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The Citizenship Advantage in Psychological Well-being: An Examination of the *Hukou* System in China

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ABSTRACT Given that Chinese migrants with rural *hukou* status are not considered full citizens in their urban destinations, rural-urban *hukou* conversion signifies full citizenship attainment in urban China. We assess causal effects of three major types of urban *hukou* attainment—merit-, policy-, and family-based *hukou* conversion—on migrants' psychological well-being in middle- and later-life. We further examine how *hukou* matters—how periods and *hukou* destinations alter the values of specific urban *hukou* and their psychological health implications for individuals. We use the China Health and Retirement Longitudinal Study (2015 data) and life history data (for 2014) for analysis. To assess the extent to which the salmon effect contributes to estimation bias for migrants, we compare results from a sample with current migrants and one with current and returned migrants. To address for selection into *hukou* conversion, we adopt inverse probability–weighted regression adjustment methods. We show that the salmon bias significantly dampened causal estimates. Merit- and policy-based *hukou* conversion has protective effects on psychological well-being. Policy-based converters have better psychological health than other types of converters. *Hukou* conversion in the pre-1978 period conveys greater psychological benefits than that in the post-1998 period, when economic and social values of urban *hukou* have decreased. *Hukou* converters in the cities with the most resources enjoy better psychological well-being than their counterparts in other cities. Our study joins the emerging literature in investigating how citizenship conveys advantage in health and well-being. We discuss these results in the global context as well as the context of China's decades of evolution of *hukou* policy and the urbanization process.

KEYWORDS Citizenship advantage • Depressive symptoms • Immigration • Salmon bias • *Hukou* system

Introduction

As people throughout the world become more mobile, migrants' limited access to full citizenship rights in destinations has been a common experience for migrants and a growing worldwide concern. The power of citizenship is deeply rooted in institutional discrimination believed to be one of the fundamental causes of health inequities

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(Gee and Ford 2011; Link and Phelan 1995). Exclusionary policies, such as setting boundaries for social rights and entitlements, have created a broad-scale segregation between full citizens and those with a more precarious status (Gee and Ford 2011).

Those without full citizenship rights are often deprived of social services and entitlements, have limited access to healthcare, and lack the social support necessary to buffer these stressors derived from citizenship denial in destinations (Amuedo-Dorantes et al. 2013; Riley et al. 2017). For example, undocumented migrants may experience chronic stress from a lack of sense of dignity, standing, or belonging (Abrego 2008; Gonzales 2016); fear of risks of deportation or family separation (Brabeck et al. 2014; Dreby 2012); and social discrimination and isolation (Gonzales 2011; Negi 2013)—all of which may contribute to adverse health outcomes.

However, current understanding on whether citizenship is a cause of health disparity is limited (Gee and Ford 2011). Three reasons contribute to this gap in knowledge. First, a large literature has been devoted to comparisons of noncitizen migrants and local citizens. However, in early life, local citizens usually enjoy more advantaged social and healthcare environments than noncitizen migrants, and with an absence of stress-inducing migration experience and migration selectivity, they are significantly different in many ways from noncitizen migrants and thus cannot be appropriately compared with them. Second, even among migrants, the wide variety of selectivity associated with citizenship entry is not always sufficiently taken into account. Finally, most research has relied on destination-based surveys collected from current migrants, making it difficult to enumerate return migrants, who tend to be selectively less healthy, thus potentially biasing causal estimation. This study assesses the causal link of citizenship and health by addressing each of the pitfalls presented in the literature.

Another gap in the literature is that existing research has rarely gone beyond a single group of immigrants observed at a single point in time, thereby limiting our understanding in how *context* shapes meanings and values of citizenship for individual well-being. Do the meanings and values of citizenship remain constant for subgroups and over time and across place? In the broad historical context of social and policy changes, structural and social implications of citizenship rights may be altered (Alba 2005). These historical contexts may intersect with individual life course to produce disparate health outcomes in the long term for those who have realized citizenship mobility. We need a better understanding of how this contextualized citizenship power differentially affects the health of different groups.

This study aims to address these two gaps in the realm of psychological health by utilizing a nationally representative data with individual life histories in the context of *hukou* policies in China. We ask, first, whether citizenship attainment (i.e., urban *hukou* conversion) has a causal effect on individual depressive symptoms in mid- and later life. Although most research has lumped all types of *hukou* mobility together, we differentiate groups by ways in which *hukou* mobility was realized: (1) *merit-based converters*, by which migrants with higher human, cultural, or financial capital gained urban *hukou* through higher education, employment, or personal success; (2) *family-based converters*, by which migrants obtained urban *hukou* through family ties, usually as a dependent spouse or child; and (3) *policy-based converters*, whereby the whole village or community was incorporated into city jurisdiction as an urbanization process, and individuals obtained urban *hukou*

"at the place." We examine the effect of *hukou* mobility for each type of *hukou* conversion.

Second, we look into internal variation in *hukou* converters and investigate how different groups experience their *hukou* mobility in various contexts and differentially benefit from *hukou* conversion. Do the two types of migrant *hukou* converters fare worse than the nonmigrant *hukou* converter group? Does *hukou* mobility at an early stage in life provide more psychological benefits than in a later stage? Over the decades, when some rights have been decoupled from urban *hukou* rights and the legal and social context of reception has shifted from a rural-urban *hukou* stratification to a city-based *hukou* stratification, how have weight and mental health implications of urban *hukou* attainment changed over time and across place? We engage these research questions in the *hukou* literature by situating the system in the broad context of policy changes and urbanization.

Established in the mid-1950s, the *hukou* system assigns each person a *hukou* type: agricultural or rural *hukou*, or nonagricultural or urban *hukou*. Assignment is primarily based on place of birth, where full citizenship access is given to only those with an urban *hukou* status. In urban China, rural-urban migrants who still hold rural *hukou* status (*rural migrants* hereafter) experience prolonged institutional and social discrimination, including limited access to work opportunities and healthcare services, and they are usually excluded from urban social security programs. Despite decades of reforms, *hukou* status persists as one of the principle bases for establishing citizenship rights and identity in urban China (Cheng and Selden 1994; Roberts 1997; Whyte 2010). For example, from 1984 to 2015, rural migrants needed a temporary residence permit, similar to a visa, to obtain legal working status in urban areas. The majority of rural migrants without such permits were subject to repatriation to their hometowns by urban police.

Does Citizenship Matter?

Does citizenship attainment have a causal effect on individual health and well-being? Evidence is uncertain when it comes to health outcomes. A number of studies have found that undocumented migrants or refugees have worse health than other immigrants or nonimmigrants (Chiswick et al. 2008; Newbold and Danforth 2003), but others have found the opposite. The term *Hispanic paradox*, for example, was coined to represent the volume of findings that net of socioeconomic status (SES), undocumented Latinos have a general advantage in health and health behaviors when compared with U.S.-born whites and Hispanics (Hummer et al. 1999; Markides and Coreil 1986; Palloni and Arias 2004).

