

WELL-BEING OF RURAL MIGRANT WORKERS IN CHINA: A LONGITUDINAL  
ANALYSIS

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## ABSTRACT

Based on China Family Panel Studies (CFPS) data, my dissertation mainly examined psychological distress and life satisfaction of rural migrant workers in China and their associations with conflictual experiences as well as explored the associations over time and across regions. Results based on Latent Difference Scores (LDS) models show that having conflictual experiences was positively associated with psychological distress and negatively associated with life satisfaction among rural migrant workers. A significant decrease in conflictual experiences, a significant increase in psychological distress, and a significant increase in life satisfaction were identified. In addition, change in conflictual experiences was significantly associated with both change in psychological distress and change in life satisfaction from 2010 to 2014. Moreover, conflictual experiences assessed at baseline explained the subsequent change of psychological distress and vice versa. Conflictual experiences showed a leading role in predicting the subsequent change of psychological distress.

However, conflictual experiences measured at baseline was not significantly associated with a subsequent change in life satisfaction and life satisfaction measured at baseline was also not significantly associated with a subsequent change in conflictual experiences. To explain this finding, I argued that economic gain might confound the effects between these two factors. Based on the follow-up Ordinary Least Squares (OLS) regression analyses, I confirmed that economic gain could alleviate the detrimental effect of conflictual experiences on life satisfaction. But this stress-buffering effect was only salient among male migrant workers but not among female migrant workers.

Finally, I linked CFPS baseline wave data with regional level data to examine the variation of well-being indicators (psychological distress and life satisfaction) across

regions as well as the direct effect of regional level characteristics on individual well-being indicators. I also examined whether the associations between conflictual experiences and well-being indicators vary across regions and how regional level indicators modify these associations. Results show that, although there were significant variations of psychological distress and life satisfaction across regions, regional differences only contribute to small proportions of overall variance of well-being. Moreover, the strength of the positive association between conflictual experiences and psychological distress as well as the strength of the negative association between conflictual experiences and life satisfaction do vary across regions. Specifically, regions with higher Expenditure on People's Livelihood (EPL) and Disposable Personal Income (DPI) tend to show a weaker association between conflictual experiences and psychological distress compared to regions with lower EPL and DPI. Regions with higher GDP per capital (GDPPC) tend to show a stronger positive association between conflictual experiences and psychological distress as well as a stronger negative association between conflictual experiences and life satisfaction than regions with lower GDPPC. Interpretation of these results and possible implications as well as future research directions were also discussed in this dissertation.

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## CHAPTER 1: Introduction to the Study

### Overview

Starting from 1980s, China has gradually transformed from a central planned economy to a market-oriented economy. For the past three decades, China has become the fastest growing economy in the world with an astonishing 9.61% annual average GDP growth (China National Bureau of Statistics 2018). Under the force of market and policy change, a large number of rural residents who were eager to improve their economic conditions migrated to urban areas for jobs and better lives. According to China National Bureau of Statistics (2018), the numbers of rural migrant workers were close to 290 million in China by the end of 2017, which was more than one third of the entire working population. Most of the migrant workers were low-skilled and lack of formal education, thus they can only take menial jobs such as blue collar works in construction, manufacturing and low-end service industry. Even though these migrant workers live and work in urban areas, under China's household registration system (hukou), they are unable to obtain urban status, which largely determines one's rights to social benefits. As a result of their disadvantaged hukou status, rural migrant workers are often treated as second-class citizens and live a marginalized life in cities. With their rural identity and floating status, they frequently experience status-based discrimination, such as being denied access to certain job positions and encountering hostile attitudes from government officials and urban residents. Within this context, researchers have raised concern about psychological well-being and life satisfaction of rural migrant workers, but to date, findings are inconsistent largely due to reasons such as lack of high quality nationally representative sample and longitudinal data. To address this gap, my dissertation utilized



panel data from China Family Panel Studies (CFPS), the nationally representative sample, to examine the psychological well-being and life satisfaction of rural migrant workers and their possible association with conflictual experiences (including a series of undesirable experiences that rural migrant workers had in their daily urban lives) as well as to explore the associations over time and across regions.

## **Background of Rural Migrant Workers and Household Registration System (hukou) in China**

### ***Household Registration System (hukou) in China***

To understand life experiences of rural migrant workers in cities, we need to start with China's unique household registration system, which is called hukou in Chinese. Chinese government has officially promulgated the hukou system in late 1950s (Chan 2010). In general, China's household registration system differs substantially from other Asian countries. Several other East Asian countries/regions, like Taiwan and Japan also have a household registration system, which serves merely as a residence recording system (Chan and Buckingham 2008). The Chinese hukou system not only functions as a statistical recording system but also is used by the government to regulate and restrict population mobility to maintain social and political stability. For more than sixty years, this very system has separated China's rural and urban population in terms of social, economic, and political resources (Chan 2010). Therefore, Hukou system is fundamental to understand China's dualistic socioeconomic structure and is key to study China's current social stratification as well as increasing socio-economic inequalities. This institutional arrangement broadly divides the population into two classes with millions of

rural migrant workers being deprived of legal settlement in urban cities as well as access to basic benefits and social resources.

China's hukou system is a combined and modified version of former Soviet Union's internal passport and household registration system (*Huji Zhidu* 户籍制度) in China's feudal era (Alexander and Chan 2004; Chan and Buckingham 2008). In 1950s, right after the establishment of People's Republic of China, China has adopted a central planned economy that was originally created by former Soviet Union leader Stalin, which was centered on rapid industrialization in cities and collectivization of agriculture in rural areas. To ensure the effectiveness of this type of economy, central government needs to plan and specify where to allocate resources of the country. There are two major reasons to register every citizen in each locale and restrict labor movement, especially the outflow of rural labors. First, the central government heavily rely on the extraction of rural surplus to provide support for the development of heavy industry in cities, including agricultural products and raw materials. Therefore, it is a strategy to allocate labor resources to ensure the functioning of planned economy. Second, to apply central planned economy in such a huge country like China, the central government not only needs to specify the policies for economic development but also needs to allocate the necessities for citizens' daily living, such as foods and clothes. To meet this goal, a rationing system was developed, which issue families with ration coupons for necessities based on the number of family members. This again, requires all the citizens to be registered. And the ration coupons could only be used in places where they were issued, which in turn automatically restricted population mobility (Alexandra and Chan 2004). So, from the

government's stand of point, it was necessary to use the hukou system to allocate labor and resources effectively in a central planned economy.

Before 1990s, there were two important classifications under hukou system. First distinction was between "local" and "non-local" hukou. Basically, hukou system required all the citizens to register only one place as permanent residence and people can only receive social benefits in places where they registered. For example, if a person was born in Beijing, he has a local Beijing hukou and can enjoy all the benefits that central government provided to Beijing residents. If he moved to Shanghai, he cannot receive social benefits and will not have access to social resources in Shanghai without obtaining a Shanghai local hukou, since he registered hukou status in Beijing. Another distinction was associated with different types of hukou. Basically, the distinction was between "non-agricultural" hukou (*feinongye* 非农业) and "agricultural" hukou (*nongye* 农业). Before 1990s this distinction was considered to be more important than "local" and "non-local" distinction. This is because those with "non-agriculture" status, no matter whether they resided in a town, small city or large city, could enjoy state-provided housing, employment, grain-rations, education and access to medical care and all other social benefits, whereas those with agricultural status was expected to be self-sufficient and receive only limited state-provided socio-economic benefits. For a long period of time, it was very difficult to convert agricultural hukou to non-agricultural hukou. In general, rural labors were prohibited to go to cities due to strict labor market control by central government as well as the aforementioned rationing system. Peasants were only allowed to work temporarily in cities as a group when their labors were needed. For example, they may be assigned to work for an urban factory, but they still received remuneration from

the rural collective (Nongchun Jiti 农村集体) and once the works were done, they had to return back to countryside (Solinger 1999). This phenomenon is called non-hukou migration. In order to convert hukou status, rural residents need to engage in hukou migration (Chan and Buckingham 2008). A handful of pathways through which one can change from agricultural to non-agricultural hukou include enrolling in post-secondary educational institutions, promoting to administrative positions, obtaining an occupation in state-run institutions or bureaucracy, and serving in the military. The annual quota of these status transfers was also strictly controlled by central government in order to allocate labor appropriately in each locale. In each locale, the annual quota of status conversion was restricted at below 0.2 percent of the local non-agricultural population (Chan and Buckingham 2008). This was also a lengthy procedure: In order to apply for hukou conversion, individual needs to first obtain migration permit issued by public security authorities and then apply to change the regular hukou registration place from the destination's local government.

Following China's transition from a central planned economy to a market-oriented economy in early 1980s, China has gradually opened to outside involvement and foreign investment. The growing investment and privatization lead to rapid urbanization and industrialization. The expanded market and export-oriented economy gradually increased the demand for labors, as a consequence, the government was under the pressure of easing the residency regulation and allowing rural residents to settle in cities. The pressure was echoed by the criticism of many problems that were caused by the dualistic system (Chan and Buckingham 2008). In 1984, the State Council published *A Document on the Issue of Peasants Settling Down in Cities* that requesting the local city

government to allow rural labors to register and integrate in urban areas (Cui and Cohen 2015). The real drastic change happened in 1990s. With the abolishing of the rationing system in early 1990s, the distinction between agricultural and non-agricultural hukou has lost much of its meaning and gradually been decentralized. Followed by China's economic transition, the central government has given great autonomy as well as fiscal and administrative powers to local governments. The central government no longer controlled for hukou conversion quotas and delegated this power to local governments. Many local governments took this advantage to offer local hukou to investors and to those with good economic conditions as a way to boost local economy (Chan 2010). And with continued urbanization, many outskirts of urban centers, which used to be owned by the agricultural collectives were expropriated by the government. As compensation, residents of these areas were granted local urban hukou. At the same time, many cities have created semi-permanent hukou status and offered to professionals and those highly educated (Cui and Cohen 2015). In 2000s, many cities have introduced the entry conditions for outsiders to obtain local hukou, which further expanded the hukou migration. Those migrants with agricultural hukou status who intended to settle down in cities no longer need to convert their hukou to non-agricultural first. Instead, they may directly apply for local hukou when certain standards were met (Chan and Buckingham 2008).

Although, in many regions, there is still a distinction between agricultural and non-agricultural status, its significance has gradually been replaced by "local" and "non-local" distinction. And the old two steps hukou conversion (1. convert agricultural hukou to non-agricultural hukou and 2. Obtain local urban hukou) has become a one-step

procedure (apply local hukou from local government). Only those with local urban status are eligible for social insurance, retirement insurance and pension, medical care, education resources, and all other social benefits in urban areas (Chan and Buckingham 2008). It is fair to say that local residency status affects an individual's living standard and well-being through the rights and benefits that one is entitled to. It is still very difficult for "outsiders," especially low-skilled labors, to obtain local hukou in major cities since the local government set high "entry conditions" for the application of local urban hukou. For a long period of time, urban hukou is only offered to migrants who have achieved certain levels of wealth and education and the immediate family of those who already obtained urban residency status (Chan and Buckingham 2008). For a large number of rural migrant workers, getting a local or urban hukou status is still very challenging as most of them are low skilled and have low levels of education.

The hukou system has elicited much criticism and underwent several reforms (Chan and Buckingham 2008; Chan 2010). The Legal Affair Office of the State Council released a draft of residence permit regulation in 2014, proposing to abolish the hukou restrictions in small cities and towns as well as gradually easing restrictions in medium sized cities (Zhou 2014). In 2016, the State Council announced a plan to help 100 million non-local residents to obtain household registration in cities where they work and live (Sheehan 2017). However, this new policy has limited impact on improving the conditions of rural migrant workers in large (cities with 5 million to 10 million residents) and mega cities (cities with over 10 million residents). Even though it is fairly easy to be granted a local hukou in small towns and some medium sized cities, these areas are less attractive to rural migrant workers due to limited resources, benefits, and job

opportunities. In large and mega cities, especially the top tier cities (Beijing, Shanghai, Guangzhou, and Shenzhen), where economic opportunities are abundant and local residents enjoy high levels of social benefits, the local government still strictly limits hukou status to outsiders. In 2017, the Ministry of Public Security announced that the government had issued 28.9 million new urban household registrations in 2016 but less than 15% are issued in the top tier cities, such as Beijing, Shanghai, Guangzhou, and Shenzhen (Sheehan 2017). In those top tier cities, local hukou is only granted to those who are considered the “best” and “brightest” citizens (Chan and Buckingham 2008). In addition, in order to transfer to urban residency status, rural migrant workers often need to give up their entitlement to the land in their home villages as an exchange. With little compensation for land expropriated by the government and unpredictable future in cities, many migrant workers are reluctant to adopt urban hukou even though they meet the requirements (Chan and Buckingham 2008). As a result, a large number of rural migrant workers have stayed in urban cities for a long time without local residency status. According to China National Bureau of Statistics (2018), China’s urban population reached to 58.52% in 2017 but only 42.35% of them had registered permanent urban status. In other words, approximately 17% of the urban residents did not have urban hukou in 2017.

### **Definition of Rural Migrant Workers**

There is no generally agreed definition of rural migrant workers due to China’s complex household registration system and continued urbanization in recent decades. The National Statistics Bureau of China (2018) defines rural migrant workers as those with a

rural hukou status, engaged in non-agricultural industries in their local or nearby township, and those work in urban workplace for more than six months. The China Labor Bulletin (2018) defines rural migrant workers as workers with rural hukou but who are employed and reside in urban areas. Rural migrant workers are not necessarily from rural areas; they may be born and raised in cities but their hukou status are still rural due to the strict control of this system. In his recently published study, Dong (2012) defined rural migrant workers broadly as those with rural hukou status and engaged in non-agricultural industries, regardless of where they got employed. In this regard, even those with rural hukou status who migrated to nearby wealthier rural areas could be considered as rural migrant workers so long as they were not engaged in agricultural industry. Liang and colleagues (2017) defined rural migrant workers as those with rural hukou and those whose registered hukou places are not the same as their employed places. In addition, they need to be currently employed and their employment status cannot be self-employed. This is a very narrow definition as it excluded some migrant workers who were engaged in small business in cities but still maintained a rural hukou status.

What we can conclude from these diverse definitions is that different scholars or institutions have different understanding of the criteria and typology of rural migrant workers to serve their different research purposes. In this study, by integrating the definitions from previous studies and reports, I defined rural migrant workers as those whose hukou status is rural but live in urban areas and who currently works in non-agricultural industries in urban areas. This definition is utilized because I attempt to highlight the great disparities between rural and urban areas as well as between rural hukou and urban hukou status in terms of social resources, benefits, and life experiences.



## **Migration Decision and Adaptation of Migration**

The study of internal migration is usually broad and interdisciplinary. The internal migration that happened or is happening in many less developed/developing countries has received much attention in recent years. This is because many developed countries and regions have already “generally passed through the demographic transition and its attendant shift from predominantly rural societies to overwhelmingly urban and metropolitan societies” (White and Lindstrom 2005: 312). The study of internal migration in less developed countries has been dominated by the study of rural-to-urban migration and economic migration (Lucas 1997). At the same time, studies on international migration and immigrants, in general, may shed light on the importance and uniqueness of China’s unprecedented domestic migration. In the following section, I would like to discuss two broad themes that have received close attention from researchers of both internal and international migration and are closely related to my current study.

### ***Migration Decision***

I would like to begin by introducing important factors that affect migration decision. Similar to what happened in China, rapid socio-economic changes in cities of many developing countries have created economic and job opportunities that made cities more attractive. Early studies viewed internal rural-to-urban migration as a response to geographic imbalances in the distribution of economic resources and opportunities (White and Lindstrom 2005). In the classic economic migration model, to gain access to higher remuneration is one of the major explanations for migration (Gries, Kraft, and Simon 2016). However, this explanation cannot be used to understand why migration is directed to some destinations but not to others that offer similar job and economic

opportunities. To answer this question, many economists offered their insights. Several of them proposed that migration is an effective way to invest in human capital (see a review from Berg and Bodvarsson 2013). For example, Sjaastad (1962) hypothesized that migrants often calculate the value difference of the opportunity in the market between each potential destination and original place and then deduct the costs of moving, and finally choose the destination that maximizes the present value. One important factor in Sjaastad's model is the cost of moving. To him, the cost of migration is largely determined by distance: The greater the distance of migration, the greater the cost of transportation, food, and accommodation. And the spatial differences in living expenses are also part of the moving cost. So the estimation of the present value is largely dependent on the information of the job market. According to Sjaastad (1962), prospective migrants usually obtain such information from both informal channels (such as friends, relatives and fellow villagers) and formal channels (such as recruitment advertisement and human resources agencies).

What we can learn from Sjaastad's model and apply to China's rural-to-urban migration is that Chinese rural migrant workers do estimate, at least roughly estimate, their present value in cities before migration. Instead of using formal information channels, they rely heavily on informal migration networks that formed through direct or indirect interpersonal relationships with family members, friends, or fellows who are current or former migrants, to get access to job and housing information as well as their potential remuneration in cities (Xu 2011). And the distance of migration does significantly influence their migration decision. Like many economic migrants in developing countries, it is rare to see rural migrant workers in China move directly from

their villages to mega-size cities. They usually follow a step migration pattern<sup>1</sup> (White and Lindstrom 2005), which means that they usually move from the countryside to the nearest town and then move from town to regional capital. Some of them choose to stay in the regional capital and some choose to move again to the national capital. For migrant workers, in addition to the consideration of moving cost, step migration is also a strategy for them to gradually adjust to the rural-urban differences and prepare themselves for future migration. What is unique about China's domestic migration is that rural migrant workers are facing severe institutional segregation and restriction due to hukou regulation. So when prospective migrant workers calculate costs of migration, they may not only count monetary cost but also consider emotional costs such as unfair treatment and perceived discrimination.

Another economic model that can be used to understand the form of internal migration viewed the cost of household production as the main driving force for individual and family migration (Berg and Bodvarsson 2013). In general, this model suggests that the choice of migration destination is determined by the production of household goods and services (Shields and Shields 1989). Basically, this perspective viewed each household as an integrated economic entity that produces goods and services for their own consumption. These goods and services include meal, housework, education, recreation, and so on. Individuals and family members invest their time and use their physical labor as well as purchased items to produce these household products. Household's general goal is to integrate these resources that maximize the utility "by choosing the optimal combination of commodities to produce and consume, subject to the

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<sup>1</sup> Migration that follows a path of a series of stages or steps towards a final destination

household's income to purchase goods and capital" (Berg and Bodvarsson 2013: 36). Apparently, the prices of goods, capital, and services as well as income vary significantly across locations. Therefore, searching for the optimal combination of production and consumption is the major reason for migration. The optimal combination also differs significantly across households as it largely depends on what a particular household values the most. For example, if a certain household values the education of the children, they are most likely to relocate in areas where educational resources are abundant; whereas if a household values the residential environment, they are most likely to relocate in areas with pleasant climate and clean air. Obviously, all their migration choices are subject to how much economic capital that they are willing to invest in the relocation.

This economic migration model is also applicable to understand China's domestic migration, especially the idea that views migrants as household producers. Due to hukou restriction, most of the rural migrant workers move to urban areas without bringing their children and aging parents. Although they physically stay in the urban areas, they still belong to the rural household (Knight and Gunatilaka 2010). Chinese filial piety beliefs emphasize co-residence and interdependence among generations. This tradition is particularly manifested in the poor countryside of China. Rural migrant workers maintain a close bond with their aging parents by providing them with regular remittance. Remittance serves two major functions: First, this is a way that adult children fulfill filial duty and compensate for not being able to take care of their aging parents in person. Second, with the absence of adult children, aging parents usually take most of the responsibility to take care of the left behind grandchildren. So the remittance is also an

exchange for the labor of aging parents. In this sense, we may extend the previously mentioned model that views migrants as household producers to a new model that values the intergeneration support. In this extended new model, migrant workers and their aging parents form an economic system in which resources are mutually shared (Xu et al. 2012). The household goal is to search for an optimal combination of production and consumption. What is unique about China's domestic migration case is that there is a clear division of labor in this economic system and there is a spatial segregation between production and consumption. Migrant workers as well as their spouses invest their physical labor and time in urban areas to generate economic returns to their whole family. Through remittance, they purchase the caregiving services from their aging parents as well as other material goods for their children to consume.

### ***Adaptation in Destination***

Another general interest of both the internal migration and international migration research is the study of migrant adaptation in destination regions. First, migrants need to adjust to the urban economy and the local labor market. Many studies found that newly arrived migrants were first absorbed by the informal sector in urban centers of less developed countries due to the low requirement of skills (White and Lindstrom 2005). The informal sector includes small business owners, small-scale manufacturers, vendors, and petty dealers. The informal sector differs substantially from the formal sector in remunerations, advancement, and job stability. Many migrants viewed jobs in the informal sector as temporary and they will eventually find jobs in the formal sector. In China, rural migrant workers do not follow the general adaptation pattern in labor market that previous studies in other developing countries have identified. In early reform era,

due to China's export oriented economic development policy and continued urbanization, many low skilled jobs have been created in the construction sector and the manufacturing sector in urban areas. Rural migrant workers who could provide cheap labors were in high demand. So, contradictory to many migrants in less developed countries, most rural migrants in China were first absorbed in the formal sector. In recent years, the Chinese government has reduced its focus on the manufacturing sector and increased investment in the service-oriented economy. Over the past several years, service sector made up over 50% of China's GDP and Chinese government aims to raise this number to 70% to 80% in the near future (Hsu 2017). As a response to this economic transition, many rural migrants moved from the secondary sector (e.g., manufacturing and industry sector) to the tertiary sector (e.g., service sector). At the same time, the increasing labor cost in coastal areas and the strengthening of environmental law have forced many transnational corporations to shut down their factories in these areas. Consequently, many laid off workers in these factories have to join the service sector, such as low-end services in restaurants and express delivery industries, due to their limited skills. So in many developing countries, rural migrants move from informal sector to formal sector to seek upward economic mobility, whereas in China, many rural migrants move from formal sector to informal sector mainly due to policy changes and economic transition.

In addition to focusing on adaptation to the labor market and economy of migrants, in recent years, topics such as migration and health as well as the well-being of migrants after migration have increasingly become hot global issues. To start with, a group of health policy makers viewed migrants in urban centers as a "threat" to public health or as a vulnerable group to health hazards that challenges health services in cities

(Zimmerman, Kiss, and Hossain 2011). In less developed countries, due to the high mobility of migrants, they are often viewed as the major cause of the epidemic of severe infectious diseases (Hu, Cook, and Salazar 2008). Counterintuitively, according to the healthy migrant hypothesis (Abraido-Lanza et al. 1999), many researchers argued that rural migrants are actually both physically and mentally healthier compared to their urban counterparts (Newbold 2005). In general, young and healthy rural labors are more likely to migrate to cities than others. Rural migrants with serious diseases are more likely to return to their home villages in order to seek more family care/support and to avoid high medical costs in cities. Due to policy restrictions and lack of medical insurance, rural migrants are largely excluded from medical resources in cities in developing countries. In China, as discussed earlier, rural migrants are largely excluded from public medical insurance due to their migratory status and hukou limitation. Many rural migrant workers also viewed their residency in cities as temporary and they will eventually return to their home villages. Therefore, they are not willing to invest their limited income to personal health care and insurance and this makes their health and mental health conditions at high risk. In addition to barriers to access health resources, migrant workers are also facing unique stressors such as acculturation stress, perceived discrimination, and separation from family members and the familial social context. All these may lead to a diminished health status if effective coping resources are absent. To successfully adapt to a new setting requires “some degree of social and cultural integration, and a condition of mutuality, culturally and economically, between the migrant and the host group” (Hull 1979: 34). To cope with migration-related stressors, some migrants choose to change their values and behaviors in order to integrate into the host culture. This is also a way to

form new social networks and obtain social support resources at the migrant destination. Other migrants, on the contrary, choose not to integrate with the main stream host culture but to integrate with their own sub-society and interact with members only from their own migrant community. As an example that draws from international migration, many Hispanic migrants do not view English proficiency as a factor that is related to their social and economic achievement in the U.S. because a large number of them prefer to live in their ethnic communities and prefer to have jobs that require only limited contacts with the U.S. Society (Zhang et al. 2012). Similar patterns were also identified by researchers who examined the sub-group of China's rural-to-urban migrants. China's rural migrants, as discussed earlier, rely heavily on their strong migration networks for jobs and housing information as well as for social support. Migrant communities are often formed based on the strong social ties among fellow villagers (Chan 2010). These migrant communities are beneficial for the well-being and health of migrants in the sense that social connections and interactions are more available within these communities than other places. Also, due to a shared background among community members, migrant communities are more likely to provide a familiar environment and support that help migrants obtain meaningful identities and sense of belonging (Xu and Palmer 2011).

Taken together, an examination of migration decisions and adaptation provides a solid theoretical base for studies that explore the formation of China's unprecedented domestic migration as well as the well-being of rural migrant workers. In the following section, I will introduce the data set that I used to explore the well-being of migrant workers in China.



## **China Family Panel Studies (CFPS): Introduction to the Dataset**

China Family Panel Studies (CFPS) is a nationally representative and biennial longitudinal survey of Chinese communities, families, and individuals that was initiated in 2010 by Peking University. I summarized the following key information of CFPS data based on Xie and Hu's introduction on CFPS that published on *Chinese Sociological Review* (2014), User Manual of CFPS (2017), and as the CFPS technical report (2014).

In China, family is “the “most direct and basic social institution that affects individuals’ roles, status, behaviors, and attitudes” (Xie and Hu 2014: 6). Therefore, CFPS treated family as the most important unit of analysis and gathered detailed information on family living conditions, family structure and relationship, family social networks, family income and expenditure, and so on. In addition to the family level data, CFPS also gathered information at the community and individual levels. At the community level, CFPS collect data on population, facilities, community resources, transportation, and so on. At the individual level, CFPS gathered information on almost every domain of life, including education, income, occupation, marital status, physical and mental health, etc.

Before the launch of CFPS, there were also many other nation-wide surveys conducted by scholars of social sciences, to name a few, the Chinese Social Survey (CSS), designed by Chinese Academy of Social Sciences in 2005, Chinese Household Income Project (CHIP), designed by Li and Colleagues (2013), and China General Social Survey (CGSS), designed by Bian and Li (2012). What makes CFPS unique is its longitudinal design. A panel design was adopted to gather information on target group at different time points to facilitate the observation of changes of certain domains and

provide evidence for causal inferences at the micro level as well as understand general trend at the macro level.

The target group of CFPS is all family members in households from the surveyed twenty-five provinces or their administrative equivalents (municipalities and autonomous regions) in China. The surveyed regions covered nearly 95 percent of China's total population, with only 5 percent who were living in Xinjiang, Tibet, Qinghai, Inner Mongolia, Ningxia, Hainan, Hong Kong, Macao, and Taiwan were excluded. The baseline survey (2010) was targeting 16,00 households with half of the households were selected from Shanghai, Liaoning, Henan, Gansu, and Guangdong (oversampling) and the other half were selected from the rest twenty provinces (or administrative equivalents). The actual CFPS 2010 baseline survey identified 14,960 households and 57,155 eligible family members, which along with "any children born to or adopted by them before age ten in the future" are treated as gene members and will be tracked throughout their lives (Xie and Hu 2014:12). Using proper weight, researchers may conduct a cross-province comparison based on the five over-sampled regions. Basically, the CFPS adopted multistage probability proportional sampling for recruitment. The first stage sampling unit was administrative districts (*Qu 区*) in urban areas or counties (*Xian 县*) in rural areas, the second stage sampling unit was communities (*Shequ 社区*) in urban areas or administrative villages (*Chun 村*) in rural areas, and the final stage sampling unit was the households. Again, the sample can be used to represent the national population when appropriate weighting variable is used. The baseline sample showed great representativeness when compared with the 2010 census data of China (Xie and Hu 2014).

The CFPS took great care of retaining sample size in the following survey waves to ensure the quality of this panel study. The follow up surveys included not only the gene members that identified in 2010 but also all the new-gene members who were born or adopted since the previous survey. When the gene members moved out of their original households and formed their own families due to marriage or other reasons, the family members of these newly formed households, such as their parents-in-law, spouses, and children, were also be interviewed with the same individual questionnaire. However, these so-called non-gene members will not be tracked permanently. In general, households with at least one gene member were interviewed and interviews would be terminated when no gene member was living in the households. Most of the surveys were based on face-to-face interviews. In order to reach out to as many gene members as possible, telephone or online interviews were also conducted when personal interviews were not possible. For gene members who cannot be reached, short questionnaires that answered by other family members were used to collect their key information.

