Are Entrepreneurs Jacks-of-all-trades? Evidence from A Return Migration Survey in Rural China

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Abstract: This study tests Lazear's Jack-of-all-trades theory using a large return migrant survey from rural China. Our study is the first to causally estimate the effect of balanced skill profile on the possibility of entrepreneurship. The results show that even after accounting for the potential endogeneity, the balanced skill profile still has a positive and statistically significant effect on the likelihood of later entrepreneurship. The results are robust to alternative definitions of entrepreneur.

Key Words: Jack-of-all-trades; Balanced skill; Migration; China

JEL: J24; L26; M13

1. Introduction

According to the seminal work by Lazear (2004; 2005), entrepreneurs must be multi-skilled in a number of fields since they have to perform more tasks than wage workers although they are not required to be experts in each field. For example, entrepreneurs may have to raise money, manage workers, and even negotiate with upstream suppliers and downstream buyers. This generalist view is particularly important for entrepreneurial activities in developing countries, where underdeveloped markets and ill-functioning legal system and institutions prevail (de Mel et al., 2010; Li et al., 2006). Compared with their market economy counterparts, entrepreneurs in developing countries may be more likely to be Jacks-of-all-trades since they have to deal with much more aspects of business operation to overcome the market failure. Sometimes, they even have to coordinate the relationship with local government officials to survive (Yueh, 2009).

However, the existing relevant literature has mostly used the data from developed countries. For example, based on the Stanford alumni data, Lazear (2004; 2005) show that individuals with more balanced course program at school or with more previous job roles are more likely to be later entrepreneurs. Several other studies (Åstebro and Thompson, 2011; Wagner, 2003, 2006) also support Lazear's Jack-of-all-trades hypothesis with Canadian or European data. Nevertheless, the robustness of those findings is questioned by Silva (2007) since previous cross-sectional studies may be subject to the omitted variable bias (for example, unobservable individual ability).

China is a good case to examine the above issue. Since its reform and opening up in the late 1970s, China has witnessed a rapid increase in entrepreneurial activities, which have helped it achieve dramatic economic growth.[1] However, China is still on the track of transition from a central-planning to market-oriented economy today. Faced with a high degree of market imperfection and numerous institutional barriers, private entrepreneurs have to deal with a lot of affairs that may be unnecessary in developed countries and thus to be more of generalists (Lu and Tao, 2010; Yueh, 2009).

This paper aims to estimate the causal effect of balanced skills on later

[1] See Li et al. (2009) and Mohapatra et al. (2007) to learn the situation of entrepreneurial activities in China and how entrepreneurship has shaped China's economy in the past decades.

entrepreneurship by using a unique survey dataset from rural China. To date, this survey may be the most comprehensive one concerning China's rural entrepreneurs. The survey was carried out by the Development Research Center, the State Council of the People's Republic of China in 2007. Since it was designed to study the entrepreneurial activities of return migrants in rural China, the survey provides detailed information on returnees' previous job history and accumulated skills during the migration period and their occupation status after return. For rural people in China, especially in the less developed central or western areas, one main way of learning skills for business startups is the migration to cities due to the lack of off-farm job opportunities at home (Zhao, 2002). Therefore, the skills accumulated in cities should largely determine their employment status when they return home.

Nevertheless, a simple OLS regression of balanced skill profile on the likelihood of individual entrepreneurship may cause endogeneity problems. For example, individuals with a taste for variety may tend to accumulate more heterogeneous skills, but they may also prefer to become entrepreneurs due to the non-pecuniary benefits associated with entrepreneurship (Åstebro and Thompson, 2011; Hamilton, 2000). The positive relationship between the varied work experience (or varied skills) and the likelihood of entrepreneurship might also be driven by some other unobservables including innate ability, which usually cannot be captured in cross-section studies (Silva, 2007).

