colonial period, rice and sugar cane were the two predominant cash

crops (Ho, 1978). At the time, the government was interested in developing a viable Taiwanese sugar industry. In the 1930s, sugar production in Taiwan was concentrated in the hands of a small number of Japanese corporations. The four biggest sugar corporations owned 87 percent of the industry's capital and land, and produced nearly 85 percent of the output (Ho, 1968). Japanese capitalists controlled the four largest sugar companies whose operations occupied 78,601 *Jia*[27] of land, and, combined with leased farmland held by state-run industries, it becomes in total 103,838 *Jia*, one-eighth of the arable land of Taiwan (Huang, 2006). Large sugar refineries were a major industry in the countryside. And unlike the previous colonial system where primary production was confined to a foreign enclave, sugar farmers, either small owner-operators or tenants, had access to land and were directly incorporated into the market (Amsden, 1979; Shih & Yen, 2009).

After 1949

The Land Reform between 1949 and 1953

The Kuomintang (KMT) troops, or the Nationalist government, fled from China to Taiwan accompanied by between one and two million refugees. The Nationalists took over land that was formally owned by the Japanese government and turned it into public land. Out of all sectors, agriculture was the most developed at the time, as Ho (1978, p.104) notes: "although weaker as a result of the war, was still, after Japan, the most advanced in the Far East."

With financial and technical supports from the Sino-American Joint Commission on Rural Reconstruction (JCRR)[28], the land reform (1949-1953)

[27] A Chinese measurement unit that is equivalent to 0.97 hectare.

[28] The JCRR was established in China in 1948 and the organization moved to Taiwan along with the retreat of the Nationalist government. The organization played a crucial role in rural development in Taiwan. As an advisory organization, the JCRR provided financial and technical supports to Taiwanese farmers. This included improvements in quality of crop, animal stock and soil, development of irrigation systems and flood control, rural credit programs, health programs, and birth control. Later, the organization of JCRR was changed to the Council for Agricultural Planning and Development (CAPD), the Executive Yuan. The background of this change was that the U.S. ended the official foreign relation with the

was carried out promptly in three stages. The land reform was inspired by Dr. Sun Yat-Sen's ideas of equalization of land rights. The first program was the Rent-reduction program (1949), in which farm rent was limited to a maximum of 37.5 % of the total amount of the main crop yield. The second was the sale of public land (1951) that was formally owned by Japanese nationals. The third was the Land-to-the-Tiller Act[29] (1953), which is the most important one for understanding the contemporary land-tenure dynamics relevant to this dissertation. According to the Land-to-the-Tiller policy, landlords were obliged to divest themselves from landholdings above 3 hectares and sell the land to their tenants. An important issue considered was how much land the landlords were allowed to retain after the implementation of the Land-to-the-Tiller policy. There were different proposals ranging from 1-2 hectares (similar standards to the Japanese reform) to 4-8 hectares (with more consideration given on land quality) (Bain, 1993). In the end, the amount of land that a landlord could retain was up to 3 hectares of paddy field. Since then, the justification of 3 hectares as the appropriate amount for a family to remain in farming has been widely debated[30].

It was not until recently that researchers began to question and examine the very need to carrying out land reforms and its resulting impacts (Bain, 1993; Huang 2006). Bain (1993) argues that it may be because land reform was regarded as a good thing, endorsed by the United Nations and the United States, and the Taiwan experience could be used to advocate for a new model of development. Some researchers argue that the land reform was able to be carried out very shortly after 1949 because policy makers (mainly from the mainland) were separated from the landowners. Land reforms were

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Republic of China (R.O.C.) in 1979. See more about the JCRR and its role in history in Huang (2006), pp.46-52.

[29] Prior to the implementation of "Land-to-the-Tiller," 38% of privately owner-farmland (630,000 ha) was tenant-operated and 55% of households on privately-owned farmland comprised tenants or part-tenants. The policy of Land-to-the-Tiller reduced tenanted farmland to 15 % of all privately-owned farmland, and tenant or part-tenant households to 26% of all farm households (JCRR 1953 in 1965, p.79 cited in Bain 1993, p. 29).

[30] Small farms were common before the land reform. In 1934, the households operating under 0.5 hectare already constituted a significant portion of the total farm households (see survey data on Ho (1979), p.350). The land reform should be seen as a redistribution of ownership rights to the majority of tenants, rather than the creation of small farms (Apthorpe, 1979).

considered urgent by the Nationalist government so as to ensure their political power, so they were quickly implemented by the authoritarian regime (Apthorpe, 1979; Ho, 1978; Huang, 2006).

In retrospect, post-war land reform has had profound impacts on the development of Taiwan (Amsden, 1979; Apthorpe, 1979; Ho, 1978). One of the impacts of post war land reform can be seen through studies of farmers' diversification and differentiation. For a short period, Taiwanese farmers were considered a homogeneous group and were sometimes viewed as a unit in rural studies. This perspective of seeing farmers as a homogeneous group was challenged when farmers increased their participation in non-farming economic activities. Squeezes between industrial and agricultural sectors and farmers' interactions with these processes have been studied in relation to rural industrialization and the emergence of the practice of part-time farming (Ho, 1978, 1979; Huang, 1993; Niehoff, 1987).

The Diversification and Differentiation of Taiwanese Farmers

Taiwanese agriculture has changed considerably over the past 70 years. Taiwan's agricultural transformation and subsequent industrialization have been considered a model for other developing countries (Byres, 1986; Kay, 2002). In 1952, 45.5% Taiwanese households were actively participating in agricultural production. In 2016, the number of farming households has reduced to only 9.1 % (see Figure 3). The number of people employed in the agricultural sector reached its peak in 1964 (with approximately 1,810,000 people involved) and has steadily decreased since then. In 1994, population employed within agriculture dropped to less than one million. This number continued to decrease until the mid-2000s. It then stabilized around 550,000 (thus accounting for five percent of national employment) (Figure 4). The economic importance of Taiwanese agriculture has rapidly diminished. The contribution of agricultural production to GDP decreased from 34.3% in 1954 to 20.2% in 1967, then from 10.4% in 1977 to less than 5% since 1988. Since the year 2000, the contribution of agricultural production has accounted for less than two percent of GDP (Figure 5).

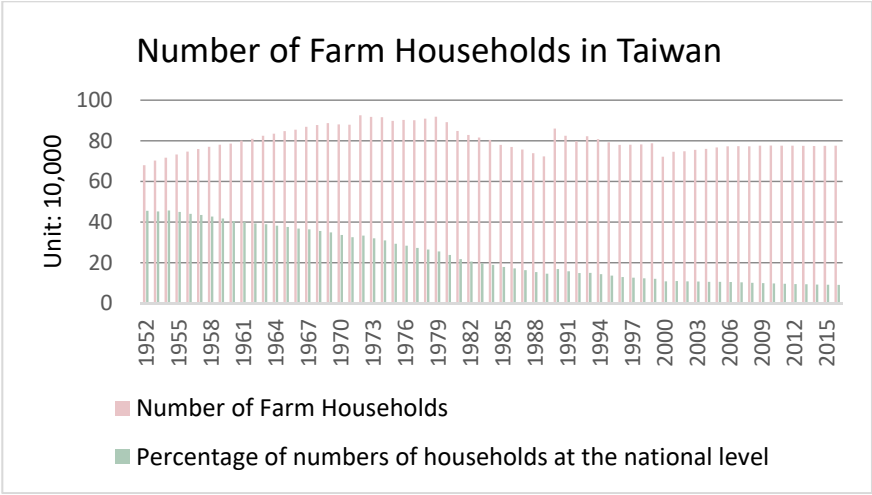

Figure 3. Number of Farm Households in Taiwan, 1956-2016
Source: Agriculture and Food Agency, COA.

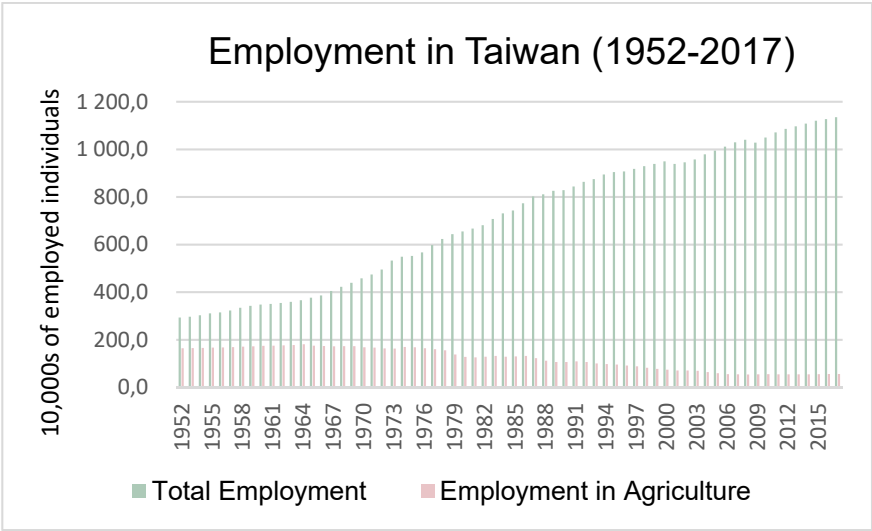

Figure 4. Employment in Taiwan 1952-2017
Source: Basic Agriculture Statistics 2017. Agriculture and Food Agency, COA

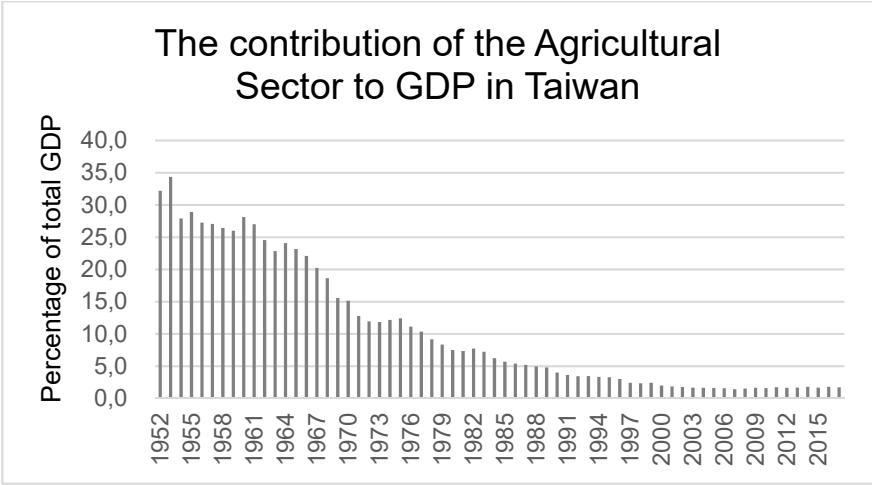

Figure 5. The contribution of the Agricultural sector to GDP in Taiwan
Source: Basic Agriculture Statistics 2017. Agriculture and Food Agency, COA

At the household level, farmers' decision to undertake diversification can be seen as a result of rapid societal and structural changes in Taiwanese agriculture. The influence of capitalism on agriculture expanded from earlier understandings of squeezes between the industrial and agricultural sectors to forces that directly and indirectly affect rural households' decision making in staying or leaving a farming life (Ho, 1978, 1979; Huang, 1993; Niehoff, 1987). During processes of rural industrialization, the ownership of small pieces of farmland played an important role in the social mobility of rural households. Some believe that the land reform created a class of smallholder farmers, that went from tenants to owner-cultivators and landlords, who could transfer their "under-capitalized" agricultural capital to industry (Ho, 1978; Huang, 2006). This perspective has been challenged by researchers such as Hsu and Hsiao (2003) and Bain (1993). They are critical towards post-war land reform (1949-1953), arguing that land reform forced farmers with medium size landholdings into extremely small landholdings. Income from farming was thus insufficient to sustain farmers' families and many left farming because they had no other choice.

Apthorpe (1979) argues that there was a weak relationship between land reform and labor flow from agriculture to industry. However, studies of sociocultural change in rural villages by researchers such as Gallin and Gallin (1982) and Sando (1986) did show that there were some links. In

ethnographic studies, for example, Sando (1986, p. 164) notes that in one migrant's account, many were affected by the land reform, as farms became too small to support family members:

> My father had seven sons. After the Land Reform Program, only little over one hectare (2.4 acres) was left to my father. Because there were so many brothers, it was almost impossible for us to make a living relying on the land. But at the time parents wanted their children to stay at home. My older brother and I were victims of our parents' conservative ideas. Because they wanted to keep us home, we weren't able to study and have no skills. But I realized that it was impossible for me to be a farmer. So even though my parents were against it, I left home.... In the old days it was hard to find a job because there were few factories. I worked in four different cities during those years and all I had to show for it was my children. When I got a job in the capital, I came back and got my wife and children and we all moved out. Five out of my six brothers have since moved out.

What Sando found was that this situation was shared by many rural households at the time. And because of lacking education and occupational training, many ended up in temporary and marginal jobs in informal sectors. Most migrants moved to the cities on their own and brought their family members after they were settled. Relationships with rural villages were maintained through "money remittances, necessary activities connected with village landholdings, occasional trips organized around kinship functions, and a few elaborate festivals" (Gallin & Gallin, 1982, p. 210). Kinship, which was the basis for social relationships, weakened after the land reform. Traditional attachment to the land, as reflected in the difficulties in abandoning farmland or selling one's ancestors' land, was increasingly destroyed (Sando, 1986).

The transformation from agricultural production to manufacturing in developing countries has been studied as the process of deagrarianization (Bryceson, 1996; Rigg, 2001). In the Taiwanese context, researchers argue that industrialization was unique from many other contexts because of the emergence of small-scale factories in rural areas, instead of only in export processing zones[31]. In this respect, rural areas became directly connected to

[31] During the process of industrialization, rural areas in East Asia and Southeast Asia typically experienced an influx of foreign capital and the establishment of large international corporations.

the global market (Hsiung, 1996; Niehoff, 1987). Rural industrialization allowed rural households to enter industrial related employment without physical migrations.

These processes were related to a well-known policy; the *family as a factory* (*Jiating ji gongchang*) scheme, which was promoted by the state during the 1970s. The factories established in relation to this scheme were typically characterized by extremely small-scale machinery owned by householders, and relied primarily on the households' labor. In *Living Room as Factories*, Hsiung (1996) analyzes everyday experiences to understand the way that women's roles were changed because of these family-centered, export-oriented, subcontracting manufacturing factories. The factories Hsiung studied were in "urban residential neighborhoods, at the fringe of urban-rural conjunctions, or in peasant's front yards that were formerly used to dry grain" (1996, p.1). Commodities produced in these factories included plastic flowers, textiles, festival decorations, electrical equipment, and construction materials. These factories are part of the history when Taiwanese agriculture moved towards an export-oriented market. Export of processed and canned agricultural products began with pineapple, followed by canned mushrooms, asparagus, and tomatoes. The export market grew from the 1950s and reached its peak in the early 1980s (Huang, 1993).

During the processes of rural industrialization, part-time farming[32] – a practice wherein farm households do not rely solely on farming as the source of income – became a dominant feature of Taiwanese farm households (Ho, 1978; Huang, 1993). The number of part-time farming households reached its peak during the early 1980s (Table 1). Between 2012 and 2015, about 70% of farm households were considered part-time farming households with

[32] According to Fuller (2015) the term part-time farming was first used in the 1930s in the United States to describe the difficulties of staying in farming during the Depression. The term became popular again after the Second World War to distinguish between full-time commercial farms and those farms with fewer resources who combined farming with off-farm jobs. In Europe, the term was used in the 1950s by economists and sociologists dealing with the "Agrarian Question" proposed by Karl Kautsky (ibid). This perspective on part-time farming was later challenged, because it assumed male heads of households and sole decisions makers. In the European context, this reflection led researchers to use the concept of pluriactivity to examine how and why most farm households supplemented farming with lucrative nonfarm activities (Fuller, 1990).

their main source of income coming from non-farming economic activities (Table 2).

Table 1.
Percentage of Part-time Farm Households out of all Farm Households in Taiwan 1960-2010

Year	1960	1970	1975	1980	1983	1985	1990	2000	2005	2010
Percentage of Part-time farming	52.4	69.76	82.28	91.05	81.53	88.56	86.8	82.1	78.3	75.5

Note: The pecentage of farm households engage in part-time farming out of all farm households. The definition of part-time farming prior to 1980 refers to farm households that have additional economic source(s) from non-farming sectors. The definition of a part-time farming household changed in 1980 to households whose members have engaged in no-farming work at least 30 days per year, or households where the total income from such work exceeds NTD 10,000. In 1995, income in the definition of part-time farming households was raised to NTD 20,000. In this table, the rapid decrease of part-time farming households seen after 1995 was due to change in the official definition.
Source: Agricultural and Food Agency, COA. Executive Yuan

Table 2.
Number of Farm Households by Full-time and Part-time 2012-2015

Year	2012	2013	2014	2015
Total	779,375	780,307	784,490	717,964
Full-time Farming	219,889 (28.21 %)	244,814 (31.37%)	260,211 (33.17%)	181,718 (25.31%)
Part-time Farming	559,486 (71.79%)	535,493 (68.63%)	524,279 (66.83%)	536,246 (74.69%)
Agriculture as Main Occupation	52,436 (6.73%)	59,588 (7.64%)	66,948 (8.53%)	45,426 (6.33%)
Non- agricultural work as Main Occupation	507,050 (65.06%)	475,905 (60.99%)	457,331 (58.3%)	490,820 (68.36%)

Note: The rapid decrease of farm households in 2015 data is due to the exclusion of 57,300 farm households that do not engage in agricultural production.
Source: Basic Agriculture Statistics 2016, Agricultural and Food Agency, COA.

To analyze characteristics of commercial farms, the government introduced a survey[33] for farm householders who have an annual farming income that

[33] According to the Agricultural, Forestry, Fishery and Husbandry Census (AFFHC) 2005, there were about 770,000 farm households in Taiwan. The average size of farmland owned by farm householders was about 0.72 hectare and the annual income from agricultural production was 197,000 NTD. To analyze characteristics of those farm households that actively participate in agricultural production, the government introduced a survey in 2008 and published the result in the Superior Farm Household Statistics. Using AFFHC 2005 as population and the method of stratified sampling, the sampling of 2008 survey consisted of 6,500 farm households of those who have family member who were under 65 years old, engaged in farming more than 90 days a year and had annual farming income more than 200,000 NTD. The Superior Farm Households Statistics 2013 was based on the AFFHC 2010. The population of this survey

exceeds 200,000 NTD. The survey has been conducted twice (in 2008 and 2013). The results were analyzed and presented in the Superior Farm Households Statistics. According to the Superior Farm Households Statistics 2008, there were a total of 96,785 commercial farms and 82% of them were full-time farm households or part-time farm households with their main source of income coming from agricultural production (COA, 2008). In terms of type of production, more than 60% of commercial farms were engaged in fruit (38,792 households) and vegetable (15,505 households) production. Only 16% (15,505 households) of commercial farms were engaged in rice production. The average cultivated farmland per superior farm household was 1.73 hectares, higher than the average of farm households (1.01 hectare) in the Agricultural Forestry, Fishery and Husbandry Census (AFFHC) 2005. Among the superior farm households, only 8.4% participated in traceable agricultural products schemes or organic certification. The reluctance of entering organic agriculture was mainly due to the complexity of the certification procedures. The average age of farmers superior farm households was 54 years old and the average years that superior farm householders had engaged in agricultural production was 27.9 years. The survey also shows that those farmers who have recently joining farming tend to have higher educational background. In the survey in 2013, only 71.4% of commercial farms' family members participated in agricultural production more than 90 days a year[34] (COA, 2013). Another interesting aspect revealed by the survey was that rice farming was not the main source of income for commercial farms. This finding resonates with the development of Taiwanese agriculture. The importance of rice farming has gradually given way to fruit and vegetable production (Table 3).

consists of 150,000 farm households. The sampling of the survey 2013 included 10,000 farm households.

[34] In the Superior Farm Household Statistics 2013, there were 149,064 commercial farms with an annual farming income exceeding 200,000 NTD. Of these 149,064 farm households, the survey further divided farms into two types: those who had family members that participated in agricultural production more than 90 days a year and those who participated less than 90 days a year. In total, there were 106,419 (71.4%) farm households and 42,645 (28.6%) respectively. 42.5% of farm households were in fruit plantation and 22.4% were involved in vegetable plantation.

Table 3.
Composition of Crop Production

	Value of Crop Production (Million NTD)	Percentage (%) of value of Crop Production					
		Rice	Coarse Grain	Special Crop	Fruits	Vegetables	Others
1976	70,842	49.64	9.63	14.05	10.31	16.28	0.09
1981	110,235	42.06	7.75	12.25	15.85	21.32	0.76
1986	119,927	30.41	9.06	11.8	23.67	23.66	1.40
1991	147,735	26.22	8.82	9.63	30.45	22.21	2.67
1996	172,781	22.21	7.51	9.19	33.51	22.69	4.88
2001	160,759	20.41	4.58	6.73	36.15	24.81	7.31
2006	172,692	17.01	4.63	4.70	39.18	27.22	7.25
2011	209,846	18.18	4.23	5.83	35.44	28.82	7.50
2016	265,529	14.30	4.89	4.82	35.73	32.73	7.53

Note: The calculation is based upon current prices. Betel-nut is counted as a fruit.
Source: Basic Agriculture Statistics 2016 issued by the Agricultural and Food Agency, COA. Executive Yuan.

Niehoff's (1987) study of rural industrialization in Zhonghe Village in Taichung County between 1979 and 1980 shows how farmers changed their views of rice farming as its economic importance began to decrease:

> By 1980, 79% of local households [603 households] still farmed, even though average farm size had dropped to 0.7 hectare per farming household, and only two village households depended on farming for the majority (over 70%) of total households' income. …To a large extent, farming had become a part-time activity executed by a combination of hired labor during peak seasons and family labor on a part-time basis during the remainder of the agricultural year. Rice farming has largely shifted from being an activity that produced a significant cash income for village households to being one that mainly provided rice for domestic household consumption once taxes and production costs had been met. Farms of average or above-average size could produce rice at a small profit, but the income from rice farming was very small compared to income generated from other economic activities (Niehoff, 1987. p.281)

The fact that some Taiwanese farmers continued to participate in rice farming (despite the profit generating potential being limited) has been indirectly investigated through studies in the emergence of the practice of part-time farming and its relation to rural industrialization (Ho, 1979; Huang, 1993; Niehoff, 1987). Ka and Wong (1993) argue that the penetration of capitalism has make it difficult to use the concepts of property and employment relations

to analyze differentiation of Taiwanese farmers after post-war land reforms. After the Land-to-the-Tiller program, Taiwanese farmers became basically smallholder owner-cultivators. Farmers who owned their land were not necessarily members of the affluent class, although many of them rented out their land or adopted the practice of part-time farming when the incentive to continue a farming life was low (ibid). Ka and Wong (1993) suggest careful examination of employment relations among farm households to understand changes in social mobility within farm households. They suggest that the presence of full-time contracting farmers (those who outsource their farm work to hired labor) might present a case of downward social mobility. Those who became full-time contracting farmers were usually elderly farmers who relied on hiring labor to meet labor shortages. The labor shortage meant that farm households received less income from agricultural activities, and rely on money remittances from family members' non-farming income or subsidies from the state. Even though for most of the elderly farmers I encountered agricultural activities were not their major source of income, farm work was viewed as a *daily exercise* to maintain their everyday life. In contrast to farmers who became dependent on hired labor, mechanized contractor farmers (those who purchased heavy machines and accumulated capital with these machines), or *Dai geng yezhe* (mechanized contractor farmers), presents an opportunity for upward social mobility.

The Debates of Small-sized Farms

During the 1970s, Taiwanese agriculture faced a crisis. Small farms in particular were at the center of debates on agricultural development. The state viewed small farms and the structure of smallholder farmers as problems that hindered Taiwan's adoption of practices of industrial agriculture. The majority of Taiwanese farmers own farmland that ranges in size from 0.1 to 0.5 hectare (Table 4). Small farms, as well as the fragmentation of farmland due to further sub-division of a single holding into parcels of land[35], were considered some of the most severe problems after the land reform (Bain, 1993).

[35] Subdivision of land can be seen as results of land inherence.

Bain (1993) examines the rationale behind the way the Taiwanese government addressed this particular issue through another land reform. The first call for a Second-Stage Land Reform was made by the eminent economist Wang Tso-Jung in 1969 (Table 5). With an economic and industry-oriented background, Wang called for commercialization of farming through a reform of land tenure (Bain, 1993). His argument was that the small-farm system must be liberated from the constraints that the first land reform imposed. Wang suggested raising farmers' incomes through realizing economies of scale. Wang and his supporters argued that smallholder farmers should be eliminated on the basis of inefficiency. The ideas for the Second-stage land reform were focused on *efficiency* and *equity* (ibid). Wang proposed capitalistic, large farm-based agriculture to address the agricultural problems related to the small farms the predominated agriculture in Taiwan.

Table 4.
Number of Farm Households by Size of Farm

	2012	2013	2014	2015
Number of Farm households	779,375	780,307	784,490	717,964
Those who have their own farmland				
Under 0.1 (ha)	26,266 (3.39%)	23,423 (3.02%)	32,614 (4.17%)	13,355 (1.87%)
0.1 – 0.5	405,468 (52.34%)	407,053 (52.43%)	380,737 (48.73%)	384,430 (53.77%)
0.5 – 1	174,953 (22.58%)	181,034 (23.32%)	183,122 (23.44%)	186,496 (26.15%)
1 – 2	108,753 (14.04%)	109,410 (14.09%)	122,353 (15.66%)	91,762 (12.87%)
2 – 3	33,409 (4.31%)	29,775 (3.84%)	32,778 (4.2%)	21,183 (2.97%)
3 – 5	16,757 (2.16%)	15,860 (2.04%)	17,882 (2.29%)	10,943 (1.53%)
5 – 10	7,435 (0.96%)	5,724 (0.74%)	8,817 (1.13%)	4,235 (0.59%)
Above 10	1,604 (0.21%)	4,050 (0.52%)	3,037 (0.39%)	1,712 (0.24%)
Those who do not have their own farmland				
	4,730	3,978	3,150	4,848

Note: Data in this table excludes Kinmen and Lianjiang County. The data of 2015 excludes the 57,300 farm households (e.g. families or individuals living on land that is zoned for agriculture, but do not engage in agricultural activities.)
Source: DGBAS, Executive Yuan, Agriculture and Food Agency, COA, Executive Yuan.

Table 5.
Key differences between the first land reform and Wang's proposal for the second land reform

First Land Reform	Wang's Second Land Reform
Redistribute ownership rights	Raise agricultural productivity
Equalize distribution of wealth	Reform agriculture
Societal reform	Economic revolution
Aim to aid the poor	Aim to acquire wealth
Self-sufficiency of the family farm	Agri-business supplying markets
Traditional ideas and operation	Expanding small farms
Reform of an agricultural economy	Modernize ideas and operation
	Reform an industrial economy

Source: Wang 1972, p.10-11, citied in Bain 1993, p.115

An alternative proposal on the second land reform was proposed by a group of experts, consisting of land administration officials and researchers. Many of them were former colleagues or students of Hsiao Tseng, were associated with or had graduated from his China Research School of Land Economies, subscribed to his journal *Land Reform Monthly*, or were members of his Chinese Association for Land Reform (CALR) (Bain 1993). The land administration group promoted Sun Yat-Sen's concept of Equalizing Land Right, "defined as "a new system of land tenure" (Hsiao, 1974, p. 294) which taxed unearned increment from private ownership of land for the public benefit, that is, government coffers" (Bain, 1993, p.119). The land administration officials emphasized equity and the value of the family farm system on land management, drawing inspiration from the concept of Equalizing Land Rights. Due to this principal in farmland policies, the content of the Second-stage Land Reform ended up being accelerated mechanization, accelerated land consolidation, promotion of group, co-operative, and entrusted farming, farmland-related loan assistance, and revision of agricultural laws (Bain, 1993). Wang's proposal for expanding small farms was not accepted, and the Second-stage Land Reform did not include policies that directly affected structures of land ownership. Ideas and actors involved in the planning of the Second-Stage Land Reform are summarized in Table 6.

Table 6.
Main actors involved in drafting the Second-stage Agricultural Land Reform

Perspective	The Main Actors	The Main Ideas
Farmland-focused Development	Land administration officials; Members of Chinese Association for Land Reform (CALR)	The concept of Equalizing Land Rights.
Farming-focused Development	Agricultural administration including the Sino-American Joint Commission on Rural Reconstruction (JCRR) and the Council of Agricultural Planning and Development (CAPD)	JCRR/CAPD rejected the ideas that smallholder farmers should be eliminated because of inefficiency. They suggested that smallholder farmers should be assisted in gaining economies of scale through group activities. Transfer farmers from farming to non-farm jobs and agricultural problems should be addressed in the overall national context.
Farm Sector-focused Development	Economic Planners; The Council of Economic Planning and Development (CEPD)	CEPD was responsible for evaluating and judging the Second-Stage Land Reform.

Note: Summarized from Bain (1993), p.118-124

Rice Production: Set-aside Policies during the 1980s and Farmland Revitalization Policies in the 2000s

Rice was once seen as the main staple food and an important source of foreign exchange earnings in Taiwan. Because a large population both engaged in rice production and consumed a large quantity of rice, the state's intervention in rice production and rice markets was an important tool for controlling society. Prior to the 1970s, the aim of rice policy was to increase production. This was achieved through raising yields, including through the development and distribution of better varieties, use of chemical fertilizers and pesticides, the use of new farming practices, and improvements in irrigation facilities and methods (Chen, Hsu, & Mao, 1975). The state introduced the Food Stabilization Fund (*Liangshi ping zhun jijin*) to stabilize the price of rice in 1974. The rice price guaranteed purchase program established in 1974 created an incentive for farmers to participate in or remain in rice farming and resulted in a persistent rice surplus. The state used different methods to improve rice production. One of the programs was a system called Bartering Fertilizer for Rice (introduced in 1948). In this system, chemical fertilizers were distributed to rice growers by the government in exchange for paddy. At the time fertilizers were tightly controlled by the government and the exchange ratio of rice for fertilizers was set unfavourably to rice farmers. With the state's relatively low price of rice (about 20 to 30% lower than the market

price) and significant controls on rice production, income gaps between farming and non-farming households gradually enlarged (ibid).

The system of Bartering Fertilizer for Rice was abolished in 1973. The state then introduced a price support program[36], wherein they purchased rice at guaranteed prices. Together with the establishment of the Food Stabilization Fund[37] in 1974, the state aimed to support rice farmers through purchasing rice at prices exceeding market prices. In 1973, the minimum price of paddy rice was set at 5.2 NTD per kilogram for the first crop cycle and 6 NTD per kilogram for the second crop cycle. In 1974, this price was set at 10 NTD per kilogram (first crop cycle) and 11.5 NTD per kilogram (second crop cycle) (ibid). These were the highest prices Taiwanese rice farmers had ever received. The rice guaranteed purchase program created incentives for farmers to stay in or join rice farming. In the beginning, the state had an unlimited quota of rice procurements, which was then replaced by limited quantities per hectare in 1997. The quantity of paddy purchased in the guaranteed program has steadily decreased since the 1980s (Figure 6). The guaranteed purchase program played an important role in stabilizing the price of rice in Taiwan. Since 1974, the prices of guaranteed purchase have adjusted several times (Table 7). In 2017, the price of Japonica rice in guaranteed purchase program was 26 NTD per kilogram and the price of Indica rice was 25 NTD per kilogram.

[36] Purchases of rice at guaranteed prices are based on a three-tiered system: the guaranteed purchase program, the supplementary purchase, and additional purchase. The last one was implemented in 2003 with the aim of preventing market prices from falling below the average costs of production. In 2010, the government purchased 191,050 metric tons of paddy rice, including 173,883 metric tons from guaranteed purchase, 17,571 metric tons from the supplementary purchase, and 596 metric tons from additional purchase. The amount of paddy rice purchased via the guaranteed purchase program accounted for 13% of total domestic rice production.

[37] The Food Stabilization Fund was implemented between 1974 to 1998.

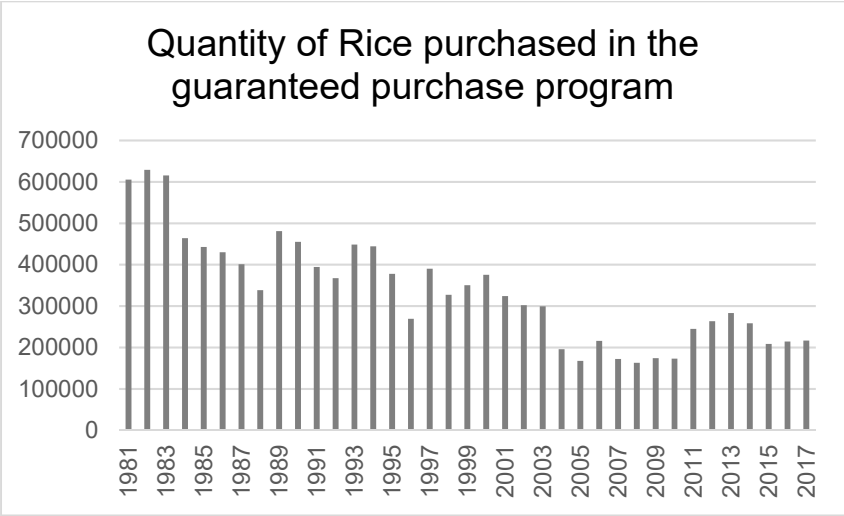

Figure 6. Quantity of Rice purchased in the guaranteed purchase program 1981-2017
Source: Taiwan Food Statistics Book (2017), Agriculture and Food Agency, COA, Executive Yuan.

Table 7.
The price of paddy rice in the guaranteed purchased program. Unit: NTD per kilogram

year	Japonica Rice (the first crop cycle)	Indica Rice (the first crop cycle)	Japonica Rice (the second crop cycle)	Indica Rice (the second crop cycle)
1981	17.6	16.6	18.5	17.5
1982	18.8	17.8	18.8	17.8
1983	18.8	17.8	18.8	17.8
1984	18.8	17.8	18.8	17.8
1988	18.8	17.8	18.8	17.8
1989	19	18	19	18
1990	19	18	19	18
1991	19	18	19	18
1992	19	18	19	18
1993	19	18	21	20
1994	21	20	21	20
1995	21	20	21	20
2006	21	20	21	20
2007	21	20	21	20
2008	23	22	23	22
2009	23	22	23	22
2010	23	22	23	22
2011	26	25	26	25
2012	26	25	26	25
2013	26	25	26	25
2014	26	25	26	25
2015	26	25	26	25
2016	26	25	26	25
2017	26	25	26	25

Note: In the guaranteed purchased program, the state collects the rice in the form of unmilled rice (paddy). The price of rice set in the guaranteed purchase program is usually higher than those in the supplementary purchase and additional purchase.
Source: Taiwan Food Statistics Book (2017), Agriculture and Food Agency, COA, Executive Yuan.

The late 1970s was a turning point for the state's intervention in rice production. At this point, the regime gradually moved away from productivism. From the 1980s onward the state began to address issues of rice surplus, partly by encouraging farmers to adopt high-valued crops other than rice. The state also introduced set-aside programs, starting with the Rice Division Program (1983-1996) and followed by the Rice Paddy Utilization Adjustment Program (1997-2010). These programs, together with other

factors[38] (such as changing consumption patterns and a proactive adjustment to international agricultural trade), played an important role in the decreasing scale of rice production in Taiwan (Figure 1).

During the late 1990s, debates on fallow farmland began to emerge as a political issue. Fallow land played an important role in the state's proactive approach of dealing with the impacts in relation to international agricultural trade (Taiwan participated in the WTO in 2002). The scale of fallow land reached its peak in 2011 when 52,939 hectares of land were fallow (Table 8). Since the calculation did not include farmland that was left fallow for only one crop cycle, the actual scale of set-aside farmland in Taiwan could be much larger. On the one hand, the state continued to spend significantly on subsidizing farmers to let their farmland go fallow. On the other hand, the state took a liberalized approach to its farmland policies. The amendment of ADA in 2000, which includes the marketization of farmland and the deregulation of the strict usage of farmland, can be seen as a result of the state's effort to revitalize farmland. The amendment of ADA is a reform that has had direct impacts on farmland ownership.

[38] In 2017, the average consumption of cereals per capita in Taiwan was 87.9 kilograms, including 45.4 kilograms rice, 38 kilograms wheat and 4 kilograms corn and other cereals (COA, 2017).

Table 8.
Agricultural Land in Taiwan 1976 – 2017

Year	Agricultural Land (Unit: Ha.)		
	Total	Cropland	Fallow
1976	919,680	---	---
1981	900,062	---	---
1986	887,451	---	---
1991	884,443	---	---
1996	872,159	---	---
2001	848,743	---	---
2005	833,176	789,592	43,585
2006	829,527	785,226	44,301
2007	825,947	780,182	45,765
2008	822,364	776,451	45,913
2009	815,462	768,545	46,917
2010	813,126	761,821	51,305
2011	808,294	755,355	52,939
2012	802,876	752,108	50,768
2013	799,830	751,151	48,679
2014	799,611	748,613	50,999
2015	796,618	746,576	50,042
2016	794,005	745,627	48,378
2017	793,027	745,518	47,509

Note: Agricultural land here refers to land that can be used to cultivate crops. The definition of fallow land here refers to long-term fallow land.
Source: Basic Agricultural Statistics 2017, Agricultural and Food Agency, COA, Executive Yuan.

The main change brought about by the amendment of ADA in 2000 is that individuals with non-farming backgrounds can now own and purchase farmland, with the principle that farmland should continue to be used for agricultural production. The main debate considering the amendment of ADA was surrounding article 18. According to article 18, farmers who acquired agricultural lands after 2000 and did not possess a farmhouse for their own use at the time of purchases can apply for the construction of individual farmhouses or concentrated townhouses on their own agricultural land with the approval of the relevant authorities at the city, county, or municipality level. The construction should not affect the agricultural production environment or the development of farming villages. The farmland where these farmhouses are located should continue to be used for agricultural production. Farmhouses may be transferred five years after the construction (except in the case of transfers due to inheritance or

auctions). This regulation, however, did not confine those farmers/landholders who acquired farmland prior to 2000. The minimal size of farmland for applying for construction permission for a farmhouse is 0.25 hectares[39]. According to the ADA, all applicants for farmhouse construction permission are farmers.

The amendment of ADA in 2000 can be seen as a retreat of state intervention on farmland regulation. Via the amendment, state regulations that were meant to address problems associated with agricultural production, efficiency, the small size of farms, and an income gap between farming and non-farming households were loosened, leading an increase in the marketization of farmland. In this farmland-focused articulation of agricultural development, there has been little room for discussing relations between smallholder farmers and their roles in Taiwanese agriculture. Yet, debates about small landholdings and agricultural development were not entirely new, as they had been discussed in the 1980s before the implementation of the Second-stage Land Reform. Wang's proposals, such as the proposals to remove the limitations on the amount of land that could be owned by each farm family from 3 hectares, the commercialization of agriculture, and free transaction of agricultural land among owner-cultivators, were not realized during the 1970s. In the late 1990s, these arguments were brought up again. Ironically, this time the case for the enlargement of farmland ownership has less to do with overall *efficiency* of agricultural production, and is instead because of the emergence of the possibility for lucrative real estate development that has attracted many to hold or get the status of *farmer*.

During the 2010s, concerns around fallow land shifted to its relation to the country's low food self-sufficiency rate[40] (32,28 % in the year 2017) (COA,

[39] On April 26, 2001, the Ministry of the Interior (MOI), the Council of Agriculture (COA), and Executive Yuan issued the Regulations for Constructing Farmhouses on Agricultural Land. This regulation has been an important supporting measure for agricultural land use in accordance with Article 18 of ADA. The regulation specifies details around how individuals can use farmland to construct farmhouses. The minimal size of farmland for farmhouse development is 0.25 hectares. However, construction of concentrated townhouses or farmhouses on offshore islands are not confined by this regulation. The regulation has been amended several times. One of the recent amendments happened on September 4th, 2015 where it was addressed that applicants for farmhouse construction should be farmers themselves.

[40] The concept of food self-sufficiency refers to a state where a country can satisfy its food needs from its own domestic production.

2017). To respond to problems of low food self-sufficiency, the state began to initiate projects to *revitalize* farmland. The aim is to increase food self-sufficiency through bringing fallow land back into active agricultural production. One of the main policies is a four-year Adjusting Cultivated System and Reactivating Farmland Program[41] that was implemented in 2013. In this program, farmers/landholders who had participated in the Rice Division Program or the Rice Paddy Utilization Adjustment Program are encouraged to grow crops under contract farming[42]. This means that farmers/landholders are only allowed to have their land lie fallow for one crop cycle per year if they want to receive a similar subsidy as before. Crops cultivated in this contract production include feed corn, wheat, pasture grass, sugarcane, edamame, carrot, and others (Table 9). Due to high production costs and import competitiveness, over the past decade Taiwan has been importing most of its corn, wheat, and soybeans (Table 10); domestic production was generally low (Table 11).

[41] The program was initiated by the Agriculture and Food Agency (AFA), a division of the Council of Agriculture (COA).

[42] Contract farming involves agricultural production being carried out on the basis of an agreement between the buyer and farm producers.

Table 9.
Types of crop and related subsidies in the Cropping Adjustment and Farmland Activation Plan

Crop Items	Payment
Import substituted products with contractual production	
Feed corn, non-GMO soybean, and wood (which can be harvested within 6 years)	45,000 NTD
Pasture grass, forage corn	35,000 NTD
Sugarcane (for refined)	30,000 NTD
Wheat, sorghum (for making wine), and sweet potato (for feed)	24,000 NTD
Export substitute products with contractual production	
Edamame	35,000 NTD
Carrot, lettuce, and others	24,000 NTD
Local specialty products[43] (listed by local government)	20,000 NTD
Organic Crops[44]	15,000 NTD

Source: COA's website https://www.coa.gov.tw/ws.php?id=2501079

Table 10.
Import of Crops between 2008 and 2017. Unit: M.T

	2008	2010	2012	2014	2016	2017
Rice	121,971	181,458	156,799	130,202	150,754	154,246
Wheat	1,061,696	1,210,414	1,431,670	1,368,643	1,442,840	1,522,606
Corn	4,343,578	5,120,241	4,391,162	4,252,678	4,279,645	4,494,224
Soybeans	2,094,345	2,551,099	2,348,129	2,375,162	2,446,442	2,552,988

Source: Food Supply and Utilization Yearbook 2017, Council of Agriculture, Executive Yuan.
Note: The use of imported corn was mainly for animal feed.