Inconsistent results have also been found in the context of internal migration in China (Chen et al. 2009; Lam and Johnston 2015; Li et al. 2006). Although some have found more depressive symptoms among rural migrants (e.g., Li et al. 2006), others have found no association between migration, *hukou*, and psychological distress (e.g., Chen 2012). We argue that some current inconsistencies in the literature are derived from three possible biases: failure to establish the correct comparison group for causality, selectivity in citizenship attainment, and return migration selection (i.e., salmon bias).

Establishing the Right Comparison Group for Causality

A large literature has compared migrants without full citizenship with the native-born. In the context of internal migration in China, rural migrants are sometimes compared with urban *hukou*ers. This is not the appropriate comparison. Social scientists are increasingly recognizing the importance of "the long arm" of early-life experience and health on later-life health and SES outcomes (Goodman et al. 2011). Later-life depression is also associated with childhood health in China (Song and Smith 2019; Zhang and Treiman 2013). Decades of rural-urban segregation further entrenched these differences into the life of rural- and urban-born (Whyte 2010), contributing to differences in psychological well-being well in advance of rural *hukou*ers' migration. Such incomparability is further aggravated by healthy migration selection and rural migrants' stress associated with the migration process, making it difficult to predict direction of bias if such a comparison is made. Therefore, it is more appropriate to compare rural migrants (i.e., the *hukou* nonconverters) with urban residents born in rural areas with a rural *hukou* who later obtained urban *hukou* (i.e., *hukou* converters), as we do here. Differences between the two groups are the result of treatment (*hukou* conversion) status rather than early-life disparities.

Selectivity in Citizenship Attainment

Compared with those without full citizenship, those who have obtained full citizenship in destinations are usually selected on human, cultural, social, and health capital (Song and Smith 2019; Wu and Treiman 2004; Zhang and Treiman 2013). These early-life advantages, such as better childhood health, higher education attainment, and stronger family background, are conducive to better health and psychological well-being before citizenship mobility is realized. We take account of all these types of selectivity in our study while utilizing data with extensive life history information.

Each of the three types of *hukou* conversion in China—merit-, policy-, and family-based conversion—may differ in early-life experience, mechanisms, conversion procedures, and selectivity. Among these types of conversion, merit- and family-based conversion are "purer" groups to compare with rural migrants given that they and rural migrants have undergone similar migration selectivity—to migrate. They were selected on individual traits, such as a strong migration aspiration (Wang 1997) and better premigration health (Song and Smith 2019; Tong and Piotrowski 2012). They also share experiences of rural-urban migration as well as possible acculturation stress associated with reestablishing a manageable working and living environment and social networks. We expect that realizing *hukou* mobility would give them protection in psychological health due to full extension of urban rights in a variety of domains, such as access to desirable public sector positions, urban healthcare and services, and better mortgage deals. Although policy-based converters generally lack a migration experience, we expect that the values of an urban *hukou* and psychological benefits confer to them as well.

> *Hypothesis 1.1* (H1.1): When current rural migrants are the reference, merit-, policy-, and family-based *hukou* conversion all show protective effects on psychological well-being of individuals.

Return Migration Selection

Adverse health status of migrants may reduce their market return (Smith 1999), thus disincentivizing migrants to continue to work and stay in urban areas. The *salmon bias hypothesis* postulates that migrants with deteriorating health have a greater tendency to return, making remaining migrants healthier than nonmigrants (Abraído-Lanza et al. 1999; Riosmena et al. 2013). Research has found a salmon effect in the context of internal migration in China, but most evidence relates to physical health (Chen 2011; Lu and Qin 2014).

Such bias is usually derived from destination-based surveys, where return migrants are missing. One way to overcome such bias is to combine it with an origin-based survey. For example, in context of Mexican immigrants in the United States, one of the best practices is to compare the health of current Mexican immigrants in the United States with that of all Mexicans in Mexico (e.g., Riosmena et al. 2013). However, assessing two surveys may produce biases caused by differences in instruments and/or data collection procedures. Taking a different approach, we directly identify return migrants in the same survey with current migrants and assess how they may alter causal estimates before and after they were incorporated in the reference. We expect that when return migrants/past migrants are included in the reference (i.e., the broad sample), observed effects of psychological protection are stronger.

> *Hypothesis 1.2* (H1.2): When both current and past migrants (migrants who returned to rural areas) are included as reference, all types of *hukou* conversion show stronger protective effects compared with when only current migrants are used as reference.

How Citizenship Matters

How Types of *Hukou* Conversion Matter

A fundamental difference between policy-based *hukou* conversion and the two other types of conversion is that the former does not involve a migration process. Migration experience may introduce a variety of risk factors for individual psychological well-being, such as the stress associated with a migration trip, adapting to a new physical and social environment, and acculturation. This is particularly a stress- and depression-inducing process when the policy and culture of the receiving society are less friendly or embracive (Malmusi 2015).

Compared with merit-based migrants, accompanying families or marrying into a family by migration allows migrants to overcome the disadvantage of being an outsider at destination (Fan and Huang 1998). However, the strict *hukou* policy toward family-based *hukou* conversion may significantly lengthen wait time for a rural *hukou*er to obtain a local urban *hukou* by this means, delaying access to urban benefits and sustaining daily stress associated with a prolonged precarious status (Sun and Fan 2011), all of which may contribute to increased depressive symptoms.

Current knowledge on policy-based *hukou* converters comes mostly from case

studies on peri-urban residents in mega cities. But current evidence suggests that through kinship and community-based mutual support networks, villagers manage to develop their own informal welfare strategies while preserving continuity in their family and community values (Smith 2014a). Villagers are also able to live in self-built housing and possibly benefit from dividends paid by land management (Smith 2014b). The social status and social benefits associated with being an urbanite without actually leaving their home or community may advantage the psychological well-being of policy-based converters over merit- and family-based converters. Therefore, we expect the following:

> *Hypothesis 2* (H2): Policy-based converters have better psychological well-being than merit-based and family-based converters.