To address those concerns, we employ the instrument variables method to causally estimate the balanced skill effect. We use the dummy variable for whether one ever worked in the Yangtze River Delta during his/her previous migration to instrument the balanced skill profile. The logic behind is that the Yangtze River Delta is one of the two main destinations for China's rural migrants since 1990s (another is the Pearl River Delta) and this region is featured by numerous small firms.[2] Compared with large enterprises, small firms tend to provide better opportunities for workers to closely observe how to run a small business and to engage in multifunctional roles (Dobrev and Barnett, 2005; Elfenbein et al., 2010; Gompers et al., 2005; Wagner, 2004). Therefore, small-firm experience can make migrant workers more likely to develop diverse skills which are helpful in later entrepreneurship.

Since our instrument variable only pertains to the previous migration destination, it may not be directly related to labor market performance of return migrants in home regions. However, people may still be concerned about the validity of the instrument

[2] By contrast, there is a relatively lower proportion of small firms in the Pearl River Delta.

variables. For instance, the risk-loving or high-ability migrants, especially those from the less developed central or western regions, might tend to choose the Yangtze River Delta as their destination, where both a lot of exciting job opportunities and large uncertainties exist.

We justify the IV exogeneity based on the following reasons. First, it is unlikely that migrants purposely select certain destinations. Actually, their destination choices are usually determined by historical village migration networks, which can help individuals overcome informational barriers and even psychic costs (Chen et al., 2010; Zhao, 2003). According to the village survey used in this paper, the migrants who went to the village's three main destinations in 2006 account for more than three quarters of the total village migration size, suggesting that the choice of migration destination may not be individually determined to a large extent. Second, our descriptive statistics also show that there are almost no statistically significant differences in individual observed characteristics between the two groups (those who have ever migrated to the Yangtze River Delta and those who have not), suggesting that the choice of the Yangtze River Delta as the destination may be exogenously determined.

This paper is unique in the following ways. First, this study is the first to estimate the causal effect of balanced skill profile on the possibility of entrepreneurship with the IV method. Second, this study contributes to the scant literature on testing Lazear's Jack-of-all-trades hypothesis by using a unique nationally representative dataset from China. Finally, it directly examines the relationship between skills accumulated during the migration and later entrepreneurship and thus adds to the existing debate on the development impacts of return migration .

Our findings support Lazear's Jack-of-all-trades hypothesis. Even after accounting for its potential endogeneity, the balanced skill profile still has a positive and statistically significant effect on the likelihood of later entrepreneurship. When we differentiate incorporated from unincorporated entrepreneurs, we find a larger role of balanced skills in promoting incorporated business. Finally, the balanced skill effect is larger for returnees without previous self-employment experience, suggesting that those returnees who previously worked as wage earners benefit more from migration, highlighting the potential developmental impact of migration for rural people in China.

The rest of this paper proceeds as follows. Section 2 introduces the background

on China's entrepreneurial activities and migration. Section 3 presents the data source and descriptive statistics. Section 4 documents the empirical model. Section 5 shows the estimation results with two different balanced skill profiles, followed by the robustness checks. The final section concludes.

2. Rural Entrepreneurship and Migration in China

After the Household Responsibility System was implemented in rural China since the early 1980s, more rural labors have been freed from the traditional agriculture to non-agricultural activities, greatly promoting the growth of the non-farm sector in China. The share of rural industries represented by township and village enterprises (TVEs) and other rural private enterprises has increased from 9% to 36% of the national industrial output during 1979-1993. Rural industries and services employed 123 million non-agricultural workers in 1993 (Jin and Qian, 1998). By the end of 2010, the rural enterprise employment has even reached 218 million, representing 45.2% of the total non-agricultural labor force (National Bureau of Statistics of China, 2011a).