Table 11.
Domestic Production of Crops between 2008 and 2017. Unit: M.T

	2008	2010	2012	2014	2016	2017
Rice	1,178,178	1,167,972	1,368,215	1,399,392	1,264,128	1,396,071
Wheat	292	303	338	844	1,384	1,309
Corn	77,694	75,164	67,500	113,990	114,976	130,120
Soybeans	141	204	159	1,173	3,061	4,674

Source: Food Supply and Utilization Yearbook 2017, Council of Agriculture, Executive Yuan.

[43] This payment is provided by local government.

[44] Farmers are eligible for this subsidy for the first three years after they adopt organic production.

Another state strategy that aims to revitalize agriculture is to encourage young people to join agricultural production. In recent years, COA has adopted various policies and programs to help young people become involved in agricultural production. This includes Farmers Academy training program [45] (*Nongmin xueyuan*), Farmland Bank (*Nongdi yinhang*), and Small Landlords and Big Tenants (*Xiao dizhu da diannong*). The Farmers Academy training program is a program established in 2011 that included training programs of future farmers, project-based consultancies, and on-farm internships. In 2013, 4,090 students graduated from this program. Farmland Bank is an online platform organized by the COA that helps beginner farmers sublet farmland from elderly farmers or landholders.

Small Landlords and Big Tenants (*Xiao dizhu da diannong*) is a pilot program that was initiated in 2009 that is characterized by payments for structural adjustment. Farmers/landholders [46] who rent out their farmland to young tenants could receive an off-farm subsidy of NTD 2000 per month for each hectare and 12,000 NTD set-aside subsidy per crop-cycle (six months) for each hectare. The maximum farmland that a farmer/landholder can rent out is 3 hectares. This means that the maximized amount of the subsidy is 72,000 NTD per year. Tenants who enlarge his/her farm scale through this program and cultivate the crop listed in the Cropping Adjustment and Farmland Activation Plan could receive a subsidy of NTD 10,000 per hectare (one-time subsidy). Since 2009, many farmers have enlarged their scale of production through this program (Table 12).

Table 12.
The result of the policy of Small Landlords and Big Tenants (Unit: hectare)

	2010	2011	2012	2013	2014	2015	2016	2017
Number of small landlords	8,121	13,912	18,265	25,724	29,049	33,880	38,282	39,701
Number of big tenant farmers	703	1,002	1,328	1,578	1,670	1,782	2,058	2,279
Area rented by tenant farmers	4,056	6,549	8,004	11,268	12,995	13,912	15,958	17,331

Source: Agriculture and Food Agency, COA, Executive Yuan.

[45] Farmers' Academy: https://academy.coa.gov.tw/

[46] Farmers/landholders have to be above 65 years old and have participated in farmers insurance scheme for more than five years in order to be eligible to participate in Small Landlords and Big Tenants program.

Concluding Remarks

This chapter provides an overview of the history of Taiwanese agriculture, with a focus on post-war land reforms and related rural changes. Rural changes in Taiwan are results of multi-layered processes that are shaped through the unfolding of legacies of post-war land reform, deagrarianization, rural industrialization, and the differentiation of Taiwanese farmers. The marketization of farmland that was allowed in the amendment of ADA in 2000 needs to be examined within the context of the state's intervention in rice production and its aim to revitalize farmland. Competing agricultural policies aimed at revitalizing farmland help to reveal an important issue regarding the development of Taiwanese agriculture: what functions and roles should farmland be assigned, and how can Taiwanese farmers continue to live an agricultural life without relocations?

3. Rural Gentrification in *Desakota*

In this chapter, I present my theoretical framework, focusing on the concepts of *desakota*, rural gentrification, and alternative food networks (AFNs). In order to analyze urbanites' increased interest in rural living in Taiwan, I first present an overview of the literature on urban-to-rural migration. I propose that urbanites' increased interest in rural affairs and lifestyles in Taiwan needs to be examined through the lens of interventions by intellectuals and activists during the rural crisis in the 1990s. This approach facilitates an analysis of bottom-up resistance involving the cooperation between smallholder farmers, intellectuals, and activists. I then move on to the concept of *desakota*, a pivotal concept for examining the spatial characteristics of rural places that have become popular for Taiwanese urbanites to realize their ideals of countryside living. I explore political economy processes that underpin the formation of these highly mixed agricultural and non-agricultural land-use areas: *desakota* regions in a Taiwanese context. Then, I employ the concept of rural gentrification to analyze rural changes associated with farmland ownership and alternative food movements. Rural gentrification in Taiwan develops in two parallel processes: in-migration of new land owners of higher socioeconomic status, leading to a distinctive landscape that has emerged out of the farmhouse boom in the desakota region; and in-migration of a group of New Farmers who are inspired by and part of the alternative food movement, leading to agricultural transformation via revitalization of the ecological value of farmland. To analyze the second process, I adopt a Bourdieusian analysis on the roles of social and cultural capital in the production of alternative food relations.

Urban to Rural Migration

The city and the countryside are one of the oldest dichotomies in language and geography (Woods, 2011). Understandings of the city and the countryside vary greatly between different contexts and individuals. Increased flows of capital, labor, and hybrid layers of second homes, exurbia residential sprawl, and manufacturing have made it difficult to pinpoint what a rural place is or is supposed to be. In migration studies, the dichotomous interpretation of the urban and the rural remains an important indicator for analyzing the movements of individuals. In developed countries, mobility away from the city has been analyzed as counterurbanization (Champion, 1989), as second home ownership (Coppock, 1977; Müller, 2011; Paris, 2011), as the back-to-the-land movement (Brown, 2011; Jacob, 1998), and as a form of rural gentrification (Bryson & Wyckoff, 2010; Hines, 2012; Solana-Solana, 2010; Stockdale, 2010). In this study, I use the analytical concepts of counterurbanization and back-to-the-land as focal ideas to analyze urban-to-rural migration.

Studies of counterurbanization emerged with the need to examine the reversed flow of migration, in contrast to urbanization processes. In Nordic countries, the social phenomenon of counterurbanization started in the 1970s and has been examined in part by second home studies (Hall & Müller, 2004; Müller, 1999, 2011). In the United States, the phenomenon of counterurbanization began in the late 1960s when urban growth slowed down, while suburban and rural areas experienced significant growth (Berry, 1976). In the United Kingdom, counterurbanization and population redistribution also began in the 1960s. Socioeconomic changes in relation to counterurbanization have been studied in terms of ideas of the post-productivist countryside (Boyle & Halfacree, 1998). Post-productivism is a contested concept that gained popularity in the 1990s (Almstedt, Brouder, Karlsson, & Lundmark, 2014; Evans, Morris, & Winter, 2002) and refers to agricultural changes that shift from a focus of production to amenities, ecosystem services, and cultural landscape. Almstedt et al. (2014) see post-productivism as an idea and political ambition rather than an irreversible change of rural economic activity. Another perspective by Evans et al. (2002) contend that productivist/post-productivist dualism is narrowly defined. They suggest that efforts should be refocused on deeper processes

underpinning agricultural change such as aspects of quality food, pluriactivity, sustainability, production dispersion, and regulation (Evans et al., 2002).

Most counterurbanization studies have relied on the definition provided by Berry (1976, p. 17) : "counterurbanization is a process of population deconcentration; it implies a movement from a state of more concentration to a state of less concentration." In this definition counterurbanization is viewed as population redistribution within the settlement system. Mitchell (2004), who provides a comprehensive review of literature on counterurbanization, distinguishes three concepts, namely ex-urbanization, displaced-urbanization and anti-urbanization to further analyze characteristics of these moves. *Ex-urbanization* refers to the movement of well-off urbanites who desire to live in peri-urban areas with a rural sense of living but still maintain connections with the city (e.g. still commute to work in the city). The term *displaced-urbanization* is used to describe those who move because of the need for new employment and lower-costs of living. The term *anti-urbanization* refers to moves that happen for a wide range of reasons: from aspirations to live in smaller places to a rejection of an urban lifestyle. Mitchell's categorization is useful to recognize the complexity of counterurbanization and the diverse motivations associated with these kinds of migrations. It is important to note that these ideal types are not mutually exclusive. In this study, the small group of urbanite newcomers who adopted an agricultural lifestyle can also be seen as a part of the anti-urbanization movement: they "not only long to *live* in a rural environment (as a result of push *and* pull factors) but, for those in the labour force, there is also the desire to *work* in a less concentrated setting" (Mitchell, 2004, p.24, emphasis in the original text). They can also be seen as being displaced by high living costs and the stressful job markets in the city. In this study, the concept of counterurbanization is used to analyze individuals' motivations for moving away from the cities (Gkartzios, 2013).

Counterurbanization in Japan, China, and Taiwan

The back-to-the-land movement refers to a North American social phenomenon of the 1960s and 1970s that was influenced by diverse social and counter-cultural movements. A common feature of the back-to-the-land movement is a call for people to take up smallholdings and grow their own

food with the aim of self-sufficiency (Brown, 2011; Jacob, 1997). In his review of literature on the back-to-the-land movement, Halfacree (2007) points out that today's back-to-the-land movement consists of a counter-culture influenced back-to-the-land element, a consideration of new agriculturalist principles, and the dwelling experience in the countryside. Many of today's back-to-the-landers are inspired by environmentalism and the organic movement and have turned to AFNs to sustain their lifestyles (Belasco, 2007; Trauger, 2007; Wilbur, 2013).

In Asian countries, the social phenomenon of back-to-the-land has received little scholarly attention. Urbanization remains the dominant process and farming has generally not been considered an attractive occupation. Knight's (1994) ethnographic study on rural resettlement and rural revitalization in Japan presents one of the first studies to take up this phenomenon in an Asian context. In this case, urbanites' interest in an agricultural lifestyle was examined. In a later study, Knight (2000) explores a small group of young and university-educated individuals and their pursuit of an agricultural lifestyle in the Kumano area, in the Southern Kii Peninsula (about 100 kilometers south of Osaka). Knight found that these newcomers originated from the major cities of Tokyo, Osaka, and Kyoto. They moved to these remote rural villages where out-migration has been severe and rice land was often abandoned in the process. These young people embraced the notion of self-sufficiency, grew and ate natural food (*Shizenshoku* in Japanese), fertilized the soil with compost, etc. They were also critical of modern urban life. Many of them adopted Fukuoka Masanobu's (a well-known figure among the rural resettlers) concept of natural farming (*shizen noho* in Japanese). Newcomers' pesticide-free rice fields sometimes created problems for adjacent farmers. The insects and pests in newcomers' fields, a common feature of ecological farming, encroached on the fields of conventional farmers. Most newcomers relied on renting land. It was also common that newcomers had difficulty renting farmland with good access to irrigation. My findings in Eastern Taiwan share some resemblance with Knight's (2000) study in Japan (see Chapter 6 for more details).

In Chinese society, the growing interest in small-scale farming lifestyles needs to be examined with consideration of the rural crisis during the 1990s and the intervention of intellectuals[47] (*zhishi fenzi*) during this time. Research and

[47] See glossary on page 20.

theorization on the intervention by intellectuals during the rural crisis in contemporary Chinese society has been mostly developed based on the case of China (Day, 2008, 2013; Yan & Chen, 2013). Throughout the 1990s, rural China witnessed unrest due to uneven development between urban areas and the countryside. The rural crisis attracted the attention of both the state and intellectuals. For intellectuals, the rural crisis presented an opportunity to rebuild rural society. During the late 1990s, researchers began to use the term New Rural Reconstruction Movement [48] (NRRM) (*Xin xiangcun jianshe yungdong*) to examine rural initiatives. These initiatives began as a diverse set of rural activities, initiatives, and experiments, and later developed into a rural social and cooperative movement. These were mainly unofficial efforts led by intellectuals to rebuild rural society. Participants of NRRM drew inspiration from the Rural Reconstruction Movement (RRM) of the 1920s and 1930s, a movement led by Liang Shuming, a neo-Confucian philosopher (Yan & Chen, 2013). Concerned about the destruction of rural society and rural social relations because of foreign influences at the time, Liang believed that traditional Chinese culture, based on village culture, would be a great tool in overcoming Western modernization, urbanization, and industrialization. Liang promoted a Confucian form of activism in which intellectuals relocated to the countryside and used their knowledge to reconstruct rural society. RRM was a critique to a capitalist market economy. Between 1931 and 1937, Liang instructed the rural reconstruction in Zouping County of the Shandong Province and established the Rural Research Reconstruction Institution (Yan & Chen, 2013).

Liang's ideas on rural reconstruction have inspired contemporary intellectuals. One of the most influential researchers in highlighting the problems of rural China and promoting the ideas of NRRM is Wen Tiejun. Wen is an Agricultural Economist and Dean of the School of Agriculture and Rural Development at Renmin University. In the late 1990s, Wen proposed the term *sannong wenti* (*sannong* refers to "peasants", "rural society," and "agriculture; *wenti* means "problems") to formulate the rural crisis in China. The term *sannong wenti* provided government officials, researchers, and activists with a discursive space to debate rural problems. This term shifted

[48] The debates of Chinese peasants, the practices of rural organization, and the rural cooperative movement today share both similarities and differences to those of the 1930s (Yan & Chen, 2013). Both rural cooperative movements enjoyed official promotion and intellectual participation was (and continues to be) viewed as the way to organize smallholder producers.

the focus away from the promotion of rural and agricultural economics (the focus of the state) to a focus on the peasantry (Day, 2008). The rural crisis has been understood as a social crisis rather than a problem of rural economy or agricultural production. NRRM represents more than a social movement built to address the rural crisis; it is accompanied by intense intellectual debate about the alternative national development of China. This is known as "the third way": one that goes beyond both the left and the right (Day, 2013; Yan & Chen, 2013). Day (2008) suggested that the intervention by intellectuals and activists could be best understood as a Polanyian social protective movement as a reaction to the marketization of society. One important aspect of NRRM are the debates about rural cooperatives. The rapid growth of rural cooperatives in China has been facilitated by the implementation of the Law on Specialized Farmer Cooperatives in July 2007 (Yan & Chen, 2013). The cooperatives offer services such as marketing, processing, transporting, storing farm products, information related to agricultural production, and operation to its members. In Matthew Hale's (2013) study of four rural cooperatives, he found that cooperative experiments reflect a structural contradiction: having commercial success required a deeper integration with capitalist logic. A related issue was that of "fake cooperatives", cooperatives controlled by rich farmers who rarely involved small producers in their enterprises. These fake cooperatives have been criticized by Yan & Chen (2013). One case in the recent development of AFNs in China exemplifies this: real farmers were minimally included in the articulation of AFNs (Si et al., 2015).

The rural movement and the emergence of AFNs in Taiwan have little to do with the NRRM and the debates about rural development in China. However, there are similarities. During the 1990s the emergence of AFNs lead to the rising interest of intellectuals in rural affairs. In contrast to NRRM in China (which involved the cooperation between the state, academic and civil society from the beginning), the rural movement in contemporary Taiwan has been mainly spurred through grassroots-oriented initiatives. During the late 1980s and 1990s, farmers' discontentedness increased when the state took a more neoliberal approach to agriculture. Farmers' movements emerged after

several high-profile cases of expropriation of farmland[49]. Participation of intellectuals in farmers' movement has been organized through grassroots organizations such as the Taiwan Rural Front (TRF), an NGO formed in 2008 by farmer activists, researchers, university and PhD students, writers, artists, and journalists. During the past decade, TRF became one of the main organizations involved in the organization of the farmers' movement. For example, TRF protested against the state's Land Expropriation Act on behalf of farmers. TRF also developed a clear statement on the government's proposed Rural Rejuvenation Act (RRA)[50]. TRF's main concern was that the RRA may accelerate the development of rural areas into spaces of consumption by the creation of a "garden city" as a means of urbanizing the countryside. TRF believed that farmers' livelihoods and agricultural problems were not fully acknowledged. In response, TRF worked as a platform organization to bridge smallholder farmers and international peasant movements such as *La Via Campesina*. As a strategy, TRF employed the concept of food sovereignty to articulate the future of Taiwanese farmers and agriculture. The turn of activists and intellectuals to the soil and the ecological benefits of AFNs to *solve* the rural problems is discussed in Chapter 6.

The mobilization of the TRF demonstrates a new type of network and way of organizing farmers' movements. Most importantly via social media, the TRF has attracted supporters from non-farming backgrounds, including those who grew up in cities who may have been relatively unaware of rural issues before participating. There are about 100,000 followers on TRF's Facebook page. Since 2010, the mobilization of the TRF and other organizations exemplifies a rejuvenation of farmers' movements driven by the agendas of farmland preservation and the reconstruction of agriculture (Chen, 2016).

[49] High-profile cases of land expropriation in Taiwan include the dispute in Dapu, Miaoli. In the past few years, farmland expropriation in Taiwan has encouraged thousands of farmers to take to the street in protest.

[50] The government allocated a large amount of the national budget (150 billion New Taiwan Dollar over the period of ten years) to the development of rural communities in 2010. Included in this Rural Rejuvenation Act (RRA) are the maintenance of irrigation systems, construction of bicycle paths and pavilions for tourists and farmers, etc.

Beyond the Urban-Rural Dichotomy: *Desakota*

In a recent commentary, López-Morales (2018) argues that studies of gentrification should go beyond the Western European/North American domain. The debate that rural gentrification studies has undertaken is central to untangling the tensions generated by planetary urbanization. In this study, I employ the concept of *desakota* to go beyond the urban-rural dichotomy (Champion & Hugo, 2004) and, in doing so, embrace theoretical epistemological complexity that studies of rural gentrification in Western contexts fail to recognize. Gentrification studies has built on analytical categories of the urban and the rural. However, in East and Southeast Asian countries, boundaries between the urban and the rural have rarely been clear and urbanization does occur in densely populated rural areas. Studies of *desakota*[51] challenge urbanization as a normalizing process across the world (McGee, 1999). *Desakota* pay attention to, in the context of East and Southeast Asian countries, changes of social mobility when the agricultural economy is integrated into the urban economy and the resulting geographical expression of an area with highly mixed agricultural and non-agricultural land-uses. This highly mixed urban-rural spatial pattern is a result of the capitalist need for seeking cheap labor and land (ibid). I argue that the analytical power of *desakota* in theorizing rural gentrification lies on its recognition of the legacies of agricultural economies: the dense population that once engaged in agriculture (paddy field rice cultivation), land ownership that was characterized by small-sized properties, and disinvestment in agriculture. The constrains and opportunities of land property in *desakota* areas are central to analyzing changes of social mobilities and appearances in rural gentrification processes.

Scholars studying the urbanization of Asian countries find it difficult to use the equivalent language as is used in studies in Western contexts. Jean Gottmann's (1961) pioneering study of "Megalopolis;" the amalgamation of Boston, New York, and Washington was published in 1961. In the early 1990s, Ginsburg et al. (1991) applied these concepts to examine urbanization in Asia with their study of *The Extended Metropolis: Settlement Transition in*

[51] Desakota refers to a term derived from Bahasa Indonesian words of *desa* (village) and *kota* (town).

Asia. Ginsburg et al. (1991) and McGee (1991) argue that the conventional view of urban transition ("the persistence of the urban-rural paradigm"), cannot be directly transferred to Asian contexts. The conventional Western view, which draws from the historical experience of urbanization in Western Europe and North America in the 19th and 20th centuries, assumes that urban and rural zones will persist as the urbanization process proceeds.

McGee (1991) developed the concept of desakota to include a historical trajectory of the urban and agrarian transition. The central hypothesis of the desakota model is that there has been an emergence of what appears to be new kinds of regions surrounding the core cities in many Asian countries. The mixed land-use patterns of agricultural and non-agricultural activities adjacent to and between big cities are uniquely characteristic of urbanization in Asia. Desakota was also used to describe structural changes to the labor force and social mobility when agricultural-based economies integrated into the urban economy. In McGee's model (Figure 7), the term desakota refers to "regions of an intense mixture of agricultural and nonagricultural activities that often stretch along corridors between large city cores" (McGee, 1991, p.7).

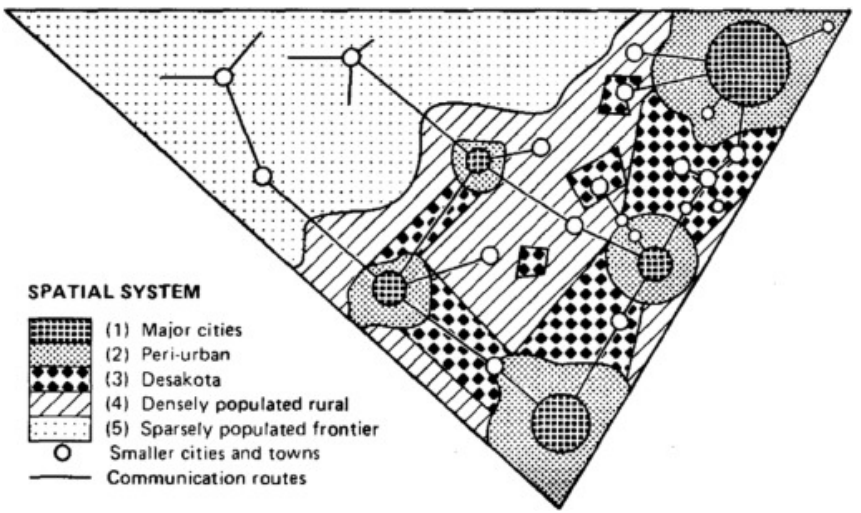

Figure 7. McGee's model
Source: Ginsburg et al., 1991, p.6

Desakota presents a contextualized case through which to question the persistent urban-rural paradigm. Based on the level of economic development, McGee (1991) divide desakota into three types. The first type refers to those countries that have witnessed a decline in rural settlement and agriculture, like Japan and South Korea. The rural landscape in these countries has a mixture of cottage industry, farmland, and industry. The main economic activities in these regions are largely non-agricultural. Income differences between urban and rural households are significant. The second type included regions such as the Central Plains of Thailand, the Taipei-Kaohsiung corridor in Taiwan, and Jabotabek in Java, which have experienced rapid economic growth because of increased productivity of agriculture and industry. These changes are linked to rising household incomes, improved transportation linkages, and infrastructure. The third type of *desakota* refers to areas in regions like Kerala in South India, the Sichuan Basin of central China, and Jogjakarta in Java. These areas have witnessed slow economic growth, high population growth, and persistently low productivity in both agricultural and non-agricultural activities (McGee, 1991). Although the countries that McGee (1991) analyzes have their unique colonial and post-colonial histories, he manages to show that the rural-urban relationships in these contexts deserve a different approach.

Wu and Sui (2016) summarize that there are three main concerns that this model addressed: firstly, the rural-urban boundaries are not clear in Asian urbanization. Urbanization can occur in densely populated rural areas and rural-to-urban migration is not necessarily a condition of urbanization. Secondly, the expansion of these areas and the subsequent population growth is not driven by suburbanization but by the growth of local manufacturing. Thirdly, the morphological patterns of these areas are highly mixed, and include residential buildings, manufacturing, and agricultural activities. Historically, *desakota* regions were areas in which inhabitants engaged in small-scale rice cultivation with good transportation infrastructure from pre-WWII (McGee, 1991). In these densely populated areas, the cultivation of wet rice involved careful water management and agronomic practices. With the growth of an urban economy, rural areas adjacent to cities were rapidly integrated into the urban economy and rural households increasingly relied on income from non-farming sources. The phenomenon that the urban economy penetrates and intertwines with highly mixed land use patterns in

adjacent rural areas is encapsulated in the idea of extended metropolitan regions (EMR) (McGee & Robinson, 1995).

Most researchers have approached the concept of *desakota* to elaborate on how economics influences urbanization processes in Asia and continue to shape unique spatial features (Sui & Zeng, 2001; Wu & Sui, 2016). Guldin (1996) argued that in China, urbanization occurred in parallel with *desakota* creation. The highly dense urban zones are the result of large scale rural-to-urban migration but also due to continued processes of *desakotasasi.* The highly mixed land-use in *desakota* regions has been viewed as an inspiration to urban sustainability (McGee, 2008).

Since the 1990s, however, the concept of *desakota* has generated considerable debate. One key critique comes from Dick and Rimmer (1998). They argue that the unique characteristics of South-East Asian cities is because the countries are within a transitional phase, and these differences, in the era of globalization, will eventually converge and conform with those in the First World. They argue that the process of urbanization in Asian countries can be better approached using strategies found within *mainstream* urban literatures. In his study of gated communities in Manila's fringe, Ortega (2012) finds that seeing the emergence of Western-like built environment (e.g. malls and gated communities) across Asian mega-urban regions as a part of urban transformations that are similar to those happening in the "First World" can be problematic. He argues that critiques such as those from Dick and Rimmer (1998) tend to be a-historical and a-spatial, and they are also devoid of consideration of actors, communities, and of the agency to resist. Ortega's (2012) study shows that the production of suburb landscape of gated communities further complicates the production of space in *desakota*. Rigg's (2001) study in Southeast Asia, which focuses on agricultural transformation, rural industrialization, social mobility, and spatial expression, explores a complexity of rural changes in *desakota*. In this dissertation I follow Rigg (2001) and Ortega (2012) strategies to analyze the real estate boom (of farmhouses in this case) as one more layer in the process of *desakotasasi*, by focusing on how rural gentrification has emerged as a part of the process of degrarianization.

Rural Gentrification in *Desakota*

Background and definition of Rural Gentrification

Glass (1964) coined the term gentrification and, in doing so, ignited debates about urban transformation that involved the relocation of middle-class households, social upgrading of housing stock, and the eventual displacement of original working-class residents in city neighborhoods. Since the 1960s, the causes, outcomes, and characteristics of gentrification have been at the center of debates on urban transformation, especially between two camps: those who advocate for production explanations and those who use consumption explanations. Most researchers today agree that the characteristics and consequences of gentrification include: the reinvestment of capital (e.g. the refurbishment of properties), social transformation of areas by incoming middle to high income groups, landscape change, and the associated direct or indirect displacement of former residents (Lees, Slater, & Wyly, 2008, 2010). The recognition of the relationship between capital investment and disinvestment (the rent gap theory) and issues of displacement (typically disguised by lifestyle practices) remain central aspects to examine the processes of gentrification.

Over the past two decades, in response to the changing social composition and means of production in the countryside, researchers began to pay attention to rural gentrification. Here, the focus is placed on in-migration of the affluent and the refurbishment of rural properties in coastal and mountain areas (Clark, Johnson, Lundholm, & Malmberg, 2007; Smith & Phillips, 2001; Solana-Solana, 2010). Rural gentrification, a subset of gentrification studies, did not receive much scholarly attention in the 1970s (Phillips, 1993; Sutherland, 2012). However, since the 2010s it has become an important debate (Bryson & Wyckoff, 2010; Hines, 2012; Qian, He, & Liu, 2013; Solana-Solana, 2010; Stockdale, 2010). This has been primarily through the implications of gentrification on rural planning and rural development (Scott et al., 2011). Given that rural gentrification has been mainly driven by increased desire for green space or natural amenities, Smith and Phillips (2001) coined the term *greentrification* to emphasize this consumption-led feature in rural gentrification.

Processes of rural gentrification have been indirectly studied as part of wider debates on rural issues such as counterurbanization, second home ownership, rural demographic change, and rural regeneration (Phillips, 2005; Stockdale, 2010). Despite this, not all concepts have addressed the political dimensions of rural change as rural gentrification (Phillips, 2010). Martin Phillips has been one of the main scholars who has engaged with rural gentrification studies (Phillips, 1993, 2002, 2005). Viewing post-productivism as a relevant process to study rural gentrification, Phillips (2005, p.479) argues that rural gentrification can be seen as "one form of the revalorization of resources and spaces which have become seen as unproductive or marginal to agrarian capital, and indeed a variety of other rural capital." He argues that the flow of capital was not only into residential developments, but also to leisure activities and facilities (Phillips, 1993). The "rent-gap" (Smith, 1979) understanding of gentrification and related processes of de-valorization and revalorization, was also discussed by Darling (2005). Using a case study of New York State's Adirondack Park, she shows that the environmental appeal can be the rent-gap, in which properties are used on a seasonal basis and are thus valued highly by tourists. Rural gentrification, as a part of the shifting geography of capital investment, demonstrates that the power to rework social and political constituencies lies in rural communities (Bryson & Wyckoff, 2010; Hines, 2012).

Phillip (2005) argues that rural gentrification should largely be seen as a form of revalorization of resources and spaces that have become unproductive. The discourse of viewing a plot of land or property as being *unproductive* relates to capital investment and disinvestment. However, I disagree with Phillips (2005) that the revalorization has been limited to non-farming approaches to rural resources and spaces. There has been little discussion on rural gentrification in regard to capital investment and disinvestment within agricultural production (Sutherland, 2012). I argue that the rent-gap in rural gentrification can also occur in agriculture.

Much of the literature on rural gentrification focuses on outcomes and characteristics (Hines, 2012; Qian et al., 2013; Smith & Higley, 2012; Solana-Solana, 2010; Stockdale, 2010). Darling (2005) summarizes processes of rural gentrification to include socioeconomic changes characterized by a shift in class structure, a shift in rural capital accumulation processes, and a shift in the composition of rural housing stock and the roles of developers. Guimond and Simard (2010) argue that rural gentrification does not

necessarily result in the displacement of locals with a lower-income. This is different than in urban contexts where the issue of displacement for researchers such as Slater (2006) has remained a defining feature of gentrification. Stockdale (2010) argues that the income parameters to identify gentrifiers (those whose income defines them as middle-class) is insufficient. The in-migration of the affluent may not be the most important aspect during the first stage of rural gentrification (Stockdale, 2010). Moreover, by only focusing on the affluent, other groups who may be marginal gentrifiers are excluded. This view has also failed to explore potential relationships between urban and rural gentrification[52].

Recent studies of gentrification have received extensive consideration in the Global East (Jou, Clark, & Chen, 2016; Shin, Lees, & Lopez-Morales, 2016). As Shin et al. (2016) point out, the term gentrification has not been subject to much public debates, only academics, grassroots organizations, and activists (within housing movements) have utilized the concept. Within East Asia, more frequently used terms in relation to gentrification are *renewal*, *redevelopment*, or *regeneration*. In terms of negative impacts associated with urban projects, terms such as *eviction* or *forced demolition* are more common. It was in recent years that researchers began to extend their domain of examination to rural localities in East Asia (Qian et al., 2013; Yang, Hui, Lang, & Li, 2018), following increased interest in rural gentrification studies in Western Europe and North America. Most of the gentrification studies in Taiwan were written in Chinese[53] and on urban context. Jou et al. (2016) contribute a nuanced analysis of the neoliberalization of the state and its relationship with gentrification in Taipei.

In recent years, researchers began to use the concept of rural gentrification to analyze rapid transformation on the urban fringe in China. One of the key debates is around the role of grassroots artists in the initial phase of aestheticization of a rural village (Qian et al., 2013; Yang et al., 2018). Rural

[52] Stockdale (2010) suggests to further explore incoming groups of those who might be affected by the high cost of housing in the city, along with other factors such as life-cycle, quality of life between urban and the countryside, and lifestyle preferences, to understand relations between urban and rural gentrification. In this study, I agree with Stockdale (2010) in suggesting that studies of rural gentrification can benefit from paying attention to the perspectives of diverse newcomers. By understanding the broader processes in both the city and countryside, I see my focus on AFN producers an effort to fill in this gap.

[53] See for example Lee (1990) and Wang, Lee, and Huang (2013).

gentrification is conceptualized as bottom-up resistance to urban encroachment and sociospatial configuration imposed by neoliberalized policies on housing development and urban expansion (Qian et al., 2013). Researchers tend to see villagers as *rent-seekers* who actively participated in the valorization of housing value and local economic restructuring (due to the system that rural land is owned collectively by villagers) (ibid). In a Taiwanese context, I conceptualize rural gentrification as a doubled process that involves investment in new land-uses that include changes in built environments and a tangible shift to ecological farming. The shift to ecological farming is in connection with urbanite newcomers' desire for agricultural lifestyles and engagement in alternative food production and distribution, a process that can be understood as gentrification in agriculture. I argue that rural gentrification in agriculture presents a bottom-up resistance to urban encroachment, and a paralleled process of rural gentrification in a Taiwanese context.

Alternative Food Networks (AFNs)

In the late 1990s, agro-food researchers began using the term Alternative Food Networks (AFNs) to analyze the rapid development of food production and consumption that differed from mainstream[54] channels (Goodman et al., 2012; Renting, Marsden, & Banks, 2003; Watts, Ilbery, & Maye, 2005; Whatmore, Stassart, & Renting, 2003). Researchers have analyzed features embedded in food networks that define practices as either conventional or alternative. The growing AFN phenomenon has attracted attention of scholars from different disciplines, such as those involved in rural development, geography, rural sociology, and agro-food studies. The term AFN refers to forms of food provisioning with characteristics that differ from "mainstream" or "conventional" modes that dominate the food regimes globally. To understand the "alternativeness" of alternative food systems, researchers split the food sector into two categories. The first included conventional, standardized food production, which involves intensive capital and follows the logic of efficiency and competitiveness. The second category encompasses food that is localized and of better quality. It is produced by

[54] In this study, the terms "mainstream" and "conventional" are used interchangeably to refer to food production that relied on industrialized methods and is part of the global supply chain.

growers and circulated within a network where trust and ecological benefits are prioritized. AFNs have been largely viewed as an effort to re-localize food sources and to break away from the highly connected global food supply chains (Goodman et al., 2012). Researchers have studied AFNs through avenues like Farmers' Markets (Holloway & Kneafsey, 2000), Community Supported Agriculture (Cone & Myhre, 2000), via the meaning of *quality turn* (Goodman, 2003), the merits of a short supply chain (Renting, Marsden, & Banks, 2003), and the role of the local in revalorizing food (Goodman et al., 2012). This renewed public interest in food systems and the increasing demand of alternative food sources have been framed as alternatives to the capital intensive, highly industrialized agricultural system. They have also been viewed as a potential solution to our dependency on fossil fuels, genetically modified crops, and capitalism (Goodman et al., 2012). For consumers, the value of such food networks has been advocated for as a means to reduce food miles, carbon emissions, and to support smallholder farmers. One of the most commonly cited definitions of AFNs is from Whatmore et al. (2003, p. 389), who describe AFNs as:

> What they share in common is their constitution as/of food markets that redistribute value through the network against the logic of bulk commodity production; that reconvene 'trust' between food producers and consumers; and that articulate new forms of political association and market governance.

Since the late 1990s, extensive literature on AFNs has been developed. Researchers in the USA and Europe have been the most active in this field (Goodman et al., 2012). In the USA, critiques of conventional agricultural production have developed alongside some researchers' doubts about the transformative capacity of the AFNs and its promise of a more equitable and justice food systems (Allan, 2010; Guthman, 2004). Many of those researching AFNs have worked closely with food activists and have actively engaged in re-localizing food initiatives. Many of the debates surrounding AFNs are centered around organic regulation. For example, Guthman (2004) convincingly showed that organic food production, similar to the industrialized agro-industry, has been largely driven by value-seeking behavior. It is argued that the "conventionalization" of organic agriculture reflects survival strategies of farm enterprises. In Europe, AFNs have been analyzed in relation to changes in agricultural policies and rural development.

Tregear (2011) suggests that studies of AFNs have been approached primarily with three theoretical perspectives: (1) political economy, (2) rural sociology or development, and (3) modes of governance and network theory. Inspired by a Marxian approach, the contribution of a political economy perspective on the knowledge of AFNs includes the recognition of contextual forces that situate and shape global food systems (ibid). This stream of studies in AFNs can be used to identify and explain the inequalities and injustices that have emerged in such systems. With this perspective, individuals' behaviors and choices can be explained within political and economic structures. A rural sociology or development perspective shares significant theoretical grounding with the previous approach and views global capitalism as the force marginalizing and exploiting producers. Researchers who adopted this perspective tend to focus on the potential socio-economic benefits that AFNs have in addressing rural issues. With this approach, AFNs are treated as social constructions. With a focus on micro-level details and explanations of how and why producers behave differently from those in the mainstream system, these studies have identified tensions associated with the social and symbolic dimensions of AFNs (ibid). Studies of AFNs with the perspective of modes of governance and network theory have provided an analysis and valuable insight into what AFNs are and how they have evolved. Tregear (2011) challenges the "universal term" of AFNs. She argues that it failed to recognize and examine the inconsistent use of concepts and the complexity of food systems. She also argues that there was insufficient acknowledgement of the problems of marketplace trading and a continued lack of a consumer perspective.

Labor has been an aspect of concern when examining the impacts of AFNs on the rural community and farming practices (Bruce & Som Castellano, 2016; Trauger, 2007; Wilbur, 2014). Similar to the earlier generation of back-to-the-landers, many AFN growers have quickly found that agricultural lifestyles characterized by family-scale sustainable agriculture may not generate enough income to be able to pay rent or sustain their way of living. One of the main reasons has been the requirement of extra labor in alternative food production. In Northern Italy, Wilbur (2014) finds that for back-to-the-land women, the adoption of an agricultural lifestyle resulted in the acceptance of more traditionalist gender roles, including greater domestic responsibilities and diminished recognition of their labor. In a rural community of South-central Pennsylvania, Trauger (2007) points out that the cost of labor was a major issue for the development of AFNs when the demand for organic agricultural

produce increased. Most farms employed either migrant labor, apprentice labor, family and women's labor or a combination to cope with the intensiveness of organic production (Trauger, 2007). According to Trauger (2007), apprentice laborers are typically 20-something middle-to-upper class suburbanites who have a desire to experience farm life and practice an environmental work ethic. They work for a monthly stipend, which is typically equivalent to below minimum wage. Often, they are recruited to manage a crew of labourers or were responsible for a particular crop on the farm.

The geographies of AFNs are largely absent from existing research on AFNs. Viewing AFNs as a "thing" to be described with focuses on attributes of AFNs was thought to be the reason why geographies of AFNs were neglected (Jarosz, 2008). Jarosz (2008) suggests we see AFNs as processes that develop out of interactions between rural restructuring and urbanization. Using Seattle, Washington State and nearby counties as a case study, she argues that AFNs need to be examined as a part of processes of agrarian, political, and economic change, in which farms near the city become smaller and suburban areas continue to expand. In other words, AFNs can be seen as the result of urbanization, in which urbanite consumers have become more dedicated to progressive politics. With their high incomes, they have become more willing and able to support food from avenues such as Farmers' Markets and CSA projects. The close relationship between the development of AFNs and peri-urban farmland has encouraged researchers to question the roles of farmland in AFNs. Many AFN growers today share back-to-the-land ideas stemming from the 1960s and 1970s (Grasseni, 2013; Trauger, 2007; Wilbur, 2013) and are beginner farmers who rely on renting farmland at peri-urban areas. Paül and McKenzie (2013) argue that AFNs in peri-urban areas are only feasible if farmland preservation is guaranteed.

Rural Gentrification, alternative food production, and land

In order to analyze rural gentrification in *desakota* regions, I suggest examination of relations between land ownership, deagrianization, and the roles of AFN in agricultural transformation. The development of AFNs in Taiwan needs to be examined in relation to crises of the farming village. Similar to the New Rural Reconstruction Movement (NRRM) in China, this

crisis was met by intensive debate by intellectuals and activists on farmers' livelihoods, rural cooperatives, and land ownership. In this study, I adopt a rural sociology perspective, focusing on capitalism as the main force marginalizing and exploiting producers. I examine the potential socio-economic benefits of AFNs through perspectives of rural gentrification.

The relationship between alternative food production and rural gentrification has attracted little scholarly attention. Keith Halfacree suggests examining processes of rural gentrification that may share similar roots to countercultural and back-to-the-land movements (Scott et al., 2011). Attention should be paid to the expressions and motivations that encourage people to move to the countryside. Halfacree also suggests that by moving to the countryside, many people try to develop connections with land, nature, and the rural community, which are all strategies to cope with the existential challenges of everyday life (Scott et al., 2011). He suggests that the difference in motivation between radical in-migration (in relation to rural distinctiveness) and mainstream counter-urbanization (in relation to manicured landscapes, aesthetics of the rural idyll, and traditional farm buildings surrounded by medium-large fields) may create tensions. However, Halfacree does not discuss how newcomers' search for rural space may contribute to gentrification.

The closest study to address the interactions between agricultural production and gentrification is Lee-Ann Sutherland's (2012) research on *agricultural gentrification*. Using a case from the United Kingdom, Sutherland brought debates about the "landed gentry" back to the countryside. She focuses on farmers who identify as non-commercial and produce agricultural products without the intention of making a living. After studying this case Sutherland argues that:

> …agricultural gentrification can occur through in-migration, which reflects increasing demand for lifestyles associated with occupation of farm land and buildings in combination with the declining economic value of agricultural land and buildings for commercial production of agricultural commodities (creating a 'rent-gap'). (Sutherland, 2012, p. 569)

Sutherland's articulation of agricultural gentrification challenges Phillips' (2005) argument that revalorization of rural spaces and resources is dominated by non-farming approaches. Furthermore, she brings the roles of

farmers back into the debates and questions about tensions around gentrification in a rural context. The in-migration of a wealthier group of people for lifestyle reasons associated with farmland and rural properties needs to be examined in relation to agrarian change. I share Sutherland's view, and have chosen to focus on non-commercial farming to work towards an analysis of how agriculture is gentrified. The conversion of a farm from commercial to non-commercially based agricultural production may indicate that rural households have insufficient income from agricultural production. To address this aspect, Sutherland argues that the major feature of agricultural gentrification is "through successful establishment of non-farm business on the farm and off-farm investment of economic capital or labour, farmers have the potential to 'self-gentrify', increasing their social status without relocation." (Sutherland, 2012, p. 570). The perspective that farmers can *self-gentrify* can be misleading. I argue that farmers/landholders should be seen as competent decision-makers (who perceive potential gains to be derived from new investments in new forms of agriculture when the rent gap is sufficiently wide), rather than gentrifiers. Gentrification processes are not the same as upward social mobility of incumbent residents (in this case, farmers), but rather involve a change of residents. Given this idea, questions need to be posed to understand whether farmers desire or are forced to participate in non-farming business. I argue that it is important to keep long-term farmers and newcomers (who seek to combine small-scale farming with their ideals of food self-sufficiency and an environmental ethic) as two separate groups of analysis. Newcomers who seek a lifestyle associated with occupying farm land and their buildings (e.g. AFN producers and B&B owners) usually belong to the group who are either rich in economic capital or social and cultural capital, or both.