How Life Stage During *Hukou* Conversion Matters

Is obtaining urban *hukou* earlier in life better for current psychological well-being of mid- and later-life urbanites? The *cumulative disadvantage theory* contends that early disadvantages may create additional risks to health and well-being, contributing to adverse health outcomes in later life (Priestley 2000). Having obtained urban citizenship early in life may launch people on promising trajectories in terms of a career path and a sense of social security. In contrast, those who obtained urban *hukou* in midlife or older may be "scarred" in their life chances and well-being (Ferraro and Kelley-Moore 2003; Lynch et al. 1997; Preston et al. 1998). They had to face constant stress from insecure rural status and deprivation of social benefits for most of their life, and such disadvantages may endure. A small strand of literature has argued that these early-life disadvantages are reversible (Elman and O'Rand 2004). Compensatory mechanisms may eliminate or undo early disadvantages (Ferraro and Kelley-Moore 2003). Outcomes may also depend on specific health aspects measured: some health aspects, such as depressive symptoms, are reversible. However, the preponderance of the existing empirical findings would support a hypothesis predicted by cumulative disadvantage theory. Therefore, we expect the following:

> *Hypothesis 3* (H3): Urbanites who obtained urban *hukou* at an early stage in life have better psychological well-being than converters who did so at a later stage in life.

How the Timing of *Hukou* Conversion Matters

Implementation and reforms of the *hukou* system have gone through three major stages, shifting from rigid implementation to relaxation and reform decentralization. Over these stages, social benefits that are important to the well-being of middle-aged and older adults, such as pension policies, have also undergone significant transformations in ways that have blurred the rural-urban *hukou* line. We first present an overview of the reform periods and then present our hypothesis.

1958 to the Late 1970s

In the socialist era in China since the *hukou* system was established (1958 to the late 1970s), state employment was a major source of employment in urban areas. State resources were distributed directly to urban *hukou*ers, the only people entitled to have access to such work assignment. Rural *hukou*ers were tied to the land to produce an agricultural surplus and did not have access to any type of pension scheme. In contrast, urban *hukou*ers enjoyed a pay-as-you-go system with generous retirement benefits, which covered about 75% to 90% of a worker's wage (Chan 2010; Cheng and Seldon 1994; Feng et al. 2011). Other state resources, such as state-owned hospitals, healthcare, and childcare, were accessible only to urban *hukou*ers with state employment.

An urban *hukou* was highly desired, and this was the period with the strictest *hukou* conversion policies. Most *hukou* conversions were merit-based, and these qualifiers were considered "the best and the brightest" of the rural population (Wu and Treiman 2004, 2007; Whyte 2010). Family members could migrate to and obtain a local urban *hukou* of an individual, but it was under strict restrictions and subject to quota control (*Nongzhuanfei*). Because the quota was usually fixed at 0.15% to 0.20% of the urban local population per year, individuals usually had to endure years or even decades of family separation before obtaining local urban *hukou* and living together again (Chan and Zhang 1999).

The Late 1970s to the Late 1990s

The late 1970s witnessed a major relaxation of the *hukou* system. The opening of the urban labor market to rural *hukou*ers in labor-intensive industries immediately attracted large numbers of migrants aspiring to increase their income and realize *hukou* mobility (Wang 1997). In the mid-1980s, further relaxation of the *hukou* system lowered the *hukou* conversion threshold for relatively well-off migrants in small towns. Eligibility for urban *hukou* is usually tied to home purchase, age, education, skills, and investment. Although rural pension largely remains absent, urban pension benefits started to shrink as it became more market-driven, resulting in delayed pension payment or no pension for some urban workers.

This period also marked the start of urbanization through urban extension. In this extension, nearby towns or counties that were formerly considered rural areas were administratively incorporated into city jurisdiction (e.g., "turning counties into districts"), and residents automatically and collectively obtained an urban *hukou* "at the place" without migration. These residents automatically obtained urban *hukou* and social security benefits. In cases where land acquisition is involved, financial compensation and housing accommodation is usually given.

The Late 1990s to 2015

The late 1990s marked the start of a new stage of *hukou* reform when urban *hukou* lowered its threshold, and the lines of privileges established by rural-urban *hukou*

divide were blurring. Local governments gained more autonomy to experiment with *hukou* reforms (Wu 2013). In 1997, a variety of policies were enacted to ease *hukou* conversions to small towns or cities, where resources were minimal. In 2001, the central government canceled the fixed quota for *hukou*-type transfer (Chan 2009).

Pension benefits and coverages are converging along the rural-urban *hukou* line. Over two decades, rural older adults have transitioned from no pension to voluntary contribution programs, and eventually to a New Rural Social Pension System, which has been highly subsidized and includes a noncontributory basic pension component (Liu and Sun 2016). By contrast, urban pension reforms have been gradually reducing benefits and pension wealth for urban workers (Feng et al. 2011). In 2014, rural *hukou*ers and nonemployed urban *hukou*ers were covered by one unified basic pension insurance plan.

Moreover, many cities started providing some basic social benefits to rural migrant workers, such as social security, pension and unemployment, and maternity insurance schemes; these rights and benefits are essentially decoupled from urban citizenship rights traditionally prescribed by an urban *hukou*. Some have argued that market competition may play a more important role in accessing job opportunities and social welfare and that economic status has a greater influence on solidifying an identity than *hukou* types (Cheng et al. 2014; Huang et al. 2010). With the diminished value and reduced social prestige it carries, we expect that the psychological value and benefits conferred by an urban *hukou* were also decreasing across time, especially when the pre-1978 period is compared with the post-1998 period.

Hypothesis 4 (H4): Those who realized *hukou* conversion in the pre-1978 period are psychologically better off than those who did so in the period after 1998.

How *Hukou* Destinations Matter

The psychological value that an urban *hukou* conveys may vary across locality because of a contemporary decentralized *hukou* reform system. The differences across *hukou* locality lie largely in the resources cities offer and the levels of difficulty with which local urban *hukou* are obtained. China's urban management system has been structured such that large cities have gathered an increasing amount of resources while smaller cities and towns have experienced resource depletion (Lu et al. 2014). Such polarization has strengthened larger cities' ability to provide social benefits to its local urban *hukou*ers while weakening others, stratifying values of *hukou* across place. These cities with more robust resources provide benefits ranging from better education opportunities for children to more generous welfare policies for older adults (Tang 2019; Wang and Quan 2016).

At the same time, the threshold for granting a local urban *hukou* in those highly desired large metropolitan cities remains fairly high. In many metros, urban *hukou* granting is subject to strict quota controls each year, even when individuals have fulfilled various criteria specified by local policies (Zhang 2010). Abundant resources and high threshold combined can increase economic value, social prestige, and health benefits that a large metro *hukou* carries. Some have argued that *hukou* stratification

has been increasingly linked to locality rather than type (Li et al. 2010; Song 2014). Therefore, we hypothesize the following:

Hypothesis 5 (H5): Those who obtained local urban *hukou* in large metropolitan areas have better psychological well-being than those who did so in other destination cities.