The rural enterprises in China usually start off with a small scale and are based on household operation. But they are increasing markedly and have made great contributions to China's transformation from an agricultural economy to an industrial one (Mohapatra et al., 2007; Zhang et al., 2006). According to de Brauw and Rozelle (2008), the self-employed accounted for 16.2% of the total rural labor force, highlighting the importance of rural entrepreneurs in local economic activities. As indicated by Figure 1, the share of non-agricultural income from household business in per capita rural household income has grown steadily from about 2% in 1978 to more than 10% in 2009, despite the trend of slowing down in recent years (National Bureau of Statistics of China, 2011b).

[Figure 1 about here]

In contrast with their non-entrepreneur counterparts, China's entrepreneurs are dominantly males. They are more likely to be married, older, and more educated (Zhang et al., 2006). In line with the findings in other countries, China's entrepreneurs usually have parents with past self-employment experience (Zhang et al., 2006). It is

also found that China's entrepreneurs usually have larger social networks (Djankov et al., 2006; Yueh, 2009). This may be related to the existing institutional constraints on entrepreneurial activities in China since social networks can help overcome the credit constraints and coordinate the relationship with local government officials (Yueh, 2009).

Rural-urban migration in China progresses almost at the same pace as the development of rural enterprises. The size of rural-urban migration has grown from less than 16 million in the 1980s to about 159 million in 2011 (Chan, 2001; National Bureau of Statistics of China, 2012). The two main destinations for China's rural migrants are the Yangtze River Delta (including Shanghai, Jiangsu, and Zhejiang) in the coastal eastern region and the Pearl River Delta (Guangdong) bordering Hong Kong. According to the national migration surveys by National Bureau of Statistics of China (2010; 2012), the rural migrants staying in the two regions account for about one half of the total migration flow nationwide in recent years. Furthermore, the inter-provincial migration flow towards the two regions even represents two thirds of the total.

However, due to the institutional barriers, rural migrants still have to move circularly between home and cities. Consequently, they can neither be fully assimilated to the way of urban life nor seek permanent stay in cities (Chan, 2001; Démurger and Xu, 2011; Hu et al., 2011). According to the estimation by Han and Cui (2007) who used the same dataset as we do in this paper, the scale of return migrants in recent years accounts for nearly one quarter of the total rural migrants and 10% of the total rural labor force.

Given such a magnitude of return migration in China, we can imagine how big the scale of benefits returnees could potentially contribute to the development of rural regions in China. As they can represent the flows of both financial and human resources to origin communities to a large extent (Carletto and Kilic, 2011; Dustmann and Kirchkamp, 2002; Zhao, 2002), returnees can bring to their hometowns various benefits such as creating jobs, or building new infrastructure for local regions. In fact, some local governments in the central and western regions of China have made great efforts to encourage the returning of rural migrants (Démurger and Xu, 2011; Murphy, 1999).

3. Data

The dataset used in this paper is based on the China Return Migrant Survey (CRMS) conducted by the Development Research Center, the State Council of the People's Republic of China in May and June of 2007. This survey contains rich information on entrepreneurs in rural China since its aim was to enhance the understanding of entrepreneurial activities of return migrants in rural China and thus to provide relevant policy recommendations for the central government. It is a nationally representative survey, covering 99 counties in 28 out of 31 provinces in China.[3] The number of selected counties for each province was determined in accordance with the rural population size of each province to guarantee the representativeness of the survey.[4] For each chosen county, one town with the average development level was selected, and three villages were randomly chosen for each selected town. All returnee entrepreneur households in the selected villages were surveyed and one member of the selected households (usually the household heads) was chosen to answer the questionnaire.[5] The number of interviewed individuals mostly ranges from 10 to 30 for each village, finally totaling 3026 sampled returnees.

This survey may be the most comprehensive entrepreneur survey in rural China, especially about returnee entrepreneurs. We define entrepreneurs as those who are self-employed with or without paid workers after they returned home from cities. Based on the survey question regarding current employment status, the respondents can be categorized into three types: farmers, wage earners, and entrepreneurs. The proportions of these three types of employment are 27.66%, 4.05%, and 68.29%, respectively.[6] The entrepreneur group can be further decomposed into incorporated and unincorporated entrepreneurs. The former subgroup may be described as opportunity entrepreneurs who actively seek unique market opportunities, while the latter subgroup can be seen as necessity entrepreneurs who may be forced into

[3] The three missing provinces are Beijing, Shanghai and Tibet. Since Beijing and Shanghai are megacities with few rural people and Tibet is an autonomous region with a small population of less than three million, neglecting these three provinces will not affect the national representativeness of the survey because we are interested in returnee entrepreneurs in rural areas.