In landscape studies, the social theories of Bourdieu have received increased attention when used to explore farming culture and the aesthetics of the agricultural landscape (Burton, 2012; Sutherland & Burton, 2011). According to Bourdieu (1986), capital is accumulated labor in its materialized form, its incorporated form, or its embodied form. For Bourdieu, capital has three dimensions: social, cultural, and economic. Bourdieu's central idea is that capital is transferrable between all three forms. Sutherland and Burton (2011) argue that due to the convertibility of different types of capital, Bourdieu's concept can provide a useful framework for understanding informal exchanges within farming communities.

Bourdieu (1986) argues that cultural capital exists in three fundamental forms: in the *embodied* state (long-lasting dispositions of the mind and body), in the *objectified* state (such as in the possession of cultural goods), and in the *institutionalized* state (e.g. via the possession of educational qualifications). In the field of agriculture, institutionalized cultural capital could be completion of programs that provide individuals with certification of competency that is recognized by a range of agents. Objectified cultural capital refers to material objects that are associated with and valuable within agricultural practices (e.g. tractors); and embodied cultural capital involves the labor of assimilation (Burton, Kuczera & Schwarz, 2008). An important aspect of objectified cultural capital is that its value is not measured by the object itself but in its use (it is an object with a specific purpose in given context). It is also enacted through the embodied cultural capital of the individual (ibid). In agriculture, Burton et al. (2008, p.20) argue that "embodied cultural capital is constructed through the performance of everyday activities and is manifest primarily in the level of farming skill possessed by the farmers." For Bourdieu, social capital represented a set of "relationships" that were established and maintained through either material or symbolic exchanges. Social capital, or the network of connections that one can mobilize, is the product of an endless effort to produce and reproduce relationships. An important aspect of social capital is in its ability to allow an individual to gain the recognition of members in a group. Social capital as collectively-owned capital gives members the entitlement to various forms of credit (Bourdieu, 1986, 2010).

To develop an argument on the relations between rural gentrification and small-sized land ownership in *desakota* regions, I focus on the in-migration of two groups: those rich in economic capital and those rich in social and cultural capital. I use the conceptualization of this dual in-migration to examine the rent-gap in gentrification process and its relation to agricultural transformation. The concept of the rent-gap is defined as "the disparity between the potential ground rent level and the actual ground rent capitalized under the present land use" (Smith, 1979, p.545). The potential ground rent reflects "the highest and best use" of land, while the actual ground rent is the amount that reflects the current land use. Although this explanation of gentrification has been developed from urban studies, similar effects can be found in rural areas (Darling, 2005). In the case of AFNs, the potential ground rent can be considered of high-value, as this is what the urbanite middle-class consumers are willing and able to pay. The ground rent can be

associated with agricultural economic activities within conventional agriculture. The sweat equity (private capital, e.g. through artistic and ecological approaches to agriculture in this case) of AFN producers is of central importance to draw volunteers and consumers to the countryside. Reflection upon on how AFNs may gentrify agriculture challenges us to think about agricultural transformation.

Concluding Remarks

Rural in-migrations, characterized in Taiwan by small landholdings, a degree of self-sufficiency, ecological farming, and progressive political ideologies, provide a discursive space to examine the roles of farmland in agricultural development. During the 1990s, researchers began to use the concept of AFNs to analyze food production and distribution that was different from mainstream food systems. The geography of AFNs brings the aspect of food to the center of research examining the interactions between rural restructuring and urbanization (Jarosz, 2008). In Taiwan, the development of AFNs emerged from interventions by activists and intellectuals during the crisis of farming villages during the 1990s. AFNs have been adopted by activists and New Farmers to help farmers raise their agricultural production to a higher value, access alternative markets, and stay in farming. AFNs, with their promise of a better quality of life, have also attracted urbanite newcomers to adopt an agricultural lifestyle. The spatial features of the countryside where AFN producers are located reflect a special style of urbanization visible in many Asian countries, that is *desakotasasi*. Farmland in the desakota region benefits from its proximity to the metropolitan area, but also suffers from the pressure of urbanization. The legacies of small-sized land ownership have played an important role in the revalorization of rural resources and spaces, and also resulted in tensions. By engaging in debates on rural gentrification, I argue that rural gentrification presents a discursive space to articulate agency and a future of agriculture and farmland in *desakota* regions. In a higher-valued alternative food market, the potential ground rent may be gathered by those who are able to tap into certain aspects of social and cultural capital (e.g. by employing certain forms of artisanal approaches to farming). These are challenges and opportunities to reflect upon in future farmland policies and agricultural development.

4. Methodology

In this chapter, I introduce the methods I have used to conduct the research that underlies this dissertation. I clarify how I gathered, analyzed, and interpreted empirical material. I began fieldwork exploring the landscape of newly-built farmhouses in the Taiwanese countryside in 2012. My research focus shifted considerably through the research process, from a focus on the newly-built farmhouses themselves to investigating a small group of urbanite newcomers who showed a keen interest in small-scale ecological farming, as well as this movement's role in the emergence of Alternative Food Networks (AFNs) in today's Taiwan. What guided me along during the research process was a contextual approach, one that enabled me to explore the time-space settings of farmland politics in today's Taiwan and the presence of diverse groups of urbanite newcomers in the countryside, as well as their differentiated activities. The term contextual approach, derived by the Swedish geographer Torsten Hägerstrand, refers to a way of "seeing the world as a series of associations and entanglements in time-space, and which seek both to retain and to explicate those interlacings as the central moment of their interpretations and explanations" (Johnston, 2000, p. 110). Hägerstrand speaks of contextual theory as an approach that "encloses' a 'pocket' of the world 'as it is found, with its mixed assortment of beings', in contrast to more conventional approaches that remove different classes of beings 'from their habitats and place them in a classification system' (Hägerstrand, 1984). A contextual approach thus depends upon identifying relationships of coexistence and connection rather than the similarities that are characterized in compositional theory. The essence of a contextual approach is the attempt to capture the flow of human agency together with the events and actions that gradually unfold in space and time (Thrift, 1983). I use a contextual approach as the main methodological line and in the case study use various methods such as interviews, observations and documentation (e.g. Yin, 2003) to gather materials and analyze relations between farmland politics and rural changes.

Entering the Field

My research began with trying to understand the landscape of newly-built farmhouses in the Taiwanese countryside that emerged after the amendment of the Agricultural Development Act (ADA) in 2000. I explore how and why countryside living has become desirable for newcomers and how the class dynamics in the Taiwanese countryside changed after the in-migration of urbanites. I focus on Eastern Taiwan as the location of my primary data collection, since this is one of the more popular regions for residential development of this type (on the basis of the national data concerning construction licenses issued for farmhouses). There are three counties on the eastern side of Taiwan: Yi-Lan (in the north), Hualien (centrally located), and Taitung (in the south) (Figure 8). My initial plan was to carry out a case study in each of these three counties. This plan changed after the pilot visits.

During pilot visits in June 2012 and February 2013, I stayed in Ji-An, Hualien and visited Lu-Yeh and Du-Lan in Taitung. I conducted content analysis of magazines, books, and brochures that were written by real estate agents, urbanite newcomers themselves, or those who were interested in countryside living in Eastern Taiwan. I used the keywords *Xin yimin* (newcomers) and *Xiao Nong* (smallholder farmers) to search for magazine articles and books that described urbanites' experiences in countryside living. Guimond and Simard (2010) suggest that the various actors involved in the processes of rural gentrification need to be further examined. My aim was to analyze the main actors involved in the in-migration and capital investment in the eastern Taiwanese countryside, how the urbanites involved made sense of their moves, and how their countryside lifestyles were described on social media. The content analysis enabled me to identify two processes related to the spike in rural in-migration[55]. On the one hand, the increased demand for farmland pushed up the price of farmland in Eastern Taiwan significantly.

[55] In Knight's (2000) study, two types of rural resettlement can be found in Japan. The first one was undertaken by elderly city dwellers who moved to the countryside after retiring from their work in the city. The second group were inspired by the idealistic ideas of an alternative and agrarian lifestyle. These people often rejected the urban way of living and wage-labor relations. My findings in the Eastern part of Taiwan have resemble the findings in Knight's study. I have also identified two types of newcomers: the one group seeking a countryside retirement and the other an agricultural lifestyle. These newcomers have opposing approaches to countryside living, which I have referred to as creating farmland politics.

This has occurred in places like Jiao-xi, Yuanshan and Su-ao in Yi-Lan, Ji-An, Shou-Feng, and Yan-Liao in Hualien, and Chi-Shang, Guan-Shan, Lu-Yeh, and Du-Lan in Taitung (Figure 8). On the other hand, these places have become increasingly attractive to urbanites and renowned for fostering alternative ways of living, and thus desirable for those who have low material consumption and want to avoid the uncertainties of the job market as well as the long-working hours in the cities.

Figure 8: Map of the eastern part of Taiwan.
Note: This map was produced by Dennis Raylin Chen for my dissertation.

After identifying these dynamics, I chose Hualien for conducting a case study to explore the geographies of newly-built farmhouses after the year 2000. In order to analyze the geography of newly-built farmhouses, I applied for data on the farmhouses constructed in Hualien between 2008 and 2012. This data was not publicly accessible due to privacy issues regarding personal information. After procured, I mapped this data in Arc GIS and discovered that the majority of the newly-built farmhouses were located in peri-urban agricultural areas.

Being a farmers' granddaughter and coming from Hualien facilitated my contact with actors who had an overview of the peri-urban changes that have occurred as a result of the amendments to ADA that happened in 2000. These actors included real estate agents, architects, local farmers, and staff of the local agricultural department. My contacts with owners of newly-built farmhouses were mainly locals who had moved there from the city nearby. Meanwhile, I looked into guesthouse websites to search for owners who had moved there from other counties. Guesthouses seemed to be one of the more attractive businesses being started by newcomers. However, my contact with owners of newly-built farmhouses did not proceed as I had expected. Many of them refused to be interviewed because they were worried that this study might expose their non-farming approaches to farmland, approaches that were considered illegal within the amendment to ADA.

At the same time, I followed the discussion of farmland politics at the national level closely and contacted researchers who had been active in these debates. In a meeting with Tsai Pei-Hui (the spokesperson of the Taiwan Rural Front (TRF)), she suggested that I look into a group of university and graduate students who had voluntarily moved to the countryside after attending a TRF-run summer camp. During their stay at the camp, these young students had realized that they could not completely understand the struggles experienced by the farmers without moving to the countryside to experience rural living themselves, which they then decided to do. Tsai's suggestion matched what I had previously identified in Eastern Taiwan. This encouraged me to include the question of the emergence of a movement towards an alternative agricultural lifestyle in examining today's rural in-migration in Taiwan. Later, I decided to focus my interviews and observation on a small group of urbanite newcomers who identified themselves as *Xiao Nong* (Smallholder Farmers), who were actively involved in small-scale farming. As a result of this decision, I also narrowed my focus to Hualien and Yi-Lan. In part due to the proximity

of the Taipei metropolitan area, both counties have witnessed a rise in capital investment in peri-urban farmland and have attracted a small group of urbanite newcomers who view ecological farming as a meaningful activity. In Taitung, I did not find similar peri-urban agricultural landscape changes as in Yi-Lan and Hualien.

Fieldwork

I conducted two periods of fieldwork for this study, each with a duration of about three months. From October 2013 to January 2014, I used Hualien as a base for the first period of fieldwork. I attended conferences and a farmers' market, both of which were related to the alternative food movement. Various people facilitated this fieldwork, including students and researchers involved in the Hualien *Hao shi ji* (the Hualien Farmers' Market), as well as the editor of East Coast Review (a local magazine) and a researcher from the Eastern Taiwan Studies Association. Students and researchers in the Hualien *Hao Shi Ji* have been important gatekeepers in this fieldwork. They facilitated my contact with newcomers who had recently begun a farming lifestyle. Discussions with the editor of the East Coast Review and researchers at the Eastern Taiwan Studies Association enabled me to understand the context of the tensions between the local people (who expected that large-scale external investment would improve local economic development) and newcomers (who desired a rural lifestyle in Eastern Taiwan).

During this fieldwork, I attended two conferences. In both of them, I obtained a more complete picture of the role of AFNs in rural in-migration and was able to make contact with newcomers. The first conference was the fifth national meeting of the Farmers' Market (*Nongxue shi ji yantao hui*). The conference was attended by producers who had adopted ecologically sensitive farming practices as well as those wished to learn more about how to participate in alternative food provisioning. At this meeting, I had my first encounters with AFN producers. I took note of their experiences and the struggles they faced in running farmers' markets, in their Community Supported Agriculture (CSA) activities, and in the acquisition of organic certification. One important thing to note is that since the late 2000s, almost every county in Taiwan has a farmers' market that only sells organic or

ecological agricultural produce. This rise in Farmers' markets indicates that there is a market for organic or ecological products. To further address this matter, I decided to focus on farmers' markets as important locations to observe naturally occurring events (Silverman, 2007). Things that occur in everyday life, in contrast with fixed interview questions, can open up a wide variety of novel issues for theorizing things/processes outside researchers' own categories (ibid). These included viewing social ties between farmers and consumers (Hinrichs, 2000) and how these connections can encourage newcomers to pursue an agricultural lifestyle. The analysis of the relations between the development of AFNs and the emergence of New Farmers is presented in Chapter 6.

The second conference I attended was about embracing farming in one's everyday life, an idea suggested by Naoko Shiomi, a Japanese back-to-the-land advocate. The conference of *Bang Nong Bang X* attracted beginner farmers, midlife career changers, and retired individuals. At this conference, I managed to establish contact with newcomers who had begun farming in Hualien and Yi-Lan. Two of them had been selling their products through the Hualien Farmers' Market and one had recently started rice farming in Yi-Lan. After the conference, I joined Naoko Shiomi and a group of university and graduate students to visit an ecological farm. During this event, I was able to directly observe farms that participated in AFNs and better understand how newcomers learned farming techniques, as well as view the physical condition of their rented farmland.

I carried out the second round of fieldwork between February and May 2015. This time, I stayed in Taipei and commuted to Yi-Lan. This fieldwork was carried out shortly after a group of smallholder farmers initiated an agricultural landscape conservation movement. It was the first time that AFN producers brought their lobbying and protesting against the amendment of ADA to a national level. Living in Taipei allowed me to easily attend public debates, workshops, and talks on the legitimacy of owning newly-built farmhouses. An important part of this fieldwork was a follow-up on the farmland preservation movement. During my stay, there were conferences and talks organized by NGOs, universities, and agricultural authorities about farmland politics. At a conference[56] organized by the Department of Irrigation

[56] The conference, Voice for Land Justice (*Wei tudi zhengyifasheng luntan*), was held by the Department of Irrigation and Engineering of Yi-Lan on the 12th of February 2015.

and Engineering (*Nongtian shuili hui*) in Yi-Lan, I was able to observe how farmland politics were discussed by different actors.

This time my fieldwork coincided with the season when farmers in Yi-Lan transplant rice seedlings. In line with this, I took the opportunity to attend a half-day course on rice farming for beginner farmers, held by Lai Ching-Sung, one of the representative figures of organic farming in Taiwan. I also volunteered to help New Farmers manually transplant rice seedlings and joined a group of university students performing manual pest collection. This involved the hand collection of golden apple snails (*Fushouluo*) (a common pest of rice), a practice adopted by newcomers. These participatory experiences enabled me to observe closely how farm work flexibility, in combination with using volunteers from the cities and the utilization of traditional farming methods (e.g. transplanting rice seedlings manually), were taken advantage of in AFNs. I also developed arguments regarding how these on-farm activities can gentrify farming practices. This is discussed in greater detail in Chapter 7.

My access to interviewees from Yi-Lan was facilitated by a researcher from the National Taiwan University Building and Planning Foundation (in the Yi-Lan Office). I provided information about my research on Taiwanese urbanites' recent desires for countryside living and the farmland politics related to it. I described how my research had shifted from a focus on peri-urban agricultural landscape change to the dynamic interactions between urbanite newcomers and their preferences for earth-friendly farming (*Youshan gengzuo*). On the basis of the information I provided, the researcher recommended three key informants (all of them in Nei Cheng, a rural village at the outskirts of Yi-Lan).

In this study, I did not focus especially on New Farmers with indigenous backgrounds or address the impact that this emerging rural in-migration might have on the politics of indigenous territories in Eastern Taiwan. I was aware that in some cases urbanites' interest in cultivating a small plot of land could be considered part of reclaiming indigenous territory and provided a platform for discussing the tensions between traditional farming knowledge and the logic of alternative food provisioning.

In the next section, I describe the key methodological tools that I used during my fieldwork process.

Interviews

I carried out two types of interviews during fieldwork. The first one aimed at investigating changes in agricultural landscapes and the matter of newly-built farmhouses. During the pilot visits, I interviewed a diverse group of actors, including real estate agents, architects, farmers, ex-urbanite newcomers, newly-built farmhouse owners, and officials in municipalities. The interview questions mainly concerned Taiwanese urbanites' recent desire for countryside living. The interviews were mostly unstructured, informal, and explorative (more like guided conversations). I asked interviewees how they viewed changes in the agricultural landscape. In addition, I asked where the actors were witnessing rural in-migrations and what their main concerns were regarding these changes.

The second type of interviews, which were the main source of data considered in this dissertation, were collected during both periods of fieldwork. Interviewees were mainly those who had moved away from cities recently and had become actively involved in farming. I established contact with some interviewees during conferences, while some were recommended to me by friends who were also pursuing agricultural lifestyles. I asked interviewees to describe their way of living, how they accessed farmland, and the types of crops they grew. Their experiences and struggles became an important source for analyzing components of the agricultural lifestyle that are part of recent rural in-migrations. My interviews with New Farmers were accompanied by an approach called the walking interview (Evans & Jones, 2011).

My understanding of the walking interview is derived from two approaches: as a *go-along* research tool used in ethnography (Kusenbach 2003) and a method to study landscape change (Riley & Harvey, 2007; Setten, 2003). According to Kusenbach (2003), the *go-along* method is a hybrid that combines participatory observation and interviewing. The aim is to overcome the pitfalls of using only participant observation in that it can mainly reflect the researchers' point of view, both socially and physically. Only making use of interviews, however, Kusenbach argues makes it impossible to "access all aspects of lived experiences…" and that an interview inevitably "separates informants from their routine experiences and practices in natural environments" (Kusenbach, 2003, p. 462). In landscape studies, the walking interview has been increasingly used to explore landscape changes, as a less *mechanical* methodological approach (Riley & Harvey, 2007). The landscape

can be used as a reference in the narrative that the farmers are developing, and the back and forth processes can enrich the content of interviews and help one gain information from farmers' perspectives (Riley & Harvey, 2007; Setten, 2003).

The walking interview used in this study took place in the field. I used walking interviews to explore the aspects of everyday farm work related to New Farmers' experiences in countryside living. This approach also allowed me to use and analyze the surrounding environment (e.g. newly-built farmhouses, the irrigation system, and farming practices in the neighboring farmland) to better understand New Farmers' opinions regarding rural change. These interviews were mostly carried out in Mandarin. In some cases, interviewees preferred to use a few words or sentences in other dialects (Hokkien or Hakka), of which I have a good understanding. Most interviews lasted for an hour or two, and took place in the interviewee's home or on their farmland. During the interviews with New Farmers, I was aware that the economic aspects of living a farming lifestyle, unlike the good life that is often described on social media, could be a struggle for those undertaking a farming life. I was cautious in asking questions regarding economic aspects of farming lifestyles. I also reminded interviewees that they could choose not to answer my questions, and that at any point they could withdraw from the process.

Altogether, I conducted twelve interviews with real estate agents (2), AFN organizers (3), long-term farmers (2), community staff (1), government officials (1), and newcomers (3) (see Appendix 1). Most of these interviews were recorded and transcribed. In addition, eight in-depth qualitative interviews were carried out with urbanite newcomers who had recently moved to Hualien (4) and Yi-Lan (4) and adopted small-scale ecological farming (see Appendix 2). I decided not to use two of the interviews. One of the two individuals had just started farming a couple of months before our interview. The other was working as an activist helping long-term farmers convert to earth-friendly farming. He started rice farming after our interview.

In Hualien, urbanite newcomers to farming were contacted through social events through farmers' markets. In Yi-Lan, one urbanite newcomer was contacted at the conference *Bang Nong Bang X* in Hualien, another was recommended by a researcher at the Building and Planning Foundation (Yi-Lan Office), and another was contacted through Facebook. I did not specifically emphasize gender in recruiting interviewees. I mainly considered

the accessibility of interviewees. All of the interviews lasted at least one hour and were held at the interviewee's home, in the field, or in public spaces (e.g. a café or restaurant owned by an urbanite newcomer). Most of the interviews were accompanied by visits to the interviewee's field. Five of the seven urbanite newcomers interviewed in the study had less than 10 years of non-farming working experience. The remaining two had over 10 years of non-farming work experience. In terms of crop preference, five out of seven newcomers to farming became rice farmers[57]. The other two were cultivating vegetables and fruit trees. All the interviews were recorded and transcribed.

Observations in the Field

Observation was an important method used in the study. I used both direct observation and participant-observation. Direct observation took place in neighborhoods that were popular for New Farmers, at conferences, farmers' markets, and at New Farmers' homes and farmland. Firstly, as a farmer's granddaughter and having lived in Hualien, my role as an insider allowed me to understand the context and the social relationships involved in the newly-built farmhouse landscape. Direct observation was useful because it allowed me to identify how new farmhouses were utilized. In Ji-An, a peri-urban area in Hualien (where I grew up), I followed a real estate agent to visit several farmhouses that were waiting to be sold. This experience helped me better understand how farmhouses constructed after the year 2000 were being used and who was buying them.

Secondly, direct observation was used to identify the role of agriculture and AFNs in urbanites' new lifestyles in the countryside. In popular magazines, the portrayal of urbanite newcomers who adopted agricultural lifestyles were relatively homogeneous. Through fieldwork, I was able to analyze various motivations associated with rural in-migration. At the conference of *Bang Nong Bang X*, I encountered individuals from diverse socioeconomic backgrounds and of different ages. In the discussion, I was able to observe urbanites' motivations and concerns about countryside living. At the farmers' markets, I was able to observe the types of economic activities that were

[57] These five newcomers have become rice farmers. However, they were not counted as farmers in the agricultural statistics due to most of the them renting farmland. Similarly, many of them do not have the eligibility to apply for farmers' insurance.

attractive to newcomers, the interactions between AFN producers and consumers, and the roles of cultural and social capital for and between New Farmers.

Thirdly, during fieldwork I visited several sites in Yi-Lan and Hualien where New Farmers had rented their farmland. I observed the scale of their agricultural production, the types of crops that were cultivated, and the condition of the land. This was accompanied by taking photographs at the sites. The data acquired through direct observation allowed me to investigate the relationships between farmland, the long-term farmers, and the New Farmers. In a few cases in which the interviews were conducted at New Farmers' homes, I was able to observe how AFNs and farming had become an important part of their everyday life. In Nei Cheng, I walked around the neighborhood that had become a popular meeting point for New Farmers. I observed the customers and supporters of the alternative food economy and the interactions between local residents and newcomers.

I also participated in farming activities organized by New Farmers to enrich my findings. The second period of fieldwork overlapped with the rice transplanting season. Many New Farmers were recruiting volunteers. In Yi-Lan, I joined a group of young people who helped a New Farmer manually transplant his rice seedlings. This allowed me to observe how earth-friendly farming practices (*Youshan gengzuo*) are experimented with, established, and sustained, and how New Farmers were able to turn an ordinary farming activity into an interactive tourist experience. Yin (2003) noted that participant-observation biases may be produced through the observer taking a position that supports the group being studied. One way to address this is through researchers being aware of their effect on the research process, relationships and outcomes of the research, in other words, their being reflexive.

Documentation and Maps

I collected a variety of texts and documents for this study. At the beginning of the study, my focus was on newly-built farmhouses. Before the Ministry of the Interior (MOI) launched their web-based real estate transaction database[58] in 2012, information on real estate transaction was difficult to obtain. I used the *Brief Information Brochure Real Estate Transaction Prices in Major Urban Areas of the Republic of China*[59] published by the MOI between 2004 and 2012 to analyze the farmhouse market in Hualien and in Yi-Lan. In 2012, the MOI introduced a policy that required all property transactions to be declared. The real estate transaction database website is now available to the general public. This website provides search options, including the transaction type, location, building variety, and price range. I used this website to analyze farmhouse locations and prices. I also used this database to identify farmers' roles in the farmhouse boom.

On September 30th 2017, COA published a report[60] on an island-wide agricultural land use survey and launched a website[61] that integrates aerial photography, a cadastral database, and an on-site survey. This website has been used as a basis for joint monitoring by the government and the public on farmland resources[62]. In the interactive maps one can find farmland that

[58] The website of real estate transactions provides information on property prices and other information related to sales, such as transaction types, location, building types, price range, among other matters. According to the regulation that began August 1, 2012, all real estate transactions are obligatorily registered.

[59] The publications issued by MOI is called Brief Informational Brochure Concerning Real Estate Transaction Prices in Major Urban Areas of the Republic of China. This information was gathered by the regional land office and served as an important reference for the government and the private sector. The publication was issued between 1999 and 2012. The function of this publication was replaced by the real estate transaction database website that was launched late in 2012.

[60] The report is called the agriculture and farmland resource survey. The calculation of land used for agricultural production includes legal agricultural land and illegal agricultural land. The illegal agricultural land includes land on the riverside and located in urban zones. The accuracy of the survey is supplemented by recent crop registration or data concerning subsidies as obtained from the agriculture and food agency.

[61] The website can be found here: https://map.coa.gov.tw/farmland/survey.html.

[62] The government claims it has around 800,000 hectares of arable land. However, of this farmland much of it is already tied up in diverse non-farming uses, such as for temples, factories, farmhouses, and illegal landfills. The aim of this report was to provide a basic assessment in

has been registered for farmhouse development and farmland that has been used for factories (both illegal and legal). I used maps from this website to visualize locations of farmhouses and their relations to farmland that remains in agricultural production.

In my second period of fieldwork, I used the keywords of *Xin yimin* (Newcomers), *Xin nong* (New Farmer), *Xiaonong* (Smallholder Farmer), *Nongshe* (Farmhouse), *Fan xiang wunong* (Return to the countryside for farming) to search for newspaper/magazine articles and books that report on urbanite newcomers' stories of moving to the countryside. In this study, I treated the documents as an entry point for further investigations rather than as definitive findings. I am also aware that every document was written for some specific purpose and audience. During analysis of the emergence of agricultural lifestyles, I included texts and documents that encouraged individuals with non-farming backgrounds to carry out small-scale farming and New Farmers' own accounts on farming life (e.g. from published books, personal blog articles, post on Facebook, etc.). I also considered texts provided by the agricultural authorities. For example, the Agricultural Department of the Municipality in Yi-Lan published a practical manual for New Farmers. In these texts and documents, I paid attention to stories that described occupational changes and farming practices that newcomers had adopted. It also outlined New Farmers' experiences and the challenges of a farming life.

Survey

In this study, I also carried out a survey (see Appendix 3). The purpose of the survey was to collect numerical data that could enable me to analyze the emergence of New Farmers and their roles in alternative food provisioning. In the survey, I asked respondents to provide information about their educational level, the length of time they had participated in agricultural production, the types of crops they were growing, how they accessed farmland, the size of their land, and their main source of income. The survey was distributed and collected at farmers' markets in Hualien and Yi-Lan, or

terms of integrated aerial maps, cadastral maps, and on-site surveys to assist the government and public agencies in monitoring farmland use.

through phone interviews in April and May 2015. I used this survey as an opportunity to follow up on those I had interviewed earlier. Altogether, I collected seventeen surveys. I used the results of the survey to supplement qualitative materials from the interviews.

Building an Explanation

The empirical materials for this study were collected from 2013 to 2015. The analytical engagement with the material started during work in the field. Field visits and interviews provided important pieces of insights that helped direct me during the tedious process of analyzing, interpreting, and writing. I moved back to Sweden in the summer of 2015 and then started the overarching analysis by preparing a file about each interviewee's experiences in adopting a farming life, alongside the documents and texts they had shared with their consumers. Most of the interviews in the study were recorded, except in the earliest phases, in which the interviews were unstructured and were carried out as guided conversations. Interviews were transcribed in a text document. This coding phase was about identifying urbanite newcomers' motivations for pursing an agricultural lifestyle and their role in AFNs. In writing about their journey of entering AFNs, I strived to create a coherent account of the information I had gained from field visits. I used the notes I took during the interviews and the reflections that I had written on the same day as the interviews to supplement transcriptions. I paid particular attention to new terms such as *Guanxing nongye* (conventional agriculture), *Shengtai zu* (ecological group), *and Shengchang zu* (production group) that interviewees talked about during our interviews. These terms were helpful because they became markers of potential themes that could be further examined in later phases. This procedure follows the iterative process, which helps a researcher avoid drifting away from the original topic of interest (Yin, 2003).

In the first phase of analysis, I employed the term *Hou Shan*, a term used to describe dual connotations associated with Eastern Taiwan, to analyze the landscape of the newly-built farmhouse boom. I analyzed how the farmhouse boom emerged as a part of a discourse concerning how an *underdeveloped* area could attract capital investment through selling the idea of countryside living. In the second phase of analysis, I focused on the interviewee's experience of

living a farming life. Based on an analysis of transcriptions and text materials, I selected themes such as preferred crops, access to farmland, and scale of cultivation to further explore relationships between state intervention and regulation of farmland and rural in-migrations. In my analysis, I worked to understand the broader impacts of farmland policies and newcomers' pursuits of agricultural lifestyles. On the one hand, I strived to understand the role of access to farmland in the development of AFNs. On the other hand, I used the interviews and materials I collected during my second period of fieldwork to put together a picture of why rice farming was specifically adopted by new farmers. The wide range of materials from observation, field notes, and photos (used as visual reminders) were used to verify what New Farmers had said and not said. I do not claim that the interview data provides complete evidence of the growth and development of AFNs in *desakota* region. I realize the partiality and the limits of this evidence. The emergence of the farmland preservation movement led by a small group of New Famers in Yi-Lan late in 2014 served as an important event to further explore relations between the debates on Taiwan's food self-sufficiency rate and New Farmers' participation in AFNs.

Empirical materials led me to bring in theoretical perspectives on rural gentrification and to explore the connections between AFNs and gentrified rice fields. It encouraged me to examine urbanite newcomers' roles and beliefs regarding farmland politics, and the impact of their farming life on the development of Taiwanese agriculture. My interpretations of the emergence of New Farmers and AFNs were broadened by conflicts between urbanite newcomers and long-term farmers. The conflicts between urbanite newcomers and the locals were related to overarching conflicts between AFNs and conventional agriculture, as well as between a new generation farmers and longer-term farmers.

Reflections

I conclude this chapter by reflecting upon my role as a researcher and why I conducted this research. Growing up in a family of farmers, many summer days of my childhood were spent on my uncle's land and in the shabby family-factory next to my grandparents' house. As is the case of many farmers'

children born in the 1950s and 1960s, my uncle moved to Taipei and was a worker there until he moved back home in the late 1990s. Before he took over the work of caring for my elderly grandparents, my uncle was a garlic chives farmer and specialized in the blanched form of chives. Blanched chives, with their white or yellow blades, are softer, more aromatic, and better priced. However, growing blanched chives takes more energy and work than growing other types of chives does. The harvesting needs to be done in the early morning before the sun rises. Most farm work at my uncle's farm was done by farmhands. In the family-factory, my uncle hired two villagers to remove the dirt from the chives and pack them for sale. When things were busy, all of our family members helped with the work. My favorite role in this process was to go along on the trip to the wholesale market, where we delivered the chives to the middle-man. Most farmers I knew at the time had few options. They sold their vegetables to the wholesale market directly. I enjoyed seeing the big baskets of vegetables piled on trucks, before the auction floors filled and the food merchants sprang into action. The vegetables were first gathered in the wholesale markets and then were redistributed to smaller markets, restaurants, and households. Most agricultural produce in my hometown was sent to metropolitan areas (such as Taipei) where there was a larger population of consumers and better prices were thus fetched.

Like most farmers' children and grandchildren, I did not consider farming as an option for my future career. At university, I majored in Environmental Engineering in a department that was historically the department of Agricultural Engineering earlier. Like many agricultural departments in Taiwanese universities, my department was eager to get rid of their association with the discipline of agriculture. In the summer after I graduated from university, I attended a week-long camp with a group of young people in Mei Nong, Kaohsiung. This was the closest experience with farming that I had had outside of helping at my uncle's farm. During the camp, we helped farmers do their farm work. When I returned from the camp, my mother questioned my reasons for attending. Her point was that if I wanted to *experience* farming, I could have just gone to our relatives' land instead of travelling all the way to Kaohsiung. She was right. However, many years later when I was conducting this study and reflected upon the experience from the summer camp, I understood that it was that short stay in Mei Nong that inspired me to explore the challenges of Taiwanese agriculture. The organic farmers I met in Mei Nong presented me an alternative that Taiwanese

farmers could potentially undertake if they wanted to stay on their land with dignity given a quickly changing agricultural landscape. Occasionally, I recalled the worries of the farmer who had accommodated us. She did not want her children to continue a farming life, but she was happy to see that so many university students wanted to learn more about agriculture.

It was a decade ago that I attended this summer camp and the experiences I had there have been relevant to this research process. When I encountered groups of young people with progressive political and environmental ideologies who have decide to become farmers, my feelings for them and their choices are mixed. The education I have received and the opportunity to pursue a doctoral study program abroad is probably one of the best outcomes for a farmers' granddaughter. When I meet these highly educated individuals who begin a farming life and are committed to it, I see their life path as one that I could have undertaken. I see my study as an opportunity to contribute with a better understanding of the challenges that Taiwanese agriculture faces today. The change of social mobility of farm households needs to be examined together with the history of the post-war land reform, of rural industrialization, and of international agricultural trade. What was revealed in the landscape of newly-built farmhouses that emerged after the year 2000 could be seen as rural households' chance to increase their social mobility, despite it often entailing a decision to leave a farming life. I share the view of activists, intellectuals, and New Farmers that the amendment of ADA in 2000 has appreciably affected the environment for agricultural production. Capital investment and land speculation in the farmland market has made it difficult to continue or to start a farming life. I am also cautious of viewing AFNs as being the only solution to the crisis of farming villages. The social and cultural capital involved in labor-intensive alternative farming practices may act as barriers for elderly farmers, and has resulted in some degree of rural gentrification. Although AFNs are established with good intentions, it should not be overlooked that these networks only provide benefits for producers and consumers who are able to join the system and access the market.

5. Gentrifying the Countryside in *Hou Shan*: The Farmhouse Boom

In 2013, the documentary *Beyond Beauty – Taiwan From Above*[63] directed by aerial photographer Chi Po-Lin sparked debate over the environmental cost of rapid economic development in Taiwan. The documentary captures breathtaking scenery as the camera takes audiences high up in the air, showing the mountain ranges of Yangmingshan National Park in the North, the Jaiming Lake in the East, and migrating indigenous wildlife in the South. These views of unspoiled natural landscapes are relatively detached from the lives of many audience members, as most Taiwanese people dwell in urban areas and the areas highlighted in the film are rarely visited by domestic tourists. Later in the film the landscapes became more recognizable, as the camera turns to the residential settlements, tea-plantations, and luxurious, exotically designed guest houses in the mountainous areas around Qingjing Farm (a group of farms in the mountain area in Nantou County). During the 1960s, Qingjing was assigned as a settling place for retired soldiers. The development began with the establishment of high-valued vegetables and fruit plantations. During the 1990s, domestic tourism began to take off in the area. As a part of land privatization regulations, non-locals were allowed to purchase land in Qingjing. This leads to the first wave of tourism in-migration. The second wave came a decade later in 2000, when the amendment of ADA allowed individuals without a farming background to purchase farmland and

[63] The documentary *Beyond Beauty: Taiwan from Above* won the Best Documentary at the Taipei Golden Horse Film Festival and Awards in 2013. Chi's documentary reveals various environmental issues in relation to economic-focused development and inspires many to devote to environmental movements. The documentary filmmaker, photographer, and environmentalist Chi Po-Lin died in a helicopter crash in Hualien on June 10th, 2017.

build a farmhouse. Newcomers and locals turned their spare rooms into guestrooms (a process facilitated by the regulation of Home Stay facilities). In 2000, there were only four guesthouses in Qingjing, but within a decade the number of guesthouses in Qingjing rapidly expanded to 110 homes. Only 6 of them were operated legally however (Control Yuan, 2017). The farmhouse boom in Qingjing presents an example of how many farmhouses built after 2000 are mainly used for recreational purposes and tourism development. Farmhouse development in contemporary Taiwan attracts a large amount of capital investment, the in-migration of urbanite newcomers, and results in changes in peri-urban agricultural landscape. These social, economic, and physical impacts of the farmhouse boom are all manifestations of and further manifest gentrification processes.

In this chapter, I present an analysis of rural gentrification in relation to the farmhouse boom in Yi-Lan and Hualien. Rural gentrification in Taiwan needs to be examined within the context of Taiwan's agricultural history, the legacy of ownership of small-sized landholdings, and changes in social mobility during the process of deagrarianization. The highly mixed agricultural and non-agricultural economic activities and land-uses that characterize peri-urban and rural areas - the *desakota* region - should be seen as results of rural households' capital accumulation and changes in social mobility. I argue that in contrast to what the agricultural authority claims, liberalized farmland policies (e.g. the amendment of ADA in 2000) have not allowed small farms to adopt the strategies of large-scale commercial farming. Instead, it has facilitated the relocation of a group of new rural residents to the countryside. This group rarely considers the adoption of a farming life. I argue that liberalized farmland policies have produced the conditions for the rural gentrification processes that are taking place. Processes of rural gentrification present new geographies of capital accumulation, and in this context gentrification is happening within a continued process of *deagrarianization*, in which farmers/landholders play an active role: farmers/landholders participate in economic activities that attract external capital investment, and in this way, they manage to stay in the countryside. Rural gentrification processes add a new layer to the patchwork of peri-urban agricultural landscape, with the emergence of a housing boom of single-family villas (farmhouses).

To analyze the landscape change in relation to the farmhouse boom in Yi-Lan and Hualien counties, I employ the term *Hou Shan* (Hsia, 2011; Hsia, Chen,

& Yorgason, 2011; Hsia & Yorgason, 2008) to examine how the dual stereotype of Eastern Taiwan, as backwards in terms of *development* and simultaneously at the forefront in terms of radical articulations of development, to analyze how geographical imaginations of Eastern Taiwan are used by politicians, investors, and newcomers to achieve different goals[64]. I analyze how the rent gap, the disparity between the current value of farmland and the potential value of farmland[65], is produced through agricultural policies and facilitated by improved infrastructure development. I use data on farmland transactions and the development of a farmland preservation movement[66] to analyze roles of farmers/landholders in rural gentrification. I argue that the marketization of farmland promoted by the amendment of ADA in 2000 fails to deliver on its promises to address issues faced by small-sized farms. In this Chapter, I analyze how agricultural and farmland policies have contributed to or deterred rural gentrification with case studies from Yi-Lan and Hualien counties. I use rural changes in Taiwan over the past two decades as a discursive space to examine how rural gentrification can help or harm agricultural development.

[64] The term *Hou Shan* is used to promote different goals of living in Eastern Taiwan. In Chapter 5, I discuss how the term *Hou Shan* is used by politicians to attract external capital investment exemplified in the Suao-Hualien Highway Project. In a counter movement to the highway project, the ideas of *Hou Shan* are used by a group of activists, researchers, and newcomers to articulate alternative development that is characterized as sustainable and a low-impact way of living. Chapter 6 continues to discuss how the term *Hou Shan* is used by newcomers and activists to promote Eastern Taiwan as an attractive, culturally-rich, lifestyle-oriented dwelling place.

[65] The potential value of farmland is associated with residential development (via building farmhouses) that was allowed by Article 18 in the amendment of the Agricultural Development Act in 2000.

[66] This movement was initiated by a group of small farmers and urbanite newcomers who started a farming life in Yi-Lan. Many of them are from *Yi-Lan Shou Hu Fan*, a group that was established with the vision of preserving a picturesque agricultural landscape in Yi-Lan early in 2013.

Hou Shan

Taiwan is a mountainous island with a population of 23.5 million. Most of the population is concentrated in the north (around the capital Taipei), the plains on the western side, and in the south. The Central Mountain Range runs through the center of the island from the north to the south, with more than 200 mountains that exceed 3,000 meters (Figure 9). Due to this geography, the eastern side of Taiwan was not described by modern maps through the 18th century (Teng, 2004). It was not until the late 19th century that this remote, mysterious, and peripheral region entered the imaginations of colonial cartographies[67]. During the Qing dynasty (1644-1912) the territory of Eastern Taiwan was termed *Hou Shan* or *Shan Hou*. The term *Hou Shan*, behind the mountains, was coined by Chinese immigrants who settled on the western plains and foothills of Taiwan in the 18th and 19th centuries (Hsia & Yorgason, 2008). Chinese immigrants viewed Eastern Taiwan as a territory beyond military control that was inhabited by indigenous people. *Hou Shan* was viewed as primitive and inferior through the gaze of Han Chinese settlers. In earlier phases of the Qing dynasty, the term *Hou Shan* referred the area of today's Yi-Lan, Hualien, and Taitung Counties. Following the territorialization by Han Chinese settlers, Yi-Lan's political and economic relationship with northern Taiwan was enhanced. During the Japanese colonial era (1895-1945), the term *Hou Shan* was replaced by Eastern Taiwan, and Yi-Lan was no longer considered a part of Eastern Taiwan (Hsia, 2011). Today, Eastern Taiwan refers to Hualien and Taitung, a sparsely populated region, home to a mere two percent of the country's population.