Data

We combine data from the China Health and Retirement Longitudinal Study (CHARLS) 2015 with CHARLS 2014 life history data. The CHARLS is a high-quality nationally representative sample of Chinese residents aged 45 and older living in continental China. In its national baseline survey, the CHARLS randomly selected 150 county-level units from 28 provinces, adopting multistage stratified sampling with probability proportional to size. The sampling frame contains all county-level units (except for Tibet) and is stratified by region and urban districts, rural counties, and per capita statistics. Within each county-level unit, three primary sampling units (PSUs), either villages in rural areas or neighborhoods in urban areas, were chosen. Migrants living in factory dormitories or employers' homes were sampled in their homes of origin as household members living away from home (Zhao et al. 2012). Individuals and their spouses were sampled with the condition that the individual is aged 45 or older (although their spouses can be younger than 45). In our analysis, variables pertaining to residence history, sociodemographic backgrounds, family history, and work history are obtained from CHARLS life history data (2014). Depressive symptoms are obtained from CHARLS 2015, which is the reason why we select that wave for analyses.

The narrow sample includes current urban residents with rural origins. The broad sample further incorporates rural-urban migrants who returned to rural areas: they were born in rural areas, lived in urban areas for at least six months, and now live in rural areas. We limit our *hukou* converters to those who were born with a rural *hukou* and currently have an urban *hukou*. We exclude 68 individuals who changed their *hukou* more than once. The narrow sample yields 2,743 individuals, of which 1,448 (52.8%) obtained urban *hukou*. The broad sample includes an additional 1,100 returned rural migrants. This number is only slightly lower than current rural migrants, suggesting that bias may be introduced if such a returned group is not considered in analysis.

Measures of Key Variables

Depressive symptoms are obtained by taking mean scores of 10 questions based on CES-D10, adopted by CHARLS. Scores range from 0 to 3, with a higher value indicating more depressive symptoms. Specific questions are available in the online appendix. *Hukou* mobility is defined by two criteria: (1) person was born with a rural *hukou*, or (2) person has a current urban *hukou*. Merit-based *hukou* converters include those who obtained urban *hukou* through education, employment in urban areas, military service, or purchase of urban housing. Family-based conversion is obtaining

urban *hukou* through marriage or following family. Collective *hukou* conversion is obtaining urban *hukou* by means of confiscation of land, whole village migration, or housing demolition. We also include an "other" group to show those who indicated "others" for reasons for *hukou* conversion or did not identify their reasons for conversion. In case of multiple reasons of conversion, merit-based conversion takes highest priority, followed by policy-based conversion, family-based conversion, and others.

Timing of *hukou* conversion is divided into four life stages: before adulthood (0–17 years old), early adulthood (18–25 years old), young adult to midlife (26–40 years old), or midlife or older (40+ years old**)**. The conversion period captures three historical stages in *hukou* reform: 1955–1978, 1979–1998, and 1999 and later. *Hukou* destination cities are stratified by their levels of socioeconomic development. We define large cities as those with a GDP per capita that ranked among the top 25 in 2015, 12 of which are in our analytical sample. These 12 cities are grouped and coded as a dummy variable, with 1 indicating large cities (our list of large cities in the sample can be found in Table A1 of the online appendix).

Analytical Strategy

In the first stage of analysis, we perform inverse probability–weighted (IPW) regression adjustment (IPWRA) estimators to assess effects. IPWRA combines the properties of a regression adjustment (RA) estimator with those of an IPW estimator. The RA estimators model outcomes to account for nonrandom treatment assignment. The IPW estimators use inverse probabilities of treatment to weight regression coefficients. Unlike RA and IPW estimators, IPWRA estimators have the advantage of being doubly robust—that is, they obtain correct estimates of treatment effect even when one of two models to predict treatment status or outcome is misspecified (Morgan and Winship 2015). In this stage of analysis, we present average treatment effects on the treated (ATET) using IPWRA estimators as well as results from ordinary least squares (OLS) models on the narrow and broad samples.

We use the following variables to predict rural-urban *hukou* conversion (treatment) and depressive symptoms (outcome). Demographic characteristics include gender, age, and educational attainment (lower than elementary school, elementary school, middle school, high school or higher). Family history includes whether at least one parent is a party member and whether the father was engaged in nonagriculture work when the respondent was a child. Personal history includes whether the respondent had any military experience and the first job they took (agriculture, state sector, firm, and other nonagriculture work).

To evaluate whether possible citizenship advantage conveys similar advantages to every *hukou* converter, in the second stage of analysis, we limit our sample to *hukou* converters and use OLS models to predict depressive symptoms. In addition to covariates used in the first stage of analysis, we further incorporate later-life experiences, including current or last job category (state sector, firms, self-employed, and others), whether the respondent or spouse is currently a party member, retirement status, logged annual household expenses per capita, and physical health (self-rated health and instrumental activities of daily living [IADLs]). Annual household expenses per capita are obtained by aggregating all consumption activities calculated

as annual expenditures and dividing by the number of people in household. Self-rated health ranges from very poor to very good (0–4). IADLs are measured by summing levels of difficulty in performing 12 daily tasks, such as difficulty in getting up from a chair after sitting for a long period, picking up a small coin from a table, and doing household chores (0 indicates do not have any difficulty, and 4 indicates cannot do it at all).

Results

Descriptive Results

Table 1 describes variables used for migrant urban residents by whether they were able to change their *hukou* status. Percentages are used to compare rural *hukou*ers in urban areas and rural migrants in urban areas who changed their *hukou* status. Sample weights are used in these statistics. In urban areas, 1,441 of 2,717 (1,276 + 1,441)—that is, 52.8% of urban residents—with rural origins and aged 45 or older have realized *hukou* mobility and obtained urban *hukou*. If we take account of rural migrants who later returned to rural areas, only 37.8% (1,276 / 3,817) who have rural origins and have worked in urban areas have obtained urban *hukou*. All current urban resident groups have a similar level of depressive symptoms, but returned rural migrants have significantly more, which suggests a selection of the more depressed into return migration. Among urban residents, compared with rural *hukou*ers, *hukou* converters generally have higher levels of education, better childhood health, and an advantageous nonagricultural background in early life. In later life, they are also more likely to work in more privileged state-sector jobs and firms, to have party membership, and to retire despite being slightly younger, and they have higher SES. Returned rural migrants resemble current rural migrants in almost all aspects of early-life experience, family background, and job opportunities throughout their life, but they have worse current self-rated health, suggesting little return migration selection in early-life experience or current wealth but negative return migration selection in current self-rated health.