So far, four waves of the CFPS were released (2010, 2012, 2014, and 2016). However, due to my research purpose, only the baseline wave (2010) and the 2014 wave were used in this dissertation. According to the CFPS 2014 technical report, the response rates were 85% at the family level and 80% at the individual level in 2014 (Wu et al. 2016).

## **Well-being of Rural Migrant Workers: A Review of Previous Findings and Results from Bivariate Analyses**

As discussed above, previous studies showed inconsistent results when the well-being indicators of rural migrant workers were examined and were compared with other reference groups. This is probably due to the limitation of data sets, and different measurement scales as well as different definitions of rural migrant workers that were used in different studies. Several studies found that rural migrant workers had worse psychological well-being and life satisfaction than their reference groups. For example, based on a survey conducted by the National Bureau of Statistics of China, Knight and Gunatilaka (2010) found that the average happiness and life satisfaction score among rural-urban migrant households were significantly lower than both rural and urban households. Based on SCL-90 scale that examined 371 migrant workers' mental health status in Shenzhen, Shen and colleagues (1998) revealed that rural migrant workers showed more symptoms of obsession, phobia and interpersonal hypersensitivity compared to local workers. They also showed inferior mental health status when being compared to SCL-90 norms (average score) provided by general people in China. Based on the same measurement scale of mental health, Li and colleagues (2009) found that rural migrant workers reported worse mental health than both urban residents and their rural counterparts. By contrast, two recent studies published in Chinese journals found that the levels of psychological well-being of rural migrant workers were comparable or even better than selected reference groups. Specifically, rural migrant workers had comparable scores as local urban residents when negative emotions such as anger, fear, anxiety were examined (Liang, Hou, and Li 2017). Their findings were based on Chinese Social Survey, the nationally representative data set. Similarly, Lu and colleagues (2017) found that rural migrant workers had lower scores on Kessler Psychological Distress

scale compared to other local groups. This study was based on a seven-province migrant workers survey. There is also a study showing mixed findings. Based on data collected in Zhejiang province, Li and colleagues (2017) disclosed that rural migrant workers had significantly better mental health (indicated by SF-36 mental health scale) than their urban counterparts but worse mental health than rural residents. Finally, a study using meta-analysis concluded that rural migrant workers were at a higher risk of having poor mental health compared to their urban counterparts as well as the general population (Zhong et al. 2013).

To understand the potential connection between conflictual experiences (defined as a series of undesirable experiences that rural migrant workers had in their daily urban lives due to their migratory and disadvantaged status) and well-being indicators, it is essential to first compare the well-being of rural migrant workers with several important reference groups. This is because, if the examined indicators of life satisfaction and psychological well-being of rural migrant workers are better than most of the reference groups as suggested by previous studies, the significance of identifying possible stressors that explain their lower levels of well-being is limited. So, in the following section, I would like to compare psychological well-being and life satisfaction of rural migrant workers with local urban workers and their rural counterparts based on the baseline wave and the 2014 wave of the CFPS data. Since the survey is a representative sample of the Chinese population, the first step is to develop ways to identify rural migrant workers, local urban workers, and rural workers from the large sample. Please recall that by integrating the definitions from previous studies and reports, I defined rural migrant workers as those whose hukou status are agriculture but live in urban areas and who

currently work in non-agricultural industries in urban areas. By contrast, local urban workers are defined as those whose hukou status are non-agriculture and live in urban areas and currently employed. Rural workers are defined as those whose hukou status are agriculture and live in rural areas and who are currently employed (i.e., engaging in farm work or other non-agricultural industries).

### ***Measures***

Psychological well-being was measured using the six-item version (K6) of the Kessler Psychological Distress Scale (Kessler et al. 2002). Respondents were asked, during the past 30 days, about how often they have felt 1) nervous, 2) hopeless, 3) restless or fidgety, 4) so depressed that nothing could cheer you up, 5) that everything was an effort, and 6) worthless (1=none of the time to 5=all of the time). A summed index was generated based on responses to these six questions. Scores of Alpha reliability are 0.85 and 0.84 in 2010 and 2014, respectively. Life satisfaction was measured by a Likert scale question. Respondents were asked to rate how satisfied they were with their lives in general on a 5-point Likert Scale (1= “not at all satisfied” to 5= “very satisfied”). The mean score of life satisfaction for each group was compared.

### ***Analysis***

In the following bivariate analysis, based on the weighted ANOVA analysis, mean scores of each well-being indicators (both the 2010 and 2014 waves of data) were compared for three groups. Mean scores for corresponding items and F-test results were summarized in Table 1.1.

(Table 1.1 is about here)<sup>2</sup>

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<sup>2</sup> Tables and Figures were placed at the end of each chapter

## ***Results***

As shown in Table 1.1, the mean score of life satisfaction among rural migrant workers was significantly higher than the mean score of local urban workers in both waves, suggesting that rural migrant workers were more satisfied with their lives in general compared to local urban workers. However, the mean score of psychological distress (an average of the summed score) of rural migrant workers was significantly higher than local urban workers at both waves. Similarly, when six individual psychological distress items were examined, rural migrant workers had higher mean scores in five items compared to their urban counterparts. The only exception was “Nervous,” for which local urban workers had higher mean scores in both 2010 and 2014. These findings indicate that, in general, rural migrant workers had worse psychological well-being but higher levels of life satisfaction compared to local urban workers.

When compared to rural workers, rural migrant workers had a lower mean score of life satisfaction in 2010 but a higher mean score in 2014. When psychological distress (an average of summed score) was examined, rural migrant workers had higher mean score compared to rural workers in 2010 but lower mean score in 2014. For individual psychological distress items, rural migrant workers had significantly higher mean scores for all the examined items compared to rural workers in 2010 but they had significantly lower mean scores than their rural counterparts in 2014. In general, rural migrant workers had lower levels of life satisfaction and worse psychological well-being compared to rural workers in 2010, however, the former had higher levels of life satisfaction and psychological well-being than the latter in 2014.

To sum up, results from bivariate analyses showed mixed findings. We should not simply assume rural migrant workers had worse well-being status when compared to other reference groups because of their disadvantaged hukou status and possible discriminatory experiences. Nevertheless, results did show that they had worse psychological well-being compared to local workers in general and had lower levels of life satisfaction compared to rural workers at a certain time point. Therefore, it is meaningful to identify possible stressors that may lead to rural migrant workers' inferior mental health status based on panel data.

### **Introduction to the Content of Each Chapter**

In the next chapter, I first discussed why rural migrant workers in China formed a stigmatized group and how this stigmatized image could eventually affect their psychological well-being. To support this argument, I draw some parallel comparisons between rural migrant workers in China and ethnic minorities in other countries. I concluded that the stigmatized images of migrant workers were largely influenced by the interest of the state and capital and were created by media. I then turned to a series of micro-sociological theories that could be applied to understand the mechanisms linking negative psychological consequences and stigmatization. I argued that perceived discrimination, as one of the five interrelated components of stigmatization (Link and Phelan 2001), received most researchers' attention as a potential stressor may cause negative mental health among rural migrant workers in China. In addition to perceived discrimination, rural migrant workers were also at high risk of experiencing structural discrimination that devalues them through social policy, laws and institutional practice.



Finally, I combined perceived discrimination with structural discrimination into the construct of conflictual experiences, which was defined as any undesirable experiences when interacting with the urban dwellers, local governments and government officials due to rural migrant workers' migratory and disadvantaged status. The empirical data analysis based on two waves of CFPS data in this chapter examined psychological distress of rural migrant workers and its association with conflictual experiences as well as explored their association over time. Findings based on latent difference score model were summarized in the results section and interpretation of the results as well as limitations and policy implications were discussed in the discussion section.

In chapter 3, I first illustrated why life satisfaction was employed as a measure of well-being of rural migrant workers. Then, based on a similar theoretical framework and analysis design in chapter 2, life satisfaction and its association with conflictual experiences as well as how their associations vary over time were examined. Findings were interpreted and compared with those from the previous chapter. In the second part of this chapter, the well-being protecting role of economic gain was discussed. I argued that rural migrant workers heavily relied on an economic coping strategy to counteract the negative impact of conflictual experiences. This is because their limited and homogenous social support resources were powerless to deal with adversities that formed by the interests of state and capital. In this chapter, I also discussed gender differences in the meaning of migration. For males, the decision and meaning of migration were largely based on potential economic gain. For females, in addition to the potential economic gain, migration was also a common way to get rid of their miserable rural lives. In the follow-up analysis, the direct effect and potential stress-buffering effect of economic gain

on life satisfaction were examined based on both waves of the data. Gender differences in both direct effect and stress-buffering effect were examined. Findings based on Ordinary Least Squares (OLS) regression models were summarized in the results section. The interpretation of the findings and detailed discussion of potential contribution to the study of income and life satisfaction among economic migrants were included in the discussion section.

In chapter 4, I continued to explore how the association between well-being and conflictual experiences vary across regions and how regional level characteristics modify these association based on the baseline CFPS data and the aggregate level data that published by China Bureau of Statistics and the 2010 census data. In the literature review part, I first utilized the principle of agency that derived from life course perspective to acknowledge that rural labors could choose their own life trajectory, such as the choice to move to cities. However, their choices were largely constrained by the socio-economic context of a rapidly changing Chinese society. Based on the principle of historical time and place, another important principle drawn from the life course perspective, I discussed how the increasing surplus of rural labors, widening regional income gap, and increasing demand for cheap labors in urban areas generate “push” and “pull” effect at the macro level that largely shaped migrant workers’ migration decision. Driven by this theoretical background, data analyses in this chapter modeled how socioeconomic context directly affected the well-being of rural migrant workers as well as modified the association between well-being indicators and conflictual experiences. Results from multi-level analyses were summarized in the results section. Detailed interpretation of analyses results and limitations were discussed in the discussion section.

Final chapter summarized important findings from each of chapter. Future research directions and general implications were also discussed in this chapter.

**Table 1.1 Weighted Mean Scores Comparison for Key Well-being Indicators: ANOVA Analysis**

	Mean (S.D.)			F-test Results
	Rural Migrant Workers (N=2,105)	Local Urban Workers (N=3,612)	Rural Workers (N=8,754)	
Life Satisfaction (2010)	3.46 (1.05)	3.40 (.98)	3.47 (1.02)	***
Psychological Distress (2010)	1.53 (3.83)	1.45 (3.28)	1.47 (.61)	***
Nervous (2010)	1.54 (.84)	1.57 (.82)	1.51 (.82)	***
Hopeless (2010)	1.34 (.75)	1.30 (.68)	1.32 (.73)	***
Restless or fidgety (2010)	1.51 (.84)	1.37 (.67)	1.48 (.81)	***
Depressed nothing could cheer up (2010)	1.71 (.93)	1.68 (.84)	1.66 (.90)	***
Everything was an effort (2010)	1.62 (.93)	1.41 (.66)	1.58 (.90)	***
Worthless (2010)	1.32 (.73)	1.26 (.64)	1.29 (.69)	***
	Rural Migrant Workers (N=3,866)	Local Urban Workers (N=4,220)	Rural Workers (N=4,051)	
Life Satisfaction (2014)	3.79 (1.01)	3.77 (.96)	3.78 (1.02)	***
Psychological Distress (2014)	1.54 (.66)	1.48 (.55)	1.57 (.68)	***
Nervous (2014)	1.62 (.90)	1.64 (.84)	1.65 (.92)	***
Hopeless (2014)	1.34 (.75)	1.30 (.65)	1.37 (.79)	***
Restless or fidgety (2014)	1.56 (.88)	1.48 (.75)	1.60 (.92)	***
Depressed nothing could cheer up (2014)	1.79 (.96)	1.78 (.86)	1.82 (.98)	***
Everything was an effort (2014)	1.62 (.94)	1.47 (.71)	1.68 (.99)	***
Worthless (2014)	1.33 (.72)	1.24 (.58)	1.36 (.80)	***

Notes: \*\*\* $P < .001$ . Standard Deviations are in parentheses. The values of life satisfaction, psychological distress, and each symptoms of psychological distress range from 1 to 5.

## **CHAPTER 2: Conflictual Experiences and Psychological Distress of Rural Migrant Workers in China: An Analysis Based on Latent Difference Score Model**

### **Introduction**

Research from meta-analysis revealed that rural migrant workers are at a higher risk of having poor mental health compared to their urban counterparts (Zhong et al. 2013). Recent studies identified that one major reason for their poorer psychological well-being is stigmatization (Li et al. 2006; Lin et al. 2009; Wong, Li, and Song 2007). Due to their stigmatized status, rural migrant workers often have higher risk of experiencing conflictual interactions in their daily lives, such as status-based discrimination.

Although prior research offered many insightful findings on the psychological well-being of rural migrant workers and its connection with their stigmatized status, most of the previous studies were based on regional level cross-sectional data, thus failed to capture a panorama of psychological well-being and its important covariates among rural migrant workers. To address this gap, the current study aims to employ two waves of data (2010 and 2014) from a nationally representative sample—The China Family Panel Studies (CFPS). In the previous chapter, I successfully identified rural migrant workers had higher levels of psychological distress compared to their urban counterparts. In this chapter I attempts to examine psychological distress of rural migrant workers and its associations with conflictual experiences as well as to explore the associations over time. Results based on analyses using panel data may provide insights on the possible predictors that contribute to high levels of psychological distress among rural migrant workers in China.

## **Background and Review of Literature**

### ***Stigmatized Rural Migrant Workers***

Currently there are more than 280 million rural migrants working in China's urban areas (China National Bureau of Statistics 2018) and they form a stigmatized social group. Several studies have drawn parallel comparisons between rural migrant workers in China and ethnic minorities in Western countries (Han 2010; Solinger 1999; Yan 2008). Unlike racial prejudice in the U.S., which link skin colors to different positions in the power relationship, rural migrant workers do not "possess any unique, formally recognized ethnic features that distinguish them from urban residents" (Han 2010: 596). However, similar to racial prejudice, urban citizens often generate simplified negative labels and stigmatized images towards rural migrant workers because of their bad hygiene, dirty clothing, strong rural accent, and bad manners. Just like the stigmatized images of African Americans in the U.S., the negative images and labels of rural migrant workers in China are often abstract and subtle. Members of non-stigmatized group do not generalize these images through first hand contact with stigmatized group members but often through "public arena" that attracts public attention (Blumer 1958: 6). Typical "public arena" includes "legislative assemblies, public meetings, conventions, the press, and the printed world" (Blumer 1958: 6). In the case of China's rural migrant workers, mass media plays a crucial role in the formation of their stigmatized images. For a long period of time, rural migrant workers were labeled as "poor, dirty, ignorant, and prone to violence". They were also frequently blamed for "increasing crime rates and social instability in China's social media." The term "migrant crime" had been used by China's government report and media that refers to as a distinct category of crime (Li et al. 2006:

7). In recent years, these negative and stereotyped labels hardly appear on main stream media. However, these stigmatized images created by government and media heavily distorted urban residents' perceptions and attitudes toward rural migrant workers.

The distorted and undesirable images of rural migrant workers were also influenced by the interests of state and capital (Han 2010). In order to compete for foreign investment and maintain the pace of economic growth, rural migrant workers who can provide cheap labors and services are high in demand. However, local governments in most mega cities are often reluctant to expand their social benefits to these migrant workers. This is largely because local government needs to control the size of city population since a bloated population could put too much strain not only on social security system but also on housing, transportation, and social services. So basically, local governments hope to get maximum benefits from migrant workers but at the same time minimize their benefit coverage (Li et al. 2006). The hukou system is used to fulfill this “exploitation” goal, which institutionally excludes rural migrant workers from local benefits. Hukou system also reduces the political and bargaining power of rural migrant workers that is vital to demand for higher wages and better benefits. With limited hope of upward social mobility, rural migrant workers often view their lives in urban cities as temporary and they will eventually return to their home villages (Loong-Yu and Shan 2007). This temporary position makes it particularly challenging for them to be involved in a long-term organized working union to protect their rights (Loong-Yu and Shan 2007).

In summary, hukou serves as a tool for the government and entrepreneurs to gain economic growth at the cost of the rights and benefits of migrant workers. China's

unprecedented economic growth for the past three decades, to some extent, is an outcome of an urban centered development strategy. And the development of cities is inevitably at the expenses of countryside (Han 2010). This unequal regional development strategy has created significant urban rural disparities and unique stigmatized images of countryside and rural residents. The countryside is often viewed as backwardness and rural residents are linked to low “suzhi” (Chinese term of competency), which means rural migrant workers do not possess the desirable qualities that allow them “to be useful for, and to fit into, a developing society” (Han 2010: 605). The hukou system and urban-rural disparities facilitate the construction of new identities that bind stigma to rural migrant workers as well as legitimate the inferior and exploitative status of this group (Han 2010; Loong-Yu and Shan 2007). Stigma is a form of symbolic power (Bourdieu 1987) and “people who are disadvantaged by the exercise of symbolic power are often influenced, sometimes without realizing it, to accept cultural assessment of their value and rightful (lower) place in the social order” (Link and Phelan 2014: 27). Not surprisingly, many rural migrant workers have internalized this stigmatized identity (Han 2010).

### ***Stigmatization, Conflictual Experiences, and Psychological Distress***

Goffman (1963) defined stigma as a phenomenon that certain attributes of individual are devalued by the society. Starting from the 21<sup>st</sup> century, there are a growing number of studies that focus on the association between stigma and psychological well-being. Most of the studies found that experiences of stigmatization will result in negative psychological responses and lead to high risks of psychiatric disorders. A meta-analysis examined 49 empirical studies from 1985 to 2005, revealing that a medium correlational



effect size exists between stigma and mental health (Mak et al. 2007). Their findings suggest the negative psychological consequences of stigmatization.

Many studies have explored the mechanisms that connect social stigma and psychological well-being. A well-studied pathway is through self-esteem. In the theoretical tradition of symbolic interactionism, scholars like Mead (1934) and Cooley (1956) have developed theoretical frameworks such as “reflected appraisals” and “looking-glass self” that highlight the importance of other’s evaluations/feedback in the development of self-concept. According to this perspective, the development of self-concepts depends heavily on individuals’ imaginations of how others evaluate toward the self during the interaction process and to what extent people accept such evaluation. Along this line, members of the stigmatized groups who are often treated with negative attitudes may integrate these negative responses into self-concepts. Consequently, a diminished self-esteem will occur. Based on the idea of Mead, individuals receive and adjust behaviors not only from specific individuals whom they interact with but also from “generalized others” (Mead 1934). Generalized others refers to the socio-cultural context within which one lives, thus social norms and values of a society are also “evaluations” that restrict and shape behaviors. In this sense, members of stigmatized group may develop negative self-images because their groups are generally devalued in the social context.

Another explanatory mechanism is known as the self-fulfilling prophecies proposed by Robert Merton (1948). This perspective asserts that people have the tendency to meet the expectation of others and adjust their behaviors to make them consistent with the expectation. According to this view, stigmatized individuals, in the

long run, may come to behave in ways that are consistent with the negative stereotypes imposed towards them. For example, African American students are often found to engage in behaviors that are deviant from the mainstream cultural values, such as “skipping class” and “not doing school assignment” because they are afraid of being labeled as “acting white” and losing their identity as African Americans (Crocker and Major 1989).

Empirical studies focusing on how stigmatization affects mental health of rural migrant workers in China have yielded inconclusive findings. On one hand, stressors that are related to stigmatization may diminish migrant worker’s self-esteem and self-efficacy, which in turn, induce their mental health problems (Lin et al. 2009; Zhong et al. 2013; Zhong et al. 2017). On the other hand, being stigmatized does not necessarily trigger adverse mental health consequences because enhanced economic conditions after migration could provide stress-buffering effects (Li et al. 2008). Although rural migrant workers belong to the disadvantaged group and are treated unfairly in big cities, they also take this opportunity to improve their economic conditions. It is this positive meaning of migration that helps them withstand daily stress and discrimination.

### ***Discrimination and Psychological Distress***

Link and Phelan (2001) defined stigma as having five interrelated components- labeling, stereotyping, separation, status loss, and discrimination converge in a power situation. Among these five components, discrimination, especially perceived discrimination has received most researchers’ attention as a potential stressor that has negative mental health effects. Many studies have documented that, perceived discrimination (such as being treated unfairly by others in workplace or in daily life) has

a negative impact on psychological well-being of rural migrant workers in China (Lin et al. 2009; Wang et al. 2010; Zhang et al. 2009). For rural migrant workers, perceived discrimination may prevent them from achieving upward mobility, reinforce their disadvantaged hukou status, and eventually diminish their psychological well-being (Zhang and Hong 2013). Perceived discrimination may also directly affect mental health by increasing the exposure to toxic and stressful environment (Kessler, Mickelson, and Williams 1999; Wang et al. 2010) and indirectly through a diminished self-esteem (Wang et al. 2010).

One unique feature of Link and Phelan's concept of stigma is that stigma is largely dependent on social, economic, and political power (Link and Phelan 2001). This is in line with what I have discussed in the background section that the stigmatization of rural migrant workers fits well with the interest of authority in China. Therefore, in addition to perceived discrimination, I argue that rural migrant workers are also at a high risk of experiencing structural discrimination (Link and Phelan 2014). Structural discrimination is defined as stigmatizer devalues stigmatized group through "social policy, laws, institutional practices, or negative attitudinal social contexts" (Link and Phelan 2014: 28). In the case of Chinese rural migrant workers, the structural discrimination that was imposed on rural migrant workers manifested in several ways. One way is through hukou restriction that institutionally denied rural migrant workers' access to social resources. In addition, experiencing undesirable interactions with local government and government officials is another way that structural discrimination operates. The following case could provide some support to this point.

<sup>3</sup>On November 2017, a citywide campaign that carried out by Beijing government evicted tens of thousands of migrant workers who lived in the urban villages (inhabited by migrant workers because of the low cost of housing) for the reason of safeguard the city's safety (Buckley 2017). This sudden campaign was launched right after a lethal fire that killed 19 people in an illegal transformed migrant worker apartment in an urban village. During the eviction, water and electric supply were shut down and migrant workers who live in dangerous and illegal buildings were ordered and forced to vacate with a very short notice (within 48 hours). Their belongings had been "either destroyed or tossed on the street if they had not cleared out by the deadline" (Rivers and Wang 2017). Many migrants had no choice but to leave Beijing and returned to their home provinces. Some migrant workers had reacted to the eviction with protests and small confrontations, which rarely used by migrant workers in Beijing to demand their rights. The largest protest happened on December 10, 2017 when hundreds of protests gathered on the street of northeast Beijing with chants "violent eviction violates human rights" (Buckley 2017; Phillips 2017).

The direct confrontations with authority do not merely happened in the capital but also in many other areas of China. According to China Labor Bulletin (2018), 6,694 collective labor unrests took place from 2015 to 2017. Among these mass incidents, only 194 happened in Beijing. Labor unrest increased substantially in China during recent years. According to report, 1,256 labor strikes took place in 2017 while there was fewer than 200 cases in 2011 (China Labor Bulletin 2018). Most of these mass incidents were led by rural migrant workers from manufacturing and construction industry. Most of the

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<sup>3</sup> Based on journal reports from CNN, the New York Times, and the Guardian.

cases happened only at local or just factory level and workers were simply demanding for better labor rights, such as wage arrears, better working conditions, and better social insurance. However, the universal approach that government adopted was to treat any labor unrest as a threat to social and political stability. More than 250 people who were actively involved in labor movement were arrested from 2015 to 2017. All these statistics indicate that there is an increased tension between government, especially local government and migrant workers in cities.

Rural migrant workers also face other structural discrimination by the government. There is evidence showing that rural migrant workers used to pay several different fees (cost equals to approximately their monthly income) to obtain governmental permits, including temporary residency permit, health certificate, certification for migration, and permit for employment in order to be legally employed in cities (Li et al. 2006). It used to be a lengthy procedure for migrant workers to obtain all these documents and they were often required to pay over-charged fees (Han 2010). In recent years, many cities have gradually reduced their fees and simplified the procedure to obtain governmental permits and certificates. However, in many cities, migrant workers still need to pay extra money and sometimes are charged unreasonable fees in order to get access to social resources that local citizens are entitled to with local hukou (Cui and Cohen 2015).

In this study, I combined perceived discrimination and structural discrimination that rural migrant workers faced into the construct of conflictual experiences. I defined conflictual experiences as any undesirable experiences when interacting with the urban dwellers, local governments and government officials due to rural migrant workers'

migratory and disadvantaged status. This chapter aim to first examine the direct relationship between conflictual experiences and psychological distress of rural migrant workers. I predict that conflictual experiences are positively associated with psychological distress among rural migrant workers (Hypothesis 2.1). The second research question is to examine, for rural migrant workers, whether there is a significant change in encountering conflictual experiences and whether there is a significant change on levels of psychological distress in recent years. As the tension between migrant workers and government has increased in recent years (China Labor Bulletin 2018) and hukou restriction still largely denies rural migrants' access to social resources, I predict that levels of conflictual experiences and psychological distress will both increase in recent years (Hypothesis 2.2). The third research question is to explore the effect of change in conflictual experiences on change in psychological distress. Based on this research question, three hypotheses were tested using two waves of panel data. First, change in conflictual experiences is associated with change in psychological distress among rural migrant workers (Hypothesis 2.3a). Second, conflictual experiences at the baseline wave predict a subsequent change in psychological distress, and psychological distress at the baseline wave also predicts a subsequent change in conflictual experiences (Hypothesis 2.3b). Finally, conflictual experiences play a leading role in explaining the subsequent change of psychological distress (Hypothesis 2.3c).

## **Methods**

### ***Data***

Currently, CFPS has released four waves of data (2010, 2012, 2014, and 2016). However, only the 2014 wave has the same measure of psychological distress as the baseline wave. Therefore, only the baseline wave (2010) and the 2014 data wave were used in this study. Similar to what I did in the previous chapter, since the survey is a representative sample of Chinese population, the first step is to identify rural migrant workers from the large sample and generate a subsample of this target population. Recall that I defined rural migrant workers as those whose hukou status is rural but live in urban areas and who currently work in non-agricultural industries in urban areas. Based on this definition, I obtained 939 rural migrant workers who were included in both 2010 and 2014 data waves.

### *Measures*

The focal independent variable is conflictual experiences that rural migrant workers may encounter in their urban lives. Respondents were asked two questions related to perceived discrimination, including 1) if they had experienced discrimination due to the income gap, 2) if they had experienced discrimination due to hukou status, and four questions related to structural discrimination, including 3) if they had been discriminated by government officials, 4) if they had conflict with government officials, 5) if they had experienced unreasonable delayed and stalled at government, and 6) if they got charged unreasonable service fees at government. Responses to these questions are binary (Yes/No). A count index was generated based on the total number of “Yes (1)” response across these six items (range: 0-6). Alpha reliability at both data waves ranges between 0.73 and 0.74.

The focal dependent variable is psychological distress, which was measured by the six-item version (K6) from the Kessler Psychological Distress Scale (Kessler et al. 2002). Respondents were asked, during the past 30 days, about how often they have felt 1) nervous, 2) hopeless, 3) restless or fidgety, 4) so depressed that nothing could cheer you up, 5) that everything was an effort, and 6) worthless (1=none of the time to 5=all of the time). An index with average score (ranging from 1 to 5) was generated based on responses to these six questions. Scores of Alpha reliability are 0.81 and 0.85 in 2010 and 2014, respectively.

In all models, I controlled for socio-demographic variables at the baseline, including age (in years), monthly wage (in RMB, 1 RMB=0.16 dollar), educational attainment (*high school graduate and above=1, less than high school=0*), gender (*male=1, female=0*), marital status (*currently married=1, others=0*), communist party membership (*party member=1, non-member=0*), and self-reported physical health condition (*good/fair health=1, relatively unhealthy/unhealthy/very unhealthy=0*).