I follow Hsia Li-Ming's (a geographer and independent research at the Eastern Taiwan Studies Association) articulation of the recent development of Eastern Taiwan. Hsia (2011) proposes that by referring to the Pacific Ocean Eastern Taiwan (instead of relating itself to the mountains), Eastern Taiwan becomes viewed as a frontier, rather than a backwards place. This ocean-oriented perspective of Eastern Taiwan has been adopted by artistic activities and literature events in recent years. It has also been adopted by activists and planners to articulate alternative development paths in Yi-Lan.

[67] See further in Teng (2004), p.231.

In post-war regional planning, Yi-Lan was considered a part of Northern Taiwan. At the time, most politicians and planners would rather associate Yi-Lan with the metropolitan Taipei than the backwards Eastern Taiwan. Being situated in this in-between gave rise to space for autonomous development in Yi-Lan. Yi-Lan has been called the holy land of Taiwan's democracy[68] (*Minzhu de shengdi*) because officials from the Democratic Progressive Party (DPP) governed the county between 1981 and 2004. The development of Yi-Lan during the late 1990s exemplifies the opposing ideologies on development of the two main parties (the Kuomintang (KMT) and the DPP) in Taiwan. In 1986, Formosa Plastic Group, Taiwan's biggest petrochemical company, proposed a 40 billion New Taiwan Dollar (NTD) complex (the Sixth Naphtha Cracker) be built in the Litzu industrial zone in Yi-Lan County. This petrochemical investment was largely supported by KMT politicians and opposed by residents because of its potential environmental impacts. The mobilization of environmentalists and activists gained momentum after the support of the county executive Chen Ting-Nan[69], who built a pro-environment reputation during his tenure. In December 1987, Chen and the president of the Formosa Plastic Group participated in a televised debate. Chen's persuasive performance and firm position for environmental protection encouraged environmentalists, and the issue was lifted to the national level by policy makers. In 1988, Formosa Plastic Group withdrew their plan, but in 1990, with the endorsement of the KMT central government of the time, Formosa Plastic Group attempted to build its naphtha cracker project in Yi-Lan again. A large-scale demonstration against the proposal (led by Chen), was held in Taipei in December 1990. At this time, Yu Shyi-Kun, the successor of the county executive, also a DPP member, held an equally strong opposing attitude toward the petrochemical project. In 1991, Formosa Plastic Group finally fully withdrew their plan of establishing a petrochemical production site in Yi-Lan.

[68] The history of Yi-Lan becoming an autonomous county has been known as the Yi-Lan experience (*Yilan jingyan*). It is a concept that is important to the discourse of the pro-environment agenda set by the DPP.

[69] Chen Ting-nan was Yi-Lan's county executive between 1981 and 1989.

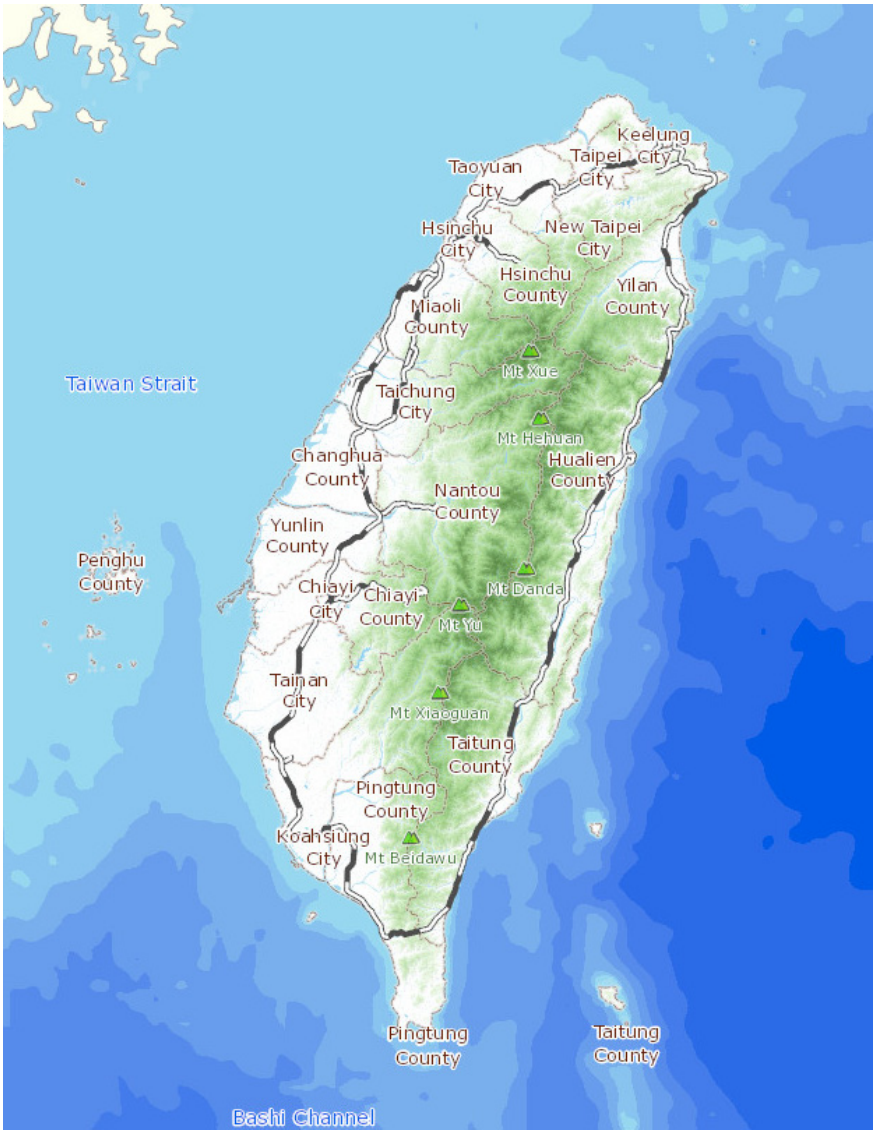

Figure 9. Map of Taiwan
Source: National Land Surveying and Mapping Center
https://whgis.nlsc.gov.tw/GisMap/NLSCGisMap.aspx

In contrast to Yi-Lan, county executives in Hualien have been either KMT politicians or those who maintain close relations with the KMT. The demand for alternative development paths in Hualien is related to the history of uneven development. Taiwan's economy took off in the 1960s, almost a decade after the first land reform. Rural industrialization, urbanization, and government investment in transport networks were mainly concentrated in Northern, Western, and Southern Taiwan. During the late 1990s, the government advocated for a policy where industry was encouraged to relocate to Eastern Taiwan (this was known as industrializing Eastern Taiwan (*Chanye dong yi*)). The reasoning was that the underdevelopment of Eastern Taiwan was thought to be largely a result of the absence of industrialization and efficient transport routes (e.g. highways). The policy of industrializing Eastern Taiwan was not a success. In the end, only parts of the mining industry relocated to Hualien. The legacies of rural industrialization, like environmental pollution and the scattered landscape of factories both large and small scale, were mainly absent in Hualien. During the 1980s and 1990s, the absence of large-scale factory development and environmental pollution became an important asset for Eastern Taiwan to develop its tourism industry. This change has been described in terms of seeing Hualien as the last idyllic place (*Zuihou de jingtu*).

Another example of development conflict is the controversies over the Suao-Hualien Highway Project[70]. In 1990, the Suao-Hualien Highway Project was proposed as a part of developing an island-round highway system and the project of industrializing Eastern Taiwan. There were different evaluations on feasibility of the highway in the following decade. However, it was not until 2000 that the government conducted an environmental impact assessment for the project. In 2003, the DPP government announced that the construction of the highway would commence by the end of the year. However, in December 2003, the President of the Executive Yuan announced abruptly that the highway project would be suspended for three months. Supporters of the highway project suspected that this decision was made due to pressure from environmental groups. The needs for constructing the highway were (and continue to be) questioned by activists, environmentalists, and younger

[70] The connection between Yi-Lan and the capital city Taipei was enhanced via the Hsueh-Shan Tunnel that completed in 2006. The Suao-Hualien Highway Project was considered an extension to this.

generations of Hualien locals. Their argument was that the Suao-Hualien Highway Project, which bypasses ecologically fragile areas, could cause ecological disasters. Based on Yi-Lan's changes after the completion of the Hsueh-Shan Tunnel, activists and environmentalists argued that the impacts of mass tourism (e.g. traffic congestion in downtown areas and heavy reliance on the tourism economy) might bring in capital investment in real estate and the farmland market. The expensive housing price and cost of living might discourage first-time home buyers (young people in this case), and further deteriorate the situation of out-migration of locals. A student-run online platform, the Suao-Hualien Cake Shop[71] (*Su Hua gaobing pu*) was also established to spread information about the pros and cons of the project. Hualien Dreamers' Union (*Hui lan mengxiang lianmeng*), a group formed by activists, writers, artists, university students, and researchers, proposed different alternatives, with the ideas of sustainable and low-impact tourism, cooperative business, and public transportation at their core (Hsia et al., 2011). With the use of social media and support from well-known public figures, the debates over the highway project were lifted to a national level. The articulation of alternative development has become an important part of a renewed interpretation of *Hou Shan*. The environmentalists, newcomers, and NGOs continued to advocate for the legacies of *Hou Shan* (e.g. the unexploited nature, sense of living, etc.) as an asset for alternative development.

In contrast to activists, environmentalists, and the younger generation's concerns about the highway project, the project was supported by Hualien municipality. The project was seen as a tool that could fulfill multiple goals of local development, such as to reduce traffic accidents, to stimulate the local economy, and to reduce the high rate of unemployment and out-migration. The local government employed the discourse of *Hou Shan* to emphasize the region's isolation and backward nature and emphasized the urgent need for external capital investment and public expenditure. In the late 2000s, the central government used the highway project as leverage to gain support from the locals. Because of these pressures, neither of the two candidates in the 2008 presidential election took a clear position on the project (Tso, 2014). On the 25th of April 2008, one month before the KMT took over the

[71] Organizers of the platform used the term cake (G*aobing*) instead of the highway (*Gaosu gonglu*) on social media to attract attention from the younger generation.

government, the Suao-Hualien Highway Project was returned to the Ministry of Transportation for re-assessment. On the 6th of July 2008, the President of the Executive Yuan announced that a new project, Suhua Highway Improvement Project, would be prioritized. The construction started in 2011 and is set to be complete in 2019 ("Suhua Highway improvement to be finished by 2019," 2016).

Farmhouse as the New Crop

During the past two decades, discourses on development in Yi-Lan and Hualien counties can be examined within the legacies of *Hou Shan*. The disinvestment at eastern Taiwan, as a part of the discourses of *Hou Shan* dealt with, was strategically used by politicians and investors to attract external capital investment (e.g. in the development of transportation infrastructure, farmland market, and the farmhouse boom). The marketization of farmland that was facilitated by the amendment of ADA has been used by the local governments to attract capital investment.

Agricultural land in Taiwan is a precious resource. According to COA's agriculture and farmland resource survey, there were 2,772,499 hectares of agricultural land in Taiwan and the majority of this land is located in mountain areas (620,135 hectares on plain areas and 2,152,364 hectares on mountain areas) (Council of Agriculture, 2017b). Of all the agricultural land, only 521,400 hectares of arable farmland[72] is actively used for agricultural production. This number is much lower than what the government usually claims (800,000 hectares of arable farmland). Of the arable farmland, only 362,535 hectares are located in plain areas.

When the importance of Taiwanese agriculture declined during the 1970s, farmland in Taiwan has been gradually appropriated for non-farming purposes. Some of them are legal, while others are illegal. The controversy of newly-built farmhouses that emerged during the 2000s was the first time that the general public began to pay attention to uses of farmland in Taiwan. Yet,

[72] This includes 362,535 hectares on plain area, 117,637 hectares on mountain area and 32,598 hectares non-legal agricultural land. Non-legal agricultural land refers to land on riverside or land in urban zone that are used for agricultural production.

the first thorough investigation on farmland use was not conducted until 2017. In September 2017, COA published an agriculture and farmland resource survey. The result of the survey is presented in interactive maps that integrate data of aerial photographs, cadastral databases, and the results from an on-site survey. According to the survey, 67,127 hectares of farmland have been converted to non-farming uses. This includes uses by residential developments, temples, restaurants, landfills, commercial buildings, and factories. The top three non-farming uses of farmland are factories[73] (13,859 hectares), residential developments (6,793 hectares) and farmhouses development (4,930 hectares) (Council of Agriculture, 2017b). The detachment of farmland from agricultural production has to do with earlier history of rural industrialization and processes of *desakotasasi*. In terms of locations, factories that were built on farmland were mostly concentrated in northern and western Taiwan. The red marks in Figure 10 indicate farmland that is being used by factories in Yuanlin, Changhua county, an area known for small-sized manufacturers and exporters.

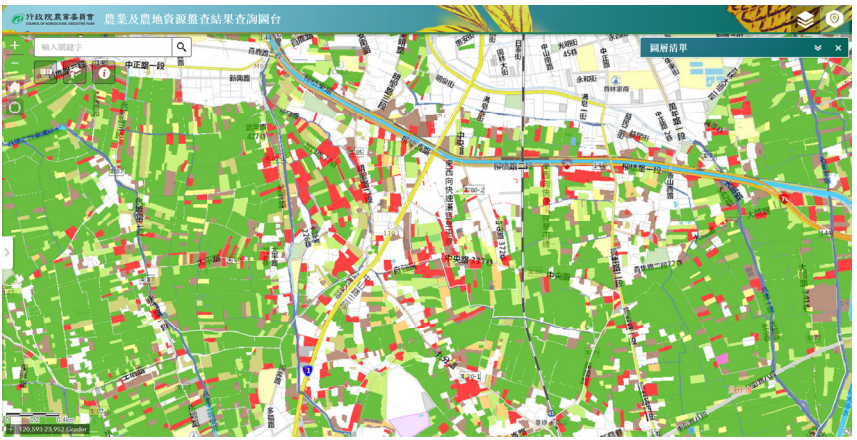

Figure 10. Farmland uses in Yuanlin, Changhua County.
Source: https://map.coa.gov.tw/farmland/survey.html.

[73] Illegal or legal use of farmland by factories has been an urgent issue in the articulation of the status and the future of Taiwanese agriculture. Most illegal uses of farmland by factories were concentrated in western and northern Taiwan, such as on the outskirts of New Taipei City (such as Shulin District), Taoyuan, Taichung city (such as Wuri, Dali, Taiping, Fengyuan, Shengang, Tanzi, Daya District), Changhua County (such as Hemei, Lukang, Xiushui Township), Tainan County, and Kaohsiung County.

According the survey, the development of farmhouses is concentrated in Yi-Lan (925 hectares), Changhua (596 hectares), Taichung (550 hectares), Pingtung (355 hectares), and Kaohsiung (330 hectares) (ibid). Between 2009 and 2012, applications for housing permits of farmhouses have doubled, from 1632 to 3332 annually, indicating that newly-built farmhouses were in huge demand on the housing market (Figure 11). The building permits for farmhouses reached its peak at 4532 permits in 2011. Applications for farmhouse construction have been concentrated in Yi-Lan, Nantou, Miaoli, Taoyuan, Hsinchu, and Hualien Counties[74] (Table 13). In 2016, there was a sharp drop in applications for construction licenses. This was due to adjustments of the Regulation for Constructing Farmhouses on Agricultural Land (hereafter Farmhouse Regulations). Although in both ADA and Farmhouse Regulations, it is specified that there should be no separation of farmhouse dwelling and farm operation (owners of farmhouses need to be *farmers*), it has been difficult to verify one's qualification as a working farmer.

The farmhouse boom in Yi-Lan can be traced to the late 2000s. After the completion of Hsueh-Shan Tunnel in 2006, the travel time between Taipei and Yi-Lan has been effectively reduced to one and a half hours. Rural and peri-urban single-family villas emerged as a popular choice for second-home seekers. In the late 2000s, there was a rapid increase of applications for farmhouses in Yi-Lan, from 694 in 2010 to 1,548 in 2011 (Figure 12). In Yi-Lan, most construction licenses were issued after 2006. Between January 2012 and November 2018, there were a total of 1,570 transactions of farmhouse in Yi-Lan. This was the highest number of transaction of farmhouses of all counties in Taiwan. Most transactions of farmhouses were concentrated in Yuanshan, Dongshan, and Sanxing townships (Figure 13).

[74] The five counties that have the highest number of applications for farmhouse construction do not match the results of the survey (Agriculture and Farmland Resources Survey) from COA. An explanation for this can be that both farmhouses constructed prior to the year 2000 and those illegally constructed are included in the COA's calculation. The data here is derived from the statistical yearbook from Construction and Planning Agency, MOI.

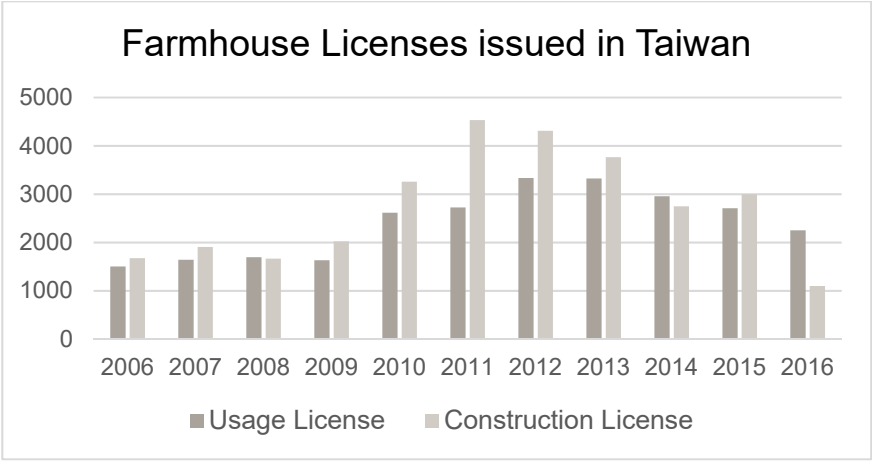

Figure 11. Farmhouse licenses issued in Taiwan between 2006 and 2016
Data source: http://cpabm.cpami.gov.tw/FarmStatistical/Farm.html and the Statistical Yearbook of Construction and Planning of Taiwan and Fuchien Area from Construction and Planning Agency, MOI http://www.cpami.gov.tw/

Note: The use of the term usage license refers to the license that is required for usage or alteration of a pre-existing building. Construction license refers to the building license required for new constructions, extensions, reconstructions, or building repairs.

Table 13.
Number of Usage Licenses of newly-built farmhouses in Taiwan issued between 2006 and 2012

	Yi-lan	Taoyuan	Hsinchu	Miaoli	Nantou	Hualien	National
2006	76	161	232	268	67	179	1,501
2007	59	125	231	255	95	180	1,643
2008	113	106	223	293	129	180	1,696
2009	224	123	211	220	124	110	1,632
2010	587	173	187	304	428	142	2,614
2011	431	198	261	319	579	111	2,822
2012	682	262	216	414	647	183	3,415

Data source: http://cpabm.cpami.gov.tw/FarmStatistical/Farm.html

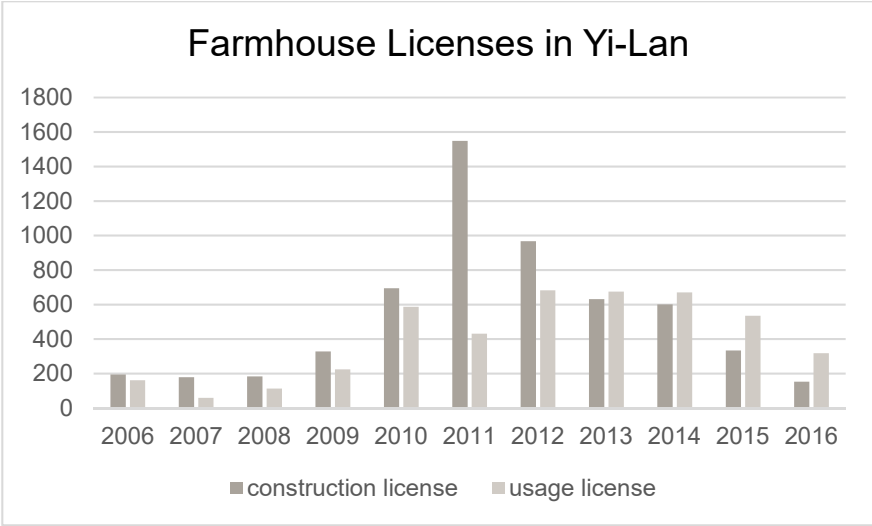

Figure 12. Farmhouse Licenses in Yi-Lan
Data source: http://cpabm.cpami.gov.tw/FarmStatistical/Farm.html and the Statistical Yearbook of Construction and Planning of Taiwan and Fuchien Area from Construction and Planning Agency, MOI http://www.cpami.gov.tw/

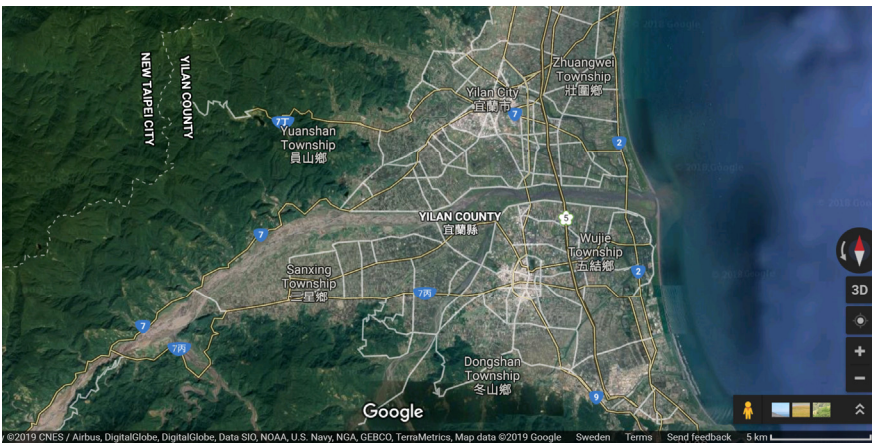

Figure 13. Aerial image and map of Yi-Lan
Source: Google maps

During the early 1990s, a group of architects and organizations initiated a housing movement called the Yi-Lan housing (*Yilan cuo*) movement. This was before the farmhouse boom. The aim of the housing movement was to experiment with different housing styles (mostly single-family homes) that could reflect a sense of living in Yi-Lan. The movement was an effort to preserve a *rural* sense of living in Yi-Lan, knowing that with improved transportation infrastructure it would be difficult to avoid an encroachment of urbanization to its hinterlands.

During the 2000s, the mass development of single-family villas (farmhouses) in Yi-Lan was promoted by local politicians, real estate agents, developers, and investors. Prior to the year 2006, transactions of farmland in Yi-Lan were concentrated in urban zones. The value of farmland in urban zones increased considerably because landholders and investors expected that the price of farmland would increase significantly after the completion of the Hsueh-Shan Tunnel in 2006. Meanwhile, investors and developers began to turn their attention to the peri-urban farmland market. Townships such as Yuanshan, Dongshan, and Sanxing emerged as hotspots for farmland investment due to their transportation infrastructure. Although the market for farmland has attracted attention from investors, the price of farmland prior to the year 2006 was relatively stable (Ministry of Interior, 2005a). The year 2006 was a turning point for farmland market in Yi-Lan. The desire and benefits of owning a second home were widely reported on in newspapers and magazines. Purchase of farmland and construction of one's own villas (newly-built farmhouses) were touted as a way to realize one's desire of a countryside living. The development of farmhouses mainly used arable farmland of good locations (e.g. with good access to irrigation water and road systems). Another feature of newly-built farmhouses of this type is riverside housing developments. For example, many newly-built farmhouses were constructed along the Annong River in Sanxing Township (Ministry of Interior, 2006). At Yuanshan, Dongshan, and Sanxing townships, transactions of real estate have mostly been of farmland and farmhouses (Ministry of Interior, 2007). In 2008, the number of transactions and the price of farmland and farmhouses were slightly affected by the economic crisis (Ministry of Interior, 2008). In Yuanshan and Sanxing townships, increased capital investment in farmland and the farmhouse market made land in residential area less attractive and even resulted in a price dropped (Ministry of Interior, 2009a, 2010a). In 2012, the average price of farmland per ping (one ping is equivalent to 3.306

m^2) in Sanxing township was between 7,500 and 14,000 NTD per ping (Ministry of Interior, 2012). In the peri-urban areas of Luo Dong, an urban township in Yi-Lan, the price of farmland was as high as between 16,700 and 38,000 NTD per ping (Ministry of Interior, 2012), meaning that the price for one hectare can reach as high as 115 million NTD (one hectare is equivalent to 3,025 ping). Between 2012 and 2018, there were a total of 199 transactions of farmland in Luo Dong township and the average price of farmland was 36,800 NTD per ping[75].

According to *Yi-Lan Shou Hu Fang*, the number of newly-built farmhouses in Yi-Lan has increased by an average of 700 houses per year since 2010. In total, there were 925 hectares of farmland used for farmhouse development in Yi-Lan (Council of Agriculture, 2017b). Significant capital investment in the farmland market, resulting in the construction of single-family villas, has produced an area at Yi-Lan's outskirts that is characterized by mixed land-uses, home to both single-family villas and farmland that is still used for agricultural production. Figure 14 shows that farmhouse development accounts for the majority of non-farming use of farmland in Yi-Lan. The farmhouse boom in Yi-Lan presents a special case of peri-urban agricultural landscape change. Massive rural industrialization, like the processes that took place in northern and western Taiwan, did not occur in Yi-Lan.

[75] The information is acquired from the MOI's website of the real estate transaction database (https://lvr.land.moi.gov.tw/). I searched for data of transactions of farmland that located in agricultural zone and specific agricultural zone.

Figure 14. Farmland uses in Yi-Lan
Note: The map is derived from the COA's agriculture and farmland resource survey in 2017 (https://map.coa.gov.tw/farmland/survey.html.). In this map, farmland that is currently used for agricultural production is marked with the color green. Farmland that is used for farmhouse development is marked with the color yellow. Farmland that is used by factories is marked with the color red. The map is produced based on the data of construction licenses of farmhouses issued between 2012 and 2016. The accuracy of the map is supplemented by the national land utilization inventory survey.

During my fieldwork in 2014 and 2015, it was common to see both advertisement of farmland for sale (Photograph 3) and newly-built villas for sale (Photograph 4). In the context of Southeast Asian countries, the presence of set-aside farmland does not necessarily indicate that income from farming is too low that farmers cannot support themselves (Rigg, 2001). The prevalence of land speculation may explain why landholders would rather let their land set-aside (ibid). Huang (2002) argues that the historically high price of farmland in Taiwan has to do with farmland's potential uses outside of agriculture, such as through residential or industrial development, as since the 1970s, the use of farmland has undergone a process of becoming detached from agricultural production in Taiwan. In terms of locations, transactions of real estate properties show that most transactions of farmhouse are located in specific agricultural zones[76], zones that are identified with good conditions for agricultural production. In 2012, there were a total of 108 transactions of

[76] The information is acquired from the MOI's website of the real estate transaction database (https://lvr.land.moi.gov.tw/). I searched for data of transactions of farmhouses between 2012 and 2018. Information on land-use zone in which the farmhouse located is provided in this search.

farmland in Yuanshan township, Yi-Lan and the average price of farmland was 11,800 NTD per ping[77]. In 2018, there were 98 transactions of farmland and the average price escalated to 18,600 NTD per ping (a 57% increase of the price in 2012).

Photograph 3. Set-aside farmland for sale in Yi-Lan
Note: The farmland was for sale. Next to this plot of farmland were two paddy fields. Author's own photo.

[77] The information is acquired from the MOI's website of the real estate transaction database (https://lvr.land.moi.gov.tw/). I searched for data of transactions of farmland that located in agricultural zone and specific agricultural zone.

Photograph 4. Newly-built farmhouse for sale in Yi-Lan
Note: The farmhouse boom in Yi-Lan has created an interesting landscape where one can see new houses waiting for sale while the rest of land surrounding the house is unkept. Author's own photo.

In Hualien, farmhouse development has been concentrated in Ji-An township[78], a township that neighbors Hualien City (Figure 15). In the beginning of the 2000s, single-family villas (farmhouses) emerged as a popular housing choice for first-time buyers. These villas were often sold at a relatively affordable price in comparison with housing price in the city. In 2004, the price for a three-floor villa (with approximately 65 m^2) in Ji-An was sold at an average price of 4.38 million NTD (Ministry of Interior, 2004). The styles of these single-family villas are wide, ranging from European to Japanese to Chinese styles. The majority of newly-built houses were constructed in Qing Feng and Tai Chang villages (Ministry of Interior, 2004), an area where land use is very mixed, characterized by both agricultural production and residential areas. Some of the single-family villas were constructed due to changes in land zoning (from agricultural land use to urban land use). Many

[78] Ji-An has 18 villages and a population of about 79,000 residents. The size of the township is about 65 km^2. Although Ji-An is categorized as a rural township, villages at the border to Hualien City have been urbanized. To the west and south of Ji-An, the land is a mixture of residential and agricultural areas. This part of Ji-An is consistent with a *desakota* landscape.

villas were constructed because of the deregulation of farmland enabled in the amendment of ADA in 2000.

> The real estate market is coming back. Ji-An township, the only township that shows positive growth in population, has become real estate agents' favorite location (for residential development). Ji-An township has mixed land uses of farmland and residential development and it is very close to Hualien City. Due to saturated housing market in Hualien City, residential development has gradually moved to Ji-An township. The villa development is mainly concentrated in Qing Feng village. The stylish villas ranging from European styles, Japanese styles to Chinese styles have become the new landmark of Ji-An. Qing Feng village used to have a large area of paddy field. After the change of urban zoning and the improvement of road system, the village experienced rapid urbanization. Most newly-constructed houses were sold out quickly. The number of housing sold increased slightly this quarter. The price of housing as well as farmland is relatively stable (Ministry of Interior, 2004b).

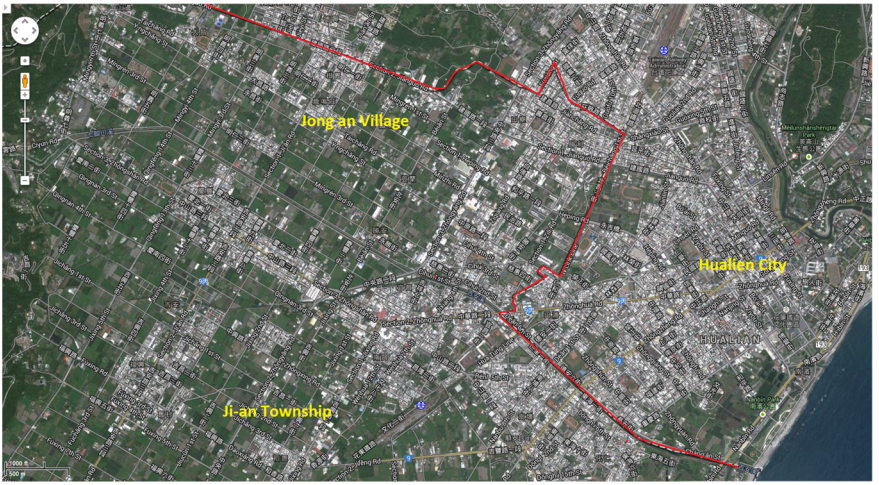

Figure 15. The location of Ji-An Township and Jong-An Village
Source: Google maps

The price of farmland in Hualien began to rise around mid-2005. Increased demand for single-family villas (farmhouses) pushed up the price of farmland (Ministry of Interior, 2005a). Most buyers were attracted by the appearance of the agricultural landscapes where the homes were situated. Transactions of

farmland and newly-built farmhouses became significant in the real estate market in Ji-An (Ministry of Interior, 2005b). The farmhouse boom also became a driver of urbanization. In 2007, transactions of farmland were responsible for the most sales of real estate market in the area (Ministry of Interior, 2007). Although the farmland market was slightly affected by the economic crisis in 2008, the price of farmland continued to grow (Ministry of Interior, 2008a). In 2012, there were 109 transactions of farmland in Ji-An township and the average price of farmland was 8,700 NTD per ping[79]. In 2018, there were 101 transactions of farmland in the same township and the average price of farmland increased to 11,100 NTD per ping (a 26% increase from the price in 2012).

> The condition of the agricultural zone (in Ji-An township) is better than other townships. It has a good natural condition to develop agriculture. The location of Ji-An is close to wholesale markets and easy to reach consumers. The transactions of farmland are intensive. The high price of farmland has been sustained by *luxury* farmhouses (Ministry of Interior, 2011).

The high demand of farmland in Ji-An is explained by its peri-urban location and the qualities that contribute to well-established, effective agricultural production, including irrigation systems, well-connected road systems, and accessibility to customers (Ministry of Interior, 2009c). In the farmhouse boom in Ji-An, the escalation of the price of farmland has had little to do with agricultural production, as the vast majority of those who are interested in investing in farmland have no intention of adopting a farming life.

During the late 2000s, the heated farmland market in northern Hualien began to extend to the southern part of the region, to townships such as Shoufeng. Shoufeng, a rural township that takes about a half hour to drive to from Hualien city, emerged as an ideal location for farmland investment. In-migrations and capital investment to Shoufeng are attracted because of the spacious hinterland that features well-organized irrigation systems and good road access (Ministry of Interior, 2008b). In-migrations to Shoufeng are attracted by the ideas of seeing Eastern Taiwan as an idealized place for retirement or returning to the countryside. In 2010, a bit later than was the

[79] This information is acquired from the MOI's website of the real estate transaction database (https://lvr.land.moi.gov.tw/). I search for data of transactions of farmland that located in agricultural zone and specific agricultural zone.

case in Ji-An township, transactions of farmland became the main item on the real estate market in Shoufeng (Ministry of Interior, 2010a). Another popular destination for farmland investment in Shoufeng is on the east coast, along the Hualien-Taitung Coastal Highway. The farmhouse development in this region is driven by tourism development. In a conversation with a real estate agent, I found that transactions of farmland in Hualien are also related to land speculation linked to the highway project. A dominant investor profile is that of a Taiwanese person who worked in China and is now considering retiring in Taiwan (personal communication, November 1, 2013).

Between 2006 and 2016 there were between 100 and 200 housing permits) issued in Hualien (see the number of usage licenses in Figure 16). Building permits reached their peak in the year 2012 and rapidly dropped in the year 2016[80] (see the number of construction licenses in Figure 16). Between 2008 and 2012, of a total of 743 farmhouse construction licenses were issued by the municipality in Hualien, and 351 of these applications were located in Ji-An township. According to the COA's agriculture and farmland resource survey, there were 305 hectares of arable farmland in Hualien being used for farmhouse development (Council of Agriculture, 2017b). The most popular locations for farmhouse development are the peri-urban areas around Hualien City (Figure 17).

[80] This rapid drop in applications for building permits of farmhouses was due to the amendment of regulations for construction farmhouses on agricultural land that happened in September 2015.

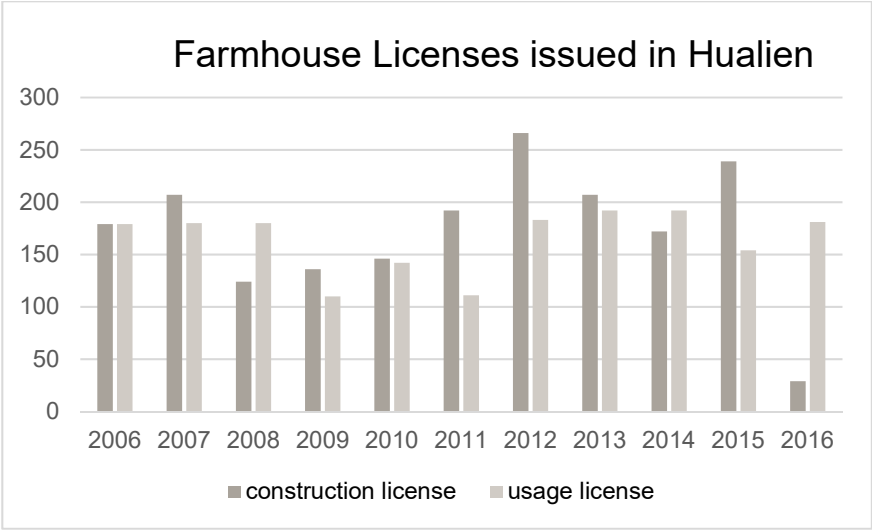

Figure 16. Farmhouse Licenses issued in Hualien between 2006 and 2016
Data Source: http://cpabm.cpami.gov.tw/FarmStatistical/Farm.html and the Statistical Yearbook of Construction and Planning of Taiwan and Fuchien Area from the Construction and Planning Agency, MOI http://www.cpami.gov.tw/

Figure 17. Farmland uses in Ji-An, Hualien
Note: The map is derived from the COA's agriculture and farmland resource survey in 2017 (https://map.coa.gov.tw/farmland/survey.html.). In this map, farmland that is currently used by agricultural production is marked with the color green. Farmland that is used by farmhouse development is marked with the color yellow. Farmland that is used by factories is marked with the color red. The map is produced based on the data of construction licenses of farmhouses issued between 2012 and 2016. The accuracy of the map is supplemented by the national land utilization inventory survey.

When I started my fieldwork in 2013, I noticed that it was common that farmhouses were surrounded by concrete fences, to separate one's private property from its neighboring farmland. Some of the fences even had home surveillance cameras. It was also common to see trucks transporting construction materials to these locations and stirring up dust on the countryside roads (see Photograph 5). I found that many of those who moved into farmhouses were middle-class Hualien locals who purchased farmland or gained farmland through family inheritance. They see farmhouse living as a way to retire in the countryside. Between 2008 and 2012, most newly-built farmhouses were concentrated in Yong-an and Guang-hua villages. These two villages witnessed significant population growth through the 2010s. In 2009, the two villages had a population of 3,985 and 1,486 respectively. In 2013, the population of these two villages increased to 4,301 and 1,812. Within this population growth, there was a significant change in terms of the average educational level of residents (see Table 15). Farmhouse development seems particularly attractive for the group with a higher socioeconomic and educational background. In an interview with a farmhouse owner in Ji-An, this person points out how newly-built farmhouses in his neighborhood are mainly used for retirement life or second homes:

> The one lives next to me is a retired couple. They used to be farmers. Their children are a civil servant and a doctor. On our right side lives a real estate agent. And the one who lives behind our house is a retired soldier. In front of our house lives a university lecturer. A business man also lives in our neighborhood. He usually lives in Taipei and visits his house (in Hualien) once a month. They usually have a maid to help them clean the house.

The profile of newcomers I see in Hualien largely echoes Peng Tso-Kwei's concern, the former Minister of the COA. Newcomers are registered as "farmers" and thus become eligible for agricultural subsidies while they demonstrate little interest in entering or engaging in agricultural production.

Photograph 5. Farmhouse under construction in Ji-An, Hualien
Note: Next to the construction site of these farmhouses is a paddy field. The view of the paddy fields is what many farmhouse newcomers like – there in an appeal in being able to see agricultural landscapes from their windows. Author's own photo.

Table 14.
Residents' educational background in Jong-An and Guang-Hua Village in 2009 and 2013

Year	2009	2013
Jong-An Village	7(PhD), 129 master's degrees, 918 University Degree	21(PhD), 170 master's degrees, 1127 University Degrees
Guang-Hua Village	1(PhD), 106 master's degree, 234 University Degrees	9(PhD), 202 master's degrees, 366 University Degrees

Data source: Hualien County Ji-An Township Household Registration Office, Statistic of Population of the educational level among residents aged above fifteen years old

The Municipality of Ji-An does not view farmhouse development as a threat to its agricultural development (personal communication). Instead, the Municipality sees potential economic gains from farmhouse development as an alternative for elderly farmers, enabling them to retire from heavy agricultural work. In my conversations with farmers in Ji-An, the amendment of ADA in 2000 often brings up mixed feelings. Some farmers are hesitant to

sell their farmland, even though capital continues to flow in the farmland market. The new geographies of capital accumulation brought up by processes of rural gentrification change social relations in rural villages. Most farmers do not know owners of the newly-built farmhouses. Because farmland has been sold many times, farmers also often don't know owners of their neighboring land. In a conversation with a farmer (who is 65 years old and an AFN producer) in Ji-An, he described his worries about the escalating prices of farmland associated with farmhouses and its impact on the younger generation. This farmer talked about the legacies of earlier farmland planning (e.g. around irrigation and road transportation) and complained that the government did not care about the value of agriculture. This farmer also comments on tensions in his field:

> Many professors prefer to live in a bigger place. However, it is surrounded by farmland cultivated with conventional agriculture. The smell (of pesticides) would, without doubt, spread all over. Many of them (new residents) complain! But they have not thought about this: it is a specific area reserved for agriculture. If they lived in a residential zone, there would be no problem.

Another farmer (65 years old), who also had his farmland in the same village, talked about the state's food policies. In his view, the amendment of ADA in 2000 had *negative* impacts on Taiwanese agriculture:

> I think on the policy side they [the state] do not want to have a sustainable perspective. Firstly, where is our policy on food? We let our land be set-aside and we waste the resources of sunshine, air, and water. We import food from outside and we have a lot of unemployed young people. We do not pay attention to natural resources. What can we buy with money that we work so hard for? If imported food is polluted, or prices are higher, how will we be able to survive?

Rent-seeking in the farmland market has pushed up the price of farmland. In many places, one can find newly-built farmhouses surrounded by unkept fields (Photograph 6). The reasons why these farmhouses are ill-maintained right after they are constructed can be because of the withdrawal of capital, both by investors and farmers/landholders who become uncertain about the potential return of their investment.

Photograph 6. Abandoned farmhouses waiting for sale in Ji-An, Hualien.
Note: Many newly-built farmhouses seemed to be temporarily abandoned. This could be due to lack of capital to finalize the construction or because of waiting for better housing price. Author's own photo.

The Role of Farmers in Rural Gentrification

Farmers' roles in gentrification have seldom been analyzed critically. Sutherland (2012) argues that the major feature of agricultural gentrification is that farmers have been active participants in rural gentrification processes. Farmers can increase their social status and avoid being displaced through establishing non-farm businesses and making off-farm investments. I agree with Sutherland that farmers might have actively participated in rent-seeking behavior. In a *desakota* context, I argue that rural gentrification presents a continued process of deagrarianization. The conversion of farmland from agricultural production to non-farming use indicates that farmers may have insufficient income from agricultural production.