Table 2 compares attributes of different types of *hukou* converters—merit, policy, and family—with the merit *hukou* converters being the reference group for the statistical tests. Of three types of *hukou* converters, merit-based *hukou* converters are more likely to be male, much more educated than the other groups, and more likely to have their first job in nonagricultural sectors. By contrast, policy-based converters are like rural migrants in most of these characteristics, suggesting low selection into this type of urban *hukou*. The contrasts between men and women across these types of conversion are pronounced: men are least likely to be family-based converters (14.7%) and most likely to be merit-based converters (60.2%).

Table 3 describes *hukou* converters by their age at *hukou* conversion, conversion period, and *hukou* destination cities. The majority of *hukou* converters realized their *hukou* mobility during early adulthood (37.2%) through midlife (29.2%), especially for merit- (76.7%) and family-based (71.9%) converters. For policy-based converters, however, more than 61% obtained urban *hukou* in midlife or older. In terms of conversion period, slightly more people realized *hukou* mobility during 1979–1998

Table 1 Descriptive statistics by residence types and *hukou* status

	Urban Residents			Rural Residents		
Variables	Rural *Hukou*ers Mean/%	All *Hukou* Converters Mean/%	Diff.	Returned Rural Migrants Mean/%	Diff.	All Mean/%
Depressive Symptoms (mean)	0.68	0.65		0.78	*	0.68
Male (%)	45.50	42.20		67.90	***	48.66
Age (mean)	58.4	61.6	***	57.6		59.6
Education (%)						
Lower than elementary	16.80	10.60		9.60		12.70
Elementary school	38.30	27.30	**	42.00		34.40
Middle school	34.60	30.40		35.80		33.10
High school or higher	10.20	31.70	***	12.60		19.80
Health Compared With Others in Childhood (%)						
Much less healthy	5.10	3.20		5.40		4.30
Somewhat less healthy	9.20	10.30		8.20		9.50
About average	53.10	42.70	**	49.00		47.80
Somewhat healthier	15.90	22.90	**	18.70		19.40
Much healthier	15.30	20.40		18.40		18.10
Parent(s) Is a Party Member (%)	12.30	15.90		15.60		14.50
Father Engaged in Nonagriculture Work (%)	15.90	25.60	**	17.30		20.30
Military Experience (%)	3.00	9.10	**	10.90	***	7.20
Self or Spouse Is a Party Member (%)	14.80	46.90	***	14.80		28.40
First Job (%)						
Agriculture-related businesses	83.24	64.02	**	81.54		74.70
State sector	3.20	12.42	***	3.23		7.14
Firm and other nonagriculture	13.56	23.55	**	15.23		18.16
Last Job (%)						
Agriculture-related businesses	39.38	14.56	***	42.58		29.49
State sector	7.61	23.25	***	5.13		13.75
Firm	19.59	39.12	***	17.07		27.38
Self-employed	30.93	20.61	**	33.23		27.02
Others	2.90	2.72		2.55		2.75
Retired by 2013 (%)	2.85	16.85	***	1.05	*	8.41
Logged Annual Household Expenses per Capita (mean)	8.71	8.88	*	8.62		8.77
% Missing	4.54	4.90		5.25		4.84
Physical Health						
Self-rated health (mean)	3.22	3.11	†	3.09	*	3.15
Instrumental activities of daily living (mean)	3.13	3.19		2.85		3.1
% Missing	6.23	4.60		2.70		4.82
N	1,276	1,441		1,100		3,817

Note: The reference group is rural *hukou*ers in an urban residence.

†$p < .10$; *$p < .05$; **$p < .01$; ***$p < .001$

Table 2 Descriptive statistics by types of *hukou* conversion

Variables	Merit-Based Converters Mean/%	Policy-Based Converters Mean/%	Diff.	Family-Based Converters Mean/%	Diff..	Other Converters Mean/%
Depressive Symptoms (mean)	0.62	0.65		0.70		0.61
Male (%)	60.20	41.30	*	14.70	***	43.70**
Age (mean)	62.00	61.50		61.10		61.50
Education (%)						
Lower than elementary	3.80	22.60	*	13.20	***	11.60**
Elementary school	20.40	34.50	*	32.10	*	29.60†
Middle school	29.30	29.60		35.20		26.00
High school or higher	46.50	13.40	***	19.50	***	32.80*
Health Compared With Others in Childhood (%)						
Much less healthy	3.50	1.50		3.90		2.90
Somewhat less healthy	7.40	10.90		13.00		12.80
About average	38.90	44.80		45.50		45.80
Somewhat healthier	26.50	19.80		23.40		15.80*
Much healthier	22.90	23.10		14.10	†	22.20
Parent(s) Is a Party Member (%)	17.60	12.40		16.50		14.40
Father Engaged in Nonagriculture Work (%)	27.70	20.40		27.00		22.70
Military Experience (%)	16.90	5.20	*	2.10	***	5.00***
Self or Spouse Is a Party Member (%)	61.50	31.30	**	35.80	**	44.20**
First Job (%)						
Agriculture-related businesses	51.64	91.30	***	65.14	*	66.65**
State sector	19.35	1.25	***	7.40	***	14.46
Firm and other nonagriculture	29.01	7.45	***	27.46		18.89†
Last Job (%)						
Agriculture-related businesses	2.52	34.37	***	20.18	***	16.09***
State sector	34.45	7.82	***	13.11	***	27.33
Firms	48.67	27.69	**	36.64	*	30.00**
Self-employed	12.97	28.69	**	25.78	**	23.42**
Others	1.46	1.43		5.13	*	3.17
Retired by 2013 (%)	17.00	25.59		13.92		11.44
Logged Annual Household Expenses per Capita (mean)	9.08	8.78	**	8.69	***	8.78**
% Missing	1.71	12.29		4.79	*	5.87*
Physical Health						
Self-rated health (mean)	3.09	2.98		3.18		3.16
Instrumental activities of daily living (mean)	2.72	3.94		3.56	†	2.93
% Missing	8.32	1.25	*	2.64		1.65†
N	523	200		430		288

Note: The reference group is merit-based *hukou* converters.

†$p < .10$; *$p < .05$; **$p < .01$; ***$p < .001$

Table 3 Life stage at conversion, conversion period, and *hukou* destination cities by types of conversion among the *hukou* converters (%)

	Merit	Policy		Family		Others		Total
Conversion Age								
Before adulthood (0–17)	16.7	0.5	***	18.1		14.19		14.36
Early adulthood (18–25)	55.6	6.97	***	41.76	***	17.99	***	37.22
Young adult to midlife (26–40)	21.06	31.34	**	30.16	**	41.18	***	29.21
Midlife or older (40+)	6.64	61.19	***	9.98	†	26.64	***	19.2
Conversion Period								
1955–1978	51.04	1.49	***	41.07	**	24.91	***	35.98
1979–1998	40.42	31.84	**	49.88	*	48.44	†	43.65
1998+	8.54	66.67	***	9.05		26.64	***	20.37
Hukou Destination Cities								
Large cities[a]	8.73	0	***	6.03		2.42	**	5.46
Other cities	91.27	100	***	93.97		97.58	**	94.54
Sum (%)	100	100		100		100		100

Note: The reference group is merit-based *hukou* converters.