[4] Specifically, for those provinces with the rural population of more than 40 million, five or six counties were selected, while one or two counties were selected for those provinces with the rural population of less than 5 million. For the rest of the provinces, three or four counties were chosen.

[5] This survey also randomly interviewed some returnee households who did not engage in entrepreneurial activities for comparison purposes.

[6] Since the survey was originally intended to examine the entrepreneurial activities of returnee migrants in rural China, the proportions of entrepreneurs seems to be relatively large compared with other studies (Démurger and Xu, 2011). Nevertheless, since our aim is to examine the balanced skill effect on the likelihood of entrepreneurship, the over-sampling of entrepreneurs should not largely affect the outcomes of interest.

self-employment (Langowitz and Minniti, 2007; Parker, 2009, pp. 11; Reynolds et al., 2001).

One advantage of this survey is that it provides detailed individual job information during the previous migration period. Following similar studies (Åstebro and Thompson, 2011; Lazear, 2005; Stuetzer et al., 2012a; Wagner, 2006), we construct the number of professional fields during the past migration period based on the respondent's job history information. The type of professions ranges from managerial tasks (such as manager/boss) to blue collar ones such as construction workers. Each respondent is required to list the information on the maximum five last jobs.[7]

Table 1 reports the fields of professions in terms of returnees' current entrepreneur status. Those who were previous managers, employers, technicians, office clerks, sales persons, or manufacturing workers are more likely to be current entrepreneurs (especially incorporated entrepreneurs). By contrast, Other professions such as agricultural worker, mining worker, and construction worker are less likely to be entrepreneurs. Although previous services workers including restaurant or hotel servants tend to start their businesses after return, they are more likely to run unincorporated businesses rather than incorporated ones.

[Table 1 about here]

Nevertheless, the aforementioned skill set measure may only refer to different professional categories. One might possibly accumulate no useful skill even if he/she has engaged in several different professions. To alleviate this concern, we next use another direct measure of balanced skill set based on the survey question "What skills (up to three) have you mastered during the migration period?" Instead of simply counting the number of accumulated skills, we categorize the skill profile into the following four types: no skill, non-managerial skill only, managerial skill only, and managerial & non-managerial skills (Ganotakis, 2012).[8]

Table 2 presents the distribution of skills accumulated during the migration period. In consistent with the descriptive statistics on professional fields, those who

[7] These retrospective information can be subject to memory decay (Stuetzer et al., 2012a). To minimize the measurement error, the enumerators have tried to assure the respondents that the survey information is confidential and elicit the information on job history by simultaneously asking other relevant information such as the starting year and destination region of each job.

[8] The two balanced skill measures are positively correlated. For example, most (about 80%) of those people who reported no accumulated skills have work experience in only one post, while about 55% of those claiming to have accumulated both managerial and non-managerial skills have at least two different previous professions.

accumulated managerial, communicative, or manufacturing skills are more likely to be entrepreneurs, while those with agricultural or construction skills are less likely to start their businesses. In addition, those with services skills such as cooking and repairing tend to be unincorporated entrepreneurs rather than incorporated ones.

[Table 2 about here]

Table 3 provides the descriptive statistics of main variables used in subsequent analyses. As shown by the second and third columns, compared with workers, entrepreneurs have experienced more professional fields and accumulated more skills during the migration period. When the accumulated skills are categorized, entrepreneurs are more likely to have managerial skills while seemingly little difference in non-managerial skills exists between the two groups, suggesting the importance of accumulated managerial skills in fostering entrepreneurship (Bloom et al., 2012).