### ***Analyses***

First, descriptive analyses were performed to summarize sample characteristics. The results were summarized in Table 2.1. Then, structural equation modeling was conducted using Mplus 7.1. Specifically, latent differences score (LDS) model was used to examine change across repeated measures. Instead of using widely used latent growth curve (LGC) model, LDS model was employed because only two waves (2010 and 2014) of data were available. One advantage of LDS model is that it could use the mean of latent difference score to test the change of certain construct across waves (Newsom 2015). Another advantage of LDS model is that this model allows the testing of cross-



lagged effects between constructs. This means that we can test the effect of one construct on subsequent change of another construct and vice versa (Xu et al. 2012). In the current study, conflictual experiences may affect the subsequent change in psychological distress; it is also possible that psychological distress may affect the subsequent change in conflictual experiences. LDS model would be used to identify which variable plays a leading role.

In the results section, Figure 2.1 was created to show main constructs and parameter estimates of LDS. Following this diagram, Table 2.2 was constructed to report parameter estimates, their standard errors, and significance levels. Multiple model fit indexes were also reported in the results section. In LDS model, the latent difference scores were estimated by the same variable that measured at two time-points with the paths from time 1 constructs to time 2 constructs and the loadings of difference scores on time 2 constructs were all fixed at 1. For identification purpose, the errors for time 2 constructs should be fixed at 0 (Newsom 2015). Therefore, the constructs that measured at time 2 were estimated by the same constructs that measured at time 1 and by latent difference scores. To address Hypothesis 2.1, the path coefficient (denoted as “a” in Figure 2.1) from the baseline wave conflictual experiences to the baseline psychological distress was estimated. In LDS model, the intercepts (means) of latent differences scores represent the average change from time 1 to time 2. In the model, the intercepts (means) of latent difference score associated with psychological distress (denoted as “ch1” in Figure 2.1) and latent difference score associated with conflictual experiences (denoted as “ch2” in Figure 2.1) represent the average change for psychological distress and conflictual experiences, respectively, from 2010 to 2014. This result was used to address

Hypothesis 2.2. To address Hypothesis 2.3a, the covariance (denoted as “b” in Figure 2.1) between two latent differences scores was estimated. The cross-lagged effects (denoted as “c<sub>1</sub>” and “c<sub>2</sub>” in Figure 2.1) indicate whether conflictual experiences measured at 2010 significantly affect the change of psychological distress and whether psychological distress measured at 2010 significantly affect the subsequent change of conflictual experiences (Hypothesis 2.3b). Finally, the comparison between c<sub>1</sub> and c<sub>2</sub> was used to test which construct plays a leading role in explaining the variation of the other construct (Hypothesis 2.3c).

## **Results**

### ***Descriptive Statistics***

Table 2.1 shows that the average conflictual experiences scores for the whole sample were 1.0 and 0.7 for the baseline wave and the 2014 wave, respectively. Mean score of psychological distress was 1.4 with a standard deviation (s.d.) of 0.5 at the baseline wave and 1.5 with a s.d. of 0.6 at the 2014 wave. The average age for the whole sample was approximately 38.3 and the mean monthly income was around 1,376 RMB (roughly \$220) in 2010. More than 62% of the sampled rural migrant workers were male and approximately 23% of rural migrant workers were high school graduates. Approximately 88% were currently married and less than 4% of the rural migrant workers were communist party members. For physical health, nearly 94.5% of rural migrant workers reported good/fair self-rated health.

(Table 2.1 is about here)

### ***LDS Model Results***

Figure 2.1 shows results from the LDS model. In general, LDS model fits data quite well (Newsom 2015) with Chi-Square=27.001 ( $df=14$ ,  $P<0.05$ ), RMSEA=0.029,  $P$  (RMSEA $\leq$ 0.05) =0.973, SRMR=0.017, CFI=0.968. As shown in Table 2.2, the cross-sectional coefficient between conflictual experiences and psychological distress was approximately 0.58 ( $P < 0.001$ ) at the baseline. This result indicates that conflictual experiences were significantly and positively associated with psychological distress. In other words, having conflictual experiences was a risk factor for higher levels of psychological distress among rural migrant workers. This finding is consistent with Hypothesis 2.1.

(Figure 2.1 is about here)

(Table 2.2 is about here)

As indicated by the intercepts of two latent differences scores (“ch1” and “ch2”), there were significant change for both psychological distress and conflictual experiences from 2010 to 2014. Specifically, there was a significant increase in psychological distress ( $B=0.627$ ,  $p < 0.001$ ) and a significant decrease in conflictual experiences ( $B= -0.404$ ,  $p < 0.001$ ) among rural migrant workers from 2010 to 2014. This finding is consistent with the mean values of these two variables showed in Table 2.1. This result partially supports Hypothesis 2.2.

As I expected in Hypothesis 2.3a, a significant covariance existed between two latent difference scores (denoted by “b”,  $B = 0.958$ ,  $p < 0.001$ ). This means that the change of conflictual experiences was positively associated with change of psychological distress. Specifically, an increased unit of conflictual experiences would relate to an increased unit in psychological distress. Moreover, as the cross-lagged effects

(denoted by “ $c_1$ ” and “ $c_2$ ”) indicate, conflictual experiences measured at the baseline was significantly and negatively associated with a subsequent increase in psychological distress ( $B = -0.203, p < 0.01$ ), and psychological distress measured at the baseline was significantly and positively associated with a subsequent decrease in conflictual experiences ( $B = 0.035, p < 0.001$ ). This is consistent with what I predicted in Hypothesis 2.3b. Finally, as indicated by the absolute value of  $c_1$  and  $c_2$ , conflictual experiences played a leading role in explaining the subsequent change of psychological distress. Therefore, Hypothesis 2.3c is also confirmed by the results.

## **Discussion**

Using two waves of the CFPS data (2010 and 2014), this study examined the psychological distress of rural migrant workers and its association with conflictual experiences as well as explored their associations over time. Based on the LDS model, this study found that having conflictual experiences was a risk factor for high levels of psychological distress among rural migrant workers. In general, a significant decrease in conflictual experiences and a significant increase in psychological distress were identified among rural migrant workers from 2010 to 2014. Moreover, the change in conflictual experiences was significantly associated with the change in psychological distress. As indicated by the LDS model, there was a significant cross-lagged effect between conflictual experiences and psychological distress. In other words, conflictual experiences assessed in 2010 predicted the subsequent change in psychological distress and psychological distress measured in 2010 explained the subsequent change in

conflictual experiences from 2010 to 2014. Finally, conflictual experiences showed a leading role in explaining the subsequent change of psychological distress.

Findings of this study are consistent with previous studies documenting that perceived discrimination has a negative impact on psychological well-being (Lin et al. 2009; Wang et al. 2010; Zhang et al. 2009). Comparing to previous studies, one unique contribution of this study is that I expanded the stressors from perceived discrimination to a broader range of conflictual experiences, including perceived discrimination and structural discrimination imposed by authority. As expected, having conflictual experiences was positively associated with psychological distress based on the 2010 baseline data. Longitudinal model also showed that changes in conflictual behaviors were positively associated with changes in psychological distress. This is consistent with the cross-sectional analysis and further confirmed that being engaged in conflictual situations would result in a high level of psychological distress among rural migrant workers. As discussed in the background section, perceived discrimination, as part of the conflictual experiences, may diminish self-esteem and thus induce psychological distress (Kessler, Mickelson, and Williams 1999). Unfortunately, this study is not able to directly examine this potential pathway because current data do not have a consistent measure of self-esteem. In addition, being exposed to structural discrimination may be even more devastating for mental health since it operates at the macro level through social policy, laws, and institutional practice that create and legitimize stigmatized images of certain individuals or groups (Corrigan, Markowitz, and Watson 2004; Link and Phelan 2014). Therefore, its effects are overwhelming and it is very difficult for individuals who

experienced structural discrimination to find tangible sources to cope with this type of stressor.

As indicated by the latent difference score, conflictual experiences among rural migrant workers decreased from 2010 to 2014, which is contradicted with what I expected. This finding indicates that even though there is an increase of labor unrest in recent years, its effect on rural migrant workers conflictual experiences in cities is trivial at national level. This is consistent with findings that nearly all the influences of protests and strikes are controlled at local level, thus they were hardly “contaminate” rural migrant workers in other regions (China Labor Bulletin 2018). This downward trend is also coincidence with hukou reform that took place from 2012 to 2014 (Zhou 2014). Although top tier cities still strictly limit local hukou numbers for rural migrant workers, in many medium-sized cities, the restriction was gradually relaxed and many rural migrant workers have started to obtain local hukou status in those cities where they have gradually enjoyed similar levels of social benefits as urban workers. Moreover, the expanded global market has increased the demand for cheap labors, yet the increasing of rural labors has not yet met this increasing demand. Consequently, the wage of rural labor has increased substantially. With an increased wage and benefits, migrant workers may encounter less discriminatory behaviors and other conflictual situations. Another explanation could be that rural migrant workers have started to integrate well into the urban setting. Over time, their clothing, and accent became closer to urban residents. Even though they were not officially recognized as urban residents, their identities became closer to those of urban residents. In this sense, conflictual experiences of rural workers in cities may decrease.

However, levels of psychological distress significantly increased from 2010 to 2014, as indicated by the latent difference score. This suggests that, in addition to conflictual experiences, other stressors may contribute to the increased psychological distress. One important factor is the aspiration of rural migrant workers. After rural migrant workers migrated to urban areas, their income as well as their aspirations increased substantially. Their risen aspirations may even exceed their potential achievements in urban areas. At the beginning of their migration, the migrant workers' financial situation has greatly improved, and they were better off compared to their rural counterparts. After several years of living in the urban setting, however, they may start to view themselves as urban residents and to compare their lives with members of the new reference group—urban residents with local hukou status (Knight and Gunatilaka 2010). This shift of the reference group may lead to the mismatch between the more rapidly increased levels of aspiration and the lagged behind levels of achievements. And the discrepancy is the major source of their stress and the subsequent increased levels of psychological distress.

The findings also indicate a significant cross-lagged effects between conflictual experiences and psychological distress. In other words, conflictual experiences measured in 2010 were significantly associated with subsequent changes in psychological distress from 2010 to 2014, and vice versa. Then, another important question becomes whether having conflictual experiences is likely a causal factor for psychological distress. Previous research focusing on the relationship between perceived discrimination and psychological distress often used cross-sectional data, thus failed to rule out the possible reciprocal relationship. This study fills in this literature gap by comparing the absolute

value of path coefficients associated with cross-lagged effects based on the LDS model. Result shows that having conflictual experiences plays a leading role in explaining the subsequent change in psychological distress. In other words, conflictual experience is more likely to affect the change of psychological distress, not the other way around. Therefore, current study provides evidence on the causal relationship between conflictual experiences and psychological distress.

This study is not without limitations. First, measures of psychological distress and conflictual experiences were based on self-reported questions, thus answers may be subject to individual understanding, social status, values, and health status. In addition, only two waves of data were included in the current study, thus the general changing trend of conflictual experiences and psychological distress as well as their correlations may not reflect the long-term reality. For future studies, more waves of data need to be included in order to understand the panorama of the association between conflictual experiences and psychological distress from long-term prospective.

Despite these limitations, findings based on longitudinal data and nationally representative sample have important implications. It is urgent for social workers and health practitioners to help rural migrant workers use effective coping strategies to alleviate the detrimental psychological well-being consequences of conflictual experiences as well as to identify other sources of stressors that could lead to adverse mental health outcomes. Government and policymakers need to take more action to reduce stigmatization and discrimination toward rural migrant workers as well as to help them avoid conflictual situations in urban areas. Furthermore, continued efforts are



needed in the reformation of hukou system to further eliminate the social structural barrier and grant migrant workers the same opportunities as city residents.

**Table 2.1 Sample Characteristics (N=939)**

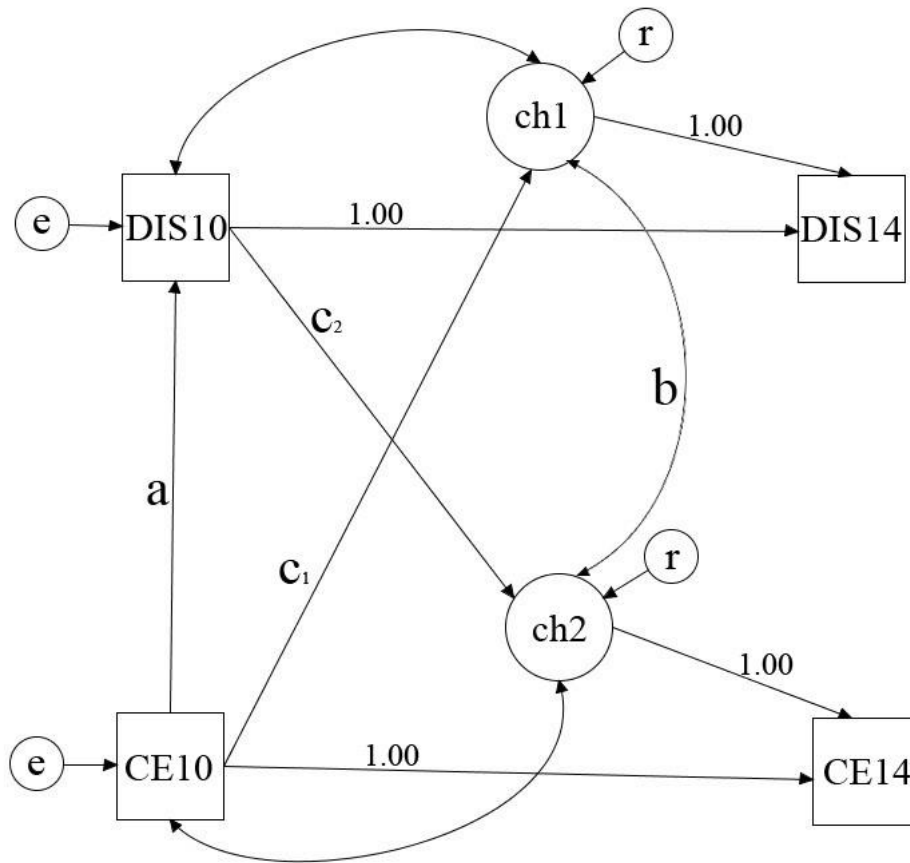
	Mean (standard deviation)/Percentage (%)
<b>Focal Variables</b>	
Conflictual Experiences (2010)	1.0 (1.5)
Conflictual Experiences (2014)	0.7 (1.2)
Psychological Distress (2010)	1.4 (0.5)
Psychological Distress (2014)	1.5 (0.6)
<b>Control Variables</b>	
Age	38.3 (10.5)
Gender	
Female	37.7
Male	62.3
Monthly Income (in RMB)	1376.4(1554.3)
Educational Attainment (%)	
High School Graduates	22.5
Less than High School	77.5
Marital Status (%)	
Currently Married	88.1
Other Marital Status	11.9
Communist Party Membership (%)	
Party Member	3.9
Non-member	96.1
Self-rated Health (%)	
Good/Fair Health	94.5
Fairly Poor/Poor/Very poor	5.5

All the control variables are selected from baseline wave data; the value of focal variable conflictual experiences ranges from 0 to 6; the value of another focal variable psychological distress ranges from 1 to 5.

**Table 2.2 Latent Difference Score (LDS) Analyses Results: Psychological Distress and Conflictual Experiences**

	Parameter Estimate	S.E.
<b>Regression coefficients</b>		
DIS10 → ch2 cross-lagged effect	0.035**	0.013
CE10 → ch1 cross-lagged effect	-0.203***	0.089
CE10 → DIS10	0.576***	0.067
<b>Covariance</b>		
ch1 ↔ ch2	0.958***	0.126
DIS10 ↔ ch1	-5.048***	0.438
CE10 ↔ ch2	-1.607***	0.093
<b>Intercepts</b>		
DIS10	4.871***	0.518
CE10	1.073***	4.913
ch1	0.627***	0.155
ch2	-0.404***	0.059
<b>Residual Variances</b>		
DIS10	6.866***	0.400
CE10	2.069***	0.096
ch1	13.818***	0.714
ch2	2.568***	0.121

Note: \* $P < 0.05$ ; \*\* $P < 0.01$ ; \*\*\* $P < 0.001$ ; two-tailed tests. Controlled for age, gender, marital status, educational attainment, monthly income, party membership and self-rated health at the baseline wave.



**Figure 2.1. Latent Difference Score (LDS) Model: Psychological Distress and Conflictual Experiences**

Notes: DIS10 refers to psychological distress at baseline wave; DIS14 refers to psychological distress at 2014 wave; CE10 refers to conflictual experiences at baseline wave; CE14 refers to conflictual experiences at 2014 wave; ch1 refers to latent difference score of psychological distress; ch2 refers to latent difference score of conflictual experiences; a refers to path coefficient from conflictual experiences to psychological distress that assessed at 2010; b refers to covariance between two latent difference scores;  $c_1$  refers to lagged effect of conflictual experiences that measured at 2010 on subsequent change of psychological distress from 2010 to 2014;  $c_2$  refers to lagged effect of psychological distress that measured at 2010 on subsequent change of conflictual experiences from 2010 to 2014; e refers to error term; r refers to residual variance. Control variables and corresponding coefficients not shown in this figure.

## **CHAPTER 3: Conflictual Experiences and Life Satisfaction of Rural Migrant Workers in China: The Protecting Role of Economic Gain**

### **Introduction**

In the previous chapter, I examined the association between conflictual experiences and psychological distress as well as the association over time among rural migrant workers. In this chapter, I shifted my focus from psychological well-being to life satisfaction, which is another important indicator of overall well-being. Current studies of China's internal migration overly emphasized the gain of economic capital associated with migration, thus largely neglected their quality of life and emotional needs in cities. Since many rural migrant workers have stayed in cities for years, their expectations are not merely the improvement of financial situations but an overall improvement of their living conditions in cities (Wang, Cheng, and Smyth 2013). Therefore, it is essential to examine whether they could live a better quality of life when they fully integrated into cities. At the same time, they are facing many unique stressors, such as conflictual experiences that I examined in the previous chapter, imposed by the state and capital as well as local citizens. These stressors may lead to diminished life satisfaction. In this chapter, I first examined the overall change of life satisfaction associated with rural migrant workers from 2010 to 2014 and then explored its possible association with conflictual experiences.

### ***Life Satisfaction as a Measure of Subjective Well-being***

World Health Organization (WHO) defines quality of life “as an individual’s perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns” (WHO

1997). Based on this definition, in order to have a comprehensive understanding of quality of life, it is not sufficient to merely examine people's objective circumstances such as social indicators. Assessing individuals' subjective perception is often equally or even more important. As Diener and Suh (1997) argued, in order to understand the well-being of individuals, it is essential to measure individuals' cognitive reactions to their life in their own standards. In other words, individuals' own "internal judgment" is the major concern of subjective well-being (Diener and Suh 1997: 201). In this sense, comparing to the measure of quality of life using objective social indicators, subjective well-being provides a more sophisticated understanding of one's living circumstance that takes into account people's different reaction, interpretation, and adjustment to external social conditions. This is because there is no sole or universal definition of a good life, and people develop different subjective standards of what a good life is based on their own values, goals, living experiences, and social relations (Zhang et al. 2016).

Researchers have found subjective well-being is associated with a wide range of correlates such as socioeconomic status, physical health, social support, psychosocial resources, self-esteem and self-efficacy (Baker et al. 2005). Subjective well-being is a multidimensional concept, and its definition as well as its assessment varies across fields and studies. In general, "subjective well-being is a broad category of phenomena that includes people's emotional responses, domain satisfaction, and global judgments of life satisfaction" (Diener, Lucas, and Smith 1999: 277). Common measures of subjective well-being include self-esteem, happiness, and life satisfaction (Pinquart and Sorensen 2000). In this study, I utilized life satisfaction as the measure of subjective well-being because it is a more stable and long-term assessment of well-being compared to

happiness and is more inclusive and diversified compared to self-esteem (Pinquart and Sorensen 2000).

### ***Life Satisfaction of Rural Migrant Workers in China***

Migration is associated with a series of stressors, including acculturation, discrimination, expectation-reality differences, separation from family members and friends, and other socioeconomic barriers. These stressors may lead to decreased life satisfaction among migrants (Knight and Gunatilaka 2010; Wang et al. 2013; Zhang et al. 2009). Specific to rural migrant workers in China, due to their migratory and disadvantaged hukou status, they lived marginalized lives in cities. And at the same time, they were facing unique stressors that were created by the joined force of perceived discrimination and structural discrimination. These stressors, in turn, may directly affect life satisfaction by increasing the exposure to toxic and stressful social context and indirectly by diminishing self-esteem (Kessler, Mickelson, and Williams 1999; Wang et al. 2010). However, even though they were facing harsh conditions in cities and they were at higher risks of exposure to stressful conditions, their levels of life satisfaction were comparable to their rural counterparts and even better than urban local workers based on the bivariate analysis that I conducted in chapter 1.

This finding is in line with previous research conducted by Nielsen and colleagues (2010), in which they found rural migrants had moderate levels of subjective well-being despite their inferior economic and social conditions in cities. They explained this by arguing that most rural migrants had no intention to settle in cities for long-terms. Instead, they preferred to return to their home villages when certain economic goals were reached. So, when they found the stressful conditions in cities were becoming too

difficult to cope, most of them had the backup plan that they could eventually return to their homes in the countryside. This fallback option provided an efficient coping resource that could be used to buffer the detrimental effects of challenges in cities on life satisfaction. By contrast, Knight and Gunatilaka (2010) found that the average happiness score among rural-urban migrant households was significantly lower than both rural and urban households. They argued that low levels of happiness of rural migrant workers not only came from the hardships of settling in cities but also came from their false expectations about their future city lives before migration. Most of the migrant workers lacked comprehension of complex policies that were implemented by their destination government, and this may result in their underestimation of strains and hassles after migration. Migrants were able to overcome the early hardships associated with settling and job searching in cities through their migrant networks, however, hardships related to housing, work, and family were difficult to cope. So, the discrepancy between pre-migratory expectation and reality depresses the happiness of migrant workers. In addition, many migrant workers had false expectations about their aspirations in the cities. Although most of them believed that their expectations would not rise in the cities, in reality, their aspirations increased substantially due to their new surroundings. Sometimes, their aspirations may even exceed their potential achievements in cities. So, another major reason for their relatively low happiness scores can be concluded as their altered aspirations after migration may not be fulfilled by their abilities and achievements in the cities. Also, when migrant workers moved to cities, they were influenced by urban norms. As a consequence, they used a higher standard to measure happiness. So, they reported lower happiness scores compared to their rural counterparts.



Due to the inconsistent findings regarding the subjective well-being of rural migrant workers, it is essential to examine their life satisfaction based on the nationally representative sample. In addition to compare their life satisfaction with important reference groups, it is also essential to identify possible factors that may directly or indirectly affect their life satisfaction. In the previous chapter, I combined perceived discrimination with structural discrimination into conflictual experiences and discussed possible mechanisms linking conflictual experiences with psychological distress. These mechanisms may also be applied to understand the possible association between conflictual experiences and life satisfaction. Comparing to psychological distress, life satisfaction is a long-term measure of the quality of life, and it subjects to personal interpretation and adjustment. Therefore, even though the previous chapter successfully identified the detrimental effect of conflictual experiences on psychological well-being, conflictual experiences would not necessarily affect life satisfaction in the same way. Taken together, in this chapter, I first attempted to use the same framework to analyze the association between conflictual experiences and life satisfaction. In addition, I also examined how this association varied over time.

Similar to the previous chapter, I aimed to examine the direct relationship between conflictual experiences and life satisfaction of rural migrant workers based on baseline CFPS data in this chapter. This was the first research goal of this chapter. I predicted that having conflictual experiences was positively associated with life satisfaction among rural migrant workers (Hypothesis 3.1). The second research goal was to examine, for rural migrant workers, whether there was a significant change in levels of life satisfaction in recent years. In the previous chapter, a significant increase in

psychological well-being was identified. Based on this finding, I expected that levels of life satisfaction would decrease in recent years (Hypothesis 3.2). The third research goal was to explore the effect of the change in conflictual experiences on the change in life satisfaction. Based on this research goal and findings from the previous chapter, similarly, three hypotheses were tested using two waves of panel data. First, change in conflictual experiences was associated with the change in life satisfaction among rural migrant workers (Hypothesis 3.3a). Second, conflictual experiences at the baseline wave predicted a subsequent change in life satisfaction, and life satisfaction at the baseline wave also predicted a subsequent change in conflictual experiences (Hypothesis 3.3b). Finally, conflictual experiences played a leading role in explaining the subsequent change in life satisfaction (Hypothesis 3.3c).

## **Methods I**

### ***Data***

Baseline wave (2010) and 2014 data wave of CFPS were used in this chapter. Again, rural migrant worker subsample (N=939) was selected based on the previously discussed definition.

### ***Measures***

The focal dependent variable in this chapter was life satisfaction, which was measured by a Likert scale question. Respondents were asked to rate how satisfied they were with their lives in general on a 5-point Likert Scale (1= “not at all satisfied” to 5= “very satisfied”). The measures of conflictual experiences and socio-demographic control variables were the same as the previous chapter.

## *Analyses*

In the following results section, descriptive analysis was performed to summarize sample characteristics. The results were summarized in Table 3.1. Figure 3.1 was created to show the main constructs and parameter estimates of LDS. Following this diagram, Table 3.2 was constructed to report parameter estimates, their standard errors, and significance levels. Multiple model fit indexes were also reported in the results section. To address Hypothesis 3.1, the path coefficient (denoted as “a” in Figure 3.1) from the baseline wave conflictual experiences to the baseline life satisfaction was estimated. In the LDS model, the intercepts (means) of latent differences scores represent the average change from time 1 to time 2. In the model, the intercepts (means) of latent difference score associated with life satisfaction (denoted as “ch1” in Figure 3.1) and latent difference score associated with conflictual experiences (denoted as “ch2” in Figure 3.1) represent the average change for life satisfaction and conflictual experiences, respectively, from 2010 to 2014. This result was used to address Hypothesis 3.2. To address Hypothesis 3.3a, the covariance (denoted as “b” in Figure 3.1) between two latent differences scores was estimated. The cross-lagged effects (denoted as “c<sub>1</sub>” and “c<sub>2</sub>” in Figure 3.1) indicated whether conflictual experiences measured at 2010 significantly affected the change of life satisfaction and whether life satisfaction measured at 2010 significantly affected the subsequent change of conflictual experiences (Hypothesis 3.3b). Finally, the comparison between c<sub>1</sub> and c<sub>2</sub> was used to test which construct played a leading role in explaining the variation of the other construct (Hypothesis 3.3c).

## **Results I**

### ***Descriptive Statistics***

Mean score of life satisfaction was 3.4 with a standard deviation (s.d.) of 0.9 at the baseline wave and 3.8 with an s.d. of 0.9 at the 2014 wave. Please refers to the previous chapter for descriptive statistics of other variables.

(Table 3.1 is about here)

### ***LDS Model Results***

Figure 3.1 shows the results of the LDS model. In general, LDS model again fitted data quite well (Newsom 2015) with Chi-Square=14.340 ( $df=14$ ,  $p=0.425$ ), RMSEA=0.005,  $P$  (RMSEA $\leq$ 0.05) =1.000, SRMR=0.013, CFI=0.998. As shown in Table 3.2, the cross-sectional coefficient between conflictual experiences and life satisfaction was about -0.10 ( $p < 0.001$ ) at the baseline. This result indicated that conflictual experiences were significantly and negatively associated with life satisfaction. In other words, having conflictual experiences decreased the life satisfaction of rural migrant workers. This finding is consistent with Hypothesis 3.1.

(Figure 3.1 is about here)

(Table 3.2 is about here)

As indicated by the intercept of the latent difference score associated with life satisfaction (denoted by “ch1” in figure 3.1), there was a significant increase (positive intercept) in life satisfaction ( $B=0.337$ ,  $p < 0.001$ ) from 2010 to 2014. The intercept of the latent difference score associated with conflictual experiences (denoted by “ch2” in figure 3.1) was also statistically significant. Therefore, an decrease in conflictual experiences from 2010 to 2014 was also identified. So, hypothesis 3.2 is also supported by empirical data analysis.