In Taiwan, there is evidence that shows that some farmers actively participate in processes of farmland marketization and gentrification. One example is that more than half of the transactions of farmhouses traded between 2012 and 2017 were registered by or concerned land that was initially owned by farmers. Between January 2012 and November 2018 there were 393 transactions of farmhouses in Ji-An[81]. Out of those transactions, 290 farmhouses (73.8%) were built in the past five years. Between January 2012 and November 2018 there were 1,570 transactions of farmhouse in Yi-Lan. Out of those transactions 951 of them (60.1%) were built in the last five years. The high transaction rate of newly-built farmhouses shows that farmers/landholders were active in farmhouse development. The amendment of ADA divides "farmers" into two groups: those who owned farmland prior to the year 2000 and those who acquired farmland after the year 2000. The amendment of ADA specifies that farmers who acquired farmland after the year 2000 are allowed to sell their properties after owning for five years. This means that that majority of sellers are farmers who owned farmland prior to 2000, and very likely, have worked on farmland. It could also be those who inherent farmland and have little intention to continue a farming life.

In Yi-Lan, Shih and Chi (2002) find that after the amendment of ADA, elderly or retired farmers have been actively involved in the construction of temporary, shabby, and small buildings. Locals refer to these houses as *Gou Long She* (dog cage in Chinese) because at an average of a tiny 3.3 m^2 they are too small to live in. These temporary constructions were used to apply for housing permits. The new owners of farmland could then use housing permits that had been acquired for these temporary houses to reconstruct single-family villas. The housing permits for the *Gou Long She* allowed new buyers of farmland to avoid waiting two more years before they could construct new farmhouses. Anticipating that newly-built farmhouses are desirable, and the value of these houses is much higher than what a farmer can normally earn during a lifetime of farming, the current market for farm houses has produced cooperation between real estate developers and farmers/landholders. The revalorization of farmland presents new geographies of capital accumulation that involve both farmers/landholders and real estate developers.

[81] Data from MOI's real estate transaction database website.

Farmers' participation in farmhouse marketization and rural gentrification have not received social media's attention until a farmland preservation movement gained momentum in 2014. On October 17th 2014, a group of smallholder farmers created a huge image of a *No house* slogan on a recently harvested rice field (photograph 7). The message was clear. They were standing against the in-migration of the affluent and their luxury farmhouses. This is the first organized social movement against the amendment of ADA in 2000. Participants of this movement are mainly from *Yi-Lan Shou Hu Fan*, a group that was established with the vision of preserving a picturesque agricultural landscape early in 2013. The development of this farmland preservation movement brought the tensions of farmland politics to a national level.

Photograph 7. Farmland preservation movement by small farmers
Note: The image *No House* was produced on a recently harvested rice field.
Source: http://e-info.org.tw/node/102801

In February 2015, in response to the farmland preservation movement, the agricultural department of Yi-Lan Municipality decided to stop issuing farmhouse construction permits for two months[82]. As the only county in Taiwan that issued suspensions on the construction of farmhouses, this created huge debates among farmers, developers, and real estate agents. Yi-Lan Municipality demanded that applicants of farmhouses needed to provide documents that prove that farmland where farmhouses located will continue to be used for agricultural production. The municipality also demanded that construction of farmhouses not be constructed in the middle of a plot of farmland, as it might affect agricultural production.

Concerned that this suspension in Yi-Lan might have broader implications for national farmland policy, a group consisting of real estate agents, landholders, B&B owners, and farmers was formed. On March 23rd 2015, this newly formed group mobilized more than one hundred participants to protest Yi-Lan Municipality's temporary suspension on farmhouses. Irritated by the environmentalists and young farmers' advocacy for keeping farmland for farming (*Nong Di Nong Yong*) and food sovereignty, representatives of real estate agents, B&B owners, and landholders shouted loudly toward the young farmers: "*If you want to grow something, go somewhere else to farm*" (*Yao zhongtian qu bie di defang zhong*) ("Civic group in preservation of farmland in Yi-Lan", 2015).

With the help of social media, the farmland preservation movement had pushed the controversies around farmhouse development to a national level. On September 3rd 2015, the Executive Yuan amended the Farmhouse Regulations, which are the main regulations concerning farmhouse construction. The amendment requires that applicants for farmhouse construction should be *farmers*[83], and one should be able to show

[82] This could explain why application for farmhouses suddenly decreased in 2015.

[83] A list of requirements of those who were eligible to apply for construction permission of farmhouses is specified in Article 2: Applicants of construction permission of farmhouses have to be older than 20 years old or married individuals under 20 years old. Applicants should own farmland for more than two years before applying for construction permission. The minimal size of farmland for constructing farmhouses is 0.25 hectare. Applicants were not allowed to build farmhouses if s(he) has property listed as farmhouses. The construction of farmhouses should not affect agricultural production environment and development of farming villages. The Article 18 of ADA also specifies one's eligibility to own farmhouses.

documentation that one is working on the land[84]. The amendment of Farmhouse Regulations in 2015 was in response to increased discontent from society concerning commodification of farmland and land speculation that happened after 2000.

On September 8, 2015, a mass protest was organized by the Agriculture and Farmland Development Association[85] and Farmers' Association[86] in response to concerns that the central government might modify ADA again. 3,500 farmers gathered in front of Yi-Lan Municipality asking the Municipality to withdraw its proposal, since it might affect farmers/landowners' *right* to gain from farmland market. Organizers and participants of Agriculture and Farmland Development Association used the term serf (*Nongnu*) to emphasize farmers' livelihood is tied with a farming life while agriculture only bring low economic return. Participants argue that one tenth of farmland for off-farm investment (farmhouse development in this case) presents a way for farmers to improve their economic situation and avoid being displaced. Based on my observation of the event, those who argue for a more liberalized farmland policy (e.g. the current ADA) are farmers/landholders. They see marketization of farmland a way to diversify their economic means and accumulate capital.

Toward a Larger Farm Operation or Gentrification?

The amendment of ADA in 2000 can be seen as one of the state's agricultural policies that was intended to solve the problems of small-sized farms and the income-gap between farming and non-farming households. The idea is that deregulation in farmland policies can enable farmers to enlarge their farm size, and thus move towards commercial agriculture. This revitalization of farmland has produced a highly mixed land-uses at peri-urban and rural areas.

[84] The amendment of Article 3.

[85] The Agriculture and Farmland Development Association is a group of farmers and landholders that formed shortly after the farmland preservation movement gained momentum. Except for a few online articles there is not much information on this group.

[86] Farmers' Association is an organization that plays an important role in agriculture development in Taiwan. Its role includes to assist farmers in accessing markets, to provide farming knowledge and information, and to support procurement of agricultural loans.

Large scale arable farmland in good condition with effective irrigation systems and road connections have often been used for expensive residential development. Very few rural in-migrants who have moved into farmhouse developments have adopted farming lifestyles. Although some farmhouse owners do follow the regulation, the scale of production could only be counted as hobby farming, lacking both intention and the possibility of making a living through farming. The use of farmland as site for lucrative real estate developments adds a new layer to this patchwork quilt of land-uses at peri-urban areas. The debates around rural in-migration during the 2000s in Taiwan are mainly related to newcomers' non-farming professions and their non-farm uses of fertile farmland. This is exemplified in Academia Sinica's (the National Academy of Taiwan) recommendation paper87 issued in 2013 (Academia-Sinica, 2013). According to this paper, the amendment of ADA has significantly affected conditions for farming in Taiwan:

> Over the past decade there has been a decrease in the amount of cultivated farmland in Taiwan equivalent to 1,770 Da-An Forest Parks[88]. Within this converted farmland, an area of farmland equivalent to fifteen Xin Yi Districts[89] was used for residential development and sites for (newly-built) farmhouses. This has seriously destroyed the site of food production. Issues that arose after the implementation of the policy (the amendment of ADA in 2000) included those who did not participate in agricultural activity. They were able to purchase farmland and were thus registered as farmers. They constructed farmhouses for their own use or to sell for profit. This has severely affected water resource used for irrigation, the use of farming machines and produced pollution. Comparing the agricultural consensus in 2005 and 2010, the number of farm households has increased 1.1 % whilst households not actively

[87] Peng Tso-Kwei, the former Minister of the Council of Agriculture, is one of the main authors of this recommendation paper.

[88] Da-An Forest Park is a public park in Da-An district in Taipei City. The park was created in 1994 after the controversial eviction of squatters and the demolition of illegal buildings on municipal land. The park occupies 26 hectares. The equivalent area of 1,770 Da-An Forest Parks is about 46,000 hectares.

[89] Xinyi district is a financial area and is considered the most cosmopolitan district of Taipei. It is also the district where government buildings and various shopping malls are located. The size of Xinyi District is about 11km^2. The equivalent area of 15 Xinyi Districts is 17,000 hectares.

> involved in agricultural activity have increased 39.8%. This means that many of them were fake farmers[90] (Academia-Sinica, 2013, p.7).

Arguments about the detrimental impacts of the amendment of ADA often simplified tensions between farm households and non-farm households, as well as those between farming and non-farming approaches to rural land. I argue that this dualistic perspective on farmland politics is not sufficient to understand the challenges of agriculture in today's Taiwan; they need to be examined within the context of an agricultural history. The farmhouse boom in Taiwan presents a continuation of the process of deagrarianization in *desakota* regions. The countryside where most in-migrants have moved used to be areas in which a large percentage of the population engaged in small-scale rice cultivation. These areas had careful water management and agronomic practices. When agriculture began to show signs of stagnation, many rural residents moved to the city to search for a better way of living. Increased productivity of agriculture also released some of the work force to non-farming sectors. The rapid economic growth in Taiwan during the 1980s was partially due to rural industrialization, in which factories were established in rural localities (instead of only located in export processing zones). Many farmers and rural young people were able to stay in their hometowns, and became workers in nearby factories and adopted practices of part-time farming. These processes were mainly concentrated in western Taiwan or the Taipei-Kaohsiung corridor (an example of the second type of desakota region[91]).

The farmhouse boom in Yi-Lan and Hualien has produced a distinctive landscape characterized by mixed land-use patterns of agricultural and non-agricultural activities. This landscape is not new to urban studies and has been theorized on with the concept of *desakota* (Ginsburg et al., 1991; McGee, 1991). The geography of *desakota* corridors represents dynamic changes of social mobilities of farmers/landholders that arise when agricultural-based economies are integrated into urban economies. The farmhouse booms investigated in this study are mainly concentrated in peri-urban areas. The

[90] My translation of the report.

[91] Similar to the Central Plains of Thailand and Jabotabek in Java, these areas experienced rapid economic growth because of increased productivity from agriculture and industry that came with improved transportation and infrastructure.

farmland used for farmhouse development is mostly *urban* farmland, located in areas that are already characterized by highly mixed agricultural and non-agricultural land-uses, and legacies of *desakota* region. This is an important background for examining gentrification processes in rural Taiwan. This diversified use of farmland can analyzed by consideration within comparative approaches to rural gentrification studies (López-Morales, 2018). The contrast between the urban and suburban has indeed played an important role in theorization of gentrification in Western countries. However, there are hardly neat boundaries between the city and the countryside in most *desakota* regions. Studies of gentrification in the context of Southeast and East Asian countries need to consider this epistemological difference.

In terms of rural industrialization, Yi-Lan and Hualien have had relatively different development paths. The focus was on infrastructure development, asserting that an improved transportation system could bring about economic growth and come to repeat what western Taiwan had experienced. Around the same time, Taiwanese society began to pay attention to environmental pollution, one of the legacies of rural industrialization, during the 1980s. Many considered retirement in *rural* areas on the east side of Taiwan. In this respect, the discourse *Hou Shan* gained a new interpretation: as being an idealized place for retirement or an alternative lifestyle (the reversed interpretation of being a lag-behind region). These are reflected in the discourse of *Hou Shan*. During the late 1990s, politicians and residents began to use the discourse around *Hou Shan* to attract external investment. The discourse *Hou Shan* is associated with disinvestment. The revalorization of rural spaces and resources in Yi-Lan and Hualien counties is underlined by two processes: (1) the results of uneven development between eastern Taiwan and northern and western Taiwan; (2) the marginalization of agrarian capital at a national level (Phillips, 2005). Rural gentrification in Eastern Taiwan happened in response to increased demand of middle-class households, in particular from the baby boom generation who were in search of idealized rural localities for retirement or second-homes. This rural in-migration was also a part of the functioning of capitalism: the constant capitalist need for increasing private revenue by moving capital from urban areas to *under-capitalized* farmland (Darling, 2005; Phillips, 2002). In the context of *desakota* regions, in which the urban/rural divide has been far from neat, gentrification processes reflect rural households' decision-making processes that are impacted by farmland ownership and the state's farmland policies.

In the British countryside, Sutherland (2012) claims that through off-farm investment, farmers have succeeded in avoiding displacement. Sutherland's analysis was based on analysis of non-commercial farmers[92] and the scale of agricultural production was much larger than those in East Asian countries. Sutherland argues that agricultural gentrification happens "both through migration of wealthy newcomers outside the locale, and by social up-grading of existing farm households i.e. gentrification from within the locale" (Sutherland, 2012, p. 569). I agree with Sutherland that examination of gentrification in rural contexts should pay attention to changes of farmers' social mobilities. Farmers' adoption of non-commercial agriculture, either voluntary or involuntary, reflects changes in farm households' strategies in terms of capital accumulation and social mobilities. In *desakota* regions, these processes are closely tied to small-sized land ownership. Farmers/landholders rent seeking resembles similar processes of gentrification as those in urban contexts. In Taiwan, the majority of farmers/landholders were small landholders. 53.77% farmers have land between 0.1 and 0.5 hectare and 26.15% farmers have land between 0.5 hectare and 1 hectare. The structure of extremely small landholdings has directly and indirectly contributed to the prevalence of practice of part-time farming in Taiwan. In 2015, 74.69% farm households were considered part-time farmers and among all part-time farms only 6.33% approached agriculture as their main occupation. The farmhouse boom in Taiwan presents a continued deagrarianization and urbanization of *desakota* regions, as well as gentrification processes. Farmers' rent-seeking can be examined in relation to legacies of post-war land reform (like the prevalence of ownership of small pieces of farmland) and histories of rural industrialization. The distinctive landscape of this ongoing rural

[92] Sutherland (2012) identifies four types of non-commercial farmers, including: (1) hobby farmers: those who have small-scale agricultural land (less than 50 ha) and produce agricultural commodities for recreational purposes; (2) new country gentlemen: those who have medium to large-scale agricultural land (more than 300 ha) and produce agricultural goods without the intention or ambition of making a living from farming; (3) pluriactive successors: those who were raised on farms and left the farm for more than 10 years before they returned to take up farm management. They have sufficient non-farming income to continue a farming life and (4) diversified farmers: those who gained sufficient income from their diversification activities and did not need to depend solely on farming income. In Sutherland's analysis, hobby farmers and new country gentlemen present "newcomers" to farming while pluriactive successors and diversified farmers represent gentrification "from within".

gentrification in Taiwan is characterized by a patchwork quilt of fallow land, cultivated farmland, and newly-built farmhouses.

Concluding Remarks

In *The caging of the mind: the ideology of keeping farmland for farming and the development and the village and city in Taiwan*, Sociologist Huang Shu-Ren (2002) argues that small farms and small landholdings are one of the factors that causes farm households to generally have a low income. Since the 1970s, the price of farmland in Taiwan has been separated from its usage in agricultural production. Comparing the price of farmland in Taiwan to countries like the Netherlands, Germany, France, and the United States[93], Huang points out that Taiwan has the highest price of farmland among all of the countries. Huang argues that the high price of farmland has to do with the prevalence of land speculation in relation to the best use of land in relation to potential capital generated, which ends up being either residential or industrial developments. Importantly, the expensive housing and land prices in cities in Taiwan can be seen as both a direct and indirect result of the state's strict control on the use of farmland (that has stemmed from the ideology of keeping farmland for farming (*Nong Di Nong Yong*)) (ibid). Huang (2002) argues that with liberalized farmland policies, such as the amendment to ADA in 2000, the price of rural and peri-urban land, as well as housing prices in the cities, will move toward a more reasonable price, and both urbanites and farmers can benefit. Over the past two decades, however, marketization of farmland as well as deregulation on use of farmland, as enabled in the amendment of the ADA in 2000, has actually produced farmhouse booms in the Taiwanese countryside. The price of farmland continues to grow and rent-seeking encourages farmers/landholders to actively participate in processes of gentrification, sometimes in cooperation with developers. Instead of relying on liberalized farmland policies to solve problems related to small farm operation (such as the low incomes generated from farming), the state should ensure it is possible that farmers are respected and able to secure enough of an

[93] The average price of farmland in the Netherlands is 1.95 million NTD per hectare (in 2000), 290,000 NTD per hectare in Germany (in1999), 95,000 NTD per hectare in France (in 1999), and 90,000 NTD per hectare in the United States (in 2000) (Huang, 2002, p.180).

income to live a life with dignity, and focus on the ecological service value of farmland and re-evaluate the amendment of ADA in 2000.

6. Cultivating Alternative Food Networks from the City

Over the past decade, the countryside in Yi-Lan and Hualien[94] has witnessed the emergence of New Farmers (*Xin Nong*) and a flourishing alternative food economy. The alternative food economy has been developed by a group of newcomers with non-farming backgrounds[95]. These newcomers have embraced the concept of natural, friendly, and/or organic farming, adopted ecological principles, and ignited debate over the relative values of conventional and alternative agricultural production. I argue that alternative food networks (AFNs) in Taiwan are largely a part of an urban-based economy[96], in which the emergence of New Farmers has played an important role. In this chapter, I attempt to draw processes from the city and the countryside together into a coherent picture to better understand the emergence and development of AFNs in today's Taiwan. I also argue that AFNs in Taiwan are advocated for and nurtured by activist farmers and

[94] There was a difference in the motivation behind urbanite newcomers entering farming in these two counties. However, in this study I did not go into detail to investigate the differences. Instead, I have chosen to use the newcomers' shared experiences as an entry point to investigate the emergence of New Farmers in Taiwan and their contribution to and influence on AFNs.

[95] According to the results of my survey, many of the newcomers have higher educational backgrounds, holding Bachelor or Postgraduate degrees. The newcomers surveyed were interior designers, academic researchers, social workers, or involved in the financial sector before they moving to the countryside.

[96] I share the opinion of researchers that AFNs in Chinese society are *urban-oriented enterprises* (Shi, Cheng, Lei, Wen, & Merrifield, 2011). Despite this, I do not mean to overlook the participation of long-term farmers who have converted from conventional agricultural to organic and friendly farming, this is indeed a topic that should be further investigated. During my fieldwork, I met only a handful of long-term farmers who had converted to alternative food provisioning. Most of them had done so due to health reasons. Intensive exposure to chemical pesticides during their farm work forced them to search for alternatives.

intellectuals (*Zhishi fenzhi*) who wish to address the crises of farming villages that have been ongoing since the late 1990s. Food activists, researchers, and intellectuals have initiated and organized projects such as the surveying of farming villages, farmers' markets and Community Supported Agriculture (CSA) projects. These projects have been largely built on the belief that if consumers buy directly from farmers, the situations in farming villages will improve. The notion of AFNs is mainly employed by a new generation of producers who have a different approach to farming. Many of these are New Farmers who were inspired by an agricultural lifestyle and the diverse promises of AFNs that I will explore below. This chapter begins with an overview of the various events and initiatives that emerged in the city in the mid-2000s. It aims to address the turbulence of rural and agricultural development. This is followed by an analysis of how a small group of urbanite newcomers were inspired by AFNs to adopt small-scale earth-friendly farming. I examine their motivations, experiences, and the challenges they faced when adopting a farming life in Yi-Lan and Hualien, alongside their contributions to the development and promotion of AFNs.

Alternative Food Networks in the City

The Roles and Responses of Intellectuals

> Population decline in rural areas, the shrinking of arable land, the aging farming population, and the inability or unwillingness of the young generation to take over farming work are the factors responsible for the ongoing deterioration in current agricultural environments. As our farmers continue to age with no young people to replace them, in what condition will our agriculture, farmers, and rural villages end? (Yang, 2007, p.257) (My translation)

The above statement was made in 2005 by activist farmer Yang Ru-Man during his time in prison. At this time, Yang was on a 44-hour hunger strike to protest against the World Trade Organization (WTO) negotiations taking place in Hong Kong. In 2002, the Taiwanese government applied to join the WTO and the impact on the agricultural industry was extensive. Due to

protectionist tariffs, Taiwan was forced to import rice for the first time since the post-war period. Inevitably, there was concern that many rice farmers would be affected. Yang Ru-Man is an activist farmer who asked the government to provide solutions to protect rice farmers given the changes required after joining the WTO. After receiving no official response during 2003 and 2004, Yang was frustrated and took action. He planned a series of bombing incidents in Taipei, attaching notes to the bombs stating: "against rice importation" and "the government should look after its people". His main purpose was to draw attention to the difficulties that farmers were experiencing as a result of the WTO agreements. Fortunately, no one was hurt by the bombing incidents[97].

Yang became a well-known activist farmer. His radical approach to agricultural issues was widely supported amongst environmental activists, Non-Governmental Organizations (NGOs), and agricultural and rural researchers. During the mid-2000s, public talks and debates over agricultural development were held and numerous books on agricultural development were published (Peng, 2011; TRF, 2012a; Wu, 2007; Yang, 2007). An important feature of these initiatives and events held in the city was the increased involvement by university students and intellectuals specializing in rural affairs. These events directly and indirectly encouraged a movement of people to take up farming during the late 2000s. Liu (2011) points out that during the 1970s, environmental movements in Taiwan were prompted by farmers' struggles over their livelihood and the unequal distribution of natural resources. From the 1980s onwards (with intervention by intellectuals and the middle-class), struggles faced by rural villages were increasingly conceptualized as environmental problems primarily centered around concerns about public health and food safety. According to Liu, the category *farmers and fishers* was replaced by *local residents*. This shift played an important role in driving the development of environmental policies in Taiwan to rely heavily on both community and expert participation in environmental impact assessments. It is important to note that this focus on environmental problems seemed to happen at the expense of focus on policies

[97] On the evening of the 25th of November 2004, in order to end the rice bombing incidents, Yang surrendered to the police. In his semi-autobiography, Rice Is Not Bomb, Yang (2007) mentions several times that it was the societal inequality and unattended class tension that prompted him to take radical actions.

that addressed the unequal distribution of resources among different classes in society.

The establishment of the Taiwan Rural Front (TRF) in 2008 is one key indicator suggesting that urbanites were becoming more interested in rural affairs. Since its development, TRF has been an important organization in advocating for issues that concern rural areas. TRF had a clear statement on the amendment of ADA in 2000. Their argument was centered on the low food self-sufficiency rate in Taiwan[98]. They demanded that the government pay attention to the agricultural sector and to critically examine the definitions of farmland and farmers in agricultural policies. TRF advocated that farmland should be reserved for agricultural production (*Nong De Nong Yong*) and the term *farmers* should be restricted to those who were active participants in agricultural production and produced healthy food (TRF, 2012b). This emphasis on *healthy* food reveals how Taiwanese urbanites and intellectuals have envisioned farming roles, the use of farmland, and what they can do to improve farmers' livelihoods in a way that might be different from many farmers themselves.

TRF has been active in organizing various actions to support rural livelihoods. Many protests organized by TRF have shown a new form of mobilization between intellectuals in the city and farmers in the countryside. TRF's actions have attracted young people, especially university students. One such example was between July 17 and 18, 2010, when more than 3,500 protestors gathered on the main road in front of the Presidential Building to protest against a development project that was understood by local villagers as an inappropriate expropriation of farmland. The protest event was called *Taiwanese people's support for farming communities – 717 vigil on Ketagalan Boulevard*[99] ("Vigil on Ketagalan Boulevard", 2010). After watching the protest on TV, smallholder farmers from Yi-Lan took their rice seedlings and covered the plaza in front of the Presidential Hall. They also used sweet potatoes to compose the Chinese characters for Land Justice (*Tudi zhengyi*). This example demonstrates how the TRF has been effective at mobilizing various groups.

[98]The food self-sufficiency rate in Taiwan, calculated on a calorific supply base, was 31% in 2016. This is relatively low compared to neighboring countries.

[99] Ketagalan Boulevard is an arterial road between the Presidential Building and the East Gate. It is a popular location for mass political rallies.

To further encourage student engagement, TRF have organized visits of university students to rural villages. After meeting farmers, participants acknowledged that their knowledge of agriculture did not allow them to fully comprehend the struggles that farmers were experiencing. To address this knowledge gap, NGOs and activists began to organize on-farm camps. In 2009, TRF organized the first summer camp in Mei-Nong, Kaohsiung. More than 60 university students attended. During the camp, students stayed with locals, participated in farming activities, and conducted surveys on farmers' livelihoods. To reach wider audiences, participants of the camp and TRF published books with detailed first-hand accounts about the status of farming and fishing villages (TRF, 2012b). Pei-Hui Tsai, the spokesperson for TRF, pointed out that the notion of a farming village has changed. Originally meaning one's hometown, they are now considered distant places for many of those born in the 1980s and 1990s (TRF, 2012b). Because of this, it is thought that young participants often consider themselves as outsiders in rural affairs. Later in my study I find that this gap between the countryside and the city has played an important role in explaining why rural living has become popular among young urbanites since the late 2000s.

The Rise of Farmers' Markets

The rapid rise of organic and ecological farmers' markets in cities around the world demonstrates how AFNs have penetrated the agro-food market and brought the roles of producers back into everyday food consumption. Farmers' markets specializing in agricultural produce grown with ecological principals are a relatively recent phenomenon. In Taiwan, the first organic farmers' market the *He Pu* Farmers' market[100] was established in 2007 (Lai & Tan, 2011). Since then, *He Pu* markets of this type have rapidly proliferated,

[100] Chen Meng-Kai is the founder of the Hope Market. Chen holds a Ph.D. in Electrical Engineering from Florida University and had previously worked for General Motors in the United States. The life history of having good education and well-paid job abroad makes Chen's journey into agriculture popular on social media. This is partly because it challenges the typical image of who enters agriculture. Chen's case highlights the existence of potential economic gains and entrepreneurial opportunities in rural society. In 2003, Chen opened a new organic gourmet restaurant, *Dongli nongyuan*, on family owned land. The restaurant is surrounded by a huge private garden near the Central Taiwan Science Park, in Taichung. The weekly Hope Farmers' Market has been held in Dongli nongyuan's garden, even after the site was handed over to a Buddhist foundation (Lai & Tan, 2011).

with more than 40 farmers' markets having been established. In Taiwan, almost every big city has a Farmers' market, though most of them are concentrated in the Northern and Western regions. A number of them are affiliated with research institutions and universities. They are usually held at least once a week, often on the weekends. Fresh vegetables, rice, soymilk, tofu, and simple processed food (like homemade jam, vinegar, and cookies) are for sale. Occasionally, seminars and workshops on food and social issues are held. In Taipei, two noteworthy farmers' markets have more political undercurrents. One is called the 248 Farmers' Market in Taipei. It was established in 2008 by Yang Ru-Man and two partners. The year before, Yang was granted an amnesty for his planned bombing incidents. Impressed by the farmers' markets that he had visited in Hong Kong, Yang decided to bring the concept to Taipei. Over the past few years, the scale of this market has grown significantly. It has become an organization with multiple farmers' markets. Farmers who participate in the 248 Farmers' Market are typically smallholder farmers who have adopted ecological and earth-friendly farming practices. Once or twice a week they travel from their farms in various counties to sell their produce. Another politically focused Farmers' market is *Wan Yao Shi Ji* (Bow-to-the-Land Farmers' Markets). It was established by the TRF and is held once a month in Taipei.

During my fieldwork in late 2013 and early 2014, I conducted participatory observation at the weekend markets of Hualien *Haoshi Ji*, a farmers' market composed of a group of small-scale producers. Since 2010, this market has been held in an old railway station. Neighboring this is Chungking market, the largest market in Hualien where the majority of locals go for their daily grocery shopping. Akin to other farmers' markets in Taiwan, the aim of Hualien *Hao Shi Ji* was to provide a space where producers and consumers can exchange ideas and knowledge about food. Participants of Hualien *Hao Shi Ji* include long-term farmers, young people who have returned from the city to take over their family's farming business, and urbanite newcomers who have recently adopted agricultural lifestyles. About twenty to thirty farms attend this market. With workshops, talks, and music performances, this market has become a tourist attraction, more than simply a food market.

An important feature of the recent development of farmers' markets in Taiwan is that growers have not necessarily relied on the label of organic certification to demonstrate the quality of their food. Diverse farming practices, such as friendly farming (*Youshan gengzuo*), natural farming (*Ziran*

nongfa), Bio-Dynamic Agriculture (BD *nongfa*), and non-toxic agriculture (*wudu nongye*), are used as alternatives to the expensive organic certification[101]. At Hualien *Hao Shi Ji*, growers have adopted the practice of Participatory Guarantee System (PGS)[102], a guideline that pays attention to the diverse stakeholders involved in the process of producing food. The concept is that consumers who buy from this market do so based on mutual trust developed between the producer and consumer, instead of an organic certification. There is also the belief that consumers would support the alternative food economy if their knowledge is enhanced about food production. As a part of the PGS practice, occasional visits to farms were arranged by the farmers' market in Hualien.

Following the increasing popularity of farmers' markets, a national conference on farmers' market (*Nongxue shi ji yantao hui*) has been held at least once a year since 2010. Food and environmental issues such as seed preservation, food safety, food security, and energy consumption are discussed. By rotating the organizers, smallholder farmers are given the opportunity to share about their local experiences and struggles around alternative food production and distribution. During my attendance at the 5th conference in 2013, I observed that most participants were contributors to AFNs, rather than conventional farmers. Much of the discussions at this conference was centered on the challenges and future potential of AFNs. The question of how farmers' markets work as a platform to build relationships of trust between producers and consumers was discussed. In contrast to the objective of AFNs in Western societies (that set out to compete with industrial and capital-intensive agriculture), Taiwanese AFN producers' main challenge remains market access. Studies conducted by Guthman (2004) have posited that organic agriculture which is influenced by agribusiness and off-farm capital has become increasingly focused on intensification and specialization. She calls the process in which organic agriculture takes on the characteristics of mainstream industrial agriculture *conventionalization of organic production*.

[101] There are 13 organic certifying agents in Taiwan and each organic certifying agent sets its own certifying rate. According to the Agriculture and Food Agency, organic certification costs about 35,800 NTD for the first year, 26,800 NTD for the second and the third year, and 29,800 NTD for the fourth year.

[102] According to International Federation of Organic Agricultural Movements (IFOAM), basic elements of PGS include participation, a shared vision, transparency, trust and horizontality. See more information on IFOAM (https://www.ifoam.bio/en).

The focus of the development of AFNs in Taiwan (with its characteristics of small landholding and small farmers) remains centered around the relationship between farmers and the market. The key challenges for AFNs in Taiwan have not been centered around the battle against capital-intensive agribusiness. Instead, they have been around how to help small farmers access the market and how to get young people to enter agricultural production.

Alternative Food Networks in the Countryside

Pioneers of AFNs in Yi-Lan and Hualien

In Yi-Lan and Hualien, the development of AFNs can be traced back to the early 2000s. In Yi-Lan, the most well-known example of ecological rice farming is Lai Ching-Sung and his initiative of *Ko-Tong* Rice Club. In 2004, Lai finished a Master program in Japan and returned to his wife's hometown in Yi-Lan to practice rice farming. He is the first person in Taiwan to introduce the concept of a Rice Club, using a model he learnt in Japan. The principal behind the Rice Club is to gather a group of people who are willing to buy harvested rice before it has been transplanted. As a group, they share the risk of crop failures and natural disasters (such as typhoons). Lai sees himself not just as a farmer but also a field manager. Using this method, he receives a fixed salary, farms the rice, and updates the consumers about the status of their rice (Lai, 2007). Lai's model of the Rice Club presents one of the earliest cases of CSA in Taiwan. Lai's model has inspired many followers who see farming as a meaningful activity. During the early 2010s, a group of urbanite newcomers that moved to Yi-Lan and adopted rice farming began to gain attention on social media. This agricultural lifestyle-led in-migration has been facilitated by improved transportation infrastructure to the capital city and an active grassroots movement for earth-friendly rice farming[103]. In the same village where Lai cultivates rice, an organization called two hundred *Jai* (*Liang Bai Jia*)[104] was established several years later. *Liang Bai Jia* is an

[103] I will discuss New Farmers' farming methods of earth-friendly farming in Chapter 7.

[104] Many of the members of *Liang Bai Jia* claim that they are inspired by the model of Lai's Rice club. The organizers of *Liang Bai Jia* work as facilitators that help newcomers look for farmland and establish their new life in the countryside. Members of *Liang Bai Jia* sublet

organization that works as facilitators to help newcomers look for farmland and establish their new life in the countryside.

The Municipality of Yi-Lan took this chance to promote its agriculture and published a brochure that specifically addressed urbanite newcomers who had little farming experiences and encouraged them to adopt a farming life (Figure 18):

> Yi-Lan is not far away from the metropolitan area (the capital Taipei). It has the advantage of low cost of shipping (to sell one's agricultural products). Most importantly, it can attract urbanite friends directly to farmland and have a face-to-face contact and establish one's own brand.

In this brochure, practical issues related to agricultural lifestyles including that types of crops, cultivation seasons, and relevant organic agricultural policies are clearly listed. Advantages of living agricultural lifestyles are described as follows:

> One of the benefits of a farming life is the low cost of living in farming villages. The state has initiated policies with subsidies for farmers…furthermore, one of the benefits is *freedom*. Many young farmers who used to work in the city said that the best salary (reward) they receive is freedom: they are their own boss. They have a down-to-earth type of living and they earn more if they work more. Their life is enriched through arrangements like have time for learning, accompany kids, or many other things. Of course, time in the countryside is highly depended on cultivation period. Daily routine has to be arranged in accordance with (the cultivation of) crops.

The type of agriculture that the Municipality encouraged is mainly small-scale farming. The Municipality recommend newcomers to farming grow crops such as rice, fruits, and vegetables. This is generally in line with the crops that Taiwanese farmers in general adopted. In the brochure, rice production is described as one of the farming activities with a stable income, while vegetable and fruit growing are associated with fast cash income and high-value added agriculture. This is the first time that the municipality uses *agricultural lifestyles* to attract newcomers and capital investment. In recent years, Yi-Lan

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farmland from local farmers and landholders in Yuanshan Township, including villages of Nei Cheng, Shen Gou and Zhen Xiang.

had been one of the most active communities in the alternative food movement in Taiwan. Newcomers have been active in restoring old houses, experimenting with new farming techniques, and creating farming knowledge. During my fieldwork, I did not find similar communities of New Farmers in other field locations.

Figure 18.
Brochure about adopting a farming life promoted by Yi-Lan Municipality

In Hualien, AFNs have been influenced by earlier developments of non-toxic agriculture (*Wudu nongye*), a farming practice that was initiated by the local agricultural authority as a part of Hualien's development strategy in 2003. Promoters of non-toxic agriculture believe that the farmland of smallholder farmers in Hualien had clean soil compared to other areas in Taiwan. Using the advantage of clean soil and the discourse of *Hou Shan*, the municipality produced images of quality agricultural products produced in Hualien. This promotion enabled farmers to skip expensive organic certification, which required a fixed transition period of at least two to three years to restore farmland. This support of non-toxic agriculture from the government encouraged a small group of farmers who became pioneers in AFNs later.

They converted from conventional agriculture and tested the waters of the alternative food economy. This early development of non-toxic agriculture in Hualien plays an important role in understanding of the emergence of New Farmers and their motivations to farm in this region.

Over the past decade, the development of AFNs in Hualien, like Yi-Lan, can be seen as grassroots movements, but ones that are more dispersed than in Yi-Lan. In Hualien, initiatives are carried out by individual AFN organizers and producers. Elizabeth Henderson, a CSA promoter and the author of *Sharing the Harvest*, visited Taiwan in 2010 and 2011[105]. During her stay, Henderson lectured about CSA and met farmers, university students, rural organizers, and supporters of local organic agriculture who were associated with the TRF. Henderson was impressed by a particular CSA project in Hualien. This 40-farm cooperative supplied weekly boxes to 200 households in Hualien and Taipei. The organizer of this concept paid farmers monthly, gave cash advances when needed, and encouraged young people to take up farming. During my pilot visit in 2013, I visited this CSA project. At their office, volunteers were helping to assemble the boxes and sorting vegetables. Most of them had non-farming professions. In this new experiment in agricultural business, I witnessed how this particular way of approaching agriculture has inspired young people to move to Hualien for an agricultural lifestyle, including two of the New Farmers interviewed in this study.

The Emergence of New Farmers

When I began this study in 2012, stories of urbanities' interest and engagement in small-scale ecological farming had been frequently featured in lifestyle and countryside magazines. This increased interest can be seen differently in comparison to earlier in-migration to the agricultural sector. Before the 1990s, Taiwan's farming population increased three times: in 1964, 1974 (due to an oil crisis), and in 1982 (Mao & Schive, 1995). During

[105] In China, Elizabeth Henderson visited the little Donkey Farm. Organizers of the little Donkey Farm learn the experience of CSA from the United States. The experience of the little Donkey Farm (established in 2008) was used as one of the early models of CSA farms. See Elizabeth Henderson's essay on Community Supported Agricultural in Taiwan and China: http://www.mofga.org/Publications/MaineOrganicFarmerGardener/Summer2012/CSAinTaiwanandChina/tabid/2186/Default.aspx

these times, unemployment was high in the cities and the agricultural sector absorbed the unskilled labor force.

Today's phenomenon of the counterurbanization enacted by New Farmers has mainly attracted skilled laborers or professionals. These groups demonstrated a strong desire to live an agricultural lifestyle, particularly after the 2008 financial crisis (personal communication, October 19, 2013). During this time, many people employed in the information technology industry were offered unpaid leave. While some accepted this and returned to their job "recharged" after the crisis, others chose not to return to their previous jobs. Instead, they became "accidental farmers" who rented small plots of land, cultivated organic vegetables, and entered AFNs ("Organic farming helps employees through furloughs", 2012).

During late 2013 and early 2014, I focused on Hualien with the aim of interviewing urbanite newcomers who adopted a farming life[106] to analyze agricultural lifestyles that had been widely reported on social media. At the time, social media began to portray rice farming as a fashionable activity and a good way to attain a proper work-life balance. It was also perceived as the preferred crop to begin one's farming career. Although stories of young New Farmers were frequently written about on social media, information about this group's impact on agriculture and the rural community has been generally fragmented. It was not clear how they embraced an agricultural lifestyle, how they accessed farmland, and why they predominantly adopted rice farming.

My first contact with New Farmers was at the *Bang Nong Bang X* Conference in Hualien. My first interviewee is a man in his early 30s who began rice farming in late 2013. His name is Adam[107]. Adam's grandfather used to be a farmer and when Adam was a teenager he would occasionally help on his land. I was impressed by Adam's openness when he shared his experiences of living a farming life with me. Unlike social media's portrayal of the ideal rural life, he was honest about the economic challenges of having an income dependent on farming. Not long before I met him, he was contacted by writers from a countryside magazine who were looking for personal stories of those who had returned to the countryside to engage in farming activities. He was annoyed

[106] In this study, I use the term "New Farmer" to refer to those individuals who used to live in cities and have little farming experience who have recently join agricultural production.

[107] All names used in this dissertation are pseudonyms.

by the media's over enthusiasm in reporting on the phenomenon of New Farmers. He said:

> For agriculture, it [this kind of media attention] is a good thing. However, I feel why should it be reported? For me, reporting these stories means there are problems in agriculture. Farming should be an ordinary thing, why should it be reported as something special?

Adam's concern was that if farming was portrayed as a popular activity, it may be difficult for those who recently entered rice production to remain in the field after the trend faded away. Adam's journey to becoming a rice producer is a typical story of how young Taiwanese urbanites have chosen to adopt agricultural lifestyles. Adam had worked for several years in different jobs after university, but failed to find job satisfaction. Each time he started a new job his expectation that he could find something that would offer him satisfactory work-life balance was dampened. After several failed attempts, he decided to enter an entrepreneurial program related to alternative food provision in Hualien. In the program he attended lectures about agricultural production and received on-farm training. After this program, Adam chose not to go back to his hometown in Northern Taiwan despite the fact that his family owned farmland there. Instead, he remained in Hualien and since then he has become a successful rice farmer. In 2013, the scale of Adam's rice production was 4 *Jia*[108]. By 2015, he increased production and cultivated 6 *Jia*. In addition to rice, he also cultivated 4 *Jia* of soy beans and 3 *Jia* of corn. Adam's rice production was the largest among all the New Farmers interviewed in my study. The size of others' farmland ranged from less than 1 *Jia* to a maximum of 6 *Jia*. According to Adam, he viewed farming as an entrepreneurial opportunity. This approach was reflected in how he entered agricultural production:

> ...I did not find myself in a good position in my job. So, I thought, why not go to something that I really enjoy? If I leave the office-based job, what type of job will I be able to do? First, I did not think about farming. Because of my previous job, I have been doing something that is related to local production. It reminded me that I should do something for the Taiwanese land. For

[108] Unit of Chinese measurement equivalent to 0.97 hectare.

> instance, it was during the time when MIT (Made in Taiwan) products were popular.

This perspective of viewing farming as an entrepreneurial opportunity was common among the New Farmers. It may be related to the earlier development of non-toxic agriculture in Hualien.

Linda was another newcomer who shared the same view as Adam. Linda started farming in Shou Feng, a rural township in Southern Hualien. We were introduced by a common friend. She moved to Hualien with the specific intention of making a living through ecological farming. To gain experience, she worked in an agricultural institute for several years and was the only one in this study with a background in the agricultural industry. In 2014, she, in partnership with others, cultivated 2 *Jia* of sweat potatoes, corn, and seasonal vegetables. In 2015, she increased her crop to 3 *Jia*. Additional crops of soy bean, edamame, and rice were grown. Through acquaintances and social media (such as groups on Facebook), she was able to sell her harvest to consumers outside Hualien. Linda's entrepreneurial method of using social media is one of the main characteristics of New Farmers. According to Chu (2015) urbanite newcomers to farming rely on social networks of friends and family to sustain their farming life in the beginning.