[a] Large cities include 79 *hukou* converters in 12 metropolitan cities in the sample: Beijing, Shanghai, Guangzhou, Shenzhen, Zhengzhou, Jinan, Tianjin, Chongqing, Foshan, Qingdao, Chengdu, and Hangzhou.

†$p < .10$; *$p < .05$; **$p < .01$; ***$p < .001$

(43.7%) than earlier (36.0%) and later (20.4%) periods. Policy-based conversion mostly happened after 1998 (66.7%).

Regression Results

We present key results from OLS and IPWRA estimators in Table 4 for the narrow and broad samples. In both models for the narrow sample, which focuses on current urban residents with rural origins, we find that only policy-based *hukou* converters have an advantage in psychological well-being compared with rural migrants. Merit- and family-based converters have similar depressive symptoms as rural-urban migrants. This supports H1.1 only in the case of policy-based conversion. In other words, with the exception of policy-based conversion, if this narrow sample were the only observable one in the survey, even with consideration of citizenship selection, we would still fail to find evidence of a causal link between citizenship and depression disparity.

In the broad sample, both current rural migrants and former/returned rural migrants with rural *hukou* are taken as reference group. When return migration selection is factored in, both merit- and policy-based conversion and "other" types of conversion show a positive effect on individual psychological well-being, partially supporting H1.2. This change in results across the narrow and broad samples highlights the important practice of considering return migrants in the analysis of the power of citizenship on psychological health. In this context, the results suggest that the salmon effect has biased the *hukou*-health causal link toward the null.

Table 4 OLS and IPWRA estimates predicting depressive symptoms by type of *hukou* conversion

	Current Urban Residents With Rural Origins: Narrow Sample				Past and Current Urban Residents With Rural Origins: Broad Sample			
	OLS		IPWRA[a]		OLS		IPWRA	
Merit-Based	–0.018		–0.054		–0.073	*	–0.113	**
Converters	(0.033)		(0.044)		(0.030)		(0.038)	
Policy-Based	–0.079	†	–0.079	*	–0.123	**	–0.122	**
Converters	(0.042)		(0.040)		(0.042)		(0.039)	
Family-Based	–0.021		–0.018		–0.057	†	0.000	
Converters	(0.035)		(0.042)		(0.033)		(0.035)	
Other Converters	–0.053		–0.072	†	–0.097	**	–0.082	*
	(0.037)		(0.041)		(0.035)		(0.036)	
N	2,717		2,717		3,817		3,817	

Notes: Depressive symptoms are obtained by taking the average scores of CES-D10. A higher value indicates more depressive symptoms.

[a] IPWRA = Inverse probability–weighted regression adjustment estimators.

†$p < .10$; *$p < .05$; **$p < .01$; ***$p < .001$

A comparison of results from the OLS and IPWRA models lends some insight into how *hukou* selection played a role in our causal investigations. As expected, the least selective type of *hukou* conversion—policy-based conversion—shows almost no difference in its two specifications (–0.123 vs. –0.122). By contrast, the presumably most selective merit-based conversion shows the largest difference in its two specifications (–0.073 vs. –0.113), suggesting that if selection into urban *hukou* were not considered, we would most significantly underestimate the power of merit-based urban *hukou* for individual depression.

We further investigate how types, life stages, and historic periods of *hukou* conversion, as well as *hukou* destination city, play roles in stratifying *hukou* converters' depressive symptoms (Table 5). In these models, we control for early- and later-life experience and resources, family contexts, and physical health. We find that for *hukou* converters, with the exception of education and party membership, early- and later-life capital and experience and SES does not seem to play a significant role in shaping current psychological well-being. Model A shows that policy-based converters have fewer depressive symptoms than merit- and family-based converters, supporting H2. This finding highlights the negative role that migration experience potentially plays in individual psychological health.

The life stage in which *hukou* mobility happened is not significantly associated with depressive symptoms of *hukou* converters (Model B). To further explore whether later-conversion disadvantage operates through occupation opportunities and SES, we conducted a basic model controlling only for demographic characteristics and education attainment. Key results did not change. Thus, our results do not support H3. As a sensitivity check, we used years since occurrence of *hukou* conversion instead of life stage measures, and results were consistent. This finding suggests

Table 5 OLS model estimates for depressive symptoms among the *hukou* converters

	Model A			Model B			Model C			Model D		
	β		SE	β		SE	β		SE	β		SE
Types of Hukou Change (ref. = merit-based)												
Policy-based conversion	−0.152	**	0.048	−0.165	**	0.052	−0.179	**	0.053	−0.186	***	0.053
Family-based conversion	0.006		0.037	0.007		0.037	0.012		0.037	0.010		0.037
Other types of conversion	−0.050		0.040	−0.056		0.042	−0.059		0.042	−0.064		0.042
Age at Conversion (ref. = 0–17 years old)												
Early adulthood (18–25)				0.014		0.042	0.000		0.043	0.000		0.043
Young adult to midlife (26–40)				0.032		0.047	−0.025		0.058	−0.026		0.058
Midlife or older (40+)				0.042		0.061	−0.077		0.085	−0.077		0.084
Period of Hukou Conversion (ref. = pre-1978)												
1978–1996							0.075		0.053	0.075		0.053
1997+							0.169	*	0.083	0.170	*	0.083
Hukou Located in Top Metro Cities										−0.125	*	0.052
Male	−0.106	***	0.030	−0.104	***	0.030	−0.107	***	0.030	−0.110	***	0.030
Age	−0.002		0.002	−0.002		0.002	0.001		0.002	0.001		0.002
Education (ref. = lower than elementary school)												
Elementary school	−0.031		0.060	−0.030		0.060	−0.031		0.060	−0.033		0.060
Middle school	−0.106	†	0.061	−0.107	†	0.062	−0.105	†	0.062	−0.104	†	0.062
High school or higher	−0.133	*	0.062	−0.131	*	0.063	−0.126	*	0.063	−0.125	*	0.063
Parent(s) Is a Party Member	−0.004		0.035	−0.003		0.035	0.000		0.035	−0.004		0.035
Father Engaged in Nonagriculture Work	−0.014		0.031	−0.011		0.031	−0.013		0.032	−0.010		0.032
Military Experience	0.041		0.052	0.045		0.053	0.053		0.053	0.059		0.053

Table 5 (continued)