As I expected in Hypothesis 3.3a, a significant covariance existed between two latent difference scores (denoted by “b”,  $B = -1.576, p < 0.001$ ). This means that the change of conflictual experiences was negatively associated with an change of life satisfaction. Specifically, an increased unit of conflictual experiences would relate to a decreased unit in life satisfaction. Finally, as the cross-lagged effects (denoted by “c<sub>1</sub>” and “c<sub>2</sub>”) indicated, conflictual experiences measured at the baseline was not significantly associated with a subsequent increase in life satisfaction and life satisfaction measured at the baseline was also not significantly associated with a subsequent decrease in conflictual experiences. This is contradicted with what I predicted in Hypothesis 3.3b. Along this line, it is also meaningless to compare the absolute value of two insignificant parameter estimates. Therefore, Hypothesis 3.3c is also not supported.

The results indicate that although conflictual experiences were negatively associated with life satisfaction at baseline with adjustment of sociodemographic variables and the change of conflictual experiences was also associated with the change of life satisfaction, the causal relationship between these two factors has not been confirmed. This means that conflictual experiences may not necessarily cause a diminished life satisfaction. This finding is largely contradicted with finding from the previous chapter, in which a causal relationship from conflictual experiences to psychological distress was identified. One possible explanation is that some unmeasured variables in the LDS model may confound the association between these two factors. In fact, it is possible that some protective factors may mitigate the detrimental effect of adversities on well-being and benefit the development of resiliency among migrants (White and Lindstrom 2005). Previous research has found the meaning of migration may

provide protective function and help migrant workers to withstand the stress of migration (Wong and Song 2008). In the rest of this chapter, I attempted to examine the possible well-being protecting effect of economic gain, one of the important meanings associated with migration among rural migrant workers, based on CFPS data.

### **The Protecting Role of Meaning of Migration: Economic Gain**

According to Pearlin and colleagues (1981), stress occurs with a significant adjustment to the circumstance that requires individuals to respond. These include two major types: life events, which represent the occurrence of discrete events (e.g., dismissal from a job, the death of a significant one), and chronic strains, which represent problems that occur continuously (poverty, poor neighborhood, disease, etc.). In the case of rural migrant workers, conflictual experiences may create a joined force between perceived discrimination and structural discrimination and form new strain or intensify existing strain. Due to rural migrant workers' migratory and disadvantaged hukou status, they frequently experience stressful life events such as hostile attitudes and direct discriminatory behaviors from local citizens. Moreover, they lived in a marginalized life in cities and were continuously being stigmatized by the government and mass media. These adversities have created chronic strains for their lives.

No matter what types of stressor individual may confront, it is irrational to assume those individuals will take no action to respond to these stress-provoking conditions. Instead, people usually respond to stressors with a set of behaviors, including cognition, perception, and defense, depending on the resources one possesses. Pearlin categorized these mediating resources into two types: social support and coping ability. I argue that

rural migrant workers rely more on coping abilities to deal with daily hassles and stressful life events than social support resources. First of all, due to hukou limitations, many rural migrant workers move to urban cities without the companies of their children and aging parents. In this sense, a large part of family support is absent. Second, although rural migrant workers form a very strong migrant network with their fellow workers, the network could only offer limited social support resources to deal with common stressors. This is because the members of the network have a similar background and are equally powerless to deal with adversities that were mainly formed by the interests of government and capital. Third, as discussed in the previous chapter, rural migrant workers often view their lives in cities as temporary due to limited hope of upward social mobility. So, many of them would eventually return to their home villages (Loong-Yu and Shan 2007). As a consequence, their migration decisions are based solely on economic concerns. At the same time, they also have limited opportunity and interest to develop social networks in cities. Therefore, I argue that rural migrant workers rely heavily on their coping abilities to counteract stressors such as conflictual experiences.

In Pearlin's famous research, he argued that coping is "the action that people take in their own behalf as they attempt to avoid or lessen the impact of life problems." (Pearlin et al. 1981: 250). Coping is a complex behavior that varies across individuals and also depends on the life problems one may encounter. In general, coping can be summarized into three categories: "the modification of the situations giving rise to stressful problems; the modification of the meaning of problems in a manner that reduces their threat; and the management of stress symptoms" (Pearlin et al. 1981: 341). Pearlin further argued, when facing economic strain, people have the abilities to "use of

comparative frames of reference in such a way that their economic resources, no matter what their objective level, are judged in a positive way”(Pearlin et al. 1981: 346). This coping strategy is based on the comparison with the reference group members or the comparison with other life stages. For the former instance, people draw their reference group from those who have worse or equal economic conditions than their own. By doing so, individuals tend to have a positive evaluation of their own economic conditions. For the latter instance, individuals compare their current situations with their past or future life stages. Individuals see their current conditions either as an improvement compared to the past or as an early stage to future improvement.

The economic coping strategy that Pearlin discussed is relevant to understand the coping ability of rural migrant workers, whose migration decisions are largely based on potential economic gain. A previous study conducted in Shanghai found that potential financial and material gains were the most common reason for rural migrants to living in Shanghai (Wong and Song 2008). For this reason, their life satisfaction is largely determined by the financial and economic gain in urban areas. Along this line, although they have higher risks of experiencing conflictual interactions in cities, they also seize this opportunity to enhance their own and their family’s economic conditions. Even though their remunerations are significantly lower than their urban counterparts, most of them take positive appraisals for their migration decisions. This is because, they do not compare their economic conditions with urban citizens, but with those who remain in rural areas. Those who choose to stay in the countryside (especially inner province countryside) have to bear very harsh conditions, including low income, poor social security benefits, and insufficient medical and educational resources. In some poorest



rural areas, even basic needs such as running water, food, and shelters are problematic. Rural migrant workers are better off in almost every aspect compared to those miserable rural dwellers. Perhaps, the comparisons that rural migrants made with their rural counterparts help them withstand daily hassles and chronic strains. As I discussed in the previous chapter, not all rural migrant workers compare their living conditions and economic conditions with their rural counterparts. As rural migrant workers become better integrated with urban life, they start to compare themselves with local urban residents (Knight and Gunatilaka 2010). According to Pearlin and colleagues (1981), for this group of individuals, the second way of economic coping comes into play. Rural migrant workers may view their current economic and social status as temporary and as an “improvement of the past” and “prelude of their future improvement” (Pearlin et al. 1981: 346). Previous research showed that the average increase rate for the annual income of rural migrant workers was close to 14.50% and has the tendency to continue to rise in the next decade (Cai and Li 2015). An enhanced economic condition has the ability to alleviate the detrimental effect of conflictual experiences on life satisfaction. In general, rural migrant workers view migration as a way to enhance their economic conditions and this positive meaning helps them counteract stressors that come from conflictual experiences.

### **Gender Differences**

Previous studies have documented that even though economic gain served as the protecting role of well-being, it affected female differently compared to male. Wong and Song (2008) found that female migrant workers who took positive appraisals of living in

Shanghai had better mental health conditions compared to other female migrant workers. By contrast, male migrant workers, especially married male migrant workers who worked as manual labors, were more likely to experience stresses and consequently had worse psychological well-being than their female counterparts. This is probably because traditional Chinese patriarchal culture expects males to be the financial supporters of their families. This strong cultural norm may put heavy pressures on males. Male migrant workers often continuously support their family members, who remain in rural areas, through monthly remittances. The heavy financial burden is often joined by the pressures that are caused by poor working and living conditions, wage arrears, lack of social insurance, and other work and life related stressors due to their migratory status (Wong and Song 2008). On the contrary, females do not bear the same levels of responsibility in terms of financial support to family members. Not surprisingly, female migrant workers experienced lower levels of stress and had better overall psychological well-being than male migrant workers.

Another important reason to explain the gender difference can be attributed to different expectations and meanings associated with migration. Male migrant workers, at least most of them, expect financial and material gains through migration. For female migrant workers, in addition to the potential improvement of economic conditions, they also view migration as a way to get rid of their rural life. Those female rural residents, especially those who are married, who remain in rural areas live in a miserable life and are facing many adversities. First of all, the out-migration of their husbands increases the workload of these “left behind” women. They become the major labor forces in the farm works, and at the same time they also need to take care of housework chores as well as to

provide care for their children and aging parents. One study conducted in Chongqing municipality found that more than 58% of left behind rural female residents worked over 10 hours during the farming season (Zhou, Zeng, and Lie 2007). The heavy workload generated a lot of physical and mental strains for this unique group. One research conducted in the rural area of Henan province showed that more than 75% of left behind women had gynecological diseases or other chronic diseases. More than 90% of left behind women reported that they had ever felt anxiety, helpless and insecure. In addition to physical and psychological problems, many left behind women were victims of sexual assault and burglary due to the absence of their husbands in the households (Jiang, Li, and Fu 2014). Moreover, large numbers of left behind women were worried about the security of their marriages and were facing long-term sexual repressions due to the separation from their out-migrated husbands (Wu and Rao 2009). Although very few studies have focused on Chinese rural female residents who are not married, we may base on the studies of “left behind” women to infer that their futures will also be very gloomy and hopeless if they remain to stay in rural areas. Therefore, migration is a life-changing decision for many female rural migrant workers. For this reason, they are more likely to view their lives in cities from a positive way compared to male migrant workers. All these pieces of empirical evidence suggest that gender difference in the meanings of migration may lead to a gendered pattern for the effect of economic gain on life satisfaction.

Taken together, the rest of this chapter mainly attempted to examine the following research questions: 1) what was the direct effect of the economic gain on life satisfaction among rural migrant workers? 2) whether economic gain could provide a stress-buffering

effect that could be used to alleviate the detrimental effect of conflictual experiences on life satisfaction? 3) whether there were any gender differences regarding the direct and moderating effect of economic gain? Based on the abovementioned empirical background, I proposed the following specific hypotheses: 3.4) economic gain was positively associated with life satisfaction among rural migrant workers; 3.5) rural migrant workers with higher levels of economic gain were more capable of counteracting the negative effect of conflictual experiences on life satisfaction compared to those with lower levels of economic gain; 3.6) the direct positive effect and stress-buffering effect of economic gain were more salient among male migrant workers than among female migrant workers.

## **Methods II**

### ***Data***

To examine these hypotheses, 2010 baseline wave and 2014 wave of CFPS data were utilized. Based on the definition of rural migrant workers that I proposed in previous chapters, I included 939 rural migrant workers (354 female and 585 male) who were surveyed in both 2010 and 2014.

### ***Measures***

Focal dependent variable life satisfaction was based on 2014 wave of CFPS data and was measured by a Likert scale question. Respondents were asked to rate how satisfied they were with their lives in general on a 5-point Likert Scale (1= “not at all satisfied” to 5= “very satisfied”). The first focal independent variable was economic gain, which was measured by the increases of annual income (in RMB, 1 RMB=0.16 dollar)

from 2010 to 2014. Annual income was measured by the summed value of salary, bonus, cash benefit, and in-kind subsidies after tax. To facilitate coefficient interpretation, log-transformed income growth was used. Another focal independent variable was conflictual experiences (2014 wave of data) that rural migrant workers have encountered in cities. A detailed measure of conflictual experiences was discussed in the previous chapter. In all models, I controlled for socio-demographic variables. The measures of the socio-demographic variables were the same as the previous chapter indicated.

### *Analysis*

Multiple imputation was applied to deal with missing cases of annual income for rural migrant workers at 2014 wave. The missing rate for this indicator was 44.3%. Multiple imputation algorithm was based on Markov Chain Monte Carlo (MCMC) method and was conducted using SPSS version 21. Missing rates for other indicators were less than 5%, therefore, it was not necessary to conduct missing data imputation for these variables. Univariate statistics that summarize sample characteristics were presented in Table 3.3. Table 3.3 also included independent t-test results for gender, focal independent variables, and dependent variable. Due to the high missing rate of annual income in 2014 wave of CFPS data, it was inappropriate to examine the effect of economic gain on life satisfaction based on the previously used LDS model. Instead, two pooled Ordinary Least Square (OLS)<sup>4</sup> regression models were performed to deal with imputed data. The results were summarized in Table 3.4, where Model 1 was used to test the direct effect and Model 2 was used to test the moderating effect (interaction effect) of economic gain. Stratified analyses based on gender were performed and the results were

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<sup>4</sup> Pooled OLS regression shows average coefficient for each independent variables based on imputed data

summarized in Table 3.5. All the models were based on weighted analyses that took into account sampling design.

## **Results II**

### ***Descriptive Statistics***

Table 3.3 shows that the average life satisfaction for the whole sample was 3.8 (range: 1-5) with a standard deviation (s.d.) of 0.93. The mean annual income for rural migrant workers in 2010 was around 16,825 RMB (roughly \$2,400; range: 0 to 240,000 RMB) and mean annual income in 2014 was approximately 32,465 RMB (roughly \$4,640; range 0 to 244, 132 RMB). The average income increases from 2010 to 2014 was close to 15,955 RMB (roughly \$2280; range -103,578 to 191,785 RMB). Average conflictual experiences score for the whole sample was 0.7 for the 2014 wave. The average age for the whole sample was approximately 41 years old. Approximately 23% of rural migrant workers were high school graduates and around 88% were currently married. Less than 4% of the rural migrant workers were the Communist Party members and nearly 94.5% of rural migrant workers reported they had good/fair self-rated health. Compared to males, female migrant workers reported significantly lower average annual income for both 2010 and 2014 as well as significantly lower mean scores of conflictual experiences. No significant difference was identified for life satisfaction based on independent sample *t*-test.

### ***OLS Regression Results***

Table 3.4 summarized the direct effect and moderating effect of conflictual experiences on life satisfaction adjusting for control variables. As shown in Model 1,

among rural migrant workers, the log-transformed income increase was significantly and positively associated with life satisfaction ( $b = 0.06, p < 0.05$ ). In other words, the economic gain was beneficial for life satisfaction among rural migrant workers. Therefore, hypothesis 3.4 is supported by empirical analysis. Having conflictual experiences was significantly and negatively associated with life satisfaction ( $b = -0.13, p < 0.001$ ). This finding is consistent with the finding from the previous LDS model. Compared to female migrant workers, male migrant workers were less satisfied with their lives in general, as shown in Model 1. Model 2 tested the potential stress-buffering/moderating effect of economic gain by adding the interaction term between economic gain and conflictual experiences. The results showed, for the whole sample, economic gain did not provide a moderating effect for the association between conflictual experiences and life satisfaction. So, hypothesis 3.5 is not supported by the analysis.

Table 3.5 summarized the results of the moderating role of gender based on the stratified OLS regression. Similar to findings from the whole sample, having conflictual experiences was significantly and positively associated with life satisfaction for both men ( $b = -0.15, p < 0.001$ ) and women ( $b = -0.07, p < 0.001$ ). As shown in Model 1, the economic gain was associated with an increased level of life satisfaction only for males ( $b = 0.11, p < 0.001$ ) but not for females. Similarly, as shown in Model 2, the moderating effect of economic gain was only significant for male subsample but not for female subsample. In other words, the negative effect of conflictual experiences on life satisfaction could be buffered by an increased annual income only for male migrant workers but not for females migrant workers. Therefore, hypothesis 3.6 is supported by the analysis.

## Discussion

In this chapter, I first examined the overall change of life satisfaction among rural migrant workers from 2010 to 2014 and explored its possible association with conflictual experiences over time. Based on the LDS model, there was a significant increase in life satisfaction and a significant decrease in conflictual experiences from 2010 to 2014 among rural migrant workers. The decrease in conflictual experiences is in line with what I found in the previous chapter. However, a seemingly counterintuitive finding is that increases in both psychological distress and life satisfaction were identified among rural migrant workers from 2010 to 2014. This contradictory finding could be explained by the measures of these two indicators. For psychological distress, the interviewers based on the Kessler Psychological Distress Scale inquired respondents' stress-related feelings or emotions for the past 30 days. This measure largely emphasized a short-term evaluation of psychological well-being. Whereas for life satisfaction, respondents were asked to rate how satisfied they were with their lives in general. This measure was largely based on a long-term evaluation. The short-term hardships or stressful life events that individuals experienced may not necessarily become chronic strains that eventually lead to decreased life satisfaction (Pearlin et al. 1981).

Life satisfaction was negatively associated with conflictual experiences at baseline wave (2010 wave of data) after controlling for sociodemographic variables. Moreover, the change of conflictual experiences was positively associated with the change in life satisfaction. However, conflictual experiences measured at baseline was not significantly associated with a subsequent increase in life satisfaction and life satisfaction measured at baseline was also not significantly associated with a subsequent



decrease in conflictual experiences. These findings suggest that although a negative association between conflictual experiences and life satisfaction has been identified, the causal relationship has been failed to confirm. In other words, conflictual experiences may not necessarily cause the change in life satisfaction. This finding is largely contradictory with the finding from the previous chapter, in which a causal relationship between conflictual experiences and psychological distress was supported. One possible explanation is that some unmeasured variables in the LDS model might confound the association between these two factors. I argued that one of the possible unmeasured variables was the economic gain among rural migrant workers. Based on the stress process model (Pearlin et al. 1981), I further argued that the economic coping strategy of rural migrant workers might counteract the detrimental effect of conflictual experiences on life satisfaction. In addition, this stress-buffering effect was more salient among males than among females. Although income was controlled in LDS model, it would be more accurate to utilize income increase as the measure of economic coping since it was viewed by rural migrant workers as an “improvement of the past.” This argument was largely supported by the pooled OLS regression analyses. The regression models indicated that economic gain was positively associated with an increased level of life satisfaction for male migrant workers but not for female migrant workers. Moreover, the economic gain provided a stress-buffering effect that could be used to alleviate the detrimental effect of conflictual experiences on life satisfaction. However, the stress-buffering effect was only salient among male migrant workers but not among female migrant workers.

In recent years, researchers have argued that studies on the well-being of Chinese rural migrant workers need to move beyond the focus of their actual or potential economic gain and to include more studies that tackle their emotional needs and cultural life (e.g., Wu, Wei, and Qian 2017). However, economic gain still played a significant role when the life satisfaction of rural migrant workers was examined based on findings above. One of the major driving forces behind China's unprecedented internal migration was China's unbalanced regional development policies, which had prioritized urban areas over rural areas. As a consequence, a huge rural-urban income gap had been generated and the gap tended to grow even larger. This increasing income gap had provided a strong "pull" effect that attracted migrant workers to move to cities and search for higher paid jobs as well as better lives. This important finding from this chapter may provide some evidence for the association between income and happiness/life-satisfaction among migrants, especially economic migrants, that were studied by many happiness researchers.

The famous Easterlin paradox (Easterlin 1974) stated that although people who live in economically developed regions were generally happier than people who live in poorer regions, the relationship between income growth was only weakly associated with happiness among residents of wealthier regions. For example, despite a post-world war economic boom in Japan and the U.S., the average happiness did not rise at comparable levels in these two countries (Easterlin 2005). In many economically developed countries, there seems to be a satiation point after which more income does not necessarily bring extra happiness. Researchers argued that when economic gain reached to a certain point, other aspects, such as marriage stability, employment, and health,

became more vital to life satisfaction and high income was not sufficient compensation for these aspects (Blanchflower and Oswald 2004). However, Easterlin's argument was not a claim that money or material goods were not important for happiness, instead, his argument was that absolute income when reaching to a certain point, was only weakly associated with happiness. In other words, income in a relative sense had more impact on happiness (Bartram 2010). This is because individuals' social and economic positions were largely unchanged when rapid economic growth within a country had increased the average income level for all the citizens, so was the happiness.

This distinction between absolute income and relative income leads us to the possible explanation of why absolute income may not necessarily translate into joy. The first reason is related to aspiration, which I discussed in the previous chapter, the individual's aspiration increases with an increased absolute income. In this regard, happiness is determined by the discrepancy between actual income and income aspiration. When income aspiration surpasses actual absolute income or potential income gains in the near future, happiness and satisfaction of life are not guaranteed (Bartram 2010). In addition, the increased income may lead to a shift in the reference group. People with increased income tend to compare themselves with an even wealthier reference group (Clark et al. 2008). Along this line, even with an increased absolute income, their relative income may remain unchanged or even decline when compared to the members of the new reference group. Finally, when people become accustomed to an increased income, its positive effects on life satisfaction and happiness may both erode (Easterlin 2001). Then, how about the relationship between income and happiness/life satisfaction among economic migrants?

Economic migrants often make a great deal of sacrifice in pursuing higher income and better lives in wealthier regions (Bartram 2011). Often times, their economic gain cannot be compensated by their sacrifices, such as being discriminated in the host culture or separating from family members. At the same time, while economic migrants could obtain higher absolute income in the destination countries/regions, their relative income/social position are likely to be lower since they now draw their reference groups from host countries/regions. Along this line, the argument that economic gain may not necessarily bring happiness or life satisfaction is even more true among economic migrants. To test this argument, Bartram (2001) examined the association between absolute income and happiness among economic migrants as well as among native-born individuals in the U.S. His finding suggested that the association between income and happiness was stronger for immigrants than for natives, and this stronger association was more salient among those who migrated from poorer countries. Bartram also found that immigrants reported lower life satisfaction scores compared to natives. So, the extra happiness that migrants obtained from their absolute incomes was “outweighed by the fact that they are less satisfied than natives with the incomes they have achieved” (Bartram 2001: 21). Olgati and colleagues (2013) further extended Bartram’s study by including more countries from Europe, North American, and Australia in their analyses. Based on data from Gallup World Poll, they found that the association between income and happiness among immigrants followed a positive linear relationship only in a handful of countries. In most of the examined countries, income could only increase happiness up to a certain point. In some of the countries, even a negative association between income

increase and life satisfaction was found. These findings indicated the association between economic gain and happiness of economic migrants varied across countries.

In the case of rural migrant workers in China, based on what I have found, their increased income still brought a beneficial effect on their life satisfaction. This suggests that economic gain was still valued by rural migrant workers at the current stage. It is still not clear whether income increase would bring extra happiness after their income reach to a certain point, as discussed by abovementioned happiness researchers. Whether increased income may lead them to compare themselves with wealthier local citizens? Whether other aspects, such as health, family relationship, and cultural life, would become more relevant to their life satisfaction if a certain level of subsistence has been reached? These are surely questions that worthy of further attention. I hypothesize that although their increased income may lead to a shift of the reference group, the satiation point at which income no longer translates into joy is unlikely to be reached by rural migrant workers. First of all, we should not neglect cultural differences. Chinese traditional filial piety emphasizes interdependence among generations. Chinese rural migrant workers maintain a close bond with their family members (left behind aging parents or/and their children) through regular remittance even after they moved to cities. So, rural migrant workers in China need to greatly improve their economic conditions in order to provide economic support for the whole family. In this sense, their financial needs are relatively more urgent and greater than many international economic migrants. In addition, most of the rural migrant workers could only take menial jobs in cities due to skill and education limitations as well as hukou restrictions. The remunerations for these jobs are usually low, and the future rises of their income are also limited. Therefore, the

economic gain would still play a significant role in determining life satisfaction of rural migrant workers, even in the long run.

In this chapter, the empirical data analysis successfully identified the stress-buffering/moderating effect associated with economic gain among male migrant workers. It seems, for males, economic coping was an effective way to withstand the detrimental effect of conflictual experiences on life satisfaction. However, the finding failed to identify a similar stress-buffering effect among female migrant workers. This gender difference was largely due to different meanings associated with migration and different role expectations that were created by the social norm. For male migrant workers, in general, migration is a way to obtain economic gain for their family members and themselves. Their migration decisions are based largely on economic concerns. Whereas for female, in addition to potential economic gain, migration is a way to get rid of their miserable rural lives. At the same time, China's traditional patriarchal culture expects males to be the breadwinner, whereas females do not bear the same levels of responsibility. So, not surprisingly, economic coping plays a significant role only for male migrant workers but not for female migrant workers. It helps the former to withstand the negative effect of conflictual experiences.

Moreover, evidence showed female workers were generally more capable to connect with others in a new context (Loong-Yu and Shan 2007), so they were more likely to rely on social support to counteract the stress that came from conflictual experiences than their male counterparts. In addition, the bivariate analysis also showed that the annual income (both 2010 and 2014) of male migrant workers were significantly higher than female migrant workers. Perhaps, based on the information provided by their

fellow villagers who were current or former migrants, female migrant workers may already have an expectation that their economic gain may not as high as males before migration. So, in addition to different meanings of migration and different role expectations, the different aspirations could also be used to explain part of the gender difference in terms of the moderating effect of economic gain. However, even though females reported significantly lower levels of conflictual experiences, their levels of life satisfaction were just comparable to male. This finding indicates that other aspects, in addition to conflictual experiences and socio-demographic factors, may have greater impacts on the life satisfaction of female migrant workers. This hypothesis is worthy of further examination in the future.

The study conducted in this chapter is not without limitation. First of all, due to the limitation of the data, the measure of life satisfaction was based on a single item question, which may not be very accurate to measure the overall quality of life of rural migrant workers. For future study, more sophisticated and well-established scales need to be included to increase the reliability of the measurement of life satisfaction. In addition, economic gain measured in this study was based on the income increase from 2010 to 2014. Within this short period, income increase may not reflect the accurate and general trend of economic gain of rural migrant workers.

Despite these limitations, findings from this study have successfully identified a significant increase in life satisfaction and a significant decrease in conflictual experiences from 2010 to 2014 among rural migrant workers. And the change of conflictual experiences was positively associated with the change of life satisfaction. Findings from OLS regression have successfully identified the direct effect of economic

gain on life satisfaction for both male and female. Finally, the economic gain may counteract the detrimental effect of conflictual experiences on life satisfaction only among males but not among females. The government needs to take more actions to further eliminate social structural barrier and improve the economic conditions of rural migrant workers. For policymakers, the design of new migration policies needs to take into account the gender difference in terms of the meanings of migration.



**Table 3.1 Sample Characteristics (N=939)**

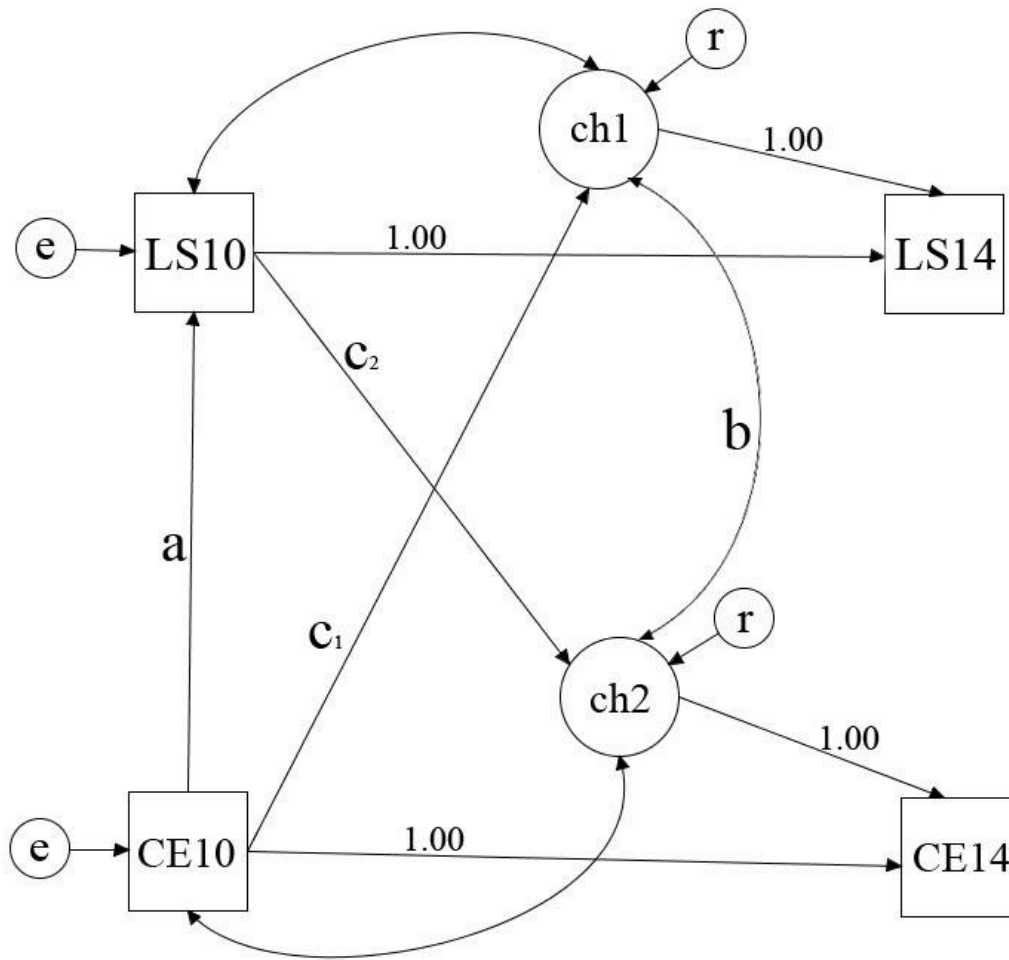
	Mean (standard deviation)/Percentage (%)
<b>Focal Variables</b>	
Conflictual Experiences (2010)	1.0(1.5)
Conflictual Experiences (2014)	0.7(1.2)
Life Satisfaction (2010)	3.4(0.9)
Life Satisfaction (2014)	3.8(0.9)
<b>Control Variables</b>	
Age	38.3(10.5)
Gender	
Female	37.7
Male	62.3
Monthly Income (in RMB)	1376.4(1554.3)
Educational Attainment (%)	
High School Graduates	22.5
Less than High School	77.5
Marital Status (%)	
Currently Married	88.1
Other Marital Status	11.9
Communist Party Membership (%)	
Party Member	3.9
Non-member	96.1
Self-rated Health (%)	
Good/Fair Health	94.5
Fairly Poor/Poor/Very poor	5.5

All the control variables are selected from baseline wave data; the value of focal variable conflictual experiences ranges from 0 to 6; the value of another focal variable life satisfaction ranges from 1 to 5.