Like many of the newcomers to Hualien who adopted small-scale and ecological farming, Linda saw farming as an entrepreneurial opportunity. Hualien presents such a place for this experiment.

> When we talk about organic agriculture in Western Taiwan, many people will shake their head [it usually means they disagree]. But when we do it here (in Hualien), people know what you are taking about. They will not discourage you immediately. People there (in Western Taiwan) will tell you that it won't work. They will ask you to go back (to the city) to find other (non-farming) jobs. People here know what organic agriculture means. Even those who do not farm organically, they would tell you who (they know) is doing so and that you should learn from them.

During our interview, Linda talked about the unreliable income from farming as the main challenge of living an agricultural lifestyle. Drawing on other organic farmers' experiences, she was fully aware prior to starting that she may not be able to earn an income for the first few years:

> Before I come to Hualien I knew I would not be able to make money in the first two years. In my previous job on the farm, I had contact with more than 20 organic farmers. It seemed that none of them managed to make a living in the first two years. I knew in the coming two years I would not have too much income, so my goal for the first year was to make ends meet. Since I am not young, I know that I will lose some savings in the first year and there will be pressure, it depends if I want to continue doing this.

Meaningful work that was beneficial for both the environment and society (which one can find in ecological farming) was what encouraged Linda to enter alternative food production. When I visited her in March 2015, she was hosting two volunteers on her farm. This form of working on the farm in exchange of accommodation was called *Dagong huan su*[109]. The volunteers were two women from Taipei on a working holiday. They were hand weeding a seasonal vegetable field and were very excited about it because the farm work they were doing was very different from their ordinary working lives. According to Linda, the purpose of hosting volunteers was not to meet the labor demand in ecological farming as volunteers are not a reliable source of labor. Instead, by hosting volunteers on her farm it provided the perfect opportunity for urbanites to increase their understanding of food production and learn more about where their food comes from. The land Linda and her partners rented was formerly set-sided farmland. Neighboring their rented land was abandoned farmland.

Victor was a newcomer who adopted rice farming in Hualien. We met at the *Bang Nong Bang X* Conference. Victor came to Hualien hoping to learn about farming and start his own business. Inspired by a group of newcomers who tried to live the *Bang Nong Bang X* lifestyle, Victor started to learn more about farming. He noticed that the farmland he and other newcomers were using was not in good condition. The farmland that they used, however, did not require them to pay rent. This was partly because of the amendment to ADA in 2000, where large amounts of farmland were purchased by investors from non-farming backgrounds. They had little intention of using the farmland for farming. This created an opportunity for those wishing to pursue farming to have temporary access to farmland. Some landholders preferred to lend their land to Victor and other ecological farmers, because they believed that farmers

[109] The term *Dagong huan su* is discussed in Chapter 7.

who previously farmed their land used excessive chemical fertilizers and pesticides. Seeing newcomers and their ecological farming practices as a means to clear up the land, landholders were willing to let new farmers use their land without charge. This *free access*, as Victor recalled, was full of problems. One example was that the land they utilized often lacked proper access to water for irrigation:

> We borrowed land for free that people did not want. The land we borrowed had no access to water or a road. It was inconvenient to borrow a road from the others (i.e drive through their land). How could we drive machines to the field?

After Victor made the decision to cultivate rice, he looked for information on farmland for rent, mostly through government channels. In 2013, he visited several places in southern Hualien to look for a suitable plot for his rice farming. The process was not smooth. He describes his attempt to find land here:

> The government has a website called the Farmland Bank[110]. If you asked a farmers' association or school, they would say that the information on the website has not been updated for a while. The information about the location of the land and the rental price was outdated. I searched for farmland based on the information posted on the website of the Farmland Bank. From Yu-Li, Fu-Li (southern part of Hualien) to Shou Feng…I checked the size of the land and the rental price...the problem was that the information was not updated.

After several attempts, Victor finally found a landholder who was willing to rent out his land to newcomers. In 2014, he learnt how to cultivate rice, soy beans, and corn. Although the productivity of his rice field was much lower than that of conventional rice farmers, after 135 days of farm work and several setbacks due to plant disease and insect damage, he harvested 902 kilograms on his plot which was 2.5 *Feng* in size (1 *Feng* = 970 m^2). The farming practice that Victor has adopted is similar to Fukuoka Masanobu's natural farming (*Ziran nongfa*). This is a farming method that involves the rejection of tillage and weeding. The forest is also utilized, and chemical fertilizers are avoided.

[110] The Farmland Bank was a program launched by the COA. The aim was to match beginner farmers (wishing to pursue a farming life) and landholders (wishing to rent out their land).

After selling his rice at a good price mainly to his family and acquaintances, he did not lose any money in the first year. After the rental contract finished at the end of 2014, he expanded his crop to 1 *Jia* and moved to a village farther away from the city (Photograph 8). During our interview in March 2015, Victor had recently transplanted rice seedlings and was satisfied with the everyday rhythm of his farming life.

Photograph 8. Victor's Rice paddy field in southern Hualien
Source: Author's own photo.

Unlike other new farmers interviewed in this study (most were between 30 and 45 years old), Maria is a New Farmer who turned to farming after she retired. Long before Maria and her husband moved to Hualien, they looked for farmland in different counties, but finally decided upon purchasing a plot of land in Shou Fong, Hualien. They felt that Shou Fong could provide a rural sense of living, while still being convenient to travel back to their home in Taipei. Unlike other farmland buyers who immediately gathered capital to realize their dream of retiring in the countryside in their dream home, Maria and her husband did an internship at an organic farm. This practical experience gave them the confidence to begin farming at a later stage in their lives. Maria and her husband are the only interviewees in this study who moved into a newly built farmhouse, one that was designed and partly constructed by themselves. Thanks to their internship at the organic farm, Maria realized that no matter how passionate she and her husband were about farming, their chance of competing with professional farmers was low. She

also concluded that farming required intensive physical labor and competence. After considering all kinds of possibilities, they decided to plant Rosella bushes on their 4.7 *Feng* plot. They used the fruit to produce and sell homemade Rosella jam. Fortunately, their jam has been popular among consumers and they found their place at the organic market. At one point, they discover that their retirement life was becoming much busier than they had planned, and due to their physical condition, they sometimes find it difficult to meet the increasing demands from customers from Taipei.

In Yi-Lan, four New Farmers were interviewed and all of them had adopted rice farming. Two out of the four interviewed in this study had rented farmland. In Nei Cheng, I did not see the landscape of arable farmland dotted with newly-built farmhouses as I saw in other peri-urban areas of Yi-Lan. In Nei Cheng, there were only two farmhouses under construction. I was told that this was partially due to the absence of land consolidation. Further, not all plots of farmland had adjacent roads, which made them more difficult to access and unattractive to investors who only saw the value of farmland for residential development.

Daniel is a New Farmer who started rice farming in Nei Cheng in 2012. We met at the *Bang Nong Bang X* Conference in 2013. Prior to farming, he worked for seven years as a social worker. Since 2012 he had cultivated rice, soy beans, black rice, and black beans. One year later, he increased the size of his rented plot to 2.2 *Feng*, and by 2015 it became 1.5 *Jia*. Over this period, I visited Daniel's farmland several times. In our first meeting, we visited a rice milling factory. After milling, instead of leaving the removed husks at the milling factory, Daniel returned his husks to the field. He used these husks as a natural fertilizer (Photograph 9). From my observations, this seemed to be an approach that other farming newcomers also used to replace chemical fertilizers.

Photograph 9. A New Farmer returning rice husks back to his rented farmland
Note: Author's own photo.

The condition of Daniel's rented farmland varied. The farmland where he returned the rice husks back to the soil was adjacent to the road, which meant this land was also attractive for investors. Later on, we visited his rented land in Nei Cheng. There, the farmland was in worse condition compared to his other plot. The accessibility was poor — we had to walk on a footpath between two paddy fields to reach his land. Next to his plot was farmland full of weeds. It was obvious that the land Daniel rented had previously been left to fallow (see Photograph 10). The conditions of Daniel's rented land, like other New Farmers in Nei Cheng, were usually of poor quality or located on the periphery of the main agricultural production zones.

Photograph 10. Daniel and his son planting black beans
Source: Author's own photo.

Allan was a New Farmer who started earth-friendly rice farming in Nei Cheng where his family owned a house in 2012. In the beginning, Allan was not particularly interested in taking up rice farming, despite the fact it was an attractive region for farming newcomers. The situation changed after his neighbor told him that if he wanted to see fireflies (Allan's favorite insect), all he had to do was improve the environment that the fireflies inhabit. During our interview, Allan proudly explained that from the yard of his house one can see fireflies at night. The luxury of seeing fireflies at home was also confirmed by Allan's wife. She recalled that during her postpartum confinement she could see fireflies flying through the window into the room on the second floor.

Unlike other newcomers to farming, Allan's journey as a beginner farmer seemed easier than other New Farmers. Farmers were willing to lease their land to him because his parents were considered locals (even though they moved to Taipei when Allan was young). In 2015, when we had our interview, Allan had been cultivating rice for three years utilizing a practice called You Shan (earth-friendly) farming. The first year he cultivated rice the size of one paddy field (5 Feng). In the second year, after discovering that rice cultivated with You Shan practices was in high demand, he decided to expand

his scale of crop to 2 Jia. During the third year (2015), he expanded production even further to 3 Jia and 4 Feng.

Unlike other New Farmers, Allan entered rice farming by assisting mechanized contractor farmers (*Dai geng yezhe*)[111]. Many of those who remained in rice farming became mechanized contractor farmers who own heavy machinery and provide outsourcing (*Dai Geng*) services to rice farmers. These services range from basic farm work such as field preparation, transplantation of rice seedlings and crop harvesting, to rice milling and packing. According to Allan, the production size of mechanized contractor farmers was at least 20 *Jia*. Overwhelmed by their own farm work, they usually had no time to provide the outsourcing service unless it was demanded from people they knew. Mechanized contractor farmers were usually those in their 50s or 60s (though some were in their 70s and 80s). As farming had been unattractive to young people in Taiwan for many decades, it was difficult for these capitalized farmers to find helpers. In order for Allan to ask one of these mechanized contractor farmers to prepare his land, he took the strategy of helping one of these farmers first. The farm work that these farmers did, according to Allan, involved intensive labor work, despite the fact that heavy machinery was used. Allan explained to me how he, as a newcomer, assisted farmers:

> The only thing that one cannot help out with is the preparing of the land by machine. There is a machine over there. That person is preparing the land. You can take a look later. The other two machines that I am going to say requires help, both machines that transplant rice seedlings and harvesting rice requires extra help. It cannot be done individually, he (the farmer) needs to have a helper. For example, for a heavy machine that transplants rice seedlings, it needs to have one person continually supplying rice seedlings on the back of the machine. Then he (the farmer) can drive all the time. Otherwise, he needs to stop, re-fill it, stop, and re-fill. Then there is no efficiency. Nowadays there are many capitalized farmers who want you to help them if you need a

[111]Mechanization of rice production and increased productivity after the green revolution were some of the reasons why Taiwanese farmers pushed their children to the cities to enter non-farming professions during the 1960s and 1970s, while they adopted a strategy of part-time farming (as discussed in Chapter 4). Many of those who stayed in rice farming became mechanized contractor farmers and those who accumulated capital by becoming producers owned heavy and expensive machines. In Yi-Lan, where I conducted fieldwork, mechanized contractor farmers were referred to *Dai geng yezhe* or *Da hu*.

> service from them. Have you heard about sharecropping (*Huan gong*)? It just takes different forms today. However, there are not so many *Xiao Nong* (smallholder farmers) capable of doing this…

The shortage of humanpower in conducting intense farm work (that Allan referred to in this quote) was, in my understanding, a common challenge shared by many farming villages in Taiwan. This was recognized by Gallin and Gallin (1982) and Sando (1986) to be the case since the 1970s. In Allan's case, he was able to use this labor shortage to his advantage. Instead of actively searching for land to farm, farmers offered land to him:

> The first year I cultivated rice to a size of farmland of 5 Feng. The second year I was thinking to expand to 1 *Jia*. However, not long after I decided to do so, people asked me if I wanted to take over another plot of farmland the size of 1 *Jia* for free. I said yes. Why should I not do it? It was very tiring to do farm work. It was especially challenging to expand the scale from 5 *Feng* to 2 *Jia*. Besides, I am not a professional farmer.

In Nei Cheng, the number of paddy fields cultivated with *You Shan* farming methods has rapidly increased since the early 2010s. This rapid expansion was, according to Allan, mainly due to the increasing interest in rice farming from New Farmers like Daniel and Allan. Urbanite newcomers' desire to adopt rice farming created conditions for rural gentrification that were based on the village's accommodation of certain kinds of agricultural lifestyles. This will be further discussed in Chapter 7.

New Farmers' access to farmland was influenced by the state's policy of *revitalizing* farmland, in particular the 'Adjusting Cultivated System and Reactivating Farmland Program' that was initiated in 2013. In response to earlier fallow land programs, the program encouraged farmers/landholders to use their farmland (that was formerly set-aside two crop cycles a year) to grow crop [112] for one crop cycle a year via contract farming. This program encouraged farmers/landholders to rent out their farmland. The state's policy on *revitalizing* farmland could partly explain why New Farmers grow certain types of crops when they first enter farming life. It may have been a part of a

[112] Types of crop encouraged in Adjusting Cultivated System and Reactivating Farmland program includes feed corn, wheat, pasture grass, sugarcane, edamame, carrot and others. See Table 9 on p.70. Each type of crop has its related amount of subsidy.

strategy to access farmland. In this study, I find that New Farmers in Yi-Lan and Hualien have gained access to farmland with reasonable rent or free of charge due to this program. Their choices of crop are tied to the state's policy of increasing its self-sufficiency rate of certain types of crop such as corn, wheat, and soybeans. The scale of production of corn and soybeans had increased significantly in recent decades (Table 15). The production of wheat also rapidly increased from 292 metric ton in 2008 to 1,309 metric ton in 2017[113]. The domestic production of wheat, corn, and soybean only supplies a small proportion of total consumption. In 2017, the production of corn accounted for only about 3% of imported corn while the production of wheat and soybean did not even reach 1%.

Table 15.
The Scale of Production of the main Agricultural Products in Taiwan 1996-2017 (Unit: hectare).

	1996	2001	2006	2011	2015	2016	2017
Rice	347,989	332,183	263,194	254,292	251,888	273,866	274,705
Feed Corn	56,424	13,523	7,361	6,729	15,135	16,157	15,171
Food Corn	16,675	15,019	12,316	11,468	12,616	14,220	15,215
Soybeans	5,061	168	85	55	1,652	2,177	3,188
Vegetables	178,521	173,673	157,183	149,034	145,660	153,051	150,403
Fruits	229,972	222,413	217,174	193,806	184,181	185,854	186,190

Source: Basic Agriculture Statistics 2017 issued by Agricultural and Food Agency, COA. Executive Yuan.

Agricultural Lifestyle as a Pull Factor

A key feature of the emergence of New Farmers in Taiwan is that many of them are inspired by what a farming life could potentially provide. Pursuing agricultural lifestyles[114] presents a number of alternative possibilities that were not accessible to urbanites in the city. Agricultural lifestyles offer opportunities to have better control over everyday lives, to have more time to

[113] See Table 11 on p.70.

[114]Although lifestyle was an important component mentioned by many New Farmers, it is also important to note that work-life balance and the relaxed schedule described by many of them as a motivator was not year-round. For example, during the busy season of plowing, transplanting, and harvesting, I was unable to contact new farmers, unless I took part in farm work.

spend with families, and to live in a healthier environment. These advantages attract families with young children and those who desire a less traditional (or fixed) career path in particular. One farmer commented on recent repopulation in his village, Nei Cheng:

> Among those newcomers, many of them moved because the working life in Taipei has been very tiring, they had to work until midnight. They realized it was not the life they wanted, so they moved to Yi-Lan for their children. I am here for my children, my future life. These types of newcomers account for the majority.

Another reason why agricultural lifestyles become attractive to urbanite newcomers, based on my interviews, are the perceived promises of AFNs. Many New Farmers do not view agriculture as a backward and low-paid industry. They see it as an industry containing entrepreneurial opportunities, in which they can set up their own business. The idea of being self-employed through farming was mentioned by several New Farmers. In Yi-Lan and Hualien, this entrepreneurial view on farming is fueled by Naoko Shiomi's idea of a Bang Nong Bang X lifestyle (Shiomi, 2006), a lifestyle that contains two parts. The term *Bang Nong* refers to lifestyles with a touch of farming and the term *Bang X* refers to one's natural calling or social missions. *Bang Nong Bang X* does not necessary mean one should equally divided his/her own time between farming and self-realization, but more that it is the combination of the two that gives one a healthy and sustainable lifestyle. In terms of income, Shiomi argues that "on the one hand, one cultivates rice, vegetables and other crops to gain access to safe food, on the other hand, one engages in a self-employed job, in exchange for a fixed income…" (Shiomi, 2006, p. 16). The farming Shiomi promoted is far from commercial farming. It is closer to the notion of hobby farming or farming with the aim of providing a portion of a family's daily food. Although far from complete self-sufficiency, Shiomi argues that participation in farming can increase one's awareness on food safety and eventually bring agriculture back to the center of our everyday life. Many New Farmers in Eastern Taiwan see themselves as practitioners of Shiomi's notions of *Bang Nong Bang X* (Cheng, 2014).

New Farmers' Preference for Rice Farming

Rice farming is a popular choice among the surveyed New Farmers. Six out of eight New Farmers interviewed in this study adopted rice farming. This specific preference was partly in response to the trade agreement imposed after Taiwan became a member of WTO. For many New Farmers, rice continued to be an important symbol of Taiwanese national identity and was considered more than simply a staple food. New farmers in Yi-Lan, in particular, have associated the preservation of the rice paddy field landscape as an important way to maintain local identity, as discussed in Chapter 5. In my observations, New Farmers' preferences for rice farming in Yi-Lan and Hualien also have to do with a changing diet of Taiwanese people, the mechanization of rice production, initial capital investment, and the value of rice produced and circulated within AFNs. These aspects of contemporary Taiwanese rice production encourage newcomers to take up rice farming. Rice production also has standardized procedures supported by both upper and downstream industries. Today rice farming is carried out independently with the help of machines[115]. The fact that rice farming involves highly mechanized and individualized work may explain why many newcomers chose rice farming. New Farmers enter an industry of rice production — dominated by long-term farmers, mechanized contract farmers, and landholders — with the ideals of *You Shan* farming, rather than labor-intensive farm work. Although many New Farmers manually transplant rice seedling, this was mostly for production of farming experiences for tourists. In regard to the main farming work, many of them, like other conventional rice farmers, are dependent on services provided by mechanized contract farmers. One of my interviewees, Allan (mentioned above), considers himself involved in different types of economic activities rather than only in agriculture. As the production of rice followed a clear procedure, he felt that all a rice farmer needs to do is "to make three phone calls":

[115] During the post-war period, Taiwan was slow to adopt mechanization in the agricultural industry. The main concerns were that mechanization would create a large unemployed rural population and farmers with little formal education would not know how to use machines. There was also doubt if machinery was suitable on small-size farms (Bain, 1993). During the 1950s, there was a shortage of water-buffaloes. Mechanization was promoted as an alternative and rice farmer were willing to adopt mechanization because their work involved land preparation and clear crop cycles (ibid).

> What does it mean by farming? You just make a phone call to ask people to plow the land, make a phone call to ask people to transplant rice seedlings, and make another phone call to ask people to harvest the rice. These processes were taken up by heavy machines. Basically, what we needed to do was to manage the field. If you can properly manage the field, then you can do it, it's that easy! Have you noticed that most of them (New Farmers) chose to do rice farming? Because it required very little to grow rice. If you are healthy, then it is not difficult to grow rice.

Allan compares the difference between rice farmers from the past and today. He talks about how the hard work of rice farming has been improved with the help of machines and modern technology. He adds:

> I would not call myself a farmer. What did a farmer look like in my impression? (They needed to) transplant rice seedlings with their hands, weed with their hands, use a hoe to do all kinds of work. Right, (they) also wore a *Douli* and harvested rice with their hands. They needed to carry a 50 kg-bag of husked rice from the middle of the field to the road. The rice harvesting machine from the old times is not what you see nowadays. Now when the machine has done the work it can directly transfer rice to a container bag on a truck. In the old times, one needed to carry it out.

Allan's perspective of not viewing himself as a farmer is shared by other New Farmers in this study. I associate these New Farmers' attitude with their previous life experiences. In Victor's case, he has a master's degree from a prestigious university and worked as a research assistant before moving to the countryside. He moved to Hualien to adopt rice farming and pursued a lifestyle he desired, where he maintained better control of his working hours and life rhythm. Thus, when I brought up the term farmer, Victor immediately told me that he refused to be labelled a "farmer." This was the strongest reaction in all interviews I conducted. He said that if I was looking for farmers to interview, then I had asked the wrong person. According to Victor, what he was doing was a kind of entrepreneurial activity. He utilized clear division of labor in rice production (i.e. in the seedling nursery, in transplantation of seedlings, rice harvesting, husking, grading, and packing) in order to run his own business.

Another factor drawing New Farmers to rice farming seemed to be the different kinds of capital investments needed to enter different areas and scales

of the farming industry. Facilities and machinery (e.g. refrigerators, tractors, and machines) used in various farming and storing processes all required substantial amounts of capital. The avoidance of such investment at the beginning of one's farming life is an important characteristic of New Farmers. I find New Farmers' capital investment to be low and their farming to generally be small-scale. For example, for Adam, the reason he chose to grow rice was related to the convenience of its storage. Investing in storage facilities presents one of the large initial costs involved in other types of crop production, such as vegetables. In Adam's words:

> First of all, all my farmland was rented. And I didn't have any facilities. I needed to grow crops that could be stored and those that did not require facilities. If you grow vegetables, then you need to have large refrigerators. Besides, I could not apply for a subsidy for it.

From my observations, it is also common for New Farmers to grow grains other than rice. For example, both Adam and Victor cultivate soy beans and corn. What they find discouraging is that neither of these crops, which require intensive input of labor, has a value equivalent to rice. In the following quotation, Victor talks about why he avoided other crops in the beginning of his farming life:

> Like what I said last year, rice was over produced. You had to grow soy beans, wheat and corn in order to be able to stay (in farming). However, these crops are grains. You could not grow them in the same field. It is difficult to prevent pests. If you farm in the same field and on a large scale, it is difficult to prevent…as for soy beans and wheat, wheat is vulnerable to birds and soy beans required proper machines to process and select. If you grow on a large scale, like four to five *Feng* (1 *Feng* = 970 m^2, 10 *Feng* = 1 *Jia*), you cannot earn much even if the price for it is high. Besides, it requires a substantial amount of manual labor. It is difficult to handle.

According to the above quote, it appeared that New Farmers avoided growing soy beans, wheat, and corn for economic reasons. However, many beginner farmers used farmland policies such as the Adjusting Cultivated System and Reactivating Farmland Program (implemented in 2013) as strategies to access farmland. They were thus obligated to grow certain crops. Yet, the state's aim to reverse its high dependency on imported grains faces an issue because, as

Victor pointed out, the cost of production was generally high. It was hard for beginner farmers to rely on production of these crops for sufficient income to remain in farming.

Another key reason why New Farmers predominately adopt rice farming in Yi-Lan and Hualien is related to the scale of production and price of rice. In contrast to conventional rice farmers, whose scale of production can easily reach 10 to 20 hectares, the scale of a New Farmer's crop is relatively small. Most New Farmers I met had about 1 Jia of land (1 Jia = 0.97 hectare) or less. Only few had up to 5 Jia. The reason behind the small plot size is that New Farmers tend not have much experience in agriculture. By starting with a small scale, New Farmers can easily sell their rice through their own social networks. From my observations, most New Farmers do not sell their rice through retail market channels. All New Farmers interviewed in this study sold rice independently, via the Internet, social media, or through personal networks.

During my fieldwork in 2013 and 2015, most New Farmers I met in Yi-Lan and Hualien had no difficulty selling their rice. In the following quote Allan describes his experience selling his rice during his first year of farming and how he decided to expand the scale of production after his rice became unexpectedly popular:

> The first year I only sold with the price of 60 (NTD, New Taiwan Dollar) per kilogram. It turned out to be very easy to sell. It only took me two months to sell all of it…then I said to myself, why not give it a try and sublet the land next to our house?

The next year Allan increased the price of his rice to 80 NTD/kg. This price was similar to the price of what other New Farmers had set in Yi-Lan and Hualien. In my view, we need to see these newcomers as those who have entered the higher-end of the price market. Many newcomers that I spoke with during my fieldwork explicitly mentioned their interest in other kinds of markets. For example, Victor, who adopted rice farming in Hualien, comments on the rice market that he is interested in:

> Now the market for average priced or low-priced rice has been saturated. Like what I said last year, if you are aiming for a medium and higher priced market, it can be 120 to 150 NTD per kilogram, or even 200 NTD for one kilogram. This market of higher-valued rice is not saturated. It will slowly grow.

The average price of rice on the wholesale market in Taiwan has steadily increased in the past decade. The rice price that New Farmers set was higher than the average price set on the wholesale market (see Figure 19).

An important discourse that circulated among New Farmers and *Zhi Shi Fen Zi* was that the consumption of domestic agricultural produce can be a way to address Taiwan's low food self-sufficiency rate (which was only 31% in 2016). The self-sufficiency rate of rice in Taiwan is relatively high (Table 16), more than 90%, when compared with grains like soybeans, wheat, and corn that were predominantly imported. In this respect, New Farmers' interest in rice farming should not be seen as necessarily providing solutions to the low food self-sufficiency rate. Recent enthusiasm in agricultural lifestyles should be seen as a medium for food education, an important part of the working of AFNs (see Chapter 7), but not a panacea.

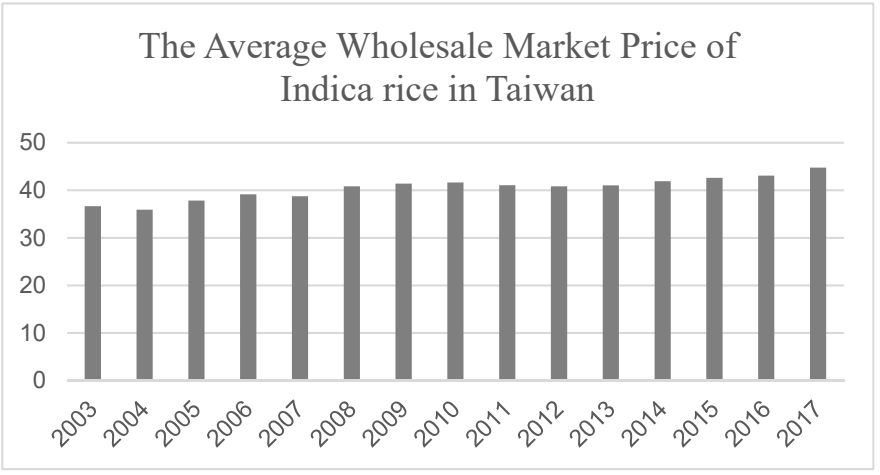

Figure 19. The average wholesale market price of Indica rice in Taiwan
Source: Taiwan Food Statistics Book (2017), Agriculture and Food Agency, COA, Executive Yuan

Table 16.
Domestic Production and Foreign Trade of Rice between 2008 and 2017. Unit: 1,000 metric tons

Year	Domestic production	Foreign Trade	
		Import	Export
2008	1,178.2	122.0	66.1
2009	1,276.5	103.3	8.4
2010	1,168.0	181.5	9.8
2011	1,347.8	131.7	19.2
2012	1,368.2	156.8	24.8
2013	1,275.5	138.8	22.5
2014	1,399.4	130.2	30.0
2015	1,260.4	152.9	93.3
2016	1,264.1	150.8	104.6
2017	1,396.1	154.2	28.6

Source: Food supply and utilization 2017, COA, Executive Yuan.

New Farmers as AFN Producers

Alternative food production has become particularly popular among newcomers to Yi-Lan and Hualien. From the results of the survey in which seventeen New Farmers responded, five respondents had built farmhouses as a part of their rural in-migration. Four out of these five respondents were approaching retirement age. In terms of economic income, fourteen out of seventeen respondents claimed that farming was their main source of income. Yet, nine out of the fourteen mentioned that they also had non-farming sources of income such as pensions, family members' non-farming incomes, savings, earnings from rural tourism, handicrafts, or agricultural subsidies. The type of agricultural production AFN producers engaged in included rice, fruit, and seasonal vegetable production.

In terms of rental relationships: nine respondents depended on renting, five respondents rented a part of their land and owned another part, and three farmed on their own land. Seven respondents claimed that their agricultural products had organic certification. The other ten respondents were either involved in earth-friendly farming practices or waiting to be organic certified. The scale of production of the survey participants ranged from several *Feng*[116]

[116] A unit of Chinese measurement equivalent to 66.6 m^2 or 1/10 Jia.

to more than ten hectares. The majority of AFN producers worked on farmland between one and three hectares, and only two respondents had more than 10 hectares. Of those with farms over ten hectares, one was involved in rice production in Hualien and the other was involved in seasonal vegetable production. The first one accessed farmland through agricultural policies of Small Landlords and Big Tenants and the Adjusting Cultivated System and Reactivating Farmland Program. The other joined their family business.

Concluding Remarks

The development of AFNs in Taiwan needs to be examined as shaped by and shaping interconnected processes between the city and the countryside. In the cities, AFNs have been advocated for and nurtured by activists and intellectuals. They perceive AFNs as an intervention to address the crises of farming villages. Mobilized via social media, young and educated urbanites began to pay attention to rural affairs and join farmers' movements during the late 2000s. As an extension to the farmers' movement, some of the projects also encouraged university students to visit farming villages. Inspired by the Western phenomenon of community sustained agriculture (CSA), farmers' markets, and the global alternative food movement, intellectuals introduced practices of AFNs as a tool to address rural problems. This focus has resulted in the emergence of diverse venues for exchanging food such as farmers' market, direct-buying from farmers, and CSA farms. The development of AFNs has introduced a new market supported by a group of consumers who are driven by environmental ethics, taste, and share similar class backgrounds (the middle and the upper-classes). On the countryside, intellectuals' concern over agricultural development encouraged a group of New Farmers who believed that solutions to the crises of farming villages can be found through entering agricultural production and distribution themselves. Inspired by Naoko Shiomi's *Bang Nong Bang X* lifestyle, farming has been perceived as a lifestyle and an experiment in alternative living with benefits impossible to access through urban lifestyles. All New Farmers interviewed in this study considered themselves adopters of earth-friendly farming (*Youshan gengzuo*), rather than conventional agriculture. Some of them even rejected associating themselves with the occupation of farmer. This rejection of seeing oneself as a farmer was reflected in farming methods and the combination of other non-

farming sources of income. New Farmers' entry into AFNs shows that liberalized farmland policies have loosened a once highly controlled grip on farmland access. Chapter 7 analyzes how urbanites' increased interest in alternative food production can gentrify agriculture, an aspect to be considered of the roles of social and cultural capital involved in transforming agri-food system.

7. Gentrification within the development of Alternative Food Networks

In this chapter, I employ the concepts of *desakota* and alternative food networks (AFNs) to theorize on rural gentrification processes that were driven by the pursuit of agricultural lifestyles. I analyze how farmland had been gentrified by a group of New Farmers who share ideas around the value of alternative food production. I focus on rural in-migration of those who are rich in social and cultural capital, and their interest in earth-friendly rice farming. Drawing upon empirical evidence from Nei Cheng, Yi-Lan about the motivations and experiences of New Farmers, I develop an argument on the relationship between rural gentrification and alternative food production. I suggest seeing rural in-migration that is inspired by a vision of an agricultural lifestyle by migrants with social and cultural capital as constituting certain rural gentrification processes. These processes include appropriation of agricultural culture by those rich in social and cultural capital and rent-seeking in higher-end food markets.

The peculiarity of this rural gentrification is that marginalized agricultural land becomes reinvested and utilized by these newcomers in a way that is centered around ideals of AFNs. New Farmers' roles as gentrifiers involves their artisanal approaches to agriculture. These practices not only distinguish their farming practices and agricultural produce from conventional agriculture, but also mean a closer relationship with urban consumers. New Farmers approach farmland as site of experience production and are thus able to fulfill the demands of labor-intensive farm work with urbanite volunteers. Results of rural gentrification driven by the pursuit of agricultural lifestyles include changes in the social aspect of farming, changed farming practices,

and renovation of traditional housing. The potential ground rent may be gained via sale within the high-end food market, while the actual ground rent can be seen as associated with land use by conventional agriculture. The sweat equity (private capital, e.g. through artistic and ecological approaches to agriculture in this case) of AFN producers is of central importance to drawing volunteers and consumers to the countryside. Reflecting on how AFNs may gentrify the countryside provides us with an opportunity to think about the challenges of agricultural transformation.

The emergence of earth-friendly farming in Nei Cheng

During my fieldwork, I collected information on villages where urbanite newcomers began to farm. Nei Cheng is one of the popular villages, which attracts urbanite newcomers who are largely devoted specifically to ecological rice farming. Nei Cheng is a rural village in Yuan Shan township in Yi-Lan (Figure 20). The size of Nei Cheng village is about 4.28 km^2 and the population in Nei Cheng is about 1800 people (divided over about 625 households) (data from 2013). Agriculture used to be the main economic activity in this village (see Photograph 11). Because of its placement within the foothills of *Xue Shan* Mountain, the village has an abundant supply of groundwater. During the Japanese colonial period, settlements in Nei Cheng were concentrated near the mountains due to risk of flooding. The settlement moved to the plain after the completion of the Yuan Shan dyke in 1921, at which point it was deemed safer to live there. The construction of the dyke was sponsored by Lin Ben-Yuan's family[117], an exceptionally rich and powerful family in Taiwan. The Lin family acquired the right to cultivate land that used to be the river bed and thus recruited a group of tenant farmers who began to cultivate sugar cane, a crop that played an important role in the export-oriented economy during the Japanese colonial period. Prior to 1949, Nei Cheng's economy was mainly depended upon agriculture. This changed

[117] The Lin Ben-Yuan's family, also known as the Banqiao Lin Family, is one of five exceptionally rich and powerful families in Taiwan that were active during the Japanese colonial days and through the post-war period.

when the Taipei Veterans General Hospital opened a center in Nei Cheng in 1962. As a result, the population increased by those drawn to the economic activities that were related to the hospital opening, such as the job growth within health care professions and the consequent emergence of other commerce, like restaurants and grocery shops[118].

When the Taiwanese agricultural sector showed signs of stagnation during the late 1970s, residents in Nei Cheng, like many other rural villages in Taiwan, made the decision to move to cities and seek non-farming employment. Over the years Nei Cheng faced intensive out-migration by young people, while elderly farmers chose to receive set-aside subsidies from the state, rather than remain active in farming. According to a staff at the community center, most farmland in Nei Cheng had been set-aside due to the government's agricultural policy[119], and many farmers were getting too old to farm.

> Basically, the condition of farmland in our village is not good, compared to other villages. A large amount of land has been set-aside (abandoned). During the first crop-cycle, the portion of set-aside land is between 40 to 50 percent. For the second crop cycle, the scale of set-aside farmland can reach 80 even 100 percent. In Yi-Lan farmers rarely cultivate rice for two crop cycles. The land is just being set-aside.

[118] Information on Nei Cheng Village can be found here: http://www.nei-cheng.org.tw/doc/Introduction/in01.html

[119] Agricultural policies that encourages farmers to let their farmland lie fallow include the Rice Division Program (1983-1996) and the Rice Paddy Utilization Adjustment Program (1997-2010).

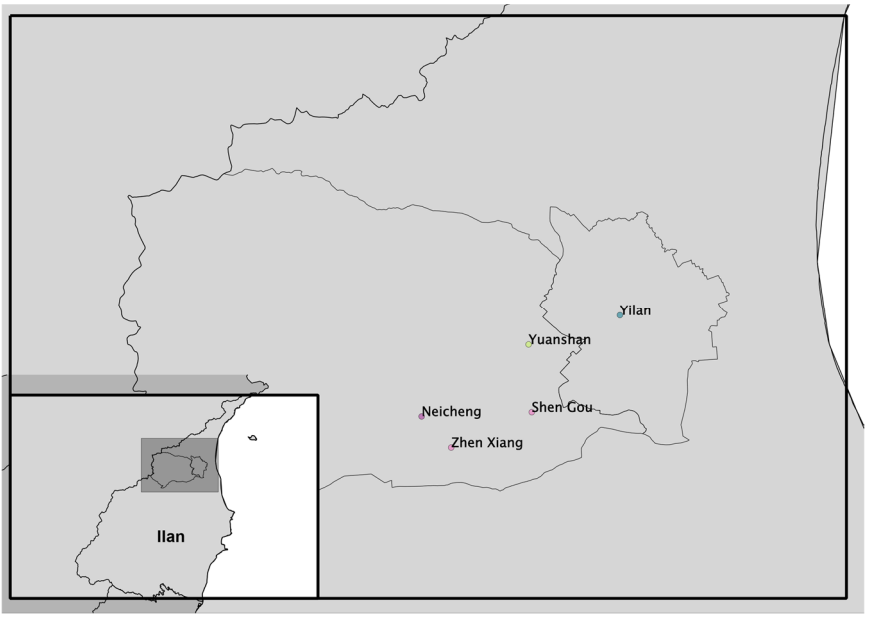

Figure 20. Map of Nei Cheng Village
Note: This map is produced by Dennis Raylin Chen for this dissertation.

Photograph 11. Farmland in Nei Cheng Village
Note: Author's own photo.

The presence of fallow farmland that the community staff described is of an in-between status that is typical of a *desakota* regions, between processes of urbanization and the old economy of agricultural production. In contrast to other villages in Yi-Lan, there are few farmhouse developments in Nei Cheng. This is partially because farmland in Nei Cheng is not consolidated. It is common that farmland has no direct access to a road. This makes farmland in this village less attractive to developers and urbanite newcomers, who see the use of farmland in its potential for residential development. Nei Cheng has a strong community center committed to preserving rural sense of living. The community center has been active in promoting low-impact tourism, wherein retired farmers use old farm machines for carrying tourists around (Photograph 12).

Over the past decade, Nei Cheng has witnessed a considerable in-migration of urbanite newcomers who desire an agricultural lifestyle. These urbanite newcomers mostly identify themselves as smallholder farmers[120] (*Xiao Nong*) or earth-friendly farmers (*You Shan Xiao Nong*), though many of them are new to farming. Allan, a new farmer who had moved back to his parents' hometown, comments on the phenomenon of repopulation in his village:

> … we have all kinds of people who move to our village, we have an architect who used to work in New York…he quit his job and moved to our village to farm…we also have executives and lots of people with PhDs and Master's degrees….it is true that we now see people who previously worked in different types of work now in our village. People say that farming is not a competitive business, however, those who are considered competitive (in their own professions) now start a farming life. I believe one can make a living through farming, it will be better than 22k[121], 30k, 40k or even 50k. It all depends on your scale of farming and your selling ability. If you are confident that you

[120] In the dissertation I chose to use the term New Farmer, rather than smallholder farmer (*Xiao Nong*), to refer to newcomers who adopted a farming lifestyle. The term smallholder farmer is associated with small landholdings and family farms. The term New Farmer is more suitable here to describe newcomers to farming.

[121] 22k is an abbreviation of 22,000 NTD. The term is widely used on social media to refer to the starting salary that a university graduate typically receives in their first year of employment. According to the Department of Census, Directorates General of Budget, Accounting and Statistics, the average regular monthly earning in 2018 in Taiwan was 43,225 NTD and the total monthly earning (include bonuses and overtime pay) was 54,796 NTD.

can sell all your rice, it is not impossible to have an annually salary of a million NTD.

According to the Superior Farm Households Statistics in 2008, more than 60% of commercial farms are engaged in fruit plantation (38,792 households) and vegetable plantation (15,505 households). Only 16 % (15,505 households) of commercial farms were engaged in rice production in 2008. Rice farming is usually not considered the main source of income for commercial farms. The emergence of New Farmers like Allan described or those who have been reported on the mass media challenges the old perception of rice farming. This is a different type of farmer, many of whom have highly-educated or professional backgrounds. Most importantly, what sets these New Farmers apart is that they are driven to the countryside because of their desire for agricultural lifestyles.

Photograph 12. A group of tourists in Nei Cheng Village
Note: As a special rural tourist experience, the community center in Nei Cheng helped elderly farmers to renovate their old tractors into small tourist carts. In this picture, tourists were being toured around with the cart. Author's own photo.

Aestheticizing Farming and Volunteers from the City

During my fieldwork I participated in transplanting rice seedlings for a New Farmer alongside a group of urban volunteers. On March 2015, two days after the Spring Equinox, Daniel (a New Farmer interviewed in this study) reserved a small plot of farmland where he wanted to transplant black and glutinous rice seedlings manually (in a traditional way), using a group of recruited volunteers for the extra help that was required. That year he had rented 1.5 *Jia* of farmland.

In the early morning I arrived at Luo Dong Train Station after a one-hour bus ride from Taipei. I joined Daniel in his SUV, along with his wife, their youngest child, and two other young men. On our way to Nei Cheng, he and the two young men spoke enthusiastically about their hobbies. It was the typical group that I had imagined would be interested in rice farming. Once we arrived and were waiting for instructions, another car arrived. Four young people jumped out of the car and joined us. Interestingly, none of the participants had any prior experience in rice farming. We started the farm work with an intense discussion, where we wondered: if we were going to transplant rice seedlings standing in a row, how long should we stand next to each other? We also discussed whether or not it was more efficient to be barefoot or to wear rain boots.

After we all had a basket of rice seedlings and were about to begin, we were stopped by Daniel. He asked us to stand on the footpath of the paddy field. He then asked us to close our eyes and to put our palms together devoutly. After a few seconds, he softly said: "Thank you *Lao Tien Ye* (God of Heaven in Chinese). Please give us a good harvest. We are preparing to transplant the rice seedlings now. Hope the weather will be good and everything will go as smoothly as possible." This ritual was by no means new to me. Through the prayer, Daniel gave participants the feeling that manually transplanting rice seedlings was essentially a way to reconnect to the land. This ritual was full of cultural capital. The activity of manually transplanting rice seedlings that I participated in was a common practice among New Farmers in Yi-Lan (Photograph 13). The farm work took longer than we originally thought;

working on a small plot of farmland (1 feng[122], approximately 970 m^2), it took us the entire morning. With the help of machinery, the same area would have only taken ten minutes.