	Model A			Model B			Model C			Model D		
	β		SE	β		SE	β		SE	β		SE
First Job (ref. = agriculture-related businesses)												
State sector	0.001		0.042	0.006		0.043	0.004		0.043	0.001		0.043
Firm and other nonagriculture	−0.032		0.035	−0.025		0.036	−0.027		0.036	−0.031		0.036
Current or Last Job (ref. = agriculture-related businesses)												
State sector	−0.081		0.058	−0.080		0.059	−0.069		0.059	−0.068		0.058
Firm	−0.067		0.053	−0.064		0.054	−0.056		0.054	−0.053		0.054
Self-employed	−0.074		0.053	−0.073		0.054	−0.070		0.054	−0.070		0.054
Others	−0.001		0.101	0.003		0.103	0.005		0.102	0.007		0.102
Self or Spouse Is a Party Member	−0.154	***	0.031	−0.154	***	0.031	−0.156	***	0.031	−0.154	***	0.031
Retired by 2013	−0.026		0.041	−0.021		0.042	−0.017		0.042	−0.012		0.042
Retire Missing	−0.011		0.037	−0.014		0.038	−0.008		0.038	−0.008		0.038
Logged Annual Household Expenses per Capita	−0.002		0.008	−0.002		0.008	−0.003		0.008	−0.002		0.008
Annual Household Expenses Missing	0.052		0.056	0.052		0.057	0.051		0.057	0.057		0.056
Physical Health												
Self-rated health	−0.182	***	0.017	−0.182	***	0.017	−0.184	***	0.017	−0.183	***	0.017
IADLs	0.021	***	0.004	0.021	***	0.004	0.021	***	0.004	0.021	***	0.004
IADLs missing	−0.060		0.050	−0.061		0.050	−0.058		0.050	−0.054		0.050
Constant	1.587	***	0.169	1.569	***	0.172	1.377	***	0.206	1.375	***	0.206
R^2	.250			.250			.253			.255		
N	1,448			1,448			1,448			1,448		

$^{\dagger}p < .10$; $^{*}p < .05$; $^{**}p < .01$; $^{***}p < .001$

that among *hukou* converters, timing of *hukou* mobility in life course may not play an important role in depression.

Model C further incorporates the period when *hukou* conversion occurred. Compared with those who realized *hukou* conversion in pre-1978 era, those who did so between 1978 and 1996 had similar levels of depressive symptoms. However, those who obtained urban *hukou* on or after 1997 have significantly more depressive symptoms than their counterparts who did so before 1978, lending support for H4. This result highlights the role of changing historical and policy contexts in shaping *hukou* converters' well-being.

Results from Model D show that obtaining a top metro *hukou* provides more psychological benefits than a *hukou* from smaller cities, supporting H5. This result suggests that the values underlying locality of an urban *hukou* may largely lie in the level of economic and social resources that a city can provide. We further explore how other characteristics of localized *hukou* reforms, such as openness of the receiving culture and characteristics of local *hukou* policies, have created heterogeneous *hukou* values across these metro cities. We compare a subset of cities: four megacities in northern China (Beijing, Tianjin, Zhengzhou, and Jinan) with three southern coastal megacities (Shanghai, Guangzhou, and Shenzhen). The southern megacities took more progressive steps in their *hukou* reforms to ease transitions into local urban *hukou* and have more open cultures than the northern megacities (Fu 2013). Tentative results from a subsample of 72 individuals show that after demographic characteristics and SES variables are controlled for, *hukou* converters in southern coastal megacities have a psychological advantage ($p < .05$) compared with *hukou* converters in northern megacities; this advantage disappears, however, after physical health characteristics are controlled for. Future research is needed with larger samples from these megacities for a more thorough comparative investigation of how city-based *hukou* policies are associated with psychological well-being and other health outcomes.

Discussion and Conclusion

This is an era in which hundreds of millions of migrants do not have citizenship status in their destination countries, and millions do not have full citizenship in their own countries (International Organization for Migration 2018). Recent years have also witnessed the enactment of harsher immigration policies in some countries. It is high time to understand citizenship's power. This research joins the emerging literature in illuminating ways that citizenship stratifies life opportunities, labor market outcomes, and well-being (e.g., Catron 2019; Hall et al. 2018). Specifically, using a nationally representative sample with extensive life history data, we contribute to this literature by filling two gaps: (1) investigating institutional discrimination and exclusionary policies enacted by the *hukou* system as a *cause* of psychological inequality, and (2) demonstrating how *context* shapes values of a specific urban citizenship and alters its psychological health implications over decades of policy and social changes.

First, we identify the causal link between citizenship and health in mid- and later-life. Although identifying causal inference of the weight of citizenship is usually thwarted by inappropriate comparisons, inability to enumerate and survey return

migrants, and selectivity embedded in citizenship entry, we address each of these pitfalls in this inquiry by employing a counterfactual approach and analyzing a survey collected in both migration origin and destinations. The results show that in the case of merit-based *hukou* conversion, reduction effects of *hukou* mobility on depressive symptoms is observed only when return migrants are incorporated in the reference group; and in the case of policy-based conversion, such effects are greatly enhanced.

The large difference in effect estimates suggests that the salmon bias can substantially dampen the observed effect of citizenship mobility. This is especially important because in various contexts, the salmon bias has been mostly found in mortality and physical health, such as height, hypertension, and self-rated health but rarely in mental health (e.g., Abraído-Lanza et al. 1999; Chen 2012; Riosmena et al. 2013). This may be partly due to the assumption that compared with physical health, depressive symptoms may be conceived as temporal and reversible. In our context, 80% of *hukou* converters realized *hukou* mobility before 1998 (Table 3), nearly 20 years before outcomes were observed, and yet mental health disadvantage of noncitizenship has persisted until now. This suggests that the psychological toll created by such exclusionary policies and citizenship boundaries for undocumented persons can be long-lasting. If we consider that such long-term effects may occur within a single country, we might envision that in some international arenas where exclusionary policies are harsher, citizenship may produce even greater health disparities related to psychological well-being.

Our second contribution lies in illuminating heterogeneities in health stratification exclusionary policies created across groups, time, and space. Bloemraad (2018:4) called for research that goes beyond enumerating citizenship in terms of status or rights to identify mechanisms through which "citizenship matters, how much they matter, for whom, or why." Answering this call necessitates a contextualized analysis of power of citizenship. We find that citizenship matters less or more, depending on certain circumstances.

First, we show in decades of time, as the threshold for obtaining urban citizenship is lowered, lines of citizenship boundaries are blurred, and benefits for rural and urban *hukou* are converging with the decoupling of some economic and social rights from citizenship rights, that the weight of citizenship in providing psychological benefits decreases—that is, citizenship matters less. Very recent anecdotal evidence suggests that in some peri-urban areas, people are reluctant to convert into urban *hukou* in order to keep rural *hukou*ers with farmland dividends qualified (Sun and Fan 2011). This situation may represent an extreme case in which urban citizenship decreases its desirability and value.