**Table 3.2 Latent Difference Score (LDS) Analyses Results: Life Satisfaction and Conflictual Experiences**

	Parameter Estimate	S.E.
<b>Regression coefficients</b>		
LS10 → ch2 cross-lagged effect	-0.032	0.040
CE10 → ch1 cross-lagged effect	0.027	0.027
CE10 → LS10	-0.101***	0.021
<b>Covariance</b>		
ch1 ↔ ch2	-0.151***	0.034
LS10 ↔ ch1	-0.741***	0.044
CE10 ↔ ch2	-1.576***	0.091
<b>Intercepts</b>		
LS10	3.197***	0.157
CE10	1.047***	0.221
ch1	0.337***	0.047
ch2	-0.221***	0.147
<b>Residual Variances</b>		
LS10	0.875***	0.040
CE10	2.070***	0.096
ch1	1.435***	0.066
ch2	2.527***	0.117

Note: \* $P < 0.05$ ; \*\* $P < 0.01$ ; \*\*\* $P < 0.001$ ; two-tailed tests. Controlled for age, gender, marital status, educational attainment, monthly income, party membership and self-rated health at the baseline wave.



**Figure 3.1. Latent Difference Score (LDS) Model: Life Satisfaction and Conflictual Experiences**

Notes: LS10 refers to life satisfaction at baseline wave; LS14 refers to life satisfaction at 2014 wave; CE10 refers to conflictual experiences at baseline wave; CE14 refers to conflictual experiences at 2014 wave; ch1 refers to latent difference score of life satisfaction; ch2 refers to latent difference score of conflictual experiences;  $a$  refers to path coefficient from conflictual experiences to life satisfaction that assessed at 2010;  $b$  refers to covariance between two latent difference scores;  $c_1$  refers to lagged effect of conflictual experiences that measured at 2010 on subsequent change of life satisfaction from 2010 to 2014;  $c_2$  refers to lagged effect of life satisfaction that measured at 2010 on subsequent change of conflictual experiences from 2010 to 2014;  $e$  refers to error term;  $r$  refers to residual variance. Control variables and corresponding coefficients not shown in this figure.

**Table 3.3 Sample Characteristics: Stratified by Gender (N=939)**

	Mean (S.D.)/Percentage (%)	Gender		
		Male (N=585)	Female (N=354)	
<b>Focal Variables</b>				
Life Satisfaction (2014)	3.8 (.93)	3.8 (.95)	3.8 (.89)	
Annual Income (2010)	16,824.8 (18,335.1)	19,155.9 (21,754.2)	12,154.1 (10,530.2)	***
Annual Income (2014)	32,465.6 (22,342.2)	36,136.2 (24,878.3)	26,357.1 (16,476.0)	***
Income Increase (2010-2014)	15,954.8 (18,983.8)	16,945.4 (21,526.2)	14,483.2 (18,293.7)	
Conflictual Experiences (2014)	0.7 (1.2)	0.7 (1.3)	0.6 (1.1)	**
<b>Control Variables</b>				
Age	40.6 (10.15)	45.6 (10.9)	42.1 (9.4)	
Educational Attainment (%)				
High School Graduates	22.5	22.1	23.2	
Less than High School	77.5	77.9	76.8	
Marital Status (%)				
Currently Married	88.1	88.0	88.1	
Other Marital Status	11.9	12.0	11.9	
Communist Party Membership (%)				
Party Member	3.9	5.1	2.0	
Non-member	96.1	94.9	98.0	
Self-rated Health (%)				
Good/Fair Health	94.5	94.2	94.9	
Fairly Poor/Poor/Very poor	5.5	5.8	5.1	

*Notes:* Means and standard deviations (in parentheses) are provided for the continuous variables and percentages are provided for categorical and dichotomous variables; Independent *t*-test was performed for gender, focal independent variables, and dependent variable, \* $P < .05$ ; \*\* $P < .01$ ; \*\*\* $P < .001$ .

**Table 3.4 Ordinary Least Squares (OLS) Regressions: Regress Life Satisfaction on Increased Income, Conflictual Experiences, and Control Variables**

	Life Satisfaction (N=939, 2014 Wave)	
	Model 1	Model 2
<b>Focal Variables</b>		
Income Increase (logged)	.06(.02)*	.04 (.02)
Conflictual Experiences (2014)	-.13(.01)***	-.24(.06)*
Conflictual Experience * Increased Income (logged)		.01(.01)
<b>Control Variables</b>		
Male (Female <sup>a</sup> )	-.15(.02)***	-.14(.02)***
Age	-.00(.00)	-.00(.00)
Educational Attainment (less than high school <sup>a</sup> )		
High School Graduates	.11(.01)***	.11(.01)***
Marital Status (others <sup>a</sup> )		
Currently Married	.30(.04)***	.30(.04)***
Communist Party Membership (non-member <sup>a</sup> )		
Party Member	.33(.04)***	.32(.04)***
Self-rated Health (other health conditions <sup>a</sup> )		
Good/Fair Health	-.03(.05)	-.03(.05)
Intercept	3.31	3.42
Adjusted R <sup>2</sup>	.23	.26

Notes: \* $P < .05$ ; \*\* $P < .01$ ; \*\*\* $P < .001$ ; <sup>a</sup> stands for the reference group; standard errors are in parentheses

**Table 3.5 Ordinary Least Squares (OLS) Regressions: Regress Life Satisfaction on Increased Income, Conflictual Experiences, and Control Variables by Gender**

	Life Satisfaction (N=939, 2014 Wave)			
	Male		Female	
	Model 1	Model 2	Model 1	Model 2
<b>Focal Variables</b>				
Income Increase (logged)	.11(.02)***	.08(.02)**	-.01(.04)	.02(.04)
Conflictual Experiences (2014)	-.15(.01)***	-.46(.10)**	-.07(.01)***	.77(.37)
Conflictual Experience * Increased Income (logged)		.03(.01)*		-.09(.04)
<b>Control Variables</b>				
Age	.01(.00)*	.01(.00)	-.02(.00)***	-.02(.00)***
Educational Attainment (less than high school <sup>a</sup> )				
High School Graduates	.19(.04)**	.19(.04)**	-.01(.04)	-.03(.03)
Marital Status (others <sup>a</sup> )				
Currently Married	.25(.08)*	.26(.08)*	.33(.05)**	.35(.06)**
Communist Party Membership (non-member <sup>a</sup> )				
Party Member	.28(.04)**	.27(.04)***	.33(.03)***	.33(.03)***
Self-rated Health (other health conditions <sup>a</sup> )				
Good/Fair Health	-.06(.04)	-.06(.04)	.07(.06)	.15(.09)
Intercept	2.34	2.70	4.53	3.93
Adjusted R <sup>2</sup>	.33	.34	.17	.23

Notes: \* $P < .05$ ; \*\* $P < .01$ ; \*\*\* $P < .001$ ; <sup>a</sup> stands for the reference group; standard errors are in parentheses

## **CHAPTER 4: Psychological Well-being and Life Satisfaction of Rural Migrant Workers: Results from Multilevel Analysis**

### **Introduction**

In the previous two chapters, individual level stressor—conflictual experiences—was examined to understand its cross-sectional and longitudinal associations with psychological distress and life satisfaction. LDS model successfully identified that conflictual experiences were positively associated with psychological distress and negatively associated with life satisfaction based on both waves of the CFPS data. This chapter will explore and discuss whether the associations vary across regions and how regional level characteristics modify these associations. This research goal was motivated by the following facts in China.

First, China's unbalanced regional development policies over the past three decades placed cities in eastern regions at the center of economic development while a large part of rural and western areas was left behind. Second, rural migrant workers' chances of acquiring hukou status and associated social benefits differ significantly across regions in China. In large cities where economic opportunities are abundant and local citizens enjoy high levels of social benefits, local government often strictly limits hukou numbers to rural migrant workers. However, in small towns and mid-sized cities where social resources, benefits, and job opportunities are limited, it is fairly easy for migrant workers to be granted a local hukou.

Third, attitudes of local government and local citizens toward migrant workers also vary significantly across cities (even in the top tier cities). For example, Beijing, as

the political center of China, sets the strictest rules for migrants to obtain local hukou status and mass eviction targeting migrant workers has happened several times in recent years. Some have argued that these indicate that Beijing government viewed migrants as a threat to political stability and a burden for the local social security system (Buckley 2017). On the other hand, Shenzhen, another top tier city as well as the first special economic zone and a leading global technology hub in China, is well-known for its culture tolerance and diversity. In 2017, the population of Shenzhen was about 20 million and around 8 million was the floating migrant population, which makes it the largest migrant city in China (China National Bureau of Statistics 2017). Migrant workers are generally welcomed and relatively easy to obtain local hukou status compared to other large cities. Local governments generally have demand for rural migrant workers who could provide cheap labors to maintain high GDP growth.

Lastly, previous research on the well-being of rural migrant workers yields inconclusive results based on cross-sectional regional-level data. Several studies found that rural migrant workers had lower levels of life satisfaction and psychological well-being than their non-migrant rural counterparts and the general population (Knight and Gunatilaka 2010; Li et al. 2007; Shen et al. 1998; Zhang et al. 2009; Zhong et al. 2013). Several other studies showed that rural migrant workers had comparable or even better psychological well-being when compared to their local counterparts (Li et al. 2007; Liang, Hou, and Li 2017; Lu, Lu, and Duan 2017). Even with nationally representative data, my results from the bivariate analysis showed inconsistent findings. All these suggest that the well-being indicators as well as their association with conflictual experiences may subject to regional differences in China.



The life course approach provides an essential framework to explore the research goal of this chapter. Life course approach is a set of perspectives that focus on time, timing, social context and long-term patterns (George 2003). It is not an integrated theory but an approach that links individual lives to their long-term development, life transition, social network, social change, and the historical context. One advantage of using the life course approach is that it takes into consideration of both “social selection” effect and “social causation” effect. Many studies that attempt to understand the association between macro-level indicators and health or well-being of individuals failed to rule out social selection effect. Life course approach addresses this gap by emphasizing the importance of human agency in life journey. Human agency plays a significant role in understanding the life trajectories and well-being of rural migrant workers because migration is a life-changing decision made by their own wills. For most rural migrant workers, migration is a turning point that has a momentous impact on their future life paths. On the other hand, however, their migration choices are also largely constrained and affected by the socioeconomic context of the rapid changing Chinese society. The increasing surplus of rural labors, widening regional income gap, and increasing demand for cheap labors in urban areas generate the “push” and “pull” effect that largely shapes individuals’ migration decision.

To model the effect of regional level characteristics on individual level indicators, multilevel modeling is the appropriate method to apply. Multilevel modeling, also known as hierarchical linear modeling (HLM), is the most common statistical technique used to analyze data that are hierarchically structured and involve units of observation at different levels (Rabe-Hesketh and Skrondal 2005). Multilevel modeling allows us to explore the

effect at different levels as well as the cross-level interaction effect by including explanatory variables at different levels. More importantly, multilevel modeling can be used to disentangle unexplained variability by estimating random effect at each level. In this chapter, I linked CFPS data with regional level data that were published by China National Bureau of Statistics as well as the 6th National Population Census of the People's Republic of China (2010 Census Data). The combined data set is hierarchically structured with each rural migrant worker being nested within each province (or its administrative equivalents). Taken together, this chapter has four major research goals: 1) estimate variations of well-being indicators at both individual level and regional level; 2) explore the direct effect of conflictual experiences and the selected regional level characteristics on well-being indicators while controlling for individual level socio-demographics; 3) examine how regional level characteristics modify the association between conflictual experiences and well-being indicators; 4) explore how much variance in well-being (both individual level and regional level variances) is explained by explanatory variables at each level.

## **Using the Life Course Approach to Understand Well-being of Rural Migrant**

### **Workers**

The life course approach provides a basic framework for studies that incorporate social pathways, trajectory, and life turning points (Elder, Johnson, and Crosnoe 2003). In general, social pathways are a series of trajectories that are followed by individuals in society such as one's education, work, resident history and so on. These trajectories are largely shaped by historical forces and embedded within social institutions. Although

individuals have the ability to choose particular paths they are willing to follow, their choices are largely constrained by social forces and social structure. Trajectories are transitions associated with changes in status, identity or social roles (Elder, Johnson, and Crosnoe 2003). Examples of transitions include graduating from college, getting married and becoming a parent. Studies showed that several transitions, especially those that happened in early life stage, have long-lasting and lagged effects across the life course (Elder, George, and Shanahan 1996). Lastly, turning points are more dramatic and often objective changes in the direction of life. Common examples of turning points include migration, job loss, and being diagnosed with terminal illness. These life turning points, again, may induce several lifelong consequences.

Scholars (e.g., Elder, Johnson, and Crosnoe 2003) have suggested five major principles, including life span development, timing, time and space, agency, and linked lives, that underlie the life course perspective. In this chapter, I attempt to use principles of agency and principle of time and space derived from the life course perspective as the theoretical basis to examine how regional level factors directly and indirectly affect the well-being of rural migrant workers in China.

### ***The principle of Agency***

The principle of agency highlights the ability that the human agency possessed to modify life course and choose his/her own life paths. Although individual choices and actions are largely constrained by social institutions and shaped by historical context, this does not mean that human actions are entirely controlled by social forces. Many disadvantaged social groups often took independent actions to cope with adversities that were imposed by social forces (Hutcison 2010). For example, those living in

disadvantaged neighborhoods (low SES, high crime rate, poor air quality, etc.) are at higher risk of developing poor physical and mental health. However, religious coping may buffer the detrimental effect of living in disadvantaged neighborhoods on individual health. In this sense, individuals who choose to frequently attend religious services or seek religious help may alleviate the adverse effect of living in poor neighborhood contexts (Krause 1998).

The concept of agency has been discussed in many sociological theories and these theories generally highlight the influence of individual actions on life paths. The use of agency in the life course perspective emphasizes that the decision of the individual is acting “toward the future, with an eye for possible selves” (Hutcison 2010: 27). The choice made by individuals may have a momentous impact on their future life trajectories. Of course, the impact of human agency has its own limitation since individuals’ choices and actions are often shaped by the socioeconomic structures and historical context. Different choices may lead to different life pathways within these constraints. Specific to rural migrant workers in China, the economic reform policies have given more priority to construction and manufacturing sectors than agricultural sector as well as prioritized urban development over rural development. The deteriorating social and economic context in rural areas forced rural laborers to make decisions on whether to remain stay in the countryside or migrate to the relatively prosperous urban areas. This is not an easy choice as it looks, especially in the early reform era. First, as I discussed in previous chapters, migrant workers were facing many restrictions in their access to social benefits in cities due to their hukou status. Second, they were more likely to experience conflictual interactions, such as discriminatory behaviors that act upon

them, than their urban counterparts. Moreover, migrant workers were required to pay several costly fees in order to be legally employed in cities. Furthermore, due to hukou restrictions and economic concerns, many rural migrant workers migrated to cities with only their spouses while their children and aging parents were left behind in the countryside. The absence of parents and adult children may have a long-lasting negative effect on the well-being of children and aging parents (Chen and Silverstein 2000; Krause and Liang 1993; Ming and Lin 2012). However, if the rural laborers choose to stay in the countryside (especially inner province countryside), they have to bear even harsh conditions including low income, poor social security benefits, and insufficient medical and educational resources. In some poorest rural areas, even basic needs such as running water, food, and shelter are not guaranteed. Two different choices may lead to different life trajectories and have momentous effects on the well-being of individuals over their life course. Research has shown that rural migrant workers have a lower happiness score and poorer mental health status compared to their rural non-migrant counterparts despite the fact that their economic well-being increased substantially (Knight and Gunatilaka 2010; Li et al. 2007; Shen et al. 2014). Previous studies suggested that migrant workers were facing unique stressors such as acculturation, perceived discrimination, expectation-reality differences, changing aspirations, separation from family members and other socioeconomic barriers. These stressors may lead to a decreased life satisfaction and a diminished psychological well-being (Knight and Gunatilaka 2010; Lin, et al. 2009; Wang, et al. 2010; Zhang, et al. 2009; Zhong, et al. 2015). However, despite that migration and urban life may lead to a deteriorated well-being, many rural laborers still

choose to become migrant workers in cities in order to get away from their poor rural life and seek possible socio-economic mobility for themselves and their families.

In many situations, individuals are powerless to directly alter their life trajectory through personal agency, and this is when collective agency comes into play. The concept, collective agency, was first discussed in psychologist Bandura's work (2006). He argued that the collective agency was practiced at the group level when individual goals were only achievable by acting collectively. In the case of rural migrant workers, the migrant networks play the role of collective agency. Migrant networks are formed through direct or indirect interpersonal relationships with family members, friends, or fellows who are current or former migrants. It is well-known that rural laborers rely heavily on their migrant networks for job and house searching as well as getting information about their potential remuneration in cities (Xu 2011). Through these networks, migrant workers significantly reduce the time and economic cost to settle down in cities. Migrant networks may also provide social support resources for rural migrant workers who cope with stressful conditions in cities. Rural migrant workers often migrate in groups from the same rural areas to a single work unit in cities. With shared experiences and common background, it is likely for them to develop camaraderies and mutual support (Li et al. 2007). In this sense, collective agency may also alter the life trajectory and significantly affect the well-being of rural migrant workers.

### ***The Principle of Time and Space***

The principle of time and place from the life course highlights individuals as well as their cohorts are influenced by historical context. The core idea of this principle states that individuals' life courses are largely shaped by the historical time and place. The

historical time may provide cohort effects, especially during unstable social context, “when distinctive formative experiences are shared at the same point in the life course and have a lasting impact on a birth cohort” (Hutcison 2010: 20). For example, a large number of the 1910s and 1920s cohorts had experienced the adversities of World War II in Europe, such as loss of significant others, dropping out from school, experiencing unemployment and financial hardship. In general, historical and large-scale social forces have great power to alter individuals’ life trajectories as well.

The life trajectories of rural laborers were largely shaped by the socio-economic context of post-reform and opening-up era in China. More than 280 million migrants formed the largest tidal wave of internal migration in human history. Migration, which seems to be a life event decided solely by an individual is largely determined by the socioeconomic transition in the rapid changing Chinese society. I will now analyze the driving forces of internal migration to illustrate how socioeconomic context may alter life paths of individuals.

The general trend of the unprecedented internal migration has two unique features: 1) migrant labors flow from interior areas to coastal areas and from central and western provinces to eastern provinces; 2) migrants emigrate from the countryside to cities and work for non-agriculture sectors (Huang and Zhan 2005). Not surprisingly, rural-urban and regional disparities are viewed as the key factors that may lead to the current trend of labor flow.

Under Mao’s regime, the egalitarian socialist policy had successfully reduced the socioeconomic inequalities in China (Bian et al. 2005). Starting in 1978, China has gradually transformed from a central planned economy to a market-oriented economy.

For the past four decades, China has become the fastest growing economy in the world with an astonishing 9.61% annual average GDP growth (China National Bureau of Statistics 2018). Much of this economic growth has been generated from the three wealthiest areas: Pearl River Delta region, which is along the southeast coast; the Yangtze River region, which is along the east coast; and the Beijing and Tianjin region. This fast growth of economy has also generated a substantial income gap between the new rich in coastal areas and the comparatively poor in inner cities (especially western cities). According to Xie and Zhou (2014), China is among countries that have the largest income inequality in the world. Based on multiple resources, they found the Gini coefficient of China had reached to nearly 0.55 from 2010 to 2012, which was much higher than the Gini coefficient of United States (approximately 0.45 in 2010). Not surprisingly, about 12% of the overall income inequality was due to regional differences while this number was only about 2% in the United States (Xie and Zhou 2014). The unbalanced regional development strategy adopted by the government played a huge role in this disparity. Ever since Deng Xiaoping's (then Communist Party leader) southern tour speech (in which he stressed the importance of private entrepreneurship and connection with global market), China has adopted a neo-liberal approach for the development of the wealthiest areas such as reducing business tax, deregulation, privatization and encouraging free trade (such as the set of special economic zones). Due to these factors, eastern regions have received the most foreign direct investment (FDI). In addition to China's regional unbalanced development policy, the east coast of China also has advantages in terms of their location (close to ports), resources (i.e. highly educated and skilled labors), culture, and close family ties with foreign investors (large



numbers of Asian American immigrants are from East Provinces in China). Due to these regional advantages, east part of China and its residents have enjoyed more benefits from a globalized economy compared to residents from other parts of China. In the reform era, the regional unbalanced development policy not only favors eastern or coastal areas but also gives more priority to urban areas. In the export-oriented economy, construction industry and manufacturing industry were considered more important than the agriculture sector in rural areas despite that the rural population was larger than the urban population. As a consequence, China's per capital annual urban-rural household income gap ratio had increased from 2.57:1 in 1978 to 3.23:1 in 2010 (Su et al. 2015). Most recent data showed that the average annual disposable income for urban residents was 36,396 in 2017 while this number was only 13,432 for rural residents (China National Bureau of Statistics 2018). Similar to regional differences, the rural-urban disparities accounted for 10% of the total nationwide income inequality (Xie and Zhou 2014). The government has developed many policies aiming at reducing rural-urban income gap, such as (1) urbanization that turned a large number of rural residents into urban residents, (2) the Household Responsibility System that gave rural population more freedom regarding the land use and agricultural production, and (3) exempting the agricultural tax. However, the rural-urban income gap remains and tends to grow even larger in recent years (Xie and Zhou 2014).

In the classical migration hypothesis, income gap is one of the major driving forces for migration. This is also one of the major reasons why rural migrant workers chose to emigrate to urban areas despite the unfair treatment in cities. However, many studies have documented that the driving force behind this unprecedented migration was

more complex than merely the income gap could explain (Gries, Kraft, and Simon 2016; Huang and Zhan 2005; Hare 1999; Li 1996; Su et al. 2015). According to the existing literature, both the “pull” and “push” factors play significant roles.

One of the major “push” factors is the rural surplus labor. The generation of rural surplus labor can be attributed to the following factors. First of all, China has one of the largest agricultural output but only 10-13% of the total land area was arable land during the 1980s and 1990s (early reform era). As a comparison, 19%-20% of United States’ total land area was cultivatable during the same period. These two nations have comparable total land areas (The World Bank 2015). While the rural laborers of China were approximately 120 times higher than the U.S (Li 1996). The overuse of fertilizers and environment pollution further reduced the land that could be cultivated. In addition to reduced arable land, agricultural industry has become modernized thanks to the advancement of farming technology (Li 1996). As a result, farming in rural areas requires fewer laborers to operate. In other words, the demand for laborer decreased in agricultural industry. Moreover, in the early 1980s, the Household Contract Responsibility System has replaced the People’s Commune system in rural areas (Huang and Zhan 2005). In the central planned economy, people’s commune was designed for collective activities including farm work and meal preparation. Through this system, labor works were mandatory and the welfares were guaranteed even for the non-efficient workers. When the system got abolished and Household Contract Responsibility System was introduced, the farm works were organized at the household level and were closely linked to the market. As a result, the efficiency of each farm worker increased since their income and livelihood were largely depending on their productivity. Therefore, the

demand for rural labors decreased substantially due to the increased work efficiency of every rural labor. In sum, the limited arable land, modernization of agricultural industry, and the transformation of rural economic system were three major reasons for the formation of rural surplus labors.

In addition to the rural “push” effect, urban “pull” effect was another major driving force of rural to urban migration. Construction industry and manufacturing industry played significant roles in China’s unprecedented economic growth in the reform era. Both sectors were in high demand for cheap labors. For rural laborers who were outside wage-economy, the opportunity of wage-employment in urban areas was a great chance to increase their household income even though their wages were significantly below those of urban workers (Wallerstein 2004). Therefore, it was this opportunity that attracted unskilled rural laborers to cities and coastal areas. In addition, the market-oriented economy also increased the demand for low-wage labors in service sectors, especially in low-end service sector (Li 1996). These jobs were categorized as dirty, dangerous, and demanding (3D jobs), thus were disdained by urban residents. As a consequence, rural workers were needed to fill in these jobs.

In sum, the massive internal migration was mainly driven by the regional income gap, especially the division between urban and rural regions. In addition, the socioeconomic and political structure changes in the market economy reduced the demand for rural laborers in farm works but increased the demand in construction, manufacturing, and service sectors in urban areas. In general, although rural laborers could decide their life trajectories by choosing to stay in the countryside or moving to cities, as I discussed in the previous section, their choices and the corresponding life

trajectories were largely shaped and constrained by the social-economic context of a rapidly changing Chinese society.

Even though the existing literature emphasizes the impact of socioeconomic context on the well-being and life trajectory of rural migrant workers, to my best knowledge, there are very few studies available that utilize objective measures to quantify socioeconomic characteristics at both individual and aggregate levels and to model their potential effects on well-being indicators. To address this gap, the current study linked the CFPS baseline data with the regional level data (provinces or their administrative equivalents) from the 6<sup>th</sup> National Population Census of the People's Republic of China (2010) and 2010 annual report published by China Bureau of Statistics. Specifically, the following research questions will be tested: 1) Whether there are significant variations across regions in the well-being indicators (psychological well-being and life satisfaction); 2) Whether there is a direct effect of regional level indicators on individual well-being; 3) Whether there is an association between conflictual experiences and the well-being indicators; Whether the strength of the association varies across regions; 4) How regional level indicators modify the associations between conflictual experiences and well-being indicators?

## **Methods**

### ***Data***

Individual level data used in this study are from the China Family Panel Studies (CFPS) baseline (2010) wave. Based on the definition of rural migrant workers that I discussed in previous chapters, I was able to obtain 2,105 rural migrant workers from the

baseline data. Measures of the macro level data were derived from 6<sup>th</sup> National Population Census of the People's Republic of China (2010) and 2010 annual report published by China Bureau of Statistics.

### *Measures*

The focal independent variable at the individual level was conflictual experiences that rural migrant workers have encountered in cities. The focal dependent variables at the individual level were psychological distress and life satisfaction. In all models, I controlled for socio-demographic variables. Please refers to chapter 2 and chapter 3 for detailed measures of the individual level variables.

At the macro level, four focal variables were used to estimate their effects on the individual level psychological distress and life satisfaction. First, the hukou population ratio (HPR) was measured by the ratio between the number of people who currently hold local urban hukou status and the total province (or its administrative equivalent) population. This macro level indicator was included because it could be used as the proxy to measure the difficulty of obtaining local hukou status and accompanied social benefits. Second, the total Expenditure on People's Livelihood (EPL) was used to measure social benefits that local residents could have access to at the regional level. Specifically, total expenditure on people's livelihood includes expenditure on social security and employment, on education, and on health. Third, GDP per capital (GDPPC) was used to measure the average living standards and economic well-being of a certain region. Lastly, Disposable Personal Income (DPI) was used as a direct measure of the economic well-being of a certain region. The DPI is the amount of money that one person has available for spending and saving on average. These macro level socioeconomic indicators were

included because they largely determined rural migrant workers' migration choice and their experiences in cities. To facilitate coefficient interpretation and comparison, log-transformed EPI, GDPPC, and DPI were used.