In recent years, the phenomenon of using volunteers for farm work has become popular around the world. Most people are attracted to the idea of certain farming experiences, and it is not necessarily an experience that will prepare one to become a farmer in the future. In these cases of volunteer farm tourism, working on farm is mostly approached as a type of leisure activity which is different from one's everyday urban life. The recruitment of volunteers amongst New Farmers' is based on a reinterpretation of farming culture and knowledge, and the production of a certain kind of *farming experience*. I argue that farming culture and knowledge can be seen as sources for objectified cultural capital (Bourdieu, 1986). The activity of transplanting rice seedlings manually is used to deliver agricultural knowledge through the production of an experience. This activity requires organizers to demonstrate embodied cultural capital. Bouton et al. (2008, p.20) argue that "embodied cultural capital is constructed through the performance of everyday activities and is manifested primarily in the level of farming skill possessed by the farmer."

Photograph 13. Young urbanites transplanted rice seedlings manually
Note: Author's own photo.

[122] A unit of Chinese measurement equivalent to 66.6 m^2 or 1/10 Jia.

In Nei Cheng, hand collection of golden apple snails (*Fushouluo*) is another activity that attracts volunteers. The golden apple snails, *Pomacea canaliculata*, were introduced from Latin America to Taiwan in the early 1980s to start an escargot industry. This was unsuccessful, as Taiwanese consumers did not react enthusiastically to the taste of the snails, and the snails were later released into the wild. With high rates of reproduction, high tolerance to pollution, and the need for low oxygen levels, the species quickly distributed throughout the Taiwanese countryside and became a major rice pest. The snails eat the base of rice seedlings as well as the aerial leaves and stems. Since the 1980s, Taiwanese farmers have used methods such as nets and special traps to prevent infestation. In most cases, farmers employed chemical pesticides to remove the snails on a large scale. The chemical pesticides, however, disturbed habitats of other animals such as the firefly, water bird, earthworm, and certain fish.

With ecological knowledge as a foundation, New Farmers prefer to use biological and physical controls to address the golden apple snails. New Farmers have initiated experiments and actively produce knowledge on coping strategies against the golden apple snails. The relationships between rice farming and the golden apple snails are described as battles that AFN food producers need to consider. The production of knowledge around ecological farming became an important discourse amongst farmers, as well as material to help enhance consumers' understanding and trust in AFNs. This production of ecological knowledge and practice of ecological farming requires one to demonstrate embodied cultural capital (Bourdieu, 1986).

A laborious method utilized by New Farmers in Yi-Lan is to remove the snails by hand. The purpose of this labor-intensive exercise is to avoid using pesticides. During my fieldwork in early 2015, I regularly received information that volunteers were being recruited on Facebook to help remove the snails. To attract volunteers to such an activity, New Farmers not only demonstrate the ability to combine farm work with tourism, but they also illustrate sound knowledge on how to best address the snail infestation (i.e. cultural capital). In one of the field visits, I joined a group of university students in this activity, and I could closely observe how this volunteering work was organized (Photograph 14). At this event, handpicking snails was described as an important part of earth-friendly farming. Volunteers at the event were aware that their participation in activities like this could potentially help preserve agricultural landscapes and protect the habitats of animals such

as frogs and water birds. Volunteers generally saw their participation as a meaningful activity.

Photograph 14. University students manually remove apple snails in Xin Nan, Yi-Lan
Note: Author's own photo.

During the 1960s and 1970s, mechanization of rice farming was at the early phase of development in Taiwan. Informal labor exchange was common amongst farm households. This practice diminished when using machines became normalized and rural young people migrated to cities. During the late 2000s, the prevalence of AFNs brought back some labor-intensive farm practices. This time, labor exchange is arranged and contacted through social media, such as Facebook. Volunteers are mainly non-locals, and participation is mostly not based on kinship relations. A practice that became popular in Hualien and Yi-Lan is called *Dagong huan su*, which means volunteers are offered free accommodation and fresh vegetables for their labor input on a farm. This practice of getting one's hands dirty resembles the participation of apprentices in organic farms all over the world. Apprentices at these organic farms are typically in their twenties and from middle to upper-middle class suburban areas and became farm apprentices because they had a desire to

experience farm life (Trauger, 2007). Sometimes they received a monthly stipend that was typically well below minimum wage (ibid). In very few cases (none that I heard about or observed) are volunteers for *Dagong huan su* paid in Hualien and Yi-Lan. From the result of my survey, most AFN producers agree that the purposes of *Dagong huan su* are diverse and included: a method of food education, as a part of school projects for young children to know where their food comes from, and last but not the least to find potential customers who embrace similar ecological ideologies.

Evidence of Landscape Change

The most evident landscape change in Nei Cheng is from increased demand of old farmhouses and farmland. Careful restoration by newcomers of old buildings, in both the city and the countryside, is a clear sign of gentrification. In the countryside, rural gentrification takes diverse forms, including conversion of old farm buildings (barns, cottages, etc.) and other rural properties (church, school, railway station, shops, etc.) (Phillips, 2002). Most New Farmers interviewed in my study rent old houses/farmhouses and invest a considerable sum of time and energy in renovating these houses. It is common that young newcomers, who often lack financial resources, use materials that are accessible from nature, such as driftwood, to decorate their homes. With particular tastes and rich in cultural capital, newcomers have renovated old houses/farmhouses into desirable residencies or spaces for cafes and restaurants. An impressive example is a small bookstore and vegetable shop complex in Nei Cheng. When I first visited in late 2013 it was an abandoned farmhouse. When I returned in early 2015, it had become an important meeting place for New Farmers. The old farmhouse had been transformed into a stylish second-hand bookstore run by a couple who had recently moved to Yi-Lan for rice farming. The bookstore sells vegetables grown by New Farmers (Photograph 15). Occasionally lectures and talks on farming and food education are held in the space.

Photograph 15. A small book and vegetable store complex in Nei Cheng
Note: Author's own photo.

Many newcomers choose to move into old houses, owning to the relatively low rental price and flexibility for renovation. *San Ho Yuan*, a traditional three-section compound farmhouse, is a specific type of old house style that is preferred by New Farmers. The flexibility of an old house, as the following quote from an interview with a local farmer suggests, includes:

> They won't disturb their neighbors if their friends (from the city) come over for a visit. It was easy to park a car and the rent is cheap. Since they have spare time, they can renovate houses by themselves, or ask their friends for a small project. If it is a new house, no one would let you to randomly put a nail on the wall. There are plenty regulations.

For newcomers, old houses present an opportunity to create a lifestyle they desire. This includes the opportunities to renovate abandoned old houses according to one's ideas, to work in a garden, or to have a hobby farm. This kind of a lifestyle was hard (or impossible) to attain in the city. This imagination of a countryside lifestyle has become especially attractive for young families with kids. Many newcomers want their children to have the opportunity to experience what they once had in their childhood. During my fieldwork in 2015, the shortage of old housing began to rise as an issue, as noted by a staff member at the community center:

> In our village Nei Cheng, they (urbanite newcomers) have rented at least 20 houses…Over the past two years, all old houses were in high demand. Those old houses that had no renters were empty because house owners did not want to rent them out.

The dominant preference for old houses reflects urbanite newcomers' attitudes towards a farming life – seeing it as an *experimental* and *temporary* stage in one's life. However, preference for old houses does not necessarily mean that newcomers were not interested in the economic gains potentially associated with rural gentrification. The economic gains in this case were not so much about increased real estate value, since many of them were renters. The economic gains, in this case, were exemplified through the value of agricultural produce cultivated and distributed within AFNs.

Another evidence of landscape change is the appearance of farmland cultivated by New Farmers. Prior to my field visit to Yi-Lan, I was aware that New Farmers might be marginalized from the farmland market due to the growing demand for newly-built farmhouses. However, in Nei Cheng, this seems to be a relatively unimportant factor. The difficulty for New Farmers to access farmland comes from farmers/landholders' unwillingness to sublet farmland to newcomers. Farmers want to avoid subletting farmland to newcomers because they are worried about the appearance of their paddy fields once they are cultivated with earth-friendly farming strategies. Farmers

also hold suspicious attitudes towards newcomers' approaches to rice farming. *Good farmers* are often defined by high productivity and the ability to maintain a neat agricultural landscape (Burton, 2004). The appearance of a field is an important part of shaping one's identity as a farmer. Farmers care about judgment from their peers based on the appearance of their fields. Taiwanese farmers' preferred aesthetics of agricultural landscapes, like elsewhere, have been heavily influenced by ideas of green revolution. Farmers view neat landscapes of their field as symbols of hard work and skill in farming. With this layer of understanding, it is not difficult to understand why New Farmers are in a relatively disadvantaged position to acquire farmland. As an AFN producer in Nei Cheng points out:

> In the beginning earth-friendly farmers could not rent farmland because they don't want to weed and replant seedlings. Why did (farmers/landholders) reject those who refuse to weed and replant seedlings? For instance, this land is owned by me, [farmers would say] *what kind of farming are you? Who do you sublet your land to? How can it be cultivated as this?* (In Minnan Dialect) They would be complained about (by farmers/landholders). The landowner would feel he or she lost face (*mianzi*) and they would not want to rent out the land to you (New Farmers) the second year.

What this farmer described seems to be a common challenge shared by many newcomers to farming. In contrast to conventional farmers who see farming as a project of self-improvement that involves efficient mechanical, managerial and farming skills (Burton et al., 2008), New Farmers seems to be more interested in searching for alternatives to chemical pesticides and fertilizers. For New Farmers, farmland is seen as a habitat for other creatures. Ecological experiments that New Farmer adopted are seen by conventional farmers as poor performances, a sign of inexperience, or an expression of laziness.

Due to this, many New Farmers have to turn to marginal farmland - those areas of poor soil quality, located on the periphery of agricultural production zones, or farmland that has been set-aside. As the same AFN producer points out, the condition of farmland rented by New Farmers is generally not so good:

> These New Farmers could not rent farmland of good quality. Mostly, it was farmland that (local) farmers did not want or the set-aside farmland. It was obvious that those were unwanted land that was full of weeds.

The condition of farmland rented by newcomers is confirmed by my field visits. Many New Farmers' land has no direct connection to roads. I remember that I had to walk on a footpath between two paddy fields to reach a New Farmer's land. Around this farmer's land is fallow land full of weeds. The preference of farming on peripheral farmland can also be a precautionary action in adopting ecological farming (to avoid *pollution* of chemical pesticide from neighboring land). Yet, my interpretation of this is that access to farmland is highly controlled by social networks in the countryside. Newcomers are thus unable to access land of better quality because they have not gained the trust of the local farmers. The farmland New Farmers is able to access is mostly marginal farmland that has been set-aside.

The landscape change associated with rural gentrification processes in this case is that set-aside farmland is being *revitalized* with ideas of AFNs. In Nei Cheng, the scale of rice paddy field cultivated with earth-friendly farming increased rapidly, from one hectare in 2010 to approximately forty hectares in 2015 (personal communication, March 9, 2015). Another farmer interviewed in this study estimated that the scale of rice farmland cultivated with *Youshan gengzuo* in Yi-Lan has reached sixty or seventy hectares (personal communication, March 9, 2015). This rapid expansion of the scale of farmland cultivated with earth-friendly farming can be seen as a part of a grassroots movement of regaining farmland from developers and investors. It also means that New Farmers may gradually gain trust from farmers/landholders.

There are mixed intentions for farmers adoption of earth-friendly rice farming. During my fieldwork, I came across an interesting debate around how New Farmers should address golden apple snails. To expand the scale of production, some New Farmers begin to apply the extracts of tea seed pomace (*Ku Cha Po*) to inhibit the snails. This practice is far more efficient than handpicking. In contrast to labor-intensive hand collection, tea seed pomace only needs to be applied once a week to have a similar effect. This approach has further divided New Farmers into two groups: the production group (*Sheng Chang Zu*) and the ecological group[123] (*Sheng Tai Zu*). The production group referred to those who prioritized maximization of productivity and

[123] The ecological group believes that extracts of tea seed pomace can harm the habitat of animals like earthworms and water birds. This practice is contradictory to their intention of adopting a farming life.

profit, while the ecological group referred to those who insisted on handpicking the snails.

A number of conventional rice farmers begin to adopt practices of *Youshan gengzuo*, inspired by the improved economic gain associated with the earth-friendly rice market. Some farmers even asked their children to return from the city to take up farming (personal communication, March 9, 2015). This increased interest in *Youshan gengzuo* has pushed up the rental price of farmland. The rental price of farmland had escalated considerably to 4,500 NTD/per *Feng*[124], three times higher than the average price paid by farmers engaged in conventional rice farming (personal communication, March 9, 2015). This increase in rent may subtly exclude rice farmers who depended on renting and relied solely on incomes from agriculture. Despite this, during my fieldwork, I did not hear that newcomers complained about the rental price of land, I only heard about shortage of housing.

Gentrifying Agriculture – the Case of Rice Farming

Studies of rural gentrification have been concentrated on in-migration of wealthier newcomers, changes of housing stocks, and shifts in capital accumulation (Phillips, 1993; Solana-Solana, 2010; Stockdale, 2010). Gentrification in relation to the pursuit of agricultural lifestyles has been generally neglected (Mamonova & Sutherland, 2015; Sutherland, 2012). As opposed to gentrification in the urban context, in which rent-seeking is oriented towards investment and disinvestment in the built-environment (as the fixed capital) (Smith, 1979), analysis of rural gentrification in *desakota* context needs include investment in new land-uses that do not involve major changes to the built-environment. Investment in new land-uses can take the form of a shift to high-value agricultural production, appropriation of farming culture, and capital accumulation based on quality of food. In the context of *desakota*, gentrification processes involve capital investment in land and housing that had been closely tied to small farms. On the one hand, rural gentrification in *desakota* presents continued deagrarianization, in which farmland, due to its proximity to the city, is constantly under pressure of

[124] A unit of Chinese measurement equivalent to 66.6 m^2 or 1/10 Jia.

urbanization (as was discussed in Chapter 5). On the other hand, rural gentrification in *desakota* is driven by alternative food movements and urbanites' pursuit of agricultural lifestyles. These newcomers use farmland as a site for production of a farming experience. The rent seeking can be examined in relation to economic gains via higher-valued alternative food production. Rural gentrification via AFNs can be defined as: in-migrations of newcomers who are inspired by farming lifestyles; a process that is often accompanied by investment on agricultural land and/or in rural houses that involves appropriation of farming practices, the restoration of old houses, and landscape changes wherein fallowed farmland is brought back to active farming.

The main feature of rural gentrification that can happen in the emergence of AFNs is in the revitalization of farmland through new farming approaches such as ecological farming. Using the convertibility of different types of Bourdieu's capital as a framework for understanding informal exchange in farming (Sutherland & Burton, 2011), I argue that knowledge, ideas, and practices of AFNs can be seen as *embodied* cultural capitals that are necessary for adopting ecological farming. Ecological knowledge is also used to bridge consumers and producers. In the field, *embodied* cultural capital possessed by New Farmers is carried out through "performance of everyday farming activities" (Burton et al. 2008). New Farmers employ *embodied* cultural capital (knowledge on ecological farming and AFNs) to address the challenges around labor-intensive farm work associated with earth-friendly farming. A common labor strategy adopted by New Farmers is the use of volunteers from the cities. Farming experiences are recognized as a collectively-owned social capital in alternative food movements. The investment of cultural and social capital, and labor, time, and work in farming can be seen as efforts in *revitalizing* farmland.

This leveraging of cultural and social capital by New Farmers may mean excluding farmers who do not have equivalent understandings of AFNs. Not all farmers have equivalent resources and means to transform the symbolic values of ecological farming into economic capital. The economic rewards of these efforts (e.g. the sweat equity via artistic and ecological approaches to agriculture) are reflected in the high-valued agricultural produce circulated in AFNs. This higher-valued agricultural produce presents speculation on the potential ground rent in AFNs. In other words, the rent gap of AFNs may be produced in subtler ways, not only via the increase of rent on farmland in the

countryside, but also through diverse venues (e.g. farmers' market and initiatives that are characterized by direct buying from farmers) and support from the middle-class consumers in the cities. Although many conventional farmers want to adopt ecological farming, they often do not have the *know-how* needed for harnessing the cultural and social capital that can make ecological farming lucrative (personal communication, March 9, 2015). This is partially because the accumulation of embodied cultural capital (e.g. ecological farming knowledge and practice of AFNs) and social capital require one to invest time and labor. The high demand of social and cultural capital in participating AFNs might be potential barriers for the participation of conventional farmers.

The development of earth-friendly farming in Nei Cheng village presents a case of how agricultural transformation is driven by the pursuit of agricultural lifestyles. The development of organic agriculture in Taiwan has been relatively slow. In 2004, the scale of certified organic rice, vegetables, and fruit was only 743 hectares, 231 hectares and 153 hectares[125] respectively (see Figure 21). In 2017, the scale of organic rice, vegetables, and fruit production increased to 2,704 hectares, 2,480 hectares and 1,108 hectares (see Figure 21). In terms of geographies of organic agriculture, the majority of organic rice production is located in Hualien. The scale of organic rice production increased from 307 hectares in 2004 to 1,632 hectares in 2017 in Hualien (see Figure 22), while it increased from 82 hectares in 2004 to 512 hectares in 2017 in Yi-Lan (see Figure 22). Although Taiwanese organic agriculture has developed steadily over the past two decades, the overall share of organic agriculture remains extremely low. In 2007, 3,186 farm households registered as organic farms[126] (0.4 % of total farm households) and the scale of farmland cultivated with organic methods was 6,488 hectares (0.8 % of total cropland).

[125] The information can be found on Organic Agricultural Production Information Platform: http://oapi.i-organic.org.tw

[126] Information on farm households registered as organic farms can be found on Organic Agricultural Production Information Platform: http://oapi.i-organic.org.tw. The number of farm households practicing organic agriculture in Taiwan in 2017 was 775,472 households.

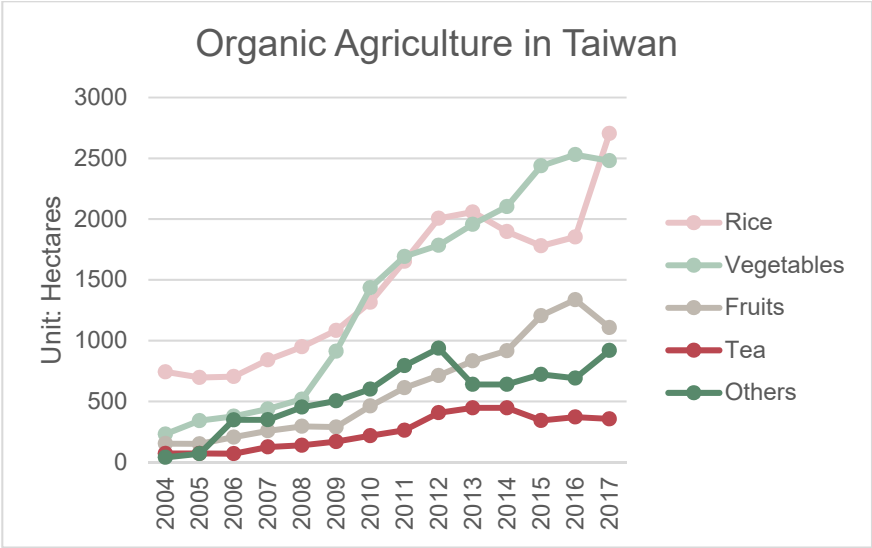

Figure 21. Major crops cultivated within Organic Agriculture in Taiwan
Source: Organic Agricultural Production Information Platform: http://oapi.i-organic.org.tw.

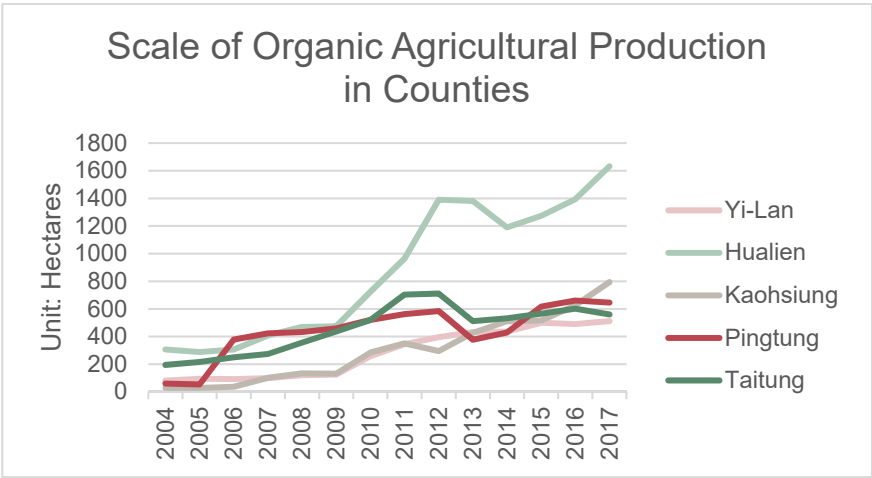

Figure 22. Scale of production of Organic Agriculture in counties
Source: Organic Agricultural Production Information Platform: http://oapi.i-organic.org.tw.

New Farmers use ideas of agricultural lifestyles and ecological farming to promote agricultural transformation. Instead of relying on costly third-party certification systems in organic agriculture, New Farmers build trust with consumers via on-farm assessments and frequent updates of their everyday farm work on social media. New Farmers' approach to AFNs presents an alternative to the third-party certification system used in organic agriculture. In 2017, the agricultural authority initiated an organic and earth-friendly cultivation subsidy that subsidized farmers who planned to convert to organic agriculture or adopt earth-friendly farming. The ecological protection subsidy in relation to earth-friendly farming was as high as 30,000 NTD per hectare per year. The verification of farmers of those who have adopted earth-friendly farming is carried out by different groups that promote the practice. This was the first time that the agricultural authority directly used term earth-friendly farming (*Youshan gengzuo*) to subsidize farmers. The definition of earth-friendly farming was set broadly (e.g. one key tenet was the avoidance of chemical fertilizers and pesticides). This subsidy policy introduced in 2017 shows that practices of earth-friendly farming are gaining momentum in Taiwanese agriculture.

Concluding Remarks

This chapter analyzes gentrification processes that are driven by agricultural lifestyles and ideas of earth-friendly farming. Gentrification and its relationship to AFNs in Taiwan challenges dominant conceptualizations of rural gentrification and suggest that investment in new-land uses does not necessarily involve major changes to the built-environment; processes of revalorization of rural spaces and lands can occur within agriculture. The recent phenomenon of Taiwanese urbanites' agricultural lifestyle migrations is partly resultant from intellectuals and activist' intervention in farming villages over the past two decades. Intellectuals and activists use AFNs to bridge farming villages and the cities. Processes of gentrification that happen alongside the development of AFNs encourage us to explicitly articulate about the challenges of agricultural transformation.

8. Conclusions

The dissertation analyzed relationships between different rural in-migrations and rural gentrification through the lens of the farmland politics that emerged during the late 1990s in Taiwan. Using the theoretical frameworks of *desakota*, rural gentrification, and alternative food networks (AFNs), I analyze capital investment, rural in-migrations, and landscape changes involved in new land-uses in peri-urban areas in Taiwan. Specifically, I use the concept *desakota* to examine changes of farmers' social mobilities and the underlying mechanism that shaped the highly mixed agricultural and non-agricultural land-uses that are characteristic of peri-urban areas in Taiwan. The mixed urban-rural spatial patterns are results of the integration of the agricultural economy into the urban economy, as well as the capitalist need for seeking out cheap labor and land. I argue that the analytical power of *desakota* in theorizing rural gentrification lies on its recognition of the legacies of agricultural economies – which in this case helps shed light on the constraints and opportunities of small-sized landholdings. Based on case studies of farmhouse developments and agricultural lifestyle-based migrations in Yi-Lan and Hualien counties, I argue that processes of gentrification in *desakota* involve investment in new land-uses in the forms of changes to the built environment (in this case mostly residential developments) and a shift to high-value agricultural production. Rural gentrification is a result of processes of urbanization and resistance to urbanization.

The dissertation contributes to the debates on farmland politics in Taiwan through the lens of rural gentrification. Much debate on farmland politics has been centered on individuals' eligibility of owning and using farmland and the ideas of *Nong Di Nong Yong* (advocacy for keeping farmland for farming) (Academia-Sinica, 2013) and fails to recognize that farmers/landholders' perception of small landholding has changed considerably during rural industrialization processes. In Chapter 2, I provided an overview of Taiwanese agriculture and recent agriculture and farmland policies that aim to revitalize

farmland. I examined the relationships between processes of deagrarianization, legacies of post-war land reform, and rural industrialization. I argue that recent capital investment in the Taiwanese countryside is built upon processes of de-valorization and revalorization (the "rent-gap") of spaces that have been detached from agricultural production.

During the late 1970s, Taiwanese agriculture suffered from labor shortages, high costs for production, and low returns for agriculture produce. This was partially a result of using the agricultural sector as a resource to be exploited to serve broader economic development strategies. One of the examples of agricultural squeeze was a system called Bartering Fertilizer for Rice (introduced in 1948 and abolished in 1973). In this system, chemical fertilizers were distributed to rice growers by the government in exchange for paddy. The exchange ratio of rice for fertilizers was set unfavorably to rice farmers (the price of rice was about 20 to 30% lower than the market price). During the 1970s, farming was rarely viewed as an economically viable activity and farmers who left farming either moved to the cities in search of better economic security or they stayed in rural areas and became dependent upon the employment opportunities that arose through rural industrialization (Gallin & Gallin, 1982; Niehoff, 1987; Sando, 1986). Rural industrialization allowed rural households to enter industrial related employment without physical migrations. These processes were related to a well-known policy; the *family as a factory* (*Jiating ji gongchang*) scheme. The factories established in relation to this scheme were typically characterized by extremely small-scale machinery owned by householders and a primary reliance on the households' labor. Mixed urban-rural spatial patterns and agricultural/non-agricultural land-uses in the *desakota* in Taiwan can be seen as results of farm householders' search for new ways of capital accumulation in light of insufficient returns from agricultural production.

To address crises in the agricultural sector during the 1970s, the state implemented policies aimed at to improving farmers' livelihood strategies such as through establishment of the Agricultural Development Act (ADA) in 1973 and the implementation of a Second-Stage Land Reform[127] (1983-1986). One of the debates that emerged around the Second-Stage Land

[127] The content of the Second-stage Land Reform included accelerated mechanization, accelerated land consolidation, promotion of group, co-operative, and entrusted farming, farmland-related loan assistance, and revision of agricultural laws (Bain, 1993).

Reform was around the impacts that small farms (legacies of post-war land reform) and fragmentation of farmland had on agricultural development (Bain, 1993). Expansion of farm operations and a liberalized approach to farmland was suggested, though Second-Stage Land Reform did not include policies that directly affect structures of land ownership.

Agricultural crisis during the 1970s was also a crisis of rice production. Prior to the 1970s, the aim of rice policy was to increase production including through the development and distribution of better varieties, the use of chemical fertilizers and pesticides, the use of new farming practices, and improvements in irrigation facilities (Chen, Hsu, & Mao, 1975). The state introduced the Food Stabilization Fund (*Liangshi ping zhun jijin*) in 1973 to stabilize the price of rice. The following year, the state also introduced a price support program, wherein they purchased rice at guaranteed prices. The rice guaranteed purchase program created incentives for farmers to stay in or join rice farming. From the 1980s onward, the state began to address issues of rice surplus, partly by encouraging farmers to adopt high-valued crops other than rice. The state also introduced different programs (e.g. the Rice Division Program (1983-1996) and the Rice Paddy Utilization Adjustment Program (1997-2010)) to address issues of rice surplus, in which result in encourage rice farmers let their farmland lie fallow. During the 1990s, set-aside programs were used as a proactive adjustment to international agricultural trade (Taiwan participated in the WTO from 2002 onwards). As a result of set-aside programs and factors such as changing consumption patterns, a massive amount of farmland that was once paddy field was either turned into fallow land or used for other purposes. The scale of fallow land reached its peak in 2011 when 52,939 hectares of land were left to lie fallow[128].

During the late 1990s, there were intense debates on individuals' eligibility to own and use farmland. The idea of enlargement of farm operation as a way to increase farm household's income levels was used to advocate for a liberalized farmland market. The marketization of farmland allowed in the amendment of ADA in 2000 was a result of the state's withdrawal of protectionism within farmland policies and, to some extent, a means to solve the financial burden of set-aside farmland subsidies. In this case, capital investment in rural land is rent-seeking, driven by the possibility for lucrative real estate development. Furthermore, issues of fallow farmland were not addressed until the 2010s.

[128] See Table 8 on p.66 for more details.

The liberalized farmland approach enabled in the amendment of ADA in 2000 has significantly pushed up the price of farmland and produced a set of conditions that have spurred rural gentrification. The state's intention to improve the food self-sufficiency of Taiwan will not be feasible if farmland continues to be used as a commodity within real estate development.

The controversies around farmland politics that evolved during the late 1990s have nurtured grassroots alternative food movements in Taiwan. The alternative food movement, inspired by environmental and progressive ideologies, has encouraged a group of intellectuals (*Zhishi fenzhi*) and urbanites to consider adopting a farming life. Chapter 6 provides an analysis of the emergence of alternative food movements in Taiwan, as a result of increased desire of urbanite newcomers to adopt farming lifestyles. Based on eight urbanites who begin a farming life in Yi-Lan and in Hualien, I provided an analysis of New Farmers' motivations, experiences, and the challenges of entering AFNs. I found that urbanite newcomers' access to farmland is enabled by policies intended to revitalize farmland such as the Adjusting Cultivated System and Reactivating Farmland Programs that were implemented in 2013. Evidence of this can be found in the ways New Farmers' access farmland, the types of farmland they access, and the types of crops they cultivate.

The majority of beginner farmers interviewed in the study depend on renting due to the expensive price of farmland, which has been pushed up by the heated farmhouse market. The condition of farmland rented by beginner farmers is usually marginal or land that has been set-aside. Most New Farmers interviewed in the study adopt rice farming due to the clear division of labor and highly standardized and mechanized processing procedures in rice production. The entry level in rice farming seems to be relatively low, both in term of farming skills and capital. What differentiates New Farmers from conventional rice farmers is their farming practices that intentionally avoided the use of chemical fertilizers and pesticides. By leveraging social media, rice cultivated by New Farmers is mostly sold to urbanites who support alternative food movements and are willing to pay a higher price.

The contribution of this study was twofold. The first contribution of this dissertation is a contextualized study of the emergence of the alternative food movement in Taiwan. I argue that the development of AFNs in Taiwan needs to be placed within the context of *desakota* and seen within the structure and

history of small landholdings. AFNs have developed out of two interconnected processes: activists and intellectuals' interventions in the crisis of farming villages and a bottom-up resistance to urbanization in *desakota* areas. Activists and intellectuals' support of farming villages has resulted in diverse initiatives such as Community Supported Agriculture (CSA) farms, ecological farmers' markets, and direct buying from farmers. AFN producers are mostly beginner farmers who depend on renting land. My study contributes to recent research on intellectuals' roles in rural affairs in Chinese society (Day, 2013; Day & Schneider, 2018; Yan & Chen, 2013). In Taiwan, activists and intellectuals' engagement in rural affairs is hinged on the ideas of keeping farmland for farming (*Nong Di Nong Yong*). This engagement began with a series of controversial land expropriation cases during the 2000s. Similar to what happened in China, Taiwanese activists and intellectuals turned to AFNs and ideas of ecological farming to try to *solve* crises of farming villages. In this dissertation, I focused on the cultural and social capital employed by AFN producers in ecological farming, interactions between conventional farmers and AFN producers (usually newcomers), and farming practices used in alternative food production. I share the doubts of researchers like Yan and Chen (2013) and Hale (2013), and believe that activists and intellectuals' participation in AFNs - with their aims of resisting hegemonic capitalism -might actually further intertwine rural areas with capitalist forces. In this dissertation, I suggest seeing urbanite newcomers' participation in AFNs as bottom-up resistance to urbanization as well as constituting processes of rural gentrification (this is discussed in Chapter 7)

The second contribution of the dissertation is an analysis of rural gentrification in a *desakota* context. Studies of rural gentrification have investigated rural change and capital investment in relation to increased demand of leisure activity and natural amenities (Phillips, 1993; Qian et al., 2013; Smith & Phillips, 2001; Solana-Solana, 2010). There has been little scholarly attention to relationships between gentrification and agriculture/food production (Mamonova & Sutherland, 2015; Sutherland, 2012). This dissertation contributes to gentrification studies with an analysis of how gentrification processes evolve in *desakota* areas – via investment in new land-uses in both the built environment and high-value agricultural production. The former is part of a continued process of deagrarianization and the latter presents a kind of gentrification in agriculture. The study responds to the call to pay attention to gentrification processes in which

boundaries between the city and the rural are ambiguous (López-Morales, 2018).

Chapter 5 provided empirical findings and an analysis on farmhouse development through the lens of rural gentrification. Based on case studies of Yi-Lan and Hualien counties, I examined the relationships between farmhouse development and rural gentrification processes. From the 2000s onward, flows of capital investment into formerly undesirable farmland has been associated with farmhouse development. The processes that turn farmland into a sought-after commodity are promoted by real estate agents, developers, architects, and investors. In Yi-Lan and Hualien, the changing discourses of *Hou Shan* (from connotations of a disinvested region to a popular destination for second-home development) plays an important role in the production of a rent gap.

Phillips (2005; 1993) argues that rural gentrification should largely be seen as a form of revalorization of resources and spaces that have previously been marginal to agrarian capital. The peculiarity of gentrification in *desakota* is that farmers/landholders participate in rent-seeking, sometimes in cooperation with developers. Sutherland argues that a key feature of agricultural gentrification is that farmers tend to 'self-gentrify' (Sutherland, 2012, p. 570). This perspective that farmers self-gentrify can be misleading. In my study, I do find that farmers/landholders actively participate in processes of rural gentrification. However, I argue that farmers/landholders should be seen as competent decision-makers (who perceive potential gains to be derived from new investments in new forms of agriculture when the rent gap is sufficiently wide), rather than gentrifiers. Gentrification processes are not the same as upward social mobility of incumbent residents (in this case, farmers), but rather involve a change of residents.

Chapter 7 analyzed relationships between urbanites' interest in alternative food provisioning and active participation in food production and processes of rural gentrification. I use Nei Cheng, a rural village in Yi-Lan, as a case study to examine impacts that AFNs have on revitalizing farmland. Over the past decade, many urbanites have relocated to Nei Cheng to pursue agricultural lifestyles. Many newcomers participate in rice farming, specialize in earth-friendly farming (*Youshan gengzuo*), and have been actively involved in renovating old houses (farmhouses), organizing on-farm volunteer programs, and farmland preservation. I argue that gentrification via AFNs

presents a case of gentrification in agriculture, with key processes including the appropriation of farming practices, aestheticization of agricultural culture, the restoration of old houses, and the revitalization of farmland that used to lie fallow. The rent gap in this case can be produced because of higher-valued agricultural produce produced and circulated within AFNs. Focusing on labor-intensive practices involved in earth friendly farming, I argue that alternative food production requires one to demonstrates *embodied* cultural and social capital (Bourdieu, 1986, 2010). New Farmers are able to present ordinary farming activities as *experiences* and attract urbanite volunteers to meet the extensive labor demanded by ecological farming. Participation in AFNs requires producers to hold significant amounts of social and cultural capital, a reality that could be a barrier for conventional farmers potential participation in the higher-end market promised by AFNs.

The development of farmhouses from 2000 onwards, spurred by a key amendment to ADA, has added a new color to the patchwork quilt woven by the diverse land-uses that characterize peri-urban Taiwan. I argue that peri-urban farmland in Taiwan is gentrified by multi-layered processes that are shaped through the unfolding of *desakota* legacies, rural industrialization, urbanization, and the emergence of alternative food movements. The marketization of farmland has pushed up the price of farmland considerably, sped up processes of deagrarianization, and has failed to assist farm households in enlarging their farm operations. The historical trajectories that have shape the structure of small landholdings in Taiwan are both challenges and opportunities. However, the emergence of New Farmers in recent Taiwan shows that farmers' children/grandchildren are returning to the land and that farmland in *desakota* areas might have a chance to remain what it is.

Appendix One: List of Interviews (1)

1. AFNs organizer in Hualien (Male), 17 May 2012.
2. Real Estate Agent in Hualien (Male), 2 February 2013.
3. Real Estate Agent in Hualien (Female), 1 November 2013.
4. Long-term Farmer in Hualien (Male), 20 November 2013.
5. Long-term Farmer in Hualien (Male), 20 November 2013.
6. AFNs organizer in Hualien (Male), 28 November 2013.
7. Government Official in Hualien (Female), 11 December 2013
8. Newcomer in Hualien (Female), 25 December 2013
9. Newcomer and a newly-built farmhouse owner in Hualien (Female), 4 January 2014
10. Newcomer in Hualien (Male), 14 January 2014
11. Staff at Community Center in Yi-Lan (Male), 9 March 2015
12. AFN producer in Yi-Lan (Male), 9 March 2015

Appendix Two: List of Interviews (2)

1. New Farmer in Hualien (Male), 31 October 2013
2. New Farmer in Yi-Lan (Male), 13 November 2013
3. New Farmer in Hualien (Female), 27 November 2013
4. New Farmer in Hualien (Female), 2 November 2014 (Skype Interview)
5. New Farmer in Yi-Lan (Male), 28 February 2015
6. New Farmer in Hualien (Male), 3 March 2015
7. New Farmer in Yi-Lan (Female), 1 April 2015
8. New Farmer in Yi-Lan (Male), 10 April 2015

Appendix Three: Survey

Survey collected between April 2015 to May 2015

From the City to the Countryside: an investigation of rural gentrification

Agriculture related in-migration or return migration to Eastern Taiwan: a focus on motivation

Survey

Hi,

I am a PhD student at the Human Geography Department in Lund University, Sweden. I would like to conduct a survey with an intention to analyze motivations of agricultural lifestyle related newcomers to Eastern Taiwan and the impact of in-migration on usage of farmland and agricultural production. This survey is distributed in Yi-Lan and Hualien and for those who are involved in agricultural production or agricultural related industry. It will take about ten minutes to fill in this survey. Participants have the right to decide if they want to answer this survey at any time. If you are willing to participate, please try to answer the questions as honest as possible. The content of the survey will only be used for purpose of research. If you would like to receive a summary of this study, please leave your contact information. Thank you for your valuable time.

PhD candidate from the Department of Human Geography, Lund University
Chia-Sui Hsu

Basic Information

Name	
Gender	□ Male □ Female
County of Registered Residency	
Age	□ 20-25 years old. □ 26-30 years old □ 31-35 years old □ 36-40 years old □ 41-45 years old □ 46-50 years old □ 51-55 years old □ 56-60 years old □ Above 60 years old
Status of study and educational Level (Please fill in the highest level of education)	□ Currently is a student □ Elementary School □ Junior High School □ High School □ Vocational High School □ Junior College □ University □ Master Degree □ PhD
Educational Background	
What types of jobs were you doing before moving to Eastern Taiwan?	

Survey

How long have you been moved to/returned to Eastern Taiwan?	
How many years have you been working before you moved to Eastern Taiwan (single choice)?	□ 1 - 2 years □ 3 - 4 years □ 5 - 6 years □ 7 - 8 years □ 8 – 9years □ More than 10 years
Have you moved to Eastern Taiwan with your family or partner?	□ Yes (□ Spouse □ Children □ Parents) □ No
What is your current occupation? (Single Choice)	□ Agricultural Production □ Agricultural Promotion (□ Blogger) □ Owner of a Guesthouse □ Processing agricultural produces (e.g. jam, cookies, bread) □ Rural tourism □ Retired □ Others
Is the land you currently used rented or owned by yourself? What is the size? Where is it?	□ Rented (Size/Unit) □ Owned by myself (Size/Unit) (If farmland is owed by yourself, please continue with question 15)
Continue with question 11, what sources did you rent farmland from?	□ Elder farmer □ State-owned land □ Landholders (□ Farmer □ Non-farm background individuals □ I don't know) □ Land from family members □ Other:

Continued with question 11, how do you know the land is available for renting? (Multiple choices)	□ Through friends □ Policy of small owners and big tenants □ Farmland Bank □ Advertisement □ Other:
Continued with question 11, what is are the statuses of farmland when you sublet it?	□ Set-aside farmland □ Farmland that used by conventional agriculture □ Farmland that used by organic/earth friendly farming □ Other:
If your farmland is rented, how much is the rent for every crop cycle? (NTD, please mention the time of crop cycle)	
How do you learn farming? (Multiple choices)	□ From elder farmers □ On-farm *Dagong huan su* □ Agricultural lessons (□ Course provided by private □ Agricultural Research and Extension Station) □ Learning by doing □ Exchange ideas with other “New Farmers” □ Consult books and researches □ Other:
How long have you been doing farming? (till the time when you answer this survey)	
What type of agriculture are you currently involved? (Multiple choices)	□ Organic agriculture (Unit of certification:_____) □ Earth-Friendly Farming □ Conventional Agriculture □ Mixed Methods □ Other:
What types of crop and scale of cultivation in your farm during the past three years?	Year 2013：

	Year 2014 : Year 2015 :
What has been the above mentioned agricultural produce mainly used? For household consumption or source of economic income?	□ Households' consumption □ Source of economic income
How do you sell above mentioned agricultural produce to consumers (Multiple choices)?	□ Farmers' Market (Name: _ _ _) □ Through friends and relatives' network □ Through internet (□ Personal blog □ Facebook) □ Traditional Market (include fruit and vegetable wholesale market) □ Restaurant □ Organic agriculture related group (e.g. the homemakers Union Consumer Co-op) □ Other:
Have agricultural produce from your farm mainly consumed at local?	□ Yes □ No
Do you have other sources of income other than farming related income?	□ Yes □ No Continue with question 26)
What kind of non-farming sources of income do you depend on (Multiple choices)?	□ Guesthouses and tourism □ Subsidy from the government (e.g. agricultural policy related subsidy) □ Handcrafts □ Project Management □ Freelance writer □ Music composition

	□ Personal Saving □ Family members' non-farming source of income □ Others:
Have you farm provide *Dagong huan su* or on-farm experience related activity?	□ Yes □ No（Continue with question 27）
How does participates of *Dagong Huan Su* get the information of the need for help at your farm (multiple choice)?	□ Internet □ Friends' introduction □ Guesthouse □ Others
What are purposes and meanings of *Dagong huan su*/on-farm experience activity? (Fill in numbers, the most important one is 1, fill in the number from 1 to 5. If there is an option, fill in number from 1 to 6.)	□ Assist farm work □ Assist update of farm's website □ Facilitate packing of agricultural produce □ Enhancing public's understanding of organic vegetable and fruit □ Cultivate future farmers □ Other
Is farming the main purpose that motivates you to move to Eastern Taiwan?	□ Yes □ No (What will be the main motivation? _ _ _ _)
What are advantages of doing farming in Eastern Taiwan (Multiple Choices)?	□ Farmland is relatively cheaper □ The environment is less polluted □ Convenient transportation system □ Known for organic Farming □ Sparsely populated □ Potential of tourism development □ Possible to work with partners that share similar mind-set □ Others
Is your current house in Eastern Taiwan owned by yourself?	□ Yes, it is owned by myself. □ No, it is rental.