Another dimension on which such a citizenship-health stratification is based is the geosocial space. The psychological values of a certain citizenship may vary widely depending on capacity of a certain locality to provide public and social resources to its citizens. Citizenship may bring greater psychological benefits in places where public provisions are abundant and citizenship is more desired. This result may shed some light in considering immigrants in the United States and Europe, where immigrants are increasingly venturing into smaller towns with limited resources ("new destinations") instead of traditional "gateway" destinations, such as Los Angeles or New York City, with established amenities offered to immigrants (Hall 2013; Massey 2008). Most concerns have centered on undocumented immigrants, but our research

also brings into question how naturalized immigrants may fare in these smaller towns that are new destinations as opposed to established gateways.

Moreover, researchers should also consider how other contexts concerning local implementation of policies may create health disparities, such as the geopolitical fields that make some localities more receptive to migrants than others. Our tentative results suggest that localities with more progressive and welcoming *hukou* policies with receptive cultures may confer more psychological benefits to successful migrants than do more politically conservative places. Similar comparisons may be made in other contexts, such as in the case of Southern and Midwestern areas versus traditional gateway areas in the United States in terms of the receptive nature of local policies and culture (Hall 2013; Massey 2008). We call for future data collection efforts to survey areas in China in more comparative terms, which will allow a more thorough investigation into this issue.

Although we find evidence that citizenship stratification in psychological health persists across decades, we do not find a gradient across groups of individuals who obtained citizenship at different stages of their life. A possible explanation is that a current urban *hukou* brings to those who are middle-aged and older a sense of security regarding economic and social status, access to high-quality urban healthcare and pension benefits, and social rights for family members. For extended periods during their lifetimes, persons who formerly had rural *hukou* status may have resided in urban areas and experienced stress resulting from their rural *hukou* status, mostly derived from limited access to social benefits or experiences with social discrimination. However, the psychological health of these individuals may have improved after their urban citizenship was realized. Our results provide a context in which certain later-life outcomes, such as depressive symptoms, may be reversed when circumstances change (Elman and O'Rand 2004). More comprehensive research is needed to assess whether this also holds in other contexts.

These results highlight the role of urban citizenship in stratifying rural-urban health patterns in China. Health disparities have been found among older adults across the rural-urban residence line in a variety of health outcomes, including mental and physical health, life expectancy, and health-related quality of life (Dong and Simon 2010; Zimmer, Kaneda et al. 2010; Zimmer, Wen, and Kaneda 2010). Many health disparities have been attributed to inequalities in education quality and attainment, income, healthcare quality and accessibility, social support, and health behaviors, perpetuated by decades of rural-urban segregation (Song and Smith 2019; Zimmer, Kaneda et al. 2010; Zimmer, Wen, and Kaneda 2010). By providing evidence of a strong salmon effect, our analysis suggests that migration and return migration selectivity deepened the rural-urban health disparity and are stratifying factors that should not be ignored in assessing rural-urban health disparities in China.

Moreover, we add a citizenship dimension in the intra-urban health disparity and point to the role of the *hukou* system in shaping current landscape of urban health. Recent decades have seen a phenomenal number of rural-urban migrants, but opportunities for urban *hukou* mobility are still limited for most migrants, and a mismatch in rural/urban status and residence has become a more common experience among urban residents. In a recent study, Song and Smith (2019) found that one-third of current urban residents of middle age or older still hold a rural *hukou*. By finding status-related health disparities within an urban space, the current research also extends the

urbanization and health literature from a traditional approach of residence-based urban advantage to a citizenship-based urban advantage in health outcomes.

We are also able to explore heterogeneities across each type of *hukou* conversion. In contrast with two other types of *hukou* conversion, family-based conversion does not seem to provide psychological protections for those who realized *hukou* mobility through this means. Across decades of *hukou* reforms, the family (especially the marriage type) *hukou* policy applies one of the strictest criteria to *hukou* conversion. Applicants usually must reside in local urban areas and stay in a marriage for years—even decades—before the application process starts. This delay hampers applicants' access to urban benefits and sustains daily stress associated with a prolonged precarious status. Another possibility is that relying on a spouse to obtain an urban *hukou* may weaken the marital power of the rural *hukou*er, leading to unfavorable household arrangements for the rural *hukou*er. In case of intermarriage, it is usually rural women who obtain urban *hukou* by marrying urban men usually considered unattractive in physical and socioeconomic personal traits (Fan and Huang 1998). This pattern may weaken women's power in household and further victimize women. Future research may benefit from utilizing data with information on intrahousehold work allocation to investigate these mechanisms.

Since the 2000s, a growing number of the rural population obtained urban *hukou* through accelerated urban jurisdiction extension. Such land-centered urbanization has introduced concerns of overconstruction, pollution, and availability of arable land (Chen et al. 2016; Guan et al. 2018). Our results show a silver lining with this type of urbanization: residents who become urbanized via this channel have better psychological well-being than *hukou* converters by other channels. However, internal dynamics, social networks, and community cohesion should be carefully considered when such urbanization happens. More research is needed to explore mechanisms of such a psychological advantage among policy-based converters.

An emerging literature has evaluated roles of *hukou* locality in affecting individual life opportunities and economic and marital achievements, especially among young adults (Qian et al. 2019; Song 2014). This research extends metro-city *hukou* advantage to the middle-aged and older population and contributes to this literature by showing that *hukou* locality stratification also exists among those who experienced upward *hukou* mobility.

Our study also has some drawbacks. First, with its initial panel wave collected in 2011 and focused on respondents aged 45 years old or older, the CHARLS does not prospectively cover a complete lifespan of individuals. Given that most of the *hukou* conversion occurred in early adulthood or even earlier, we are not able to capture status or changes in depressive symptoms before and shortly after conversion. Ideally, we would have data that prospectively document individual and household background, individual experience, and health during 50 years of *hukou* implementation. No such Chinese data are currently available. CHARLS life history data, however, provide detailed survey information on *hukou* entry history, reasons of conversion, and a spectrum of childhood individual and family backgrounds, which are generally not accessible through other data sets.

Second, our results show that family-based converters, who are mostly women, did not benefit from obtaining an urban *hukou* in terms of psychological well-being, suggesting that women may not enjoy mental benefits of *hukou* mobility as much as

men do. However, because of sample size limitations, we cannot examine gender differences in effects by types of *hukou* conversion. Further insight may benefit from a larger survey that focuses on the population of *hukou* converters and rural migrants in urban areas. ■

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