### *Analyses*

First, descriptive analysis was performed to summarize sample characteristics for both levels of variables. Results of descriptive statistics were summarized in Table 4.1. Second, multilevel analysis was conducted using HLM 6.08. First, one-way ANOVA model (null model) was used to estimate the grand mean and capture the variability of outcome variables at each level. The one-way ANOVA model can be summarized as the following two equations:

$$\text{Level 1: Life Satisfaction}_{ij} \ \& \ \text{Distress}_{ij} = \beta_{0j} + r_{ij} \ [4.1]$$

Where  $j$  refers to regions and  $i$  refers to individuals (rural migrant workers) nested within regions.  $\beta_{0j}$  represents group mean;  $r_{ij}$  represents the individual level residual.

$$\text{Level 2: } \beta_{0j} = \gamma_{00} + \mu_{0j} \ [4.2]$$

Where  $\gamma_{00}$  represents grand mean and the random intercept  $\mu_{0j}$  represents the regional level residual. In table 4.2 and 4.3,  $\tau_{00}$  was used to represent the variation between provinces (or their administrative equivalents),  $\sigma^2$  was used to represent the variation within province (between individuals). Intraclass correlation coefficient (ICC) was calculated to measure the proportion of variance in the well-being indicators that was explained by regional differences. ICC was estimated based on the following equation

$$ICC = \tau_{00} / (\tau_{00} + \sigma^2) \ [4.3]$$

Third, Means-as-Outcomes model was applied to test the macro level explanation for the means of each well-being indicator. Specifically, this model has the same level 1

equation (3.1) as the one-way ANOVA model. The level 2 model can be summarized as the following:

$$\text{Level 2: } \beta_{0c} = \gamma_{00} + \gamma_{01}(HPR) + \gamma_{02}(EPL) + \gamma_{03}(GDPPC) + \gamma_{04}(DPI) + \mu_{0j} \quad [4.4]$$

In this equation,  $\gamma_{00}$  is the intercept (grand mean), and  $\gamma_{01}, \gamma_{02}, \gamma_{03}, \gamma_{04}$ , are the effect of HPR, EPL, GDPPC, DPI on  $\beta_{0j}$  (group mean).  $\mu_{0j}$  is the regional level random effect, its variance ( $\tau_{00}$ ) represents the residual variance in group mean after controlling for the macro level indicators. The mixed model could be written as the following once we substituted Equation 4.4 into Equation 4.1.

$$\text{Life Satisfaction}_{ij} \ \& \ \text{Distress}_{ij} = \gamma_{00} + \gamma_{01}(HPR) + \gamma_{02}(EPL) + \gamma_{03}(GDPPC) + \gamma_{04}(DPI) + \mu_{0j} + r_{ij} \quad [4.5]$$

This mixed model has five fixed effects— $\gamma_{00}, \gamma_{01}, \gamma_{02}, \gamma_{03}, \gamma_{04}$ , and two random effects— $\mu_{0j}$  and  $r_{ij}$ .

In addition to estimate abovementioned fixed effects and random effects, this model can also calculate how much between-region variance in outcome variables was accounted for by the macro level indicators by comparing the level 2 residual with the one way ANOVA model. Specifically, the variance explained at the regional level can be computed based on the following equation

$$\text{Proportion of variance explained in } \beta_{0j} = \frac{\tau_{00}(\text{one-way ANOVA}) - \tau_{00}(\text{Means as outcome})}{\tau_{00}(\text{one-way ANOVA})} \quad [4.6]$$

Fourth, the Random-Coefficient model was applied to understand the association between conflictual experiences and well-being indicators within the 25 provinces (or its administrative equivalent). This model was used to test the following questions: 1) what was the average intercept and slope of 25 regions? In other words, what was the average regional mean of well-being indicators and what was the average association between

conflictual experiences and well-being indicators? 2) How much did the intercepts and slopes vary from region to region? 3) What was the correlation between the intercepts and slopes?

The level 1 model of Random-Coefficient can be summarized as the following,

$$\text{Level 1: } Life\ Satisfaction_{ij} \ \& \ Distress_{ij} = \beta_{0j} + \beta_{1j}(CE) + \beta_{2j}(control) + r_{ij} \quad [4.7]$$

The intercept  $\beta_{0j}$  is the regional mean outcome, the individual level predictor conflictual experiences was centered around its regional mean.  $r_{ij}$  is again the random effect at individual level, however now its variance  $\sigma^2$  is the residual variance at the individual level after adding conflictual experiences and control variables.

The level 2 model can be summarized as the following equations:

$$\text{Level 2: } \beta_{0j} = \gamma_{00} + \mu_{0j} \quad [4.8a]$$

$$\beta_{1j} = \gamma_{10} + \mu_{1j} \quad [4.8b]$$

$$\beta_{2j} = \gamma_{20} \quad [4.8c]$$

In these two equations  $\gamma_{00}$  is the average of the regional means on the well-being indicators across the regions.  $\gamma_{10}$  is the average effect (indicated by slope) of conflictual experiences on well-being indicators across regions.  $\mu_{0j}$  is the random effect associated with intercept of region  $j$ .  $\mu_{1j}$  is the random effect associated with slope of region  $j$ . In the table I denoted the variance associated with  $\mu_{0j}$  as  $\tau_{00}$  and the variance associated with  $\mu_{1j}$  as  $\tau_{11}$ . The correlation that measure the association between slopes and intercepts was labeled as  $\tau_{01}$ . The slope associated with control variable was a fixed parameter estimator. Similarly, the variance explained by level 1 indicators could be obtained by comparing the individual level residual with the one-way ANOVA model. Specifically,



$$\text{Proportion of variance explained at level 1} = \frac{\sigma^2(\text{one-way ANOVA}) - \sigma^2(\text{Means as outcome})}{\sigma^2(\text{one-way ANOVA})} \quad [4.9]$$

Finally, the Intercepts- and Slopes-as-Outcomes model was applied to include both level 1 and level 2 indicators. The individual level model is the same as the Random-Coefficient model. The regional level equations can be written as the following

*Level 2:*

$$\beta_{0j} = \gamma_{00} + \gamma_{01}(HPR)_j + \gamma_{02}(EPL)_j + \gamma_{03}(GDPPC)_j + \gamma_{04}(DPI)_j + \mu_{0j} \quad [4.10a]$$

$$\beta_{1j} = \gamma_{10} + \gamma_{11}(HPR)_j + \gamma_{12}(EPL)_j + \gamma_{13}(GDPPC)_j + \gamma_{14}(DPI)_j + \mu_{1j} \quad [4.10b]$$

$$\beta_{2j} = \gamma_{20} \quad [4.10c]$$

In this model, again  $\mu_{0j}$  and  $\mu_{1j}$  are random effects associated with intercept (regional mean for outcome variables) and slope (conflictual experiences to well-being indicators). Their variance components,  $\tau_{00}$  and  $\tau_{11}$  now represent the residual for  $\beta_{0j}$  and  $\beta_{1j}$ , respectively, after controlling for macro level indicators. The mixed model can be written once we substitute equation 4.10 into equation 4.7

$$\begin{aligned} \text{Life Satisfaction}_{ij} \ \& \ \text{Distress}_{ij} = \gamma_{00} + \gamma_{01}(HPR)_j + \gamma_{02}(EPL)_j + \gamma_{03}(GDPPC)_j + \\ & \gamma_{04}(DPI)_j + \gamma_{10}(CE) + \gamma_{20}(\text{control}) + \gamma_{11}(HPR)_j(CE) + \gamma_{12}(EPL)_j(CE) + \\ & \gamma_{13}(GDPPC)_j(CE) + \gamma_{14}(DPI)_j(CE) + \mu_{0j} + \mu_{1j}(CE) + r_{ij} \quad [4.11] \end{aligned}$$

Based on this model, the well-being indicators were measured by the overall intercept  $\gamma_{00}$ , the main effect of HPR ( $\gamma_{01}$ ), the main effect of EPL ( $\gamma_{02}$ ), the main effect of GDPPC ( $\gamma_{03}$ ), the main effect of DPI ( $\gamma_{04}$ ), the main effect of CE ( $\gamma_{01}$ ), the direct effect of control variable the effect of cross-level interactions including HPR with CE ( $\gamma_{11}$ ),

EPL with CE ( $\gamma_{12}$ ), GDPPC with CE ( $\gamma_{13}$ ), and DPI with CE, plus the random effect  $\mu_{0j} + \mu_{1j}(CE) + r_{ij}$ .

## Results

### *Descriptive Statistics*

Table 4.1 summarized the sample characteristics for both the individual level and regional level characteristics. The average conflictual experiences score for the whole sample was 0.95 for rural migrant workers. Mean score of psychological distress was 2.2 with a standard deviation (s.d.) of 3.1. Another focal variable, life satisfaction, has a mean score of 3.4 with an s.d. of 0.97. The average age for the whole sample was approximately 35.3 and the mean monthly income was around 1,385 RMB (roughly \$220) in 2010. More than 62% of the sampled rural migrant workers were male and only approximately 24% of rural migrant workers were high school graduates. Approximately 78% were currently married and less than 5% of the rural migrant workers were communist party members. For physical health, nearly 95.2% of rural migrant workers reported good/fair self-rated health <sup>5</sup>.

For the macro level indicators, the mean Hukou Population Ratio (HPR) was 0.52 (range: 0.46 to 0.88) and the mean Expenditure on Livelihood (EPL) was 32.98 billion RMB (approximately 4.75 billion dollars; range 43.74 to 169.51 billion RMB) in 2010 among 25 regions. The mean GDP per capital was approximately 35,000 RMB (approximately 5,012 dollars; range 13,119 to 76,074 RMB) and the mean disposable

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<sup>5</sup> In CFPS, “good” and “fair” self-rated health are the only two options that indicate a positive appraisal of one’s physical health

personal income at 2010 was around 19,000 RMB (approximately 2,774 dollars; ranges from 10,954 to 42,173 RMB).

(Table 4.1 is about here)

### ***Multilevel Modeling Results with Psychological Distress as the Outcome Variable***

As shown in Model 1 from Table 4.2, the weighted hierarchical model yielded a grand-mean psychological distress of 2.166 without including any predictors. For the variance components, the individual level variance and regional level variance equal to 7.847 and 0.100, respectively. The significant test showed that there was a significant variation ( $p < 0.01$ ) among regions in the psychological distress of rural migrant workers. The Intra Class Correlation (ICC) was calculated based on equation 4.3. Results showed that around 1.25% of the variance in psychological distress was due to regional differences.

(Table 4.2 is about here)

As indicated by Model 2 from Table 4.2 (Means-as-outcomes Model), none of the macro level indicators was significantly associated with psychological distress among rural migrant workers. For the variance components, the individual level residual ( $\sigma^2$ ) remained the same when compared to Model 1 (one-way ANOVA model). The regional level residual ( $\tau_{00}$ ) was 0.102, which was even slightly greater than  $\tau_{00}$  estimated in Model 1 and the regional level variance was still significant ( $P < 0.001$ ). This means that after controlling for the macro level indicators, significant variation among regional means on psychological distress was still unexplained.

As shown in Model 3, the average regional mean of psychological distress was 4.825 and the average slope estimating the association between conflictual experiences

and psychological distress was 0.506 and was statistically significant. This indicates that, on average, the focal independent variable—conflictual experiences, was significantly and positively associated with psychological distress among rural migrant workers. This finding is consistent with the Latent Difference Score (LDS) result that I discussed in Chapter 2. After adding the individual level characteristics, the residual variance at the individual level reduced to 6.990. Comparing to Model 1 (one-way ANOVA model), I calculated the proportion variance that was explained by the individual level characteristics and it was 0.1092. In other words, nearly 10.92% of the individual level variance was explained by the individual level characteristics that I added in the model. The estimated residual of the slope  $\tau_{11}$  was 0.007 and statistically significant. This result indicates that the significant association between conflictual experiences and psychological distress did vary across regions. Finally, the correlation of slope and intercept was -0.385, which indicates that the association between regional means of psychological distress and the slope associated with conflictual experiences was relatively strong. In other words, regions with high mean scores of psychological distress had weak associations between conflictual experiences and psychological distress.

Finally, as indicated in Model 4, none of the macro level indicators was significantly associated with psychological distress. The main effect of conflictual experience was still positively associated with psychological distress among rural migrant workers ( $b=3.901, p<0.05$ ). As indicated by cross-level interactions, regions with high EPL showed weaker association between conflictual experiences (CE) and psychological distress compared to regions with low EPL. Regions with high DPI tended to have smaller CE-Distress slope than do regions with low DPI. On the contrary, regions with

high GDPPC showed a stronger association between conflictual experiences and psychological distress compared to regions with low GDPPC. HRP did not affect the significant association between conflictual experiences and psychological distress. As indicated by the random variance, the individual level residual reduced to 6.980 after controlling for the macro level indicators and cross-level interactions. The regional level variance reduced to 0.091 ( $p < 0.01$ ) after controlling for all the macro level indicators. Comparing to residual variance in the random coefficient model, which was 0.093, we can conclude that the macro level indicators explained only a very small portion of the regional level residual and a large portion of variance remained unexplained.

#### ***Multilevel Modeling Results with Life Satisfaction as the Outcome Variable***

The weighted hierarchical linear model results with life satisfaction as the outcome variable were summarized in Table 4.3. As shown in Model 1, the grand-mean of life satisfaction was 3.406 in this non-conditional model (without including any predictors). For the variance components, the individual level variance and regional level variance equal to 0.906 and 0.043, respectively. There was a significant variation ( $P < 0.001$ ) among regions in the life satisfaction of rural migrant workers. The Intra Class Correlation (ICC) was calculated based on equation 4.3. Results showed that around 4.53% of the variance in life satisfaction was between regions.

(Table 4.3 is about here)

As indicated by Model 2 (Means-as-outcomes Model), similar to the results that I obtained with psychological distress as the outcome variable, none of the macro level indicators was significantly associated with life satisfaction among rural migrant workers. For the variance components, the individual level residual ( $\sigma^2$ ) yielded a same score

compared to Model 1 (one-way ANOVA model). The regional level residual ( $\tau_{00}$ ) was 0.053, which was greater than  $\tau_{00}$  obtained in model 1. Moreover, the regional level variance was still significant ( $p < 0.001$ ). These findings suggest that after controlling for the macro level indicators, significant variation associated with life satisfaction was still unexplained at regional level.

As shown in Model 3, the average regional mean of life satisfaction was 3.227 and the average slope estimating the association between conflictual experiences and life satisfaction was -0.121 ( $p < 0.05$ ). This result indicates that, on average, the focal independent variable—conflictual experiences, was significantly and negatively associated with life satisfaction among rural migrant workers. This finding is consistent with the Latent Difference Score (LDS) result that I discussed in Chapter 2. The residual variance at the individual level reduced to 0.857 after adding the individual level indicators. Comparing to Model 1 (one-way ANOVA model), nearly 5.41% of the individual level variance was explained by the individual level characteristics that I added in the model. The estimated residual of the slope  $\tau_{11}$  was 0.007 and statistically significant. This result indicates that the association between conflictual experiences and life satisfaction did vary across regions. Finally, the correlation of slope and intercept was 0.590, which indicates that the association between regional means of life satisfaction and the slope associated with conflictual experiences was strong. In other words, regions with high mean scores of life satisfaction also had strong associations between conflictual experiences and life satisfaction.

Lastly, as indicated in Model 4, none of the macro level indicators was significantly associated with life satisfaction. The main effect of conflictual experience

was also not significantly associated with life satisfaction among rural migrant workers. As indicated by cross-level interactions, regions with high GDPPC showed a stronger negative association between conflictual experiences and life satisfaction compared to regions with low GDPPC. This is consistent with what I have found in multilevel models with psychological distress as the outcome variable. HRP, EPL, and DPI did not affect the association between conflictual experiences and life satisfaction. As indicated by the random variances, the individual level residual reduced slightly after controlling for the macro level indicators and cross-level interactions. The regional level variance reduced to 0.042 ( $p < 0.01$ ) after controlling for macro level indicators. Comparing to residual variance in random coefficient model, which was 0.048, we can conclude that the macro level indicators explained 12.50% of the regional level residual. However, the significant variation among regional mean life satisfaction remained to be explained since the regional level residual ( $\tau_{00}$ ) was still significant. Again, the estimated residual of the slope  $\tau_{11}$  reduced to 0.005 but still statistically significant. This indicates that the association between conflictual experiences and life satisfaction did vary significantly across regions after controlling for the macro and individual level indicators.

## **Conclusion and Discussion**

In this chapter, I linked CFPS baseline data with the regional level data of 25 provinces (or their administrative equivalents) that were released by China Bureau of Statistics and 6th National Population Census of the People's Republic of China (2010). These data were used to examine the variation of psychological distress and life satisfaction at both individual level and regional level based on hierarchical linear

models. I also examined the direct effects of individual level indicator—conflictual experiences, and regional level indicators—HPOP, EPL, GDPPC, and DPI, on the well-being indicators. The cross-level interaction effects were also tested to examine how the regional level indicators modify the associations between conflictual experiences and the well-being indicators. Finally, variances explained at each level by the selected individual level indicators and the regional level indicators were also estimated.

Results showed that both psychological well-being and life satisfaction of rural migrant workers varied significantly across regions. This result provided some justification for the application of multilevel modeling in this chapter. However, as indicated by the ICC, regional differences only contributed to a small proportion of the variance for both well-being indicators. Specifically, only 1.25% of the variance in psychological distress and only 4.53% of the variance in life satisfaction were between-regions. In other words, individual differences contributed to a substantially larger proportion of the variance for both psychological distress and life satisfaction among rural migrant workers. Chinese government adopted an unbalanced regional development plan that prioritized coastal areas over inner provinces for the past three decades. As a consequence, the prosperous East regions attracted most migrants with rural hukou status while Central and Western provinces have experienced a massive labor outflow (Gries, Kraft, and Simon 2016). Studies have shown that a large part of the inequality in China such as income inequality, unbalanced social resources and social benefits allocation, and an increasing consolidated social hierarchy could be attributed to regional disparity to some extent (Xie and Zhou 2014; Xie 2016). However, it seems that the effect of regional disparity was subtle when psychological distress and life satisfaction were examined for



rural migrant workers. In this sense, future studies that attempt to examine the same or related issue should not over exaggerate the effect of regional differences on the well-being of rural migrant workers. This argument can be further justified by the direct effect of regional level characteristics on well-being indicators that I examined in this chapter. The result showed that none of the examined regional level factors were significantly associated with psychological distress and life satisfaction of rural migrant workers.

These findings are consistent with some arguments that Xie (2016) raised in his article in which he attempted to understand the inequality in China. He argued that even though regional disparity creates and maintains social inequality in China, many Chinese citizens could tolerate it “passively and reluctantly” (Xie 2016: 14). First, most social inequality cannot be attributed to individual efforts and ability, rather it was created by collective agencies such as regions and work units that operate at a meso or macro level. In this sense, inequality is structural and systematic rather than personal. Therefore, it eased the social resentment in the general population since individuals cannot find tangible sources to deal with structural inequality. Second, traditional Chinese culture and current ideology make inequality acceptable so long as inequality would bring benefits to ordinary citizens and upward mobility is achievable through personal efforts. Finally, some Chinese view inequality as the byproduct of economic development. The inequality is tolerable since it benefits the economic well-being of individuals as well as it brings future prosperous of Chinese economy. Along this line, regional disparity, which could be viewed as both the cause (unbalanced regional development policies) and the consequence (such as income gap and unbalanced social benefits and social resources allocation) of migration, is also tolerable for most Chinese citizens. This argument may

be even true for rural migrant workers who migrated from relatively underdeveloped areas to the economically more prosperous areas. Regional disparity “pushed” them to leave underdeveloped areas but at the same time they were benefitted from regional disparity. This is because the development of their migration destination, the prosperous eastern regions is at the cost of their migration origins, the relatively less developed regions. Although rural migrant workers are largely denied access to social benefits in the economically prosperous areas due to their hukou status, both their and their families’ economic well-being have increased substantially especially when compared to those who choose to stay in less prosperous areas. In this sense, regional disparity per se may not affect their well-being directly.

Similarly, regional level characteristics may not explain much of the variance for well-being indicators as indicated by the comparison between regional level variance from one-way ANOVA model (model 1) and Intercept- and Slopes-as-Outcomes model (model 4). The regional level variance only slightly reduced when explanatory variables at macro level were added. In other words, despite that regional disparity contributed to a small proportion of variances for both well-being indicators, the variances remain largely unexplained by the examined regional level characteristics. This is probably because the macro level explanatory variables examined in this study were selected based on the classical economic model of migration. This model emphasizes the major driving force of migration is the difference in wages (Gries, Kraft, and Simon 2016). However, it seems the effects on well-being are more complex than the classical economic model has suggested. In this sense, future research that attempts to estimate the effects of regional level indicators on the well-being of rural migrant workers need to include more relevant

measures in addition to economic factors, such as leisure times and activities, and government expenditure on recreation facilities for rural migrant workers (Wu, Wei, and Qian 2017). The following paragraph explains why these two factors are worth examining.

Most rural migrant workers are facing excessive working hours and an intensive working load. As a consequence, they won't have enough time to participate in leisure activities and cultural entertainments, which in turn, may result in a decreased life satisfaction and psychological well-being (Lian and Tao 2013). In this sense, more developed labor law is needed and should be applied strictly to regulate the working hours of rural migrant workers. Future study that attempts to apply multilevel modeling could consider including macro level variables to measure average working hours in regions or in sectors where large numbers of employees are rural migrant workers. In addition, the government has limited expenditure on recreation facilities to meet rural migrant workers' need for cultural entertainments (Wu, Ou, and Xie 2015). With a comparatively low-income, rural migrant workers have limited economic resources to spend on entertainments, therefore, it is important to have government sponsored entertainment resources that they could access. So future studies also need to take government expenditure on cultural entertainments into consideration when macro level indicators are used to examine the well-being of rural migrant workers.

At individual level, having conflictual experiences was positively associated with psychological distress and negatively associated with life satisfaction while controlling for other socio-demographic factors. Individual level characteristics explained more than 10% and more than 5% of the individual level variances for psychological distress and

life satisfaction, respectively. This result is consistent with LDS model result that I discussed in the previous chapter. Moreover, as indicated by the strong correlation between slope and intercept in model 3, regions with high levels of mean psychological distress showed weak relationships between conflictual experiences and psychological distress. This is probably because other stressors may contribute to the increased psychological distress for regions with high mean psychological distress among rural migrant workers. For example, acculturation, financial hardship, rigid control over hukou status, poor living and working conditions, separation from family members, limited access to social support and other stressors may all contribute to the high levels of psychological distress (e.g. Liang, Hou, and Li 2017; Lu, Lu, and Duan 2017; Zhong et al. 2016). In this sense, the effect of conflictual experiences may become decentralized. Similarly, regions with high levels of mean life satisfaction also showed a strong association between conflictual experiences and life satisfaction. This is probably due to the fact that the aforementioned stressors may not be salient in regions with high average life satisfaction, in this sense, the effect of conflictual experiences may become amplified.

Finally, as indicated by the variance associated with the slope between conflictual experiences and well-being indicators, the significant association between conflictual experiences and well-being indicators did vary across regions. In other words, some regions may show stronger associations between conflictual experiences and well-being indicators than other regions. This finding was supported by the cross-level interaction effect that I examined in the Intercept and Slope as the outcome model. The results showed, for psychological distress, regions with higher EPL and DPI had weaker

associations between conflictual experiences and psychological distress compared to regions with lower EPL and DPI. Whereas Regions with higher GDPPC had stronger positive associations between conflictual experiences and psychological distress compared to regions with lower GDPPC. As for life satisfaction, similarly, regions with higher GDPPC had stronger negative associations between conflictual experiences and life satisfaction compared to regions with lower GDPPC. These results suggest that in regions with high EPL and DPI, residents, including rural migrant workers, generally enjoy better social benefits and have higher disposable income than residents of other regions. Even though rural migrant workers are largely denied access to social benefits in cities due to their hukou status and have lower income than most of their urban counterpart, they are still better off when compared to rural migrant workers in regions with low EPL and DPI. As the proverb says, “a rising tide lifts all boats.” Consequently, rural migrant workers who have more opportunities to obtain better benefits and higher disposable incomes may also have more chances develop stronger self-esteem or stronger social support networks. These, in turn, may mitigate the detrimental effect of conflictual experiences on psychological well-being. Then, why the cross-level interaction effect between GDPPC and conflictual experiences showed a contradictory finding? This is probably because GDPPC, which was used to measure the general economic well-being of a certain region, was not directly related to social benefits and remunerations that rural migrant workers could obtain. At the same time, regions with high GDPPC were also regions with more rigid control over hukou status. In these regions, rural migrant workers were more likely to face structural discrimination from government and government officials since dominant ideology in these regions stigmatized rural migrant workers as a

way to exclude them from city benefits as well as to get maximum gains from their works. In addition, they also faced unique stressors such as a large income gap between themselves and their urban counterparts, denied access to certain positions, and poor living conditions. These stressors further amplified the detrimental effect of conflictual experiences on their well-being.

This study is not without any limitation. First, the data used in this study were based on the 2010 wave of CFPS, 2010 National Population Census, and 2010 annual report that was published by China National Bureau of Statistics. These data may not fully reflect the current conditions of the well-being of rural migrant workers. Nonetheless, the most recent national level census was conducted in 2010, which were the most accurate data that could be used to measure macro level characteristics. For this reason, I selected the 2010 wave of CFPS intentionally to match macro level data resources. Second, the variances of well-being indicators at the regional level were trivial as indicated by the ICC. In this sense, multilevel analysis was redundant to some extent. However, I viewed this chapter as an exploratory study and at least there were some variances for both well-being indicators at the regional level. Finally, more macro level indicators needed to be included in addition to the four measurements that I examined in this study.

**Table 4.1 Weighted Descriptive Statistics for Sample Characteristics (N=2,505)**

	<b>Mean (standard deviation)/ Percentage (%)</b>
<b>Individual Level Characteristics (N=2,505)</b>	
<b>Focal Variables</b>	
Conflictual Experiences	.95(1.43)
Psychological Distress	2.15(2.82)
Life Satisfaction	3.41(.97)
<b>Control Variables</b>	
Age	35.31(11.25)
Gender	
Female	62.04
Male	37.96
Monthly Income (in RMB)	1385.02(1569.67)
Educational Attainment (%)	
High School Graduates	24.71
Less than High School	75.29
Marital Status (%)	
Currently Married	78.69
Other Marital Status	21.31
Communist Party Membership (%)	
Party Member	4.70
Non-member	95.30
Self-rated Health (%)	
Good/Fair Health	95.20
Fairly Poor/Poor/Very poor	4.80
<b>Macro Level Characteristics (N=25)</b>	
Hukou Population Ratio (HPR)	.52(.10)
Expenditure on Livelihood (EPL, Measured in billion RMB)	32.98
GDP per capital (GDPPC, Measured in RMB)	34,785.96(18287.39)
Disposable Personal Income (DPI, Measured in RMB)	19,255.72(8172.03)

*Notes: Individual Level Characteristics are from CFPS (2010) baseline waves of data, Macro level characteristics are from 6th National Population Census of the People's Republic of China (2010) and 2010 annual report that released by China Bureau of Statistic; the value of focal variable conflictual experiences ranges from 0 to 6; the value of psychological distress and life satisfaction range from 1 to 5; the value of HRP ranges from .46 to .88; the value of EPL ranges from 437 to 1695; the value of DPI ranges from 10,954 to 42,173.*

**Table 4.2 Weighted Hierarchical Linear Model: Regress Psychological Distress on Regional Level and Individual Level Predictors (N=2505)**

	Model 1	Model 2	Model 3	Model 4
<b>Fixed Effect</b>				
Intercept ( $\gamma_{00}$ )	2.166(.105)***	7.273(3.046)*	4.825(.681)***	7.093(3.146)*
<b>Regional level factors</b>				
Hukou Population Ratio (HPR)		-.212(.442)		.204(.408)
Expenditure on livelihood (EPL, log transformed)		-.447(.348)		-.308(.344)
GDP per capital (GDPPC, log transformed)		-.142(.755)		-.834(.810)
Disposable personal income (DPI, log transformed)		-.046(.833)		.805(.881)
<b>Individual level factors</b>				
Conflictual Experiences			.506(.051)***	3.901(1.484)*
<b>Cross-level interactions</b>				
HPR X Conflictual Experiences				-.233(.167)
EPL X Conflictual Experiences				-.241(.138) <sup>+</sup>
GDPPC X Conflictual Experiences				1.126(.301)**
DPI X Conflictual Experiences				-1.351(.363)**
<b>Socio-demographic Characteristics</b>				
Age (Measured in years, group centered)			-.004(.009)	-.004(.009)
Male (Female <sup>a</sup> )			-.579(.169)***	-.580(.168)***
Married (Others <sup>a</sup> )			-.613(.309)*	-.600(.312) <sup>+</sup>
High school graduate (less than high school <sup>a</sup> )			.253(.198)	.262(.197)
Income (measured in RMB )			-.000(.000)***	-.000(.000)***
Party member (Non-Member)			-.148(.408)	-.151(.389)
Good/Excellent Health (Other health conditions <sup>a</sup> )				
Individual Level Variance ( $\sigma^2$ )	7.847(2.801)	7.847(2.801)	6.990(2.643)	6.980(2.642)
Regional Level Variance ( $\tau_{00}$ )	.100(.316)**	.102(.319)***	.093(.306)***	.091(.301)**
Variance of random slope associate with CE ( $\tau_{11}$ )			.007(.081)	.003(.056)
Correlation between intercept and slope ( $\tau_{01}$ )			-.385	-.985

Notes: <sup>+</sup> $P < .01$ ; \* $P < .05$ ; \*\* $P < .01$ ; \*\*\* $P < .001$ ; <sup>a</sup> stands for the reference group; standard errors are in parentheses.