What types of house is it?	□ Rowhouse □ Newly-built farmhouse □ Apartment □ Room □ Old farmhouse □ Other:
How much is the monthly rent approximately?	□ 2500 – 5000 NTD per month □ 5000 – 8000 NTD per month □ 8000 – 10000 NTD per month □ 10000 – 12000 NTD per month □ 12000 – 15000 NTD per month □ More than 15000 NTD per month
What are the landscape from the farm you work on (multiple choice)?	□ Guesthouse □ Newly-built Farmhouse □ Factory □ Other:

Appendix Four: Quotes in Chinese

我們自己種的就像外面友善耕種一樣，不施肥，不灑藥，除非有需要才施肥...我覺得一個農舍...還是要兼顧跟農業相關的東西，不全然就是一個美觀，一個享受...我覺得它兼具...一個以農舍為主體的生活模式，比如說，食物里程，真的就是很少。

花蓮房地產回溫，全縣人口唯一正成長的吉安鄉成為建商最愛，本鄉農、建地各半且臨接花蓮市，由於花蓮市住宅區之房屋趨於飽和，逐漸往吉安鄉郊區住宅區發展，其中又以慶豐村新興別墅工地最多，不管是歐式、日式、中式建築應有盡有，成為吉安房市新地標。吉安鄉慶豐村原是一片稻田，都市計畫變更後，道路變寬，已成為另一番都市繁榮景象，才剛完工就造成搶購風潮，本季房地銷售量明顯稍增，房地價格仍維持一定水準，農地價格則無明顯變動。

農業區位條件優於其他鄰近鄉鎮，發展農業自然條件優良，且鄰近農作物集散中心，消費市場可及性，市場交易熱絡，地價行情呈高檔態勢，且因區內「豪宅」農舍林立，使價格仍居高不下。

我隔壁住了一對退休的夫妻，他們以前是務農的，他們的小孩是公務人員跟醫生。住我們右邊的是房仲，住我們後面的是退休軍人，住在前面一點的也是大學教授。這附近也有一個生意人，平常住臺北，他每個月來一次，平常都有傭人幫他們打掃。

像很多教授啊，他們就是喜歡住在地比較大的地方，但是，周邊的農田啊，就是會有慣行（農法）的，味道就會飄過來，他們很多就會抗議啊！他們沒有想到這是特定農業區，如果他們住的是建地，就比較沒有這個問題。

我認為政策方面他們根本沒有想要做一個永續經營，第一個，我們的糧食政策在那裡？ 土地荒廢掉，任由這些陽光空氣水浪費掉，我們的糧食從國外進口，然後我們有很多年輕人失業，這些自然資源都荒廢不管，我們辛苦工作的錢又去買什麼東西？外國的東西如果汙染的話，或是漲價，我們怎麼生存下去？

十年來台灣的耕地已有相當於約一七七〇座大安森林公園的耕地消失。其中有相當於十五個台北市信義區的面積拿去蓋住宅與農舍，嚴重破壞糧食生產基地。此政策實施後所衍生的問題，就是一些不經營農業的人到都市近郊購買農地登記為農民，爾後在水田中大興土木蓋農舍自住或轉售獲利，嚴重影響農田灌溉排水及農機利用並造成環境汙染。從 99 年的農業查的農戶數比 94 年的農戶數增加 1.1%，而且不從事農業的農戶數增加到 39.8%，證明假農民為數相當多。

鄉下人口的流失，耕地面積的銳減，種田人高齡化的趨勢，和年輕人因為觀念、社會價值的轉變，不能也不想承繼種田的工作，在在凸顯了農業問題的惡化。當現有種田的人漸漸老去，又沒有年輕人肯援手種田的工作時，農業、農村、農民的未來該走向何處？

宜蘭這裡離都會不遠，不僅在銷售上有其低運費的優勢，更重要的是可以吸引都會朋友直接來農地，和農民做近距離接觸，建立個人品牌的獨特性。

務農的好處之一是：農村生活開銷較低，且政府已為農民設想了不少補助方案。...此外，「自由」也是其中一項優點。許多在城市工作過的年輕農民都說，他們領到最好的薪水是「自由」：自己當老闆，多勞就多得，生活很踏實。可以自己安排的生活內容變豐富了，學習、陪小孩、做任何事都有了時間。當然，在耕作期間、農忙時期，時間也會被作物給綁住，一切作息都得順著作物特性安排。

以農業來講這當然是件好事啦，它被重視，但是其實我覺得說，為什麼需要報導這件事情，對我來講，這代表農業出了問題，其實務農應該是很平常的事情，為什麼需要被特定的報導?

後來就想想，可能也是在職場上不是那麼順利，不然乾脆去做自己想做的事情，不要待在公司這樣，那到底要做什麼呢? 第一個並沒有想到務農這一塊，應該是說前面一份工作，那個是屬於在地的東西，我就想到說，是不是應該為台灣的土地做一些相關事情，譬如說那時候剛好有 MIT 潮。

之前在西部講到有機農業，很多人就會搖頭啊，但是在這邊大家都知道你在講什麼，然後也不會就直接潑你冷水，*說你這樣做不行，這樣做不起來，然*

後回去找頭路（閩南語），他們這邊都知道有機農業是什麼，有人就算不是做有機農業，也會跟你說，那個誰誰誰有在作，你有沒有去學習一下。

因為我覺得就是來花蓮之前，我就知道自己頭兩年是賠錢的啦，就是很難打平，我之前在農場工作的時候，接觸過的有機農夫不下二十個，沒有人在兩年內，感覺是有賺到錢的，我知道兩年內不會有太大的收入，我的想法是第一年要打平，因為我年紀也不小了，所以就是知道自己來這邊工作，就是第一年一定會賠錢的啦，然後會有一些壓力，就看要不要再撐下去而已。

有人不要的地，然後我們免費借過來用。到處跟人家借地，然後借過來的地，水也沒有，路也沒有，然後跟人家借路也不方便，叫我們怎麼把機械開進去……

其實政府有類似的東西叫作農地銀行，你到各個農會去問或是學校，他們都說上面的資料已經很久沒有更新過了，上面土地或者是行情，都已經是N年前的了。我之前從玉里跟富里那邊一路找上來，找到壽豐，都是根據農地銀行在找，就是有幾個，他有多大的面積要出租然後一年的租金多少，然後還剩多久？問題是看到最後都不是即時的。

唯一一個不能幫的是翻地啦，（只需要）一台車翻啊翻的……（但）接下來另外兩台機器（兩樣農作）都需要人家幫忙，插秧跟割稻都需要人家幫忙。那不是一個人可以獨自完成的，就是他要有一個助手。譬如說插秧機是一個人在前面開，一個在後面放秧苗，他才可以一直開，不然他就要停一下，放一下，停一下，放一下，那個就沒有效率了。所以就形成說，現在有很多代耕業者，他們會希望要我幫你 ok 啊，那你也來幫我，換工有聽說嗎?只是現在形式不一樣而已，問題是可以幫到代耕業者的小農，沒有幾位啦……

其實像我第一年種五分嘛，第二年種一甲而已，但過沒多久，就有人過來說，那邊有一甲地，不用地租，你要不要做? 好啊! 為什麼不要做呢? 啊就種種種，好累好累喔。從五分地到兩甲有一點累啦，而且我又不是專業農夫。

這些新移民，很多因為在台北工作很累，三更半夜（才回家）不是我要的生活，我為了小朋友移民來宜蘭這裡，我為了下一代的生活，我為了我以後的生活，這樣的最多，大部分是這樣移民過來的。

現在什麼叫做種田？打電話來，來翻地喔，打電話來，來插秧喔，打電話來，來割稻喔，什麼都是重機器在完成的，所以基本上我們只要盡到管理的責任就好，你只要管理好，你就可以「種稻」，就這麼簡單。你有沒有發現他們選擇的都是水稻? 因為水稻門檻最低，只要基本上你是正常人，你要種它就不難。

像我都不會稱我自己農夫，我印象中的農夫是怎樣呢? 要下田插秧，要下田搓草（閩南語），要下田拿著鋤頭去農一些有的沒有的，對，還要戴斗笠，然後割稻，然後還要把五十公斤的稻穀從田中央搬到馬路邊來。因為以前的割稻機不像現在，現在的可以割到馬路邊然後直接卸出來，放在貨車，然後再一個大的太空包，就裝進去，以前是要扛出來的。

因為第一個，我的地都是用租的，然後我沒有什麼設備，就要種收成之後可以儲放的，不太需要設備的。像你如果種菜類的，你就需要有冷藏設備，而且我又沒有補助可以拿。

譬如說我去年就有講，現在稻米過剩，你一定要種黃小玉才有未來，可是，黃小玉的話是雜糧生產，它不能連作，那些蟲害很難防治，如果你一直連作，然後大面積生產，就很難防治.....然後黃豆跟小麥的話，小麥就怕鳥害，黃豆沒有適當的後製跟選別的機器，你如果種大面積種，種了四五分，就算單價再高，你四五分也賣不了什麼錢，然後你還要一大堆的人力去搞，根本就處理不了。

我第一年只賣六十，還蠻好賣的，兩個月就賣完了.....那就想說，那再嘗試一下，把我家在旁邊的田都租下來。

現在平價的或者是低價的稻米市場完全飽和，就跟我去年講的一樣，但是你如果是以中高價位的市場的話，一公斤一百二到一百五，甚至一公斤接近兩百，這種高價位的市場，這種有機米的市場，它其實還沒飽和的，它還再緩慢成長的。

基本上我們這邊的田，如果跟別的村落比的話，這邊的田耕作條件不好，所以說廢耕的情況非常多，你第一期的廢耕會達到四至五成，第二期的廢耕會

達到八成，甚至於百分之一百，因為二期稻宜蘭本來就很少有人在做了，所以說（土地）就是放在那邊。

現在有一些奇奇怪怪的人進來農村啊，就有什麼紐約的建築師啦，他捨去那邊的工作現在來我們村子裡種菜種田.....啊！也有那種高階主管的，還有一些博士碩士之類的，很多啊，就是各行各業的人都有，很多人都說種田沒有競爭力，我相信現在務農可以餬一口飯吃 ，甚至比 22k、30 K、40k 甚至 50k 還要好，就看你的耕作面積與銷售能力，只要你有把握把你的米賣掉，你務農要年薪百萬不是不可能。

他不會吵到別人，朋友來聚會什麼的，停車又方便，然後再來的話，那邊他租金比較便宜。既然有時間就可以消磨，消磨什麼? 古厝裡面要整理啊，來就自己亂整理，或者是朋友叫一叫，啊比較不會被管，因為你到新的房子，這個不能釘釘子，這個不能幹嘛。

我們這內城，他們租的房子至少有二十戶，二十間房子以上.....。內城這一兩年來，空房子的狀況，除非是屋主自己不租，不然，有空房大部分都供不應求。

一開始他們友善小農是租不到的，因為他們不除草，不補秧，啊為什麼不除草不補秧會被嫌棄？譬如說這塊地是我的（農夫會說）*你在種什麼田啦？你的田是給誰做的啦？種成這樣！*(閩南語），他就會被唸，那個地主就會覺得沒面子，第二年就不給你做了。

這些新農其實好的地都租不到，都是人家不要做的地，廢耕的地，很明顯都是雜草叢生人家不要的地。

References

Academia-Sinica. (2013). Nongye zhengce yu keji yanjiu jianyi shu [Recommendation Paper for Agricultural Policy and Techhnology Research]. Retrieved from http://as.sinica.edu.tw/advice/advice_agri1.pdf

Allen, P. (2010). Realizing justice in local food systems. *Cambridge Journal of Regions, Economy and Society*, *3*(2), 295-308.

Almstedt, Å., Brouder, P., Karlsson, S., & Lundmark, L. (2014). Beyond Post-Productivism: From Rural Policy Discourse To Rural Diversity *European Countryside* (Vol. 6, pp. 297).

Amsden, A. H. (1979). Taiwan's Economic History: A Case of Etatisme and a Challenge to Dependency Theory*,* 341.

Apthorpe, R. (1979). The Burden of Land Reform in Taiwan: An Asian Model Land Reform Re-analysed. *World Development, 7*(4/5), 519-530.

Bain, I. (1993). *Agricultural reform in Taiwan : from here to modernity?* Hong Kong: Chinese University Press.

Belasco, W. J. (2007). *Appetite for change: how the counterculture took on the food industry.* Ithaca: Cornell University Press.

Berry, B. J. L. (1976). The counterurbanization process: urban America since 1970 In B. J. L. Berry (Ed.), *Urbanization and Counterurbanization* (pp. 17-30). Beverley Hills: Sage.

Bourdieu, P. (1986). The forms of capital In W. Biggart (ed.), *Readings in Economic Sociology* (pp. 280-291). UK: Blackwell Publishers

Bourdieu, P. (2010). *Distinction: A Social Critique of the Judgement of Taste*: Taylor & Francis Group.

Boyle, P., & Halfacree, K. (1998). *Migration into rural areas: theories and issues*. Chichester: Wiley.

Brown, D. (2011). *Back to the land: the enduring dream of self-sufficiency in modern America*. Madison, Wis.: University of Wisconsin Press

Bruce, A. B., & Som Castellano, R. L. (2016). Labor and alternative food networks: challenges for farmers and consumers. *Renewable Agriculture and Food Systems*, *32*(5), 403-416

Bryceson, D. F. (1996). Deagrarianization and rural employment in sub-Saharan Africa: A sectoral perspective. *World Development, 24*(1), 97-111.

Bryson, J., & Wyckoff, W. (2010). Rural gentrification and nature in the Old and New Wests. *Journal of Cultural Geography, 27*(1), 53-75.

Burton, R. J. F. (2004). Seeing Through the 'Good Farmer's' Eyes: Towards Developing an Understanding of the Social Symbolic Value of 'Productivist' Behaviour. *Sociologia Ruralis, 44*(2), 195-215.

Burton, R. J. F. (2012). Understanding Farmers' Aesthetic Preference for Tidy Agricultural Landscapes: A Bourdieusian Perspective. *Landscape Research, 37*(1), 51-71.

Burton, R. J. F., Kuczera, C., & Schwarz, G. (2008). Exploring Farmers' Cultural Resistance to Voluntary Agri-environmental Schemes. *Sociologia Ruralis*, *48*(1), 16-37.

Byres, T. J. (1986). The Agrarian Question, Forms of Capitalist Agrarian Transition and the State: An Essay with Reference to Asia. *Social Scientist, 14*(11/12), 3-67.

Champion, A. G. (1989). *Counterurbanization: the changing pace and nature of population deconcentration*: London: Edward Arnold

Champion, T., & Hugo, G. (2004). *New forms of urbanization : beyond the urban-rural dichotomy*: Aldershot: Ashgate

Chen, H. Y., Hsu, W. F., & Mao, Y. K. (1975). Rice Policies of Taiwan. *Food Research Institute Studies, 14*(4).

Chen, J. H. (2016). Yi nong wei ming: Taiwan zhan hou nong yun de lishi kaocha. [In the name of the Farmer: A Historical Review of Agrarian Movements in Postwar Taiwan]. *A Journal of Cultural Studies, 22*, 75-122.

Cheng, H. I. (2014). Xiangcun qingnian yimin de ban nong ban X zhuixun: Shehui hua yu ziwo gainian guandian. [The pursue of the rural youth migrants in hannou-hanx life : socialization and self-concept perspectives]. (Master thesis), National Dong Hwa University, Hualien.

Civic group in preservation of farmland in Yi-Lan. *Liberty Times* (2015, March 23). Retrieved from http://news.ltn.com.tw/news/life/breakingnews/1266033

Chu, T. T. (2015). *Likai dushi, rongru xiangcun?──Cong taiwan fan tu guitian nongfu de shengji yu shenghuo tantao dangdai chengxiang guanxi.* [Living from urban, integrating into rural? Examining urban-rural dialectical relationships through livelihoods and everyday life of the back-to-the-land farmers in Taiwan]. (Master thesis), National Taiwan University, Taipei.

Clark, E., Johnson, K., Lundholm, E., & Malmberg, G. (2007). Island Gentrification & Space Wars In G. Baldacchino (Ed.), *A world of islands: an island studies reader*. Charlottetown: Institute of island studies.

Council of Agriculture. (1999). *Histories of the Food Stabilization Fund*. Retrieved from https://www.coa.gov.tw/ws.php?id=2251&print=Y

Council of Agriculture. (2016). *Basic Agricultural Statistics*. Retrieved from https://agrstat.coa.gov.tw/sdweb/public/book/Book.aspx

Council of Agriculture. (2017a). *Basic Agricultural Statistics*. Retrieved from https://agrstat.coa.gov.tw/sdweb/public/book/Book.aspx

Council of Agriculture. (2017b). *Agriculture and Agricultural Land Survey*. Retrieved from https://map.coa.gov.tw/farmland/index.html

Council of Agriculture (2017). Food Supply and Utilization Yearbook. Retrieved from https://agrstat.coa.gov.tw/sdweb/public/book/Book.aspx

Cone, C., & Myhre, A. (2000). Community-Supported Agriculture: A Sustainable Alternative to Industrial Agriculture? *Human Organization, 59*(2), 187-197.

Coppock, J. T. (1977). *Second homes: curse or blessing?* Oxford: Pergamon.

Darling, E. (2005). The city in the country: wilderness gentrification and the rent gap. *ENVIRONMENT AND PLANNING A, 37*(6), 1015-1032.

Day, A. (2008). The End of the Peasant? New Rural Reconstruction in China. *boundary 2*, *35*(2), 49-73.

Day, A. F. (2013). *The Peasant in Postsocialist China: History, Politics, and Capitalism*. Cambridge: Cambridge University Press.

Day F. D., Schneider, M. (2018). The end of alternatives? Capitalist transformation, rural activism and the politics of possibility in China. *The Journal of Peasant Studies, 45*(7), 1221-1246.

Dick, H. W., & Rimmer, P. J. (1998). Beyond the Third World City: The New Urban Geography of South-east Asia. *Urban Studies*, *35*(12), 2303-2321.

Evans, J., & Jones, P. (2011). The walking interview: Methodology, mobility and place. *Applied Geography, 31*(2), 849-858.

Evans, N., Morris, C., & Winter, M. (2002). Conceptualizing agriculture: a critique of post-productivism as the new orthodoxy. *Progress in Human Geography, 26*(3), 313-332.

Fuller, A. M. (1990). From part-time farming to pluriactivity: a decade of change in Rural Europe. *Journal of Rural Studies, 6*(4), 361-373.

Fuller, A. M. (2015). From Part-Time Farming to Multifunctionality Reflections of a Social Geographer. In J. I. Bakker (Ed.), *The Methodology of Political Economy: Studying the Global Rural–Urban Matrix* (pp. 113-127): Lexington Books.

Gallin, B., & Gallin, R. S. (1982). Socioeconomic Life in Rural Taiwan: Twenty Years of Development and Change. *Modern China, 8*(2), 205-246.

Ginsburg, N. S., Koppel, B., & McGee, T. G. (1991). *The Extended Metropolis: Settlement Transition in Asia*: University of Hawaii Press.

Gkartzios, M. (2013). 'Leaving Athens': Narratives of counterurbanisation in times of crisis. *Journal of Rural Studies, 32*(0), 158-167.

Glass, R. (1964). Introduction: Aspects of change *London aspects of change.* London: MacGibbon & Kee.

Goodman, D. (2003). The quality 'turn' and alternative food practices: reflections and agenda. *Journal of Rural Studies, 19*(1), 1-7.

Goodman, D., DuPuis, E. M., & Goodman, M. K. (2012). *Alternative food networks : knowledge, place and politics*: Abingdon : Routledge, 2012.

Gottmann, J. (1961). *Megalopolis: the urbanized Northeastern seaboard of the United States:* New York: The Twentieth Century Fund.

Grasseni, C. (2013). *Beyond Alternative Food Networks Italy's Solidarity Purchase Groups*: Bloomsbury Academic.

Guimond, L., & Simard, M. (2010). Gentrification and neo-rural populations in the Québec countryside: Representations of various actors. *Journal of Rural Studies, 26*(4), 449-464.

Guldin, G. E. (1996). Desakotas and beyond: Urbanization in Southern China. *Ethnology, 35*(4), 265-283.

Guthman, J. (2004). *Agrarian Dreams: The Paradox of Organic Farming in California*: University of California Press.

Hägerstrand, T. (1984). Presence and absence: A look at conceptual choices and bodily necessities. *Regional Studies, 18*(5), 373-379.

Hale, M. (2013). *Reconstructing the Rural: Peasant Organization in a Chinese Movement for Alternative Development* (Doctoral dissertation), University of Washington, Seattle, Washington.

Hall, C. M., & Müller, D. K. (2004). *Tourism, mobility, and second homes: between elite landscape and common ground* (Vol. 15). Buffalo, N.Y: Channel View Publications.

He, B. (2006). Chinese Intellectuals Facing the Challenges of the New Century *Chinese intellectuals between state and market, 2006* (pp. 263-279): Routledge.

Hines, J. D. (2012). The Post-Industrial Regime of Production/Consumption and the Rural Gentrification of the New West Archipelago. *Antipode, 44*(1), 74-97.

Ho, S. P. S. (1978). *Economic development of Taiwan, 1860-1970*: New Haven : Yale U.P., 1978.

Ho, S. P. S. (1979). Decentralized Industrialization and Rural Development: Evidence from Taiwan. *Economic Development and Cultural Change, 28*(1), 77-96.

Holloway, L., & Kneafsey, M. (2000). Reading the Space of the Framers 'Market:A Case Study from the United Kingdom. *Sociologia Ruralis, 40*(3), 285-299.

Hsia, L. M. (2011). Dong taiwan bianjie: Lishi, shehui jiangou yu dili xiangxiang. [The Boundary of Eastern Taiwan: History, Social Construction, and Geographical Imagination]. *Journal of Eastern Taiwan Studies,* 16, 3-26.

Hsia, L. M., Chen, Y. F., & Yorgason, E. (2011). Regional Marginalization of Eastern Taiwan: Interior Dependency, Geographical Imagination, and Civic Development In R. Y. W. Kwok (Ed.), *The Second Transformation Taiwanese Industrialization in the 19890s-2000s* (pp. 303-331). Taipei, Taiwan Chengchi University Press.

Hsia, L. M., & Yorgason, E. (2008). *Hou Shan* in Maps: orientalism in Taiwan's Geographic imagination. *Taiwan in Comparative Perspective, 2*, 1-20.

Hsiung, P. C. (1996). *Living Rooms as Factories: Class, Gender, and the Satellite Factory System in Taiwan*: Temple University Press.

Hsu, S. J., & Hsiao, H. H. M. (1999). *The Impacts of Class Differentiation and Cultural Construction on Post-War Land Reform in Taiwan (II)* Paper presented at the The Second Workshop on the Land Reform in East Asia, Academia Sinica, Taipei, Taiwan.

Hsu, S. J., & Hsiao, H. H. M. (2006). Zhan hou chuqi taiwan ye dian guanxi zhi tantao - jian lun geng zhe you qitian zhengce [Landlord and Tenant's

Relations in the Post-war era - reconsidering the Land-to-the-Till Program]. *Taiwan Historical Research*, 10(2), 35-66.

Huang, S. R. (2002) *Xin lao - nongdi nongyong yishi xingtai yu taiwan chengxiang fazhan* [The Caging of Mind: The Ideology and Political Economy of Land Use in Taiwan]. Taipei: Juliu tushu gongsi.

Huang, C. C. (2006). *Taiwan in Transformation, 1895-2005: The Challenge of a New Democracy to an Old Civilization*: New Brunswich and London: Transaction Publishers.

Huang, S. W. (1993). Structural Change in Taiwan's Agricultural Economy. *Economic Development and Cultural Change, 42*(1), 43-65.

Jacob, J. (1997). *New Pioneers: The Back-to-the-Land Movement and the Search for a Sustainable Future*. University Park, PA: Pennsylvania State University Press.

Jarosz, L. (2008). The city in the country: Growing alternative food networks in Metropolitan areas. *Journal of Rural Studies, 24*, 231-244.

Johnston, R. J. (2000). *The dictionary of human geography* (4. ed. ed.): Oxford : Blackwell.

Jou, S. C., Clark, E., & Chen, H. W. (2016). Gentrification and Revanchist Urbanism in Taipei? *Urban Studies, 53*(3), 560-576.

Ka, C. M., & Wong, S. J. (1993). Taiwan nongmin de fenlei yu fenhua [The classification and differentiation of Taiwanese Farmers]. *Bulletin of the Institute of Ethnology Academia Sinica, 72*, 107-150.

Kay, C. (2002). Why East Asia overtook Latin America: agrarian reform, industrialisation and development. *Third World Quarterly, 23*(6), 1073-1102.

Knight, J. (1994). Rural Revitalization in Japan: Spirit of the Village and Taste of the Country. *Asian Survey, 34*(7), 634-646.

Knight, J. (2000). New "Peasant" in Japan In C. K. Deborah Bryceson, Jos Mooij (Ed.), *Disappearing peasantries? Rural Labour in Latin America, Asia and Africa* (pp. 279-298): Intermediate Technology Publications.

Kuo, N. C. (2012). Yingxiang hualian haoshi ji nongfu congshi youshan (youji) gengzuo zhi yinsu tantao. [The factors of the farmers engaged in environment-friendly (organic) farming at Farmers' Market of Hualien]. (Master thesis), National Dong Hwa University, Hualien.

Kusenbach, M. (2003/08/16/2003 Annual Meeting, Atlanta, GA). *Street-Phenomenology: The Go-Along as Ethnographic Research Tool.*

Lai, C. S. (2007). *Qingsong e zhongtian biji: Gu dong julebu*: Xinling gong fang.

Lee, C. J. (1990). Zu xi lilun zhi fazhan ji qi xianzhi. [The Development of Rent Gap Theory and its Limitation]. *Journal of Taiwan Land Research, 1*, 67-89.

Lees, L., Slater, T., & Wyly, E. (2008). *Gentrification*. New York: Routledge.

Lees, L., Slater, T., & Wyly, E. (2010). *The gentrification reader*. New York: Routledge.

Lin, M. Y. (2006, May 11). *35 Sui de tuixiu jin hang shi* [Prepare for Retirement from 35 years old]. Retrieved from https://www.gvm.com.tw/article.html?id=10958

Liu, H. J. (2011). Xiaoshi de nong yumin: Zhong tan taiwan zaoqi huanjing kangzheng. [Vanishing Farmers: Taiwan's Early Environmental Protests Revisited]. *Taiwanese Sociology,* 21, 1-49.

López-Morales, E. (2018). A rural gentrification theory debate for the Global South? *Dialogues in Human Geography, 8*(1), 47.

Mamonova, N., & Sutherland, L. A. (2015). Rural gentrification in Russia: Renegotiating identity, alternative food production and social tensions in the countryside. *Journal of Rural Studies, 42*, 154-165.

Mao, Y. K., & Schive, C. (1995). Agricultural and industrial development in Taiwan. In J. W. Mellor (Ed.), *Agriculture on the road to industrialization* (pp. 23-66). Baltimore, MD: Published for the International Food Policy Research Institute (IFPRI) Johns Hopkins University Press.

McGee, T. G. (1991). The Emergence of *Desakota* Regions in Asia: Expanding a Hypothesis In *The Extended Metropolis: Settlement Transition in Asia* (pp. 3-26): University of Hawaii Press.

McGee, T. G. (2008). Managing the rural-urban transformation in East Asia in the 21th century. *Sustainability Science*, *3*(1), 155-167.

McGee, T. G. & Robinson, I. M. (1995). T*he Mega-urban Regions of Southeast Asia*: UBC Press.

Ministry of Interior. (2004a). *Brief Information Brochure Real Estate Transaction Prices in Major Urban Areas of the Republic of China* (No.18). Taipei, Republic of China: Ministry of Interior

Ministry of Interior. (2004b). *Brief Information Brochure Real Estate Transaction Prices in Major Urban Areas of the Republic of China* (No.20). Taipei, Republic of China: Ministry of Interior

Ministry of Interior. (2005a). *Brief Information Brochure Real Estate Transaction Prices in Major Urban Areas of the Republic of China* (No.22). Taipei, Republic of China: Ministry of Interior

Ministry of Interior. (2005b). *Brief Information Brochure Real Estate Transaction Prices in Major Urban Areas of the Republic of China* (No.23). Taipei, Republic of China: Ministry of Interior

Ministry of Interior. (2005c). *Brief Information Brochure Real Estate Transaction Prices in Major Urban Areas of the Republic of China* (No.24). Taipei, Republic of China: Ministry of Interior

Ministry of Interior. (2006). *Brief Information Brochure Real Estate Transaction Prices in Major Urban Areas of the Republic of China* (No.28). Taipei, Republic of China: Ministry of Interior

Ministry of Interior. (2007). *Brief Information Brochure Real Estate Transaction Prices in Major Urban Areas of the Republic of China* (No.32). Taipei, Republic of China: Ministry of Interior

Ministry of Interior. (2008a). *Brief Information Brochure Real Estate Transaction Prices in Major Urban Areas of the Republic of China* (No.36). Taipei, Republic of China: Ministry of Interior

Ministry of Interior. (2008b). *Brief Information Brochure Real Estate Transaction Prices in Major Urban Areas of the Republic of China* (No.33). Taipei, Republic of China: Ministry of Interior

Ministry of Interior. (2008c). *Brief Information Brochure Real Estate Transaction Prices in Major Urban Areas of the Republic of China* (No.35). Taipei, Republic of China: Ministry of Interior

Ministry of Interior. (2009a). *Brief Information Brochure Real Estate Transaction Prices in Major Urban Areas of the Republic of China* (No.38). Taipei, Republic of China: Ministry of Interior

Ministry of Interior. (2009b). *Brief Information Brochure Real Estate Transaction Prices in Major Urban Areas of the Republic of China* (No.40). Taipei, Republic of China: Ministry of Interior

Ministry of Interior. (2010a). *Brief Information Brochure Real Estate Transaction Prices in Major Urban Areas of the Republic of China* (No.42). Taipei, Republic of China: Ministry of Interior

Ministry of Interior. (2010b). *Brief Information Brochure Real Estate Transaction Prices in Major Urban Areas of the Republic of China* (No.43). Taipei, Republic of China: Ministry of Interior

Ministry of Interior. (2011). *Brief Information Brochure Real Estate Transaction Prices in Major Urban Areas of the Republic of China* (No.46). Taipei, Republic of China: Ministry of Interior

Ministry of Interior. (2012). *Brief Information Brochure Real Estate Transaction Prices in Major Urban Areas of the Republic of China* (No.52). Taipei, Republic of China: Ministry of Interior

Mitchell, C. J. A. (2004). Making sense of counterurbanization. *Journal of Rural Studies, 20*, 15-34.

Müller, D. (1999). *German second home owners in the Swedish countryside : on the internationalization of the leisure space.* (Doctoral thesis), Department of Social and Economic Geography, Umeå University.

Müller, D. (2011). Second homes in rural areas: Reflections on a troubled history. *Norsk Geografisk Tidsskrift -Norwegian Journal of Geography, 65*(3), 137-143.

Niehoff, J. D. (1987). The Villager as Industrialist: Ideologies of Household Manufacturing in Rural Taiwan. *Modern China, 13*(3), 278-309.

Organic farming helps employees through furloughs. (2012, January 4). *Taipei Times,* Retrieved from http://www.taipeitimes.com/News/taiwan/archives/2012/01/04/2003522388

Ortega, A. C. (2012). Desakota and Beyond: Neoliberal Production of Suburban Space in Manila's Fringe. *Urban Geography*, *33*(8), 1118-1143.

Paris, C. (2011). *Affluence, mobility and second home ownership*: Routledge

Paül, V., & McKenzie, F. H. (2013). Peri-urban farmland conservation and development of alternative food networks: Insights from a case-study area in metropolitan Barcelona (Catalonia, Spain). *Land Use Policy, 30*, 94-105.

Peng, M. H. (2011). *Liangshi weiji guanjian baogao: Taiwan guancha*. Taiwan: Shang zhou chuban.

Phillips, M. (1993). Rural gentrification and the processes of class colonisation. *Journal of Rural Studies, 9*(2), 123-140.

Phillips, M. (2002). The Production, Symbolization and Socialization of Gentrification: Impressions from Two Berkshire Villages. *Transactions of the Institute of British Geographers, 27*(3), 282-308.

Phillips, M. (2005). Differential productions of rural gentrification: illustrations from North and South Norfolk. *Geoforum, 36*(4), 477-494.

Phillips, M. (2010). Counterurbanisation and rural gentrification: an exploration of the terms. *Population, Space and Place, 16*(6), 539-558.

Qian, J., He, S., & Liu, L. (2013). Aestheticisation, rent-seeking, and rural gentrification amidst China's rapid urbanisation: The case of Xiaozhou village, Guangzhou. *Journal of Rural Studies, 32*, 331-345.

Renting, H., Marsden, T. K., & Banks, J. (2003). Understanding Alternative Food Networks: Exploring the Role of Short Food Supply Chains in Rural Development. *Environment and Planning A, 35*(3), 393-411.

Rigg, J. (2001). *More than the Soil: Rural Change in Southeast Asia*: Pearson Education Limited.

Riley, M., & Harvey, D. (2007). Oral histories, farm practice and uncovering meaning in the countryside. *Social & Cultural Geography, 8*(3), 391-415.

Sando, R. A. (1986). Doing the work of two generations: The impact of out-migration on the elderly in rural Taiwan. *Journal of Cross-Cultural Gerontology, 1*(2), 163-175.

Scott, M., Smith, D. P., Shucksmith, M., Gallent, N., Halfacree, K., Kilpatrick, S.,…Cherrett, T. (2011). Interface. *Planning Theory & Practice*, *12*(4), 539-635.

Setten, G. (2003). Landscapes of gaze and practice. *Norsk Geografisk Tidsskrift - Norwegian Journal of Geography, 57*(3), 134-144.

Shi, Y., Cheng, C., Lei, P., Wen. T., & Merrifield, C. (2011). Safe food, green food, good food: Chinese Community Supported Agriculture and the rising middle class. *International Journal of Agricultural Sustainability*, *9*(4), 551-558.

Shih, C. S. S., & Chi, C. L. (2012). Contesting Urban and Rural Space in Desakota Regions of Taiwan - A Case Study of I-Lan County. *Environment and Urbanization Asia*, *3*(1), 93-120.

Shih, C. M., & Yen, S. Y. (2009) The Transformation of the Sugar Industry and Land Use Policy in Taiwan. *Journal of Asian Architecture and Building Engineering*, *8*(1), 41-48.

Shin, H. B., Lees, L., & Lopez-Morales, E. (2016). Introduction: Locating gentrification in the Global East. *Urban Studies*, *53*(3),455-470.

Shiomi, N. (2006). *The lifestyle of Bang nong ban X - Obey nature and realize one's talent* Taipei: Tianxia wenhua.

Si, Z., Schumilas, T., & Scott, S. (2015). Characterizing Alternative Food Networks in China. *Agriculture and Human Values*, *32*(2), 299-313.

Slater, T. O. M. (2006). The Eviction of Critical Perspectives from Gentrification Research. *International Journal of Urban & Regional Research, 30*(4), 737-757.

Smith, D. P., & Higley, R. (2012). Circuits of education, rural gentrification, and family migration from the globalcity. *Journal of Rural Studies, 28*(1), 49-55.

Smith, D. P., & Phillips, D. A. (2001). Socio-cultural representations of greentrified Pennine rurality. *Journal of Rural Studies, 17*(4), 457-469.

Smith, N. (1979). Toward a Theory of Gentrification A Back to the City Movement by Capital, not People. *Journal of the American Planning Association, 45*(4), 538-548.

Smith, N. (1987). Gentrification and the Rent Gap. *Annals of the Association of American Geographers, 77*(3), 462-465.

Solana-Solana, M. (2010). Rural gentrification in Catalonia, Spain: A case study of migration, social change and conflicts in the Empordanet area. *Geoforum, 41*(3), 508-517.

Stockdale, A. (2010). The diverse geographies of rural gentrification in Scotland. *Journal of Rural Studies, 26*(1), 31-40.

Suhua Highway improvement to be finished by 2019. (2016, March 29). *Taipei Times*, Retrieved from http://www.taipeitimes.com/News/taiwan/archives/2016/03/29/2003642709

Sutherland, L. A. (2012). Return of the gentleman farmer?: Conceptualising gentrification in UK agriculture. *Journal of Rural Studies, 28*(4), 568-576.

Sutherland, L. A., & Burton, R. J. F. (2011). Good Farmers, Good Neighbours? The Role of Cultural Capital in Social Capital Development in a Scottish Farming Community. *Sociologia Ruralis, 51*(3), 238-255.

Teng, E. (2004). *Taiwan's imagined geography: Chinese colonial travel writing and pictures, 1683-1875* (Vol. 230). Cambridge, Mass: Harvard University Asia Center.

Thrift, N. J. (1983). On the Determination of Social Action in Space and Time. *Environment and Planning D: Society and Space, 1*(1), 23-57.

Trauger, A. (2007). Un/re-constructing the Agrarian Dream: Going Back-to-the-Land with an Organic Marketing Co-operative in South-central Pennsylvania, USA. *Tijdschrift voor Economische en Sociale Geografie, 98*(1), 9-20.

Tregear, A. (2011). Progressing knowledge in alternative and local food networks: Critical reflections and a research agenda. *Journal of Rural Studies, 27*(4), 419-430.

TRF. (2012a). *Tudi zhengyi de juexing yu shijian-dikang quan di wenji* Taipei: Taiwan Rural Front & Center for the Third Sector of National Chengchi University.

TRF. (2012b). *Xun tian shui, zhi nong xiang: 2011 Xia yun nongcun caogen fang diao wenji* Taipei Taiwn Rural Front Center for the Third Sector of National Chengchi University.

Tsai, Y. L. (2016). Nongyi fuxing taiwan nongye xinlang chao. [Agricultural Renaissance in Taiwan]. *A Journal of Cultural Studies,* 22, 23-74.

Tso, C. D. (2014). Digital Media and the Transformation of Politics in Taiwan. In L. Diamond & G. W. Shin (Eds.), *New Challenges for Maturing Democracies in Korea and Taiwan*. Palo Alto: Stanford University Press.

Vigil on Ketagalan Boulevard. (2010, July 18). Liberty Times, Retrieved from https://news.ltn.com.tw/news/focus/paper/412161

Wang, C. H., Lee, H. R., & Huang, J. T. (2013). Jinshen hua huo bianli chengshi shengji?─Xin beishi sanchong qu dushi shenghuo zhichi xitong zai jiegou. [Gentrification or Convenient City Upgrading? Restructuring of the Urban Life Support System in New Taipei City's Sanchong District]. *Journal of National Development Studies, 12*(2), 179-229.

Watts, D. C. H., Ilbery, B., & Maye, D. (2005). Making reconnections in agro-food geography: alternative system of food provision. *Progress in Human Geography*, *29*(1), 22-40

Whatmore, S., Stassart, P., & Renting, H. (2003). What's Alternative about Alternative Food Networks? Guest Editorial. *Environment and Planning A, 35*(3), 389-391.

Wilbur, A. (2013). Cultivating Back-to-the-Landers: Networks of Knowledge in Rural Northern Italy. *Sociologia Ruralis*.

Wilbur, A. (2014). Back-to-the-house? Gender, domesticity and (dis)empowerment among back-to-the-land migrants in Northern Italy. *Journal of Rural Studies*, 35, 1-10

Woods, M. (2011). *Rural*. London: Routledge

Wu, B. S., & Sui, D. (2016). Modeling impacts of globalization on desakota regions: a case study of Taipei Metropolitan Area. *Environment and Planning B: Planning and Design*, *43*(2), 320-340

Wu, Y. N. (2007). *Jianghu Zai Nali -Taiwan Nongye quancha* Taiwan: INK Publisher

Yan, H., & Chen, Y. (2013). Debating the rural cooperative movement in China, the past and the present. *Journal of Peasant Studies, 40*(6), 955-981.

Yang, J., Hui, E. C. M., Lang, W., & Li, X. (2018). Land Ownership, Rent-Seeking, and Rural Gentrification: Reconstructing Villages for Sustainable Urbanization in China (Vol. 10).

Yang, R. M. (2007). *Baimi bushi zhadan* Taiwan: INK Publisher

Yin, R. K. (2003). *Case study research: design and methods* (Vol. 5). Thousand Oaks: Sage Publications.

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Rural Gentrification in *Desakota*

Since the year 2000, rural living has been idealized and has become a desired lifestyle for many Taiwanese people. Characteristics that allow one to own a small plot of land, grow one's own food, and establish stronger social connections with neighbors have drawn urbanites to the countryside. This dissertation analyzes relationships between different rural in-migrations and rural gentrification through the lens of the farmland politics that emerged during the late 1990s in Taiwan. Based on fieldwork in Yi-Lan and Hualien, this dissertation argues for a broader conceptualization of rural gentrification in a context in which boundaries between the city and the rural are ambiguous. Rural gentrification in desakota challenges us to think about agricultural transformation, urban-rural relations, and alternative food production when theorizing on the changing class and agricultural landscapes in Taiwan.

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