**Table 4.3 Weighted Hierarchical Linear Model: Regress Life Satisfaction on Regional Level and Individual Level Predictors (N=2505)**

	Model 1	Model 2	Model 3	Model 4
<b>Fixed Effect</b>				
Intercept ( $\gamma_{00}$ )	3.406(.055)***	4.852(1.814)**	3.227(.124)***	4.807(1.368)**
<b>Regional level factors</b>				
Hukou Population Ratio (HPR)		.051(.318)		.124(.316)
Expenditure on livelihood (EPL, log transformed)		.105(.181)		.015(.170)
GDP per capital (GDPPC, log transformed)		.047(.491)		.407(.472)
Disposable personal income (DPI, log transformed)		-.273(.563)		-.596(.516)
<b>Individual level factors</b>				
Conflictual Experiences			-.121(.026)***	-.045(.929)
<b>Cross-level interactions</b>				
HPR X Conflictual Experiences				-.089(.134)
EPL X Conflictual Experiences				.068(.085)
GDPPC X Conflictual Experiences				-.336(.151)*
DPI X Conflictual Experiences				.304(.212)
<b>Socio-demographic Characteristics</b>				
Age (Measured in years, group centered)			.001(.002)	.001(.002)
Male (Female <sup>a</sup> )			-.090(.046)	-.092(.047)
Married (Others <sup>a</sup> )			.099(.060) <sup>+</sup>	.091(.060)
High school graduate (less than high school <sup>a</sup> )			-.019(.053)	-.018(.054)
Income (measured in RMB )			.000(.000)*	.000(.000)*
Party member (Non-Member)			.386(.114)***	.385(.116)***
Good/Excellent Health (Other health conditions <sup>a</sup> )			.149(.131)	.149(.132)
Individual Level Variance ( $\sigma^2$ )	.906(.952)	.906(.952)	.857(.926)	.856(.925)
Regional Level Variance ( $\tau_{00}$ )	.043(.208)***	.053(.231)***	.048(.219)***	.042(.204)***
Variance of random slope associate with CE ( $\tau_{11}$ )			.007(.082)***	.005(.074)**
Covariance between intercept and slope ( $\tau_{01}$ )			.590	.384

Notes: <sup>+</sup> $P < .01$ ; \* $P < .05$ ; \*\* $P < .01$ ; \*\*\* $P < .001$ ; <sup>a</sup> stands for the reference group; standard errors are in parentheses.

## CHAPTER 5: Final Thoughts

Over the past three decades, the economic transition, continued industrialization in urban areas, and huge rural-urban income differences, have attracted more than 200 million rural labors (China Bureau of statistics 2017) to migrate from the countryside to cities for jobs in China. Most of the rural migrant workers generally lack the skills and formal education, therefore, they were often absorbed by the construction sector, the manufacturing sector, and the low-end service sector. These sectors were in high demand for cheap labors and generally required minimal skills. Due to hukou restrictions, most of the rural migrant workers were unable to obtain urban status (local hukou) and were largely excluded from basic social security and benefits in cities. In general, rural migrant workers lived in marginalized lives in cities and experienced higher levels of perceived discrimination due to their rural identities and migratory status. At the same time, they were also at high risk of experiencing structural discrimination that was mainly created by the interests of state and capital. Within this context, researchers have started to examine the well-being of rural migrant workers, but to date, previous research yielded inconsistent findings when comparing the well-being status of rural migrant workers to other important reference groups. To address this gap, in chapter 1, I conducted bivariate analyses using two waves of data (2010 and 2014) from CFPS, the nationally representative sample. The results showed that, when compared to urban local workers, rural migrant workers had worse psychological well-being and higher levels of life satisfaction in both 2010 and 2014. Their levels of life satisfaction and psychological well-being were lower when compared to rural workers in 2010, but interestingly, rural migrant workers had better life satisfaction and psychological well-being when compared

to their rural counterparts in 2014. With these inconsistent findings, it would be meaningful to identify possible stressors as well as potential protective factors that would affect their psychological well-being and life satisfaction.

To measure one of the major stressors that rural migrant workers have encountered in cities, this study combined perceived discrimination and structural discrimination into the construct of conflictual experiences. I defined conflictual experiences as any undesirable experience when interacting with the urban dwellers, local governments, and government officials due to rural migrant workers' migratory and disadvantaged status. Chapter 2 examined the psychological distress of rural migrant workers and its association with conflictual experiences as well as explored the association over time. Results based on the LDS model showed that having conflictual experiences was positively associated with psychological distress among rural migrant workers. A significant decrease in conflictual experiences and a significant increase in psychological distress were identified. Moreover, change in conflictual experiences was significantly associated with change in psychological distress. Finally, conflictual experiences assessed at baseline explained the subsequent change of psychological distress and vice versa. Conflictual experiences showed a leading role in predicting the subsequent change of psychological distress. Based on these findings, I identified several unique contributions of this chapter: 1) the overall changes of conflictual experiences and psychological distress from 2010 to 2014 were successfully modeled; 2) the current study not only identified that having conflictual experiences was a risk factor for high levels of psychological distress but also provided evidence on causal relationship from the former to the latter based on the panel data analysis.

In chapter 3, a similar framework was used to examine the life satisfaction of rural migrant workers and its possible association with conflictual experiences. Based on the LDS model and the same two waves of the CFPS data, a significant increase in life satisfaction and a significant decrease in conflictual experiences among rural migrant workers were identified. Moreover, having conflictual experiences was negatively associated with life satisfaction, and the change of conflictual experiences was positively associated with the change in life satisfaction. However, unlike findings from the previous chapter on distress, conflictual experiences measured at baseline was not significantly associated with a subsequent increase in life satisfaction and life satisfaction measured at baseline was also not significantly associated with a subsequent decrease in conflictual experiences. In other words, although a negative association between conflictual experiences and life satisfaction was identified, the causal relationship between these two factors was not confirmed by the data. Based on this finding, I argued that economic gain, which was not included in the LDS model due to a high missing rate and was identified as a protective factor of well-being among rural migrants in previous research, might confound the association between conflictual experiences and life satisfaction. In other words, economic gain might protect life satisfaction by mitigating the detrimental effect of conflictual experiences. Due to this protecting effect, having conflictual experiences might not necessarily cause low levels of life satisfaction. I examined this hypothesis by testing the direct effect and stress-buffering effect of economic gain among rural migrant workers. Results showed that economic gain not only was positively associated with life satisfaction but also provided a stress-buffering effect that could be used to alleviate the detrimental effect of conflictual experiences on life

satisfaction. I further identified that the stress-buffering effect of economic gain was only salient among male migrant workers but not among female migrant workers. This gender difference is possibly due to different meanings associated with migration. For male migrant workers, in general, their migration decisions are based largely on economic concerns. Whereas for female, in addition to potential economic gain, migration is also a way to get rid of their miserable rural lives. In this chapter, although I failed to provide evidence to support the causal relationship between conflictual experiences and life satisfaction, the negative association between these two factors was confirmed. At the same time, the well-being protecting role of economic gain as well as gender difference were also identified.

In chapter 4, I linked the CFPS baseline wave data with regional level data of 25 provinces (or their administrative equivalents) released by China Bureau of Statistics and 6th National Population Census of the People's Republic of China. The major goal of this chapter was to examine the variation of well-being indicators (psychological distress and life satisfaction) across regions as well as the direct effects of regional level characteristics on these well-being indicators. I also examined whether the associations between conflictual experiences and these well-being indicators varies across regions and how regional level indicators modify the associations. Results showed that, although there were significant variations of psychological distress and life satisfaction across regions, regional differences only contributed to small proportions of overall variances of examined well-being indicators. In addition, all of the examined regional level indicators were not directly associated with psychological distress and life satisfaction among rural migrant workers. Moreover, the strength of the positive association between conflictual

experiences and psychological distress as well as the strength of the negative association between conflictual experiences and life satisfaction varied significantly across regions. Specifically, regions with higher Expenditure on People's Livelihood (EPL) and Disposable Personal Income (DPI) had a weaker association between conflictual experiences and psychological distress compared to regions with lower EPL and DPI. Regions with higher GDP per capital (GDPPC) had a stronger positive association between conflictual experiences and psychological distress as well as a stronger negative association between conflictual experiences and life satisfaction than regions with lower GDPPC. To my knowledge, the study conducted in this chapter is perhaps the first study that links nationally representative sample data with aggregate level data and examines the variations of the well-being indicators among rural migrant workers at the regional level. Results suggested that, although there were significant variations of well-being indicators at the regional level, most of the variations of the well-being indicators may still come from individual differences, therefore, we should not over exaggerate the effect of regional differences when examining the well-being of rural migrant workers. However, at the same time, we may also need to be aware of the significant indirect effects of regional level indicators (EPL, DPI, and GDPPC) that may amplify or mitigate the effect of conflictual experiences on well-being indicators.

In addition to aforementioned limitations of each chapter, I would like to discuss a major limitation of this dissertation. In the first chapter, 2105 rural migrant workers were included at the baseline wave (2010) and 3,866 were included at the 2014 wave of data for the bivariate analysis. However, in chapter 2 and chapter 3, only 939 rural migrant workers were included to construct the LDS models. This reduced sample size is not due

to “attrition”, in other words, this does not mean CFPS loss track more than half of the rural migrant workers in 2014. Instead, what it really means is that some of those who were surveyed in 2010 may return back to rural areas, loss their jobs in cities, or convert their hukou status to urban hukou within that four year period. So, CFPS still tracked most of them in 2014, but they are not “qualified” as rural migrant workers based on my definition (see chapter 1). Therefore, only those who were “qualified” as rural migrant workers for both waves of study were included in Chapter 2 and Chapter 3. This reduced sample size may leave the selection biases largely unaddressed. Those who met the criteria of rural migrant workers at both waves of study were more likely to be those who were more resilient to negative attitudinal social context, discriminatory behaviors, unfair treatment, and disadvantaged status, thus, their well-being status may be better compared to the overall rural migrant workers population. To address this limitation, future research could identify those who used to be qualified as rural migrant workers at the baseline but excluded from the follow up surveys and discuss the characteristics of this group of people.

Despite of this limitation and previously discussed limitations at the end of each chapter, there are several unique contributions of the dissertation. First of all, previous study that examined the well-being of rural migrant workers often heavily rely on regional level-data, thus may not be able to identify possible reciprocal relationship and capture the panorama of the well-being of rural migrant workers from the long-term perspective. I successfully addressed this gap by employing two waves of CFPS data and found a reciprocal relationship between conflictual experiences and psychological well-being as well as providing some evidence for the identification of causal effect based on

LDS model. In addition, due to the high quality of nationally representative sample, the regional level differences are largely neglected in the previous research. I successfully addressed this gap by linking CFPS individual level data with regional level data of 25 provinces (or their administrative equivalents) released by China Bureau of Statistics and 6th National Population Census of the People's Republic of China. Although regional level differences only contribute to a small proportion of the over all variation of well-being indicators, I identified several indirect relationship of macro level indicators that could modify the significant association between conflictual experiences and well-being indicators.

## **Implications**

Findings based on panel data, regional level data, and the nationally representative sample have provided many insights for future research and have offered several important implications for policymakers. Researchers who attempt to examine the discriminatory experiences of rural migrant workers in cities should not only examine perceived discrimination but also examine other processes through which discrimination may occur. This is because “there are so many ways to...discriminate against people that when motivation and power are in place” (Link and Phelan 2014: 3). The current study examined the effect of structural discrimination, which is manifested through hukou restrictions and undesirable interactions with local government and government officials. Future research may consider other forms or processes through which structural discrimination occurs. These may include laws, negative discourse/social contexts, and cultural practices. In addition to the structural discrimination, interactional discrimination



is another common discriminatory experience that individuals often encounter but is largely neglected by researchers. Interactional discrimination occurs when people behave differently, such as “hesitancy, uncertainty, superiority or even excessive kindness,” during the interaction with stigmatized individuals (Link and Phelan 2014: 4). The stigmatized individual often reacts to these behaviors with less confidence and indifferent attitude, which may lead to the interaction partners to dislike him/her. When this kind of interaction happens for multiple times with multiple interaction partners, the stigmatized individual may eventually become excluded. The difference between interactional discrimination and the common direct person-to-person discrimination is that no prejudicial attitudes or stereotypes are openly expressed in the former (Allport 1954). Therefore, researchers or even interaction participants often failed to recognize this kind of the discriminatory process.

In this study, I provided several mechanisms, such as “reflected appraisals” and self-fulfilling prophecies, that linking social stigma to well-being indicators through the pathway of self-esteem. The current study did not test this potential pathway due to an inconsistent measure of self-esteem in the CFPS data. Future studies need to include this key variable and conduct empirical analysis in order to support the proposed mechanism. At the same time, we have to acknowledge that stigmatization does not necessarily cause low self-esteem. Previous research has proposed several self-protective mechanisms that stigmatized individuals adopted to protect their self-images. Stigmatized individuals may a) attribute negative feedback to prejudice against their group; b) selectively compare their outcomes with those members at their own group; c) devalue those attributes on which their group typically fares poorly and value those attributes on which their group

excels (Crocker and Major 1989). Whether Chinese rural migrant workers have engaged in these self-protective strategies is worth examining in future studies.

CFPS offers valuable longitudinal data that help scholars who study domestic migration in China to fully capture the panorama from a long-term perspective. Previous research often heavily relies on traditional survey data, which were cross-sectional and were specifically focusing on the migrant population. Therefore, these data were suffered from several major problems and made the implications drawn from the findings limited. First of all, this type of data failed to rule out the possibility of selection biases. To address selection biases, the comparison between migrants and non-migrants need to be provided. Second, due to the high mobility of migrant workers, traditional sampling strategy may downgrade the representativity and accuracy of the sample. Third, the cross-sectional design failed to rule out possible reciprocal relationships. The CFPS data address all these problems with a unique sampling design. First, CFPS is based on the nationally representative sample, which could be used to rule out selection biases by comparing migrants with non-migrants. Second, CFPS tracks gene members (please see details of gene members in chapter 1) based on their households. Therefore, the target person could still be tracked through his/her family members even when he/she moved to other places. Even when this migrated person cannot be reached by any means, his/her family members could provide proxy answers for key questions (Xie and Hu 2014). Third, based on multiple waves of data, CFPS could be used to identify causal relationships and rule out the possibility of reciprocal relationships. However, current waves of CFPS data are not without limitations. For example, due to the inconsistent measure of psychological distress, the current study only included two waves of the

CFPS data (2010 and 2014). Therefore, the current study is only able to provide some evidence for a causal relationship between conflictual experiences and psychological distress. To truly examine and identify causal relationships, more waves of data are needed. Nevertheless, CFPS data are currently the most appropriate data to examine rural migrant workers at the national level and from a long-term perspective.

For policymakers, continued efforts need to be made to further eliminate the social structural barriers and to eventually improve the livelihood as well as the well-being of rural migrants. However, this is not an easy task. First of all, due to China's socioeconomic structure and unbalanced regional development policies as well as a large population base, the hukou system will not be easily abolished to grant every citizen the same rights. Despite several phases of evolution and reform of the hukou system, we still see rigid control and high criteria of hukou conversion in large and mega-sized cities. In these cities, local government has set high requirements for education, years of employment, years of residence, and years of social security payment to grant local hukou to migrants (Zhang, Wang, and Lu 2018).

Second, as discussed in chapter 1, even there are many opportunities to obtain local urban hukou status in small and medium-sized cities, rural migrants showed low enthusiasm since they need to give up their entitlement to their lands as an exchange. I want to elaborate on this point further here. Many rural migrants do not want to change their hukou status simply due to an increased value of rural hukou and a declined value of urban hukou (Chen and Fan 2016). Although more and more rural migrants intend to stay in urban areas for a long period of time, they view returning to the countryside as a fallback option. The rural land is a secured source of income for rural residents who

choose to return. In addition, the land value has increased substantially in rural areas due to a rapid urban expansion in recent years. Therefore, rural residents may not easily give it up when they have the opportunities to obtain great compensations from future land acquisitions. At the same time, although urban hukou holders still enjoy better state-provided benefits than rural hukou holders, the gap between rural and urban benefits has been largely narrowed in recent years. This is because the benefits in urban areas have become marketized, which means that employees now enjoy most of the benefits from their employers rather than from the local government. In other words, the disparity of social benefits not directly comes from hukou status but comes from occupation per se. In addition, although rural migrants still cannot enjoy the full benefits that their urban counterparts have, the public services that they could access to in cities have also increased substantially ever since the principle promoted by the central government (Chen and Fan 2016) stating that all citizens should have access to basic public services.

Third, with China's economic transition as well as the decentralization of "agricultural" and "non-agricultural" hukou distinction, hukou status per se does not create the huge socioeconomic status and life chance disparities between rural migrants and city dwellers. The disparities were created by their different capabilities in accessing high-quality resources. For example, migrant children are eligible to attend public schools if their families are willing to pay additional fees in cities. But, high quality education, especially high quality senior secondary education, is still limited to those from socioeconomically advantaged families. The supply of high quality high schools is considerably lower than the demand, as a consequence, students are often facing fierce competition for enrollments. Urban parents often need to pay expensive "selection fees"

to obtain a slot for their children in prestigious schools (Gao 2014). In addition to traditional school education, socioeconomically advantaged families further secure their children's advantages through after-school private tutoring and short-term study abroad programs. The high cost of high quality educational resources often selects migrant children in cities out of the competition. In general, those from high-status families obtain more social, economic, and cultural capitals that reward them with more opportunities and guarantee their educational attainments and future success in the job market. This indicates that hukou distinction may be the key factor that forms previous social stratification in cities; however, marketization of resources in current Chinese society heavily influenced the resources that individuals from different social strata could access to, which, in turn, may reproduce the social stratification and even enlarge inequalities among next generation. In sum, more actions from government and policymakers are needed to help rural migrants to access to benefits in cities and at the same time to foster rural migrants' long-term assurance of living in cities. To achieve this goal, it is not enough to focus merely on hukou reform, the designing of tailored policies that meet rural migrants' needs and address their concerns is also urgent.

### **Looking Forward**

The well-being of rural migrant workers and their adaptation in cities will remain highly salient issues in years to come. The future livelihood of rural migrant workers is largely determined by the economic development strategies that will be adopted by the Chinese government. In the pre-reform era, rural labors were not allowed to work and reside in cities for long-terms. This is because central planned economy heavily relied on

the extraction of rural surplus to provide support to heavy industry in cities. When market-oriented and export-oriented economy had replaced the central planned economy, rural labors were allowed to freely work and live in cities but were denied most social benefits. Researchers generally agreed that China's economic boom for the past three decades was fueled by rural surplus labors, who were absorbed by secondary sectors as cheap labors in urban areas (Athukorala and Wei 2017). In recent years, China's annual GDP growth rate has declined (ET Bureau 2019). Within this context, researchers have raised concern about China's fast economic growth period might be coming to an end. Many researchers have argued that China's economy has reached to, or will soon reach to "Lewisian turning point" (Lewis 1954) at which the labor market of a developing country would transit from a labor surplus phase to a labor shortage phase.

In Lewis' model, there are two sectors in a developing economy: one is modern sector, and another is traditional sector. The modern sector includes industries and services in which the labors are paid with marginal productivity. Marginal productivity is an economic term, which refers to the extra output gained by adding one unit of labor when all other inputs are held constant (O'Farrell 2019). The traditional sector includes any other sector (e.g., agricultural sector and small businesses) in which "the modes of production use little capital and simple technology, and a vast majority of people therein live at or near subsistence level" (Athukorala and Wei 2017: 2). Since the wage in traditional sector is only at the subsistence level, employers of the modern sector could just set a fixed wage rate that is slightly above the subsistent level to hire unskilled labors from the traditional sector. This is a win-win arrangement for both employers, who spend relatively less amount of money on labor costs, and employees, who obtain higher

income than work in traditional sector. With the expansion of modern sector, there will be a continued demand for labors from traditional sector. However, the surplus labors in traditional sector will eventually become exhausted (reach to Lewisian turning point). What will happen afterward is that the economy will operate as developed countries, in which the wage will no longer at a fixed rate but will be determined by the marginal productivity (Yamamoto 2019). So, whether the surplus labor pool has become depleted is vital to understand China's future economic transition and the livelihood of rural migrant workers. The current literature yields mixed findings regarding this important issue. On one hand, by examining the wage pattern of urban economy as well as by comparing wage difference between unskilled workers' from coastal provinces (concentration of modern sector) and from inland provinces (where most rural surplus labors originated from), several studies have found there was an overall increase in urban wage levels and a sharp decline in inter-province wage difference (e.g., Cai 2012; Li et al. 2012; Yang et al. 2010). Therefore, China's economy has already reached or is approaching the Lewisian turning point. By contrast, a group of researchers who focus directly on the supply side of the labor market argued that the rising urban wage levels and the declining inter-regional wage difference were not due to the depletion of surplus labor pool but because of the current barriers of labor mobility, such as hukou restrictions (Golley and Meng 2011; Knight, Deng, and Li 2011; Kwan 2009; Yao and Zhang 2010). In this sense, the Lewisian turning point has yet to be reached in China. Perhaps as the restrictions for labor mobility become further relaxed, modern sector will absorb more rural labors from traditional sector. Although the existing literature draws an inconsistent conclusion, there is a consensus that China's economic high-growth period, which is

fueled by rural cheap labors and export economy, has come to an end (Lee 2019) and another round of economic transition is inevitable.

From 1992 to 2014, China's annual GDP growth never fell below 7% (The World Bank 2018). However, in the state council published *Outline of the National 13th Five-Year Plan* (FYP), which is the central government's blueprint for China's long-term social and economic policies, the central government envisaged only an average 6.5% annual GDP growth from 2016 to 2020 (State Council of China Central Government 2016). In preparing for this economic slowdown, many strategies adopted by the central government of China will have a profound impact on the livelihood and well-being of rural migrant workers.

First of all, in order to maintain the pace of economic growth, one strategy that central government adopted is the continuous urbanization. This strategy is viewed as an attempt to increase consumption in the domestic market. In the *New-Type Urbanization Plan* (2014-2020), the Chinese Government claims to elevate the urban population from 53% to 60% by 2020 (Lee 2019). To achieve this goal, large numbers of rural lands which originally belonged to rural residents were expropriated by the government. These landless migrant workers, although they now become urban residents, find themselves remain in the bottom of the social hierarchy and feel even more insecure economically due to the absence of any fallback option.

Second, the economic slowdown also has a profound impact on the labor market, especially in heavy industry and export market. For example, some 5 million workers who used to work for state-run coal and steel companies were scheduled to lay-off in 2016 due to excess capacity (Lim, Miller, and Stanway 2016). At the same time, due to



declining demand and a rising labor cost, many transnational manufactures shut down their factories in the coastal area of China, as a consequence, several millions of manufacturing workers lost their jobs (USCBC 2016). The impact of the ongoing trade war between the U.S. and China on the labor market is unclear. Analysts predicted that the export growth in China would reduce from 11% in 2018 to 4% in 2019 (Pi 2018).

In dealing with the potential increase of jobless citizens, Chinese government responded with a series of policies aiming at promoting entrepreneurship and the e-business/platform business (Lee 2019). Many local governments now provide petty loans, subsidies, and tax reductions to encourage entrepreneurship. Starting from 2010, the annual growth rate of newly formed private business entities were all excess 100% (China Bureau of Statistics 2017). At the same time, many laid-off female migrant workers were engaged in online retail business through Taobao, an e-commerce business platform owned by Alibaba, and many laid-off male migrant workers were engaged in platform business, such as food delivery, express delivery, and online car-hailing services. These strategies have eased the potential pressures of unemployment among workers and at the same time have narrowed the “political space for collective mobilization and self-organizing.” This is because migrant workers now have fewer opportunities to form long-term and stable connections with fellow workers due to a blurred boundary between capital and labor in platform business as well as in self-employed small business (Lee 2019). Therefore, their bargaining power declines when demanding for their labor rights and the improvement of their livelihood.

Finally, in dealing with a potential labor shortage, it is also possible that the central government will further reduce the hukou barrier and introduce policies that

encourage more rural labors to move into cities. Perhaps in the near future, the rural migrant workers could have access to full range of benefits, including education, medical, pension, and other social services, even in some large size cities and at the same time maintain their land-use rights in their home villages (Chen and Fan 2016).

In sum, the livelihood and well-being of rural migrant workers will still be intertwined with the development of China's economy in the next few decades. Therefore, future studies that attempt to examine the well-being and its important correlates among rural migrant workers should pay special attention to the effect of the political system and economic structure of China.

## APPENDICES

### Distribution of Conflictual Experiences Items

	Yes (%)	No (%)
<b>Discrimination due to income gap (2010)</b>	22.3	77.7
<b>Discrimination due to hukou status (2010)</b>	14.3	85.7
<b>Discriminated by government officials (2010)</b>	14.5	85.5
<b>Had conflict with government officials (2010)</b>	5.9	94.1
<b>Unreasonable delayed and stalled by government (2010)</b>	20.7	79.3
<b>Charged unreasonable service fees at government (2010)</b>	16.2	83.8
<b>Discrimination due to income gap (2014)</b>	11.5	88.5
<b>Discrimination due to hukou status (2014)</b>	6.2	93.8
<b>Discriminated by government officials (2014)</b>	9.3	90.7
<b>Had conflict with government officials (2014)</b>	8.0	92.0
<b>Unreasonable delayed and stalled by government (2014)</b>	15.7	84.3
<b>Charged unreasonable service fees at government (2014)</b>	8.0	92.0

*Note:* N=939

### Distribution of Psychological Distress Items

<b>During the past 30 days, how often respondents have felt...</b>	1 (%) none of the time	2 (%)	3 (%)	4 (%)	5 (%) all of the time
<b>Nervous (2010)</b>	56.2	36.3	2.5	3.6	1.1
<b>Hopeless (2010)</b>	65.1	28.5	2.2	2.9	1.0
<b>Restless or fidgety (2010)</b>	72.3	23.5	1.6	1.8	0.5
<b>Nothing could cheer you up (2010)</b>	84.0	12.8	1.2	1.2	0.3
<b>Everything was an effort (2010)</b>	67.4	27.6	1.9	2.3	0.4
<b>Worthless (2010)</b>	84.7	12.7	1.0	0.9	0.3
<b>Nervous (2014)</b>	41.3	37.6	4.5	3.4	1.6
<b>Hopeless (2014)</b>	52.2	28.4	3.3	3.1	1.3
<b>Restless or fidgety (2014)</b>	58.0	24.5	2.7	2.0	1.1
<b>Nothing could cheer you up (2014)</b>	71.8	12.9	1.8	1.2	0.6
<b>Everything was an effort (2014)</b>	58.6	24.0	2.8	2.0	0.9
<b>Worthless (2014)</b>	73.0	11.8	1.6	1.2	0.6

*Note:* N=939

## REFERENCES

- Alexander, Peter and Anita Chan. 2004. "Does China Have an Apartheid Pass System?" *Journal of Ethnic and Migration Studies* 30(4): 609-629.
- Allport, Gordon W. 1954. *The Nature of Prejudice*. Garden City, New York: Doubleday.
- Athukorala, Prema-chandra and Zheng Wei. 2017. "Economic Transition and Labour Market Dynamics in China: An Interpretative Survey of the "Turning Point" Debate." *Journal of Economic Surveys* 0(0): 1-20.
- Baker, Lindsey A., Lawrence P. Cahalin, Kerstin Gerst, and Jeffrey A. Burr. 2005. "Productive Activities and Subjective Well-Being among Older Adults: The Influence of Number of Activities and Time Commitment ." *Social Indicators Research* 73: 431-458.
- Bartram, David. 2010. "Economic Migration and Happiness: Comparing Immigrants' and Natives' Happiness Gain From Income." *Social Indicators Research* 103(1): 57-76.
- Berg, Hendrik Van den and Orn B. Bodvarsson. 2013. *The Economics of Immigration: Theory and Policy*. New York: Springer.
- Bian, Yanjie and Lulu Li. 2012. "The Chinese General Social Survey (2003-2008): Sample Designs and Data Evaluation." *Chinese Sociological Review* 45(1): 70-97.
- Bian, Yanjie, Ronald Breiger, Deborah Davis, and Joseph Galaskiweicz. 2005. "Occupation, Class, and Social Networks in Urban China." *Social Forces* 83(4): 1443-1468.
- Blanchflower, David G. and Andrew J. Oswald. 2004. "Well-being Over Time in Britain and the USA." *Journal of Public Economics* 88(7-8): 1359-1386.

- Blumer, Herbert. 1958. "Race Prejudice as a Sense of Group Position." *The Pacific Sociological Review* 1(1): 3-7.
- Boudieu, Pierre. 1990. *The Logic of Practice*. Stanford: Stanford University Press.
- Buckley, Chris. 2017. "A Drive Against Migrants: 'Beijing doesn't Want Us'." *The New York Times*, December 1, A4.
- Cai, Fang. 2012. "The Coming Demographic Impact on China's Growth: the Age Factor in the Middle-Income Trap." *Asian Economic Papers* 11(1): 95-111.
- Cai, He, and Chaohai Li. 2015. "Nongmingong Gongzhi Zhengzhang Beihou de Bupingdeng Xianxiang 农民工工资增长背后的不平等现象." *Wuhan Daxue Xuebao: Zhexue Shehuikexue Ban 武汉大学学报哲学社会科学版* 68(3): 111-120.
- Chan, Kam W. 2010. "The Household Registration System and Migrant Labor in China: Notes on a Debate." *Population and Development Review* 36(2): 357-364.
- Chan, Kam W. and Will Buckingham. 2008. "Is China Abolishing the Hukou System?" *The China Quarterly* 195: 582-606.
- Chen, Chuanbo, and Cindy C. Fan. 2016. "China's Hukou Puzzle: Why Don't Rural Migrants Want Urban Hukou." *The China Review* 16(3): 9-39.
- China Labor Bulletin. 2018. *The Workers' Movement in China 2015-2017*. Hong Kong: China Labor Bulletin.
- China National Bureau of Statistics. 2017. "2017 Nongmingong Jianche Baogao." Retrieved August 10, 2018 ([http://www.stats.gov.cn/tjsj/zxfb/201804/t20180427\\_1596389.html](http://www.stats.gov.cn/tjsj/zxfb/201804/t20180427_1596389.html)).

- China National Bureau of Statistics. 2018. "China GDP Annual Growth Rate." Retrieved August 9, 2018 (<https://tradingeconomics.com/china/gdp-growth-annual>).
- Clark, Andrew E., Ed Diener, Yannis Georgellis, and Richard E. Lucas. 2008. "Lags and Leads in Life Satisfaction: A Test of the Baseline Hypothesis." *The Economic Journal* 118(529): 222-243.
- Cooley, Charles. 1956. *Human Nature an the Social Order*. New York: Free Press.
- Corrigan, Patrick W., Fred E. Markowitz, and Amy C. Watson. 2004. "Structural Levels of Mental Illness Stigma and Discrimination." *Schizophrenia Bulletin* 30(3): 481-491.
- Crocker, Jennifer and Brenda Major. 1989. "Social Stigma and Self-Esteem: The Self-Protective Properties of Stigma." *Psychological Review* 96(4): 608-630.
- Cui, Rong and Jeffrey H. Cohen. 2015. "Reform and the Hukou System in China." *Migration Letters* 12(3): 327-335.
- Diener, Ed, and Eunkook. M. Suh. 1997. "Measuring Quality of Life: Economic, Social, and Subjective Indicators." *Social Indicators Research* 40(1-2): 189-216.
- Diener, Ed, Eunkook M. Suh, Richard E. Lucas, and Heidi L. Smith. 1999. "Subjective Well-Being: Three Decades of Progress." *Psychological Bulletin* 125: 276-302.
- Dong, Xiangshu. 2012. "Nongminggong Gongzuo Zhuangtai Yu Jiankang De Shizheng Yanjiu 农民工工作状态与健康的实证研究." *Guizhou Caijing Xueyuan Xuebao 贵州财经学院学报* 159 (4): 91-96.
- Easterlin, Richard A. 1974. "Does Economic Growth Improve the Human Lot?" Pp. 89-125 in *Nations and Households in Economic Growth: Essays in Honor of Moses Abramowitz*, edited by P. A. David and M. W. Rede. New York: Academic Press.

- Easterlin, Richard A. 2001. "Income and Happiness: Towards a Unified Theory." *The Economic Journal* 111(473): 465-484.
- Easterlin, Richard A. 2005. "Diminishing Marginal Utility of Income? Caveat Emptor." *Social Indicators Research* 70(3): 243-255.
- Elder, Gleen H Jr., Monica Kirakpareick Johnson, and Robert Crosnoe. 2003. "The Emergence and Development of Life Course Theory." Pp. 3-19 in *Handbook of the Life Course*, edited by J. T. Mortimer and M. J. Shanahan. College Station, Texas: Howard B. Kaplan, Texas A&M University.
- Elder, Glen H. Jr., Linda K. George, and Michael J. Shanahan. 1996. "Psychological Stress over the Life Course." Pp. 247-292 in *Psychosocial Stress: Perspectives of Structure, Theory, Life-course, and Methods*, edited by Howard B. Kaplan. San Diego: Academic Press.
- ET Bureau. 2019. "Decoded: The Chinese Economic Slowdown." Retrieved January 25, 2019. (<https://economictimes.indiatimes.com/news/economy/indicators/decoded-the-chinese-economic-slowdown/articleshow/67633558.cms>).
- Gao, Helen. 2014. "China's Education Gap." *New York Times*. Retrieved March 04 , 2017. ([www.nytimes.com/2014/09/05/opinion/sunday/chinas-education-gap.html?\\_r=0](http://www.nytimes.com/2014/09/05/opinion/sunday/chinas-education-gap.html?_r=0)).
- Goffman, Erving. 1963. *Stigma*. New Jersey: Prentice-Hall: Englewood Cliffs.
- Golley, Jane and Xin Meng. 2011. "Has China Run Out of Surplus Labour?" *China Economic Review* 22(4): 555-572.
- Gries, Thomas, Manfred Kraft, and Manuel Simon. 2016. "Explaining Inter-provincial Migration in China." *Papers in Regional Science* 95(4): 710-731.

- Han, Dong. 2010. "Policing and Racilization of Rural Migrant Workers in Chinese Cities." *Ethnic and Racial Studies* 33(4): 593-610.
- Hsu, Sara. 2017. "China Takes Another Step Towards a Service Economy." *Forbes*, Retrieved January 15, 2018.  
(<https://www.forbes.com/sites/sarahsu/2017/02/21/china-takes-another-step-towards-a-service-economy/#3c8c1faf28c1>).
- Hu, Xiaojiang, Sarah Cook, and Miguel A. Salazar. 2008. "Internal Migration and Health in China." *Lancet* 372(9651): 1717-1719.
- Huang, Ping and Shaohua Zhan. 2005. "Internal Migration in China: Linking it to Development." Pp. 65-84 in *Migration, Development and Poverty Reduction in Asia*, edited by L. Frank and P.-D Ilse. Geneva: International Organization for Migration.
- Hull, Diana. 1979. "Migration, Adaptation, and Illness: A Review." *Social Science & Medicine* 13A: 25-36.
- Hutcison, Elizabeth D. 2010. *Dimensions of Human Behavior: The Changing Life Course*. Thousand Oaks: SAGE Publications.
- Jiang, Hong, Jihua Li, and Lanying Fu. 2014. "Nongchun Liushou Funv Jiangkang Zhuangkuangzhuangkuang Ji Jiangkangxuqiu Diaocha 农村留守妇女健康状况及健康需求调查." *Hunan Shehuikexue 湖南社会科学* 2: 112-115.
- Kessler, Ronald C., Gavin Andrews, Lisa J. Colpe, Eva Hiripi, Daniel K. Mroczek, S-LT Normand, Ellen E. Walters, and Alan M. Zaslavsky. 2002. "Short Screening Scales to Monitor Population Prevalences and Trends in Non-Specific Psychological Distress." *Psychological Medicine* 32(6): 959-976.



- Kessler, Ronald C., Kristin D. Mickelson, and David R. Williams. 1999. "The Prevalence, Distribution, and Mental Health Correlates of Perceived Discrimination in the United States." *Journal of Health and Social Behavior* 40(3): 208-230.
- Knight, John, Quheng Deng, and Shi Li. 2011. "The Puzzle of Migrant Labour Shortage and Rural Labour Surplus in China." *China Economic Review* 22(4): 585-600.
- Knight, John and Ramani Gunatilaka. 2010. "Great Expectations? The Subjective Well-being of Rural-Urban Migrants in China." *World Development* 38(1): 113-124.
- Krause, Neal. 1998. "Neighborhood Deterioration, Religious Coping, and Changes in Health during Late Life." *Gerontologist* 38(6): 653-664.
- Kwan, Fung. 2009. "Agricultural Labour and the Incidence of Surplus Labour: Experience from China During Reform." *Journal of Chinese Economic and Business Studies* 7(3): 341-361.
- Lee, Ching Kwan. 2019. "China's Precariats." *Globalization* 16(2): 137-154.
- Lewis, William Arthur. 1954. "Economic Development with Unlimited Supplies of Labour." *The Manchester School* 22(2): 139-191.
- Li, Cheng. 1996. "Surplus Rural Laborers and Internal Migration in China: Current Status and Future Prospects." *Asian Survey* 36(11): 1122-1145.
- Li, Hongbin, Lei Li, Binzhen Wu, and Yanyan Xiong. 2012. "The End of Cheap Chinese Labor." *Journal of Economic Perspectives* 26(4): 57-74.
- Li, Lu, Hong-mei Wang, Xue-jun Ye, Min-min Jiang, Qin-yuan Lou, and Therese Hesketh. 2007. "The Mental Health Status of Chinese Rural-Urban Migrant Workers." *Social Psychiatry & Psychiatric Epidemiology* 42(9): 716-722.

- Li, Shi, Hiroshi Sato, and Terry Sicular. 2013. *Rising Inequality in China*. Cambridge: Cambridge University Press.
- Li, Xiaoming, Bonita Stanton, Xiaoyi Fang, and Danhua Lin. 2006. "Social Stigma and Mental Health among Rural-to-Urban Migrants in China: A Conceptual Framework and Future Research Needs." *World Health Population* 8(3): 14-31.
- Li, Xiaoming, Bonita Stanton, Xiaoyi Fang, Qing Xiong, Shuli Yu, Danhua Lin, Yan Hong, Liying Zhang, Xinguang Chen, and Bo Wang. 2009. "Mental Health Symptoms among Rural-to-Urban Migrants in China: A Comparison with Their Urban and Rural Counterparts." *World Health & Population* 11(1): 24-38.
- Li, Xiaoming, Liying Zhang, Xiaoyi Fang, Qing Xiong, Xinguang Chen, Danhua Lin, Ambika Mathur, and Bonita Stanton. 2008. "Stigmatization Experienced by Rural-to-Urban Migrant Workers in China: Findings from a Qualitative Study." *World Health & Population* 9(4): 1-16.
- Lian, Si and Tao Yuanhao. 2013. "Fuwuye Xinchengdai Nongmingong Jingshenwenhua Shenghuo De Shizhengyanjiu - Jiyu Beijing De Diaocha Fenxi 服务业新生代农民工精神文化生活的实证研究——基于北京的调查分析." *Zhongguo Qingnian Yanjiu 中国青年研究* 5: 55-59.
- Liang, Ying, Bing Hou, and Shuangshuang Li. 2017. "Shenghuoyali Juzhutiaojian Dui Nongmingong Jingshenjiankang De Yingxiang 生活压力、居住条件对农民工精神健康的影响." *Chengshi Wenti 城市问题* 9: 94-103.
- Lim, Benjamin Kang, Matthew Miller, and David Stanway. 2016. "Exclusive: China to Lay Off Five to Six Million Workers, Earmarks at Least \$23 Billion." *Reuters*.

- Retrieved January 25, 2019 (<https://www.reuters.com/article/us-china-economy-layoffs-exclusive-idUSKCN0W33DS>).
- Lin, Danhua, Xiaoming Li, Bo Wang, Yan Hong, Xiaoyi Fang, Xiong Qin, and Bonita Stanton. 2009. "Discrimination, Perceived Social Inequality, and Mental Health Among Rural-to-Urban Migrants in China." *Community Mental Health Journal* 47(2): 171-180.
- Link, Bruce G. and Jo C. Phelan. 2001. "Conceptualizing Stigma." *Annual Review of Sociology* 27(1): 363-385.
- Link, Bruce G. and Jo C. Phelan. 2014. "Stigma Power." *Social Science & Medicine* 103: 24-32.
- Loong-Yu, Au and Nan Shan. 2007. "Chinese Women Migrants and the Social Apartheid." *Local/Global Encounters* 50(3): 76-82.
- Lu, Wenrong, Hanlong Lu, and Yao Duan. 2017. "Chengshi Wailaiwugong Renyuan De Jingshenjiankang: Zhidu Hefaxing Yali Shehuizhichi Yu Qianyiyi 外来务工人员的精神健康：制度合法性压力、社会支持与迁移意义." *Journal of Social Work* 2: 57-111.
- Lucas, Robert E. B. 1997. "Internal Migration in Developing Countries." Pp. 721-798 in *Handbook of Population and Family Economics*, edited by M. B. Rosenzweig and O. Stark. New York: Elsevier.
- Mak, Winnie W. S., Cecilia Y. M. Poon, Loraine Y. K. Pun, and Shu F. Cheung. 2007. "Meta-analysis of Stigma and Mental Health." *Social Science and Mental Health* 65(2): 245-261.
- Mead, George H. 1934. *Mind, Self, and Society*. Chicago: University of Chicago Press.

- Merton, Robert. 1948. "The Self-fulfilling Prophecy." *Antioch Review* 8(2): 193-210.
- Newbold, K. Bruce. 2005. "Self-Rated Health within the Canadian Immigrant Population: Risk and the Healthy Immigrant Effect." *Social Science & Medicine* 60(6): 1359-1370.
- Newsom, Jason T. 2015. *Longitudinal Structural Equation Modeling: A Comprehensive Introduction*. New York and London: Routledge.
- O'Farrell, Renee. 2019. "Concept of Marginal Productivity." Retrieved January 25, 2019. (<https://smallbusiness.chron.com/concept-marginal-productivity-10570.html>).
- Olgiati, Analia, Rocio Calvo, and Lisa Berkman. 2013. "Are Migrants Going Up a Blind Alley? Economic Migration and Life Satisfaction around the World: Cross-National Evidence from Europe, North America and Australia." *Social Indicators Research* 114(2): 383-404.
- Pearlin, Leonard I. 1985. "Social Structure and Processes of Social Support." Pp. 43-60 in *Social Support and Health*, edited by S. Cohen and L. S. Syme. San Diego, CA: Academic Press.
- Pearlin, Leonard I., Elizabeth G. Menaghan, Morton A. Lieberman, and Joseph T. Mullan. 1981. "The Stress Process." *Journal of Health and Social Behavior* 22(4): 337-356.
- Phillips, Tom. 2017. "Hundreds Take Part in Rare Protest in Beijing Over Migrant Crackdown." *THE GUARDIAN*. Retrieved August 10, 2018 (<https://www.theguardian.com/world/2017/dec/11/hundreds-take-part-rare-protest-beijing-migrant-crackdown>).

- Pi, Xiaoqing. 2018. "Chinese Factories Cut Prices, Lay Off Workers in Trade War: UBS." Retrieved December 17, 2018.  
(<https://www.bloomberg.com/news/articles/2019-01-26/google-memo-on-cost-cuts-sparks-heated-debate-inside-company>).
- Pinquart, Martin and Silvia Sorensen. 2000. "Influence of Socioeconomic Status, Social Network, and Competence on Subjective Well-Being in Later Life: A Meta-Analysis." *Psychology and Aging* 15(2): 187-224.
- Rabe-Hesketh, Sophia and Anders Skrondal. 2005. *Multilevel and Longitudinal Modeling Using Stata*. College Station: Stata Press.
- Rivers, Matt and Serenitie Wang. 2017. "Beijing Forces Migrant Workers from Their Homes in 'Savage' Demolitions." CNN. Retrieved August 29, 2018  
(<https://www.cnn.com/2017/12/08/asia/china-migrant-workers-evictions-beijing/index.html>).
- Sheehan, Spencer. 2017. "China's Hukou Reforms and the Urbanization Challenge." THE DIPLOMAT. Retrieved November 5, 2017  
(<https://thediplomat.com/2017/02/chinas-hukou-reforms-and-the-urbanization-challenge/>).
- Shen, Qijie, Ya-Wen Lu, Chi-Yi Hu, Xiao-Ming Deng, Huan Gao, Xian-Qing Huang, and En-Hong Niu. 1998. "A Preliminary Study of the Mental Health of Young Migrant Workers in Shenzhen." *Psychiatry and Clinical Neurosciences* 52(Suppl.): S370-S373.
- Shields, Gail M. and Michael P. Shields. 1989. "The Emergence of Migration Theory and A Suggested New Direction." *Journal of Economic Surveys* 3(4): 277-304.

- Solinger, Dorothy J. 1999. *Contesting Citizenship in Urban China: Peasant Migrants, the State, and the Logic of the Market*. Berkeley: University of California Press.
- State Council of China Central Government. 2016. *Outline of the National 13th Five-Year Plan*. Beijing: Xinhua News Agency.
- Su, Chi-Wei, Tie-Ying Liu, Hsu-Ling Chang, and Xu-Zhao Jiang. 2015. "Is Urbanization Narrowing the Urban-Rural Income Gap? A Cross-Regional Study of China." *Habitat International* 48: 79-86.
- The World Bank. 2015. *Arable Land*. Retrieved October 24, 2018.  
([https://data.worldbank.org/indicator/AG.LND.ARBL.ZS?locations=CN-US&name\\_desc=true](https://data.worldbank.org/indicator/AG.LND.ARBL.ZS?locations=CN-US&name_desc=true)).
- Treiman, Donald J. 2012. "The 'Difference between Heaven and Earth': Urban-Rural disparities in Well-Being in China." *Research in Social Stratification and Mobility* 30(1): 33-47.
- USCBC. 2016. "Handling Mass Layoffs in China's Manufacturing Sector." Retrieved January 25, 2019 (<https://www.chinabusinessreview.com/handling-mass-layoffs-in-chinas-manufacturing-sector/>).
- Wallerstein, Immanuel. 2004. "The Modern World-System in Crisis." Pp. 76-90 in *World-Systems Analysis: An Introduction*, by Immanuel Wallerstein. Durham, NC: Duke University Press.
- Wang, Bo, Xiaoming Li, Bonita Stanton, and Xiaoyi Fang. 2010. "The Influence of Social Stigma and Discriminatory Experience on Psychological Distress and Quality of Life among Rural-to-Urban Migrants in China." *Social Science and Medicine* 71: 84-92.

- Wang, Haining, Zhiming Cheng, and Russel Smyth. 2013. "Happiness and Job Satisfaction in Urban China: A Comparative Study of Two Generations of Migrants and Urban Locals." *Urban Studies* 51(10): 2160-2184.
- White, Michael J. and David P. Lindstrom. 2005. "Internal Migration." Pp. 311-346 in *Handbook of Population*, edited by D. L. Poston and M. Micklin. New York: Springer Science & Business Media.
- Wong, Daniel Fu Keung, Chang Y. Li, and He X. Song. 2007. "Rural Migrant Workers in Urban China: Living in a Marginalised Life." *International Journal of Social Welfare* 16(1): 32-40.
- Wong, Daniel Fu Keung and He Xue Song. 2008. "The Resilience of Migrant Workers in Shanghai China: The Roles of Migration Stress and Meaning of Migration." *International Journal of Social Psychiatry* 54(2): 131-143.
- World Health Organization. 1997. "WHOQOL: Measuring quality of life ." World Health Organization, Geneva.
- Wu, Huifang and Jing Rao. 2009. "Nongchun Liushou Funv Yanjiu Zhongsu 农村留守妇女研究综述." *China Agricultural University Journal of Social Sciences Edition* 26(2): 18-23.
- Wu, Qiong, Lihong Dai, Chong Zhang, Yulei Wang, and Wenjia Zhang. 2016. *China Family Panel Studies Technical Report: Introduction to 2014 Data and Data Clearance Report*. Beijing: China Family Panel Studies.
- Wu, Jie, Chunyao Ou, and Hongyan Xie. 2015. "Wenhua Chengdu Yu Nongmingong Jingshen Wenhua Shenghuo Yanjiu Baogao - Jiyu Jingzhoushi 800 Wei Nongmingong De Diaocha Fenxi 文化程度与农民工精神文化生活研究报告—

- 基于对锦州市 800 位农民工的调查分析。” *Zhongguo Shichang 中国市场* 39: 125-126.
- Wu, Wei, Xiangyang Wei, and Fangyuan Qian. 2017. “Nongmingong Jingshen Wenhua Shenghuo Wenti Yanjiu 农民工精神文化生活问题研究.” *Journal of Fuyang Normal University (Social Science) 阜阳师范学院学报* 39: 125-131.
- Xie, Yu. 2012. “The User's Manual of the China Family Panel Studies (2010).” Beijing: Institute of Social Science Survey, Peking University.
- Xie, Yu. 2016. “Understanding Inequality in China.” *Chinese Journal of Sociology* 2(3): 327-347.
- Xie, Yu and Jingwei Hu. 2014. “An Introduction to the China Family Panel Studies.” *Chinese Sociological Review* 47(1): 3-29.
- Xie, Yu, Xiaobo Zhang, Ping Tu, Qiang Ren, Yan Sun, Ping Lv, Hua Ding, Jingwei Hu, and Qiong Wu. 2017. *User Manual of China Family Panel Studies*. Beijing: China Family Panel Studies.
- Xie, Yu and Xiang Zhou. 2014. “Income Inequality in Today's China.” *Proceedings of the National Academy of Science* 111(19): 6928-2933.
- Xu, Ling, Bei Wu, Iris Chi, and Hsin-Yi Hsiao. 2012. “Intensity of Grandparent Caregiving and Life Satisfaction among Rural Chinese Older Adults: A Longitudinal Study Using Latent Difference Score Analysis.” *Family & Community Health* 35(4): 287-299.
- Xu, Qingwen. 2011. “Migrant Workers Community in China: Relationships among Social Networks, Life Satisfaction and Political Participation.” *Psychosocial Intervention* 20(3): 281-294.



- Xu, Qingwen and Neal A. Palmer. 2011. "Migrant Workers' Community in China: Relationships among Social Networks, Life Satisfaction and Political Participation." *Psychosocial Intervention* 20(3): 281-294.
- Yamamoto, Hiromi. 2012. "Has China's Economy Already Passed the Lewisian Turning Point." Retrieved January 25, 2019.  
(<https://www.yomiuri.co.jp/adv/chuo/dy/opinion/20121015.html>).
- Yan, Hairong. 2008. *New Masters, New Servants: Migration, Development, and Women Workers in China*. London: Duke University Press.
- Yang, Dennis Tao, Vivian Weijia Chen, and Ryan Monarch. 2010. "Rising Wages: Has China Lost Its Global Labor Advantage?" *Pacific Economic Review* 15(4): 482-504.
- Yao, Yang and Ke Zhang. 2010. "Has China Passed the Lewis Turning Point? A Structural Estimation Based on Provincial Data." *China Economic Journal* 3(2): 155-162.
- Zhang, Jintao, Xiaoming Li, Xiaoyi Fang, and Qing Xiong. 2009. "Discrimination Experience and Quality of Life among Rural-to-Urban Migrants in China: the Mediation Effect of Expectation-Reality Discrepancy." *Quality of Life Research* 18(3): 291-300.
- Zhang, Jipeng, Ru Wang, and Chong Lu. 2018. "A Quantitative Analysis of Hukou Reform in Chinese Cities: 2000-2016." *Growth and Change* 0(0): 1-21.
- Zhang, Wei, Qiushi Feng, Joy Lacanienta, and Zhihong Zhen. 2016. "Leisure Participation and Subjective Well-being: Exploring Gender Differences among Elderly in Shanghai, China." *Archives of Gerontology and Geriatrics* 69: 45-54.

- Zhang, Wei, Seunghye Hong, David T. Takeuchi, and Krysia N. Mossakowski. 2012. "Limited English Proficiency and Psychological Distress among Latino and Asian Americans." *Social Science & Medicine* 75(6): 1006-1010.
- Zhang, Wei and Seunghye Hong. 2013. "Perceived Discrimination and Psychological Distress Among Asian Americans: Does Education Matter?" *Journal of Immigrant and Minority Health* 15(5): 932-943.
- Zhang, Zhuoni, and Donald J. Teiman. 2013. "Social Origins, Hukou Conversion, and the Wellbeing of Urban Residents in Contemporary China." *Social Science Research* 42: 71-89.
- Zhong, Bao-Liang, Tie-Bang Liu, Helen Chiu, Sandra Chan, Chi-Yi Hu, Xue-Feng Hu, Yu-Tao Xiang, and Eric Caine. 2013. "Prevalence of Psychological Symptoms in Contemporary Chinese Rural-to-Urban Migrant Workers: An Exploratory Meta-Analysis of Observational Studies using the SCL-90\_R." *Social Psychiatry and Psychiatric Epidemiology* 48: 1569-1581.
- Zhong, Bao-Liang, Tie-Bang Liu, Jian-Xing Huang, Helene H. Fung, Sandra S. M. Chan, Yeates Conwell, and Helen F. K. Chiu. 2016. "Acculturative Stress of Chinese Rural-To-Urban Migrant Workers: A Qualitative Study." *PLOS One* 11(6): 1-15.
- Zhong, Bao-Liang, Tie-Bang Liu, Sandra Chan, Dong Jin, Chi-Yi Hu, Jing Dai, and Helen Chiu. 2017. "Common Mental Health Problems in Rural-to-Urban Migrant Workers in Shenzhen, China: Prevalence and Risk Factors." *Epidemiology and Psychiatric Sciences* 27(3): 1-10.
- Zhou, Qingxing, Zhi Zeng, and Zengmei Lie. 2007. "Nongchun Liushou Fu'nv Diaocha 农村留守妇女调查." *Journal of China Women's University* 19(1): 63-66.

Zhou, Tian. 2014. "State Council Releases Hukou Reform Proposal." CAIXIN ONLINE.

Retrieved December 09, 2015 ([http://english.caixin.com/2014-12-](http://english.caixin.com/2014-12-05/100759833.html)

[05/100759833.html](http://english.caixin.com/2014-12-05/100759833.html)).

Zimmerman, Cathy, Ligia Kiss, and Mazedra Hossain. 2011. "Migration and Health: A

Framework for 21st Century Policy-Making." *PLoS Medicine* e1001034.