In addition, entrepreneurs tend to be female, married, younger, and more educated.[9] They have longer migration experience and are more likely to be self-employed during the migration. Their families have more available labor resources and less farming burden. The per capita income at the township level on average is lower for entrepreneurs than for workers. In addition, returnees' entrepreneurial activities seem to be more likely to happen in the western region rather than in the eastern region.

The survey provides detailed information on current business, which allows us to distinguish between unincorporated and incorporated entrepreneurs. An individual is defined as an incorporated entrepreneur if his/her business is a shareholding company or a registered private company. Most unincorporated entrepreneurs are self-employed without employees. Therefore, most of them do not need to manage others and may not need the same number of skills as incorporated entrepreneurs.

As shown in the fourth and fifth columns of Table 3, incorporated entrepreneurs on average have a more balanced skill set than unincorporated ones. The proportion of accumulating both managerial and non-managerial skills for incorporated entrepreneurs almost doubles that for unincorporated ones. Incorporated entrepreneurs are older, more educated, and more likely to be male and to be married. They have longer migration experience and are more likely to be self-employed during the

[9] The result that females tend to become entrepreneurs in rural China seems to be inconsistent with other relevant studies (such as Démurger and Xu, 2011).

migration period than their unincorporated counterparts.

[Table 3 about here]

Overall, our descriptive analysis shows that individuals with balanced skills accumulated during their migration period tend to become entrepreneurs (especially incorporated ones) when they return home, which is consistent with the Jack-of-all-trades theory proposed by Lazear (2004; 2005). However, the descriptive results may only be suggestive since the effects of other covariates are not taken into account. Therefore, next we will employ the multivariate regression model to control for other covariates to further our understanding on this issue.

4. Empirical Strategy

The aim of this paper is to examine whether individual balanced skill set contributes to later self-employment. Therefore, we start with the following linear probability model:

$$Y_i = BS_i\beta_1 + X_i\beta_2 + \varepsilon_i, \quad (1)$$

where Y_i is a binary variable for being an entrepreneur, BS_i is the key explanatory variable for individual balanced skill profile, and X_i includes other individual, household, and township-level characteristics.

Following similar studies (Åstebro and Thompson, 2011; Lazear, 2004, 2005; Wagner, 2006), we first use the number of previous professional fields to measure the balanced skill profile. However, this measure may only refer to different professional categories. One might possibly accumulate no useful skill even if he/she has engaged in several different professions. To alleviate this concern, we also use another direct measure of balanced skill set: the categorized accumulated skill profile during the migration period. The accumulated skills variable are categorized as four types: no skill, non-managerial skill only, managerial skill only, and managerial & non-managerial skills.

As suggested by the existing literature (Démurger and Xu, 2011; Silva, 2007; Stuetzer et al., 2012b), we include in the vector X_i several individual demographic characteristics such as age, gender, marital status, and education and individual labor

market experience variables such as previous migration duration and self-employment experience. Because businesses in rural China are usually run or supported by families (Yueh, 2009), we also include several household-level variables on available labor resources or family burden, including the number of working adults, the number of children under 16, and the area of contracted land.

Finally, the likelihood of starting a business may be correlated with local economic development level and entrepreneurial environment, which can provide some externalities, such as knowledge spillovers and social ties (Commander and Svejnar, 2011; Parker, 2009, pp. 140-142; Rocha and Sternberg, 2005). Given the available information in the survey, we control for per capita net income in 2000 at the township level in the model. To account for the large regional heterogeneity of entrepreneurial environment across China (Li et al., 2009; Yueh, 2009), we also control for region dummies (eastern region and central region dummies, with western region as the reference group).

However, the causal interpretation of the above OLS estimates may be problematic. It is possible that some unobservable factors may simultaneously determine the skill accumulation during the migration period and later entrepreneurship (Lazear, 2005; Silva, 2007). For example, those who are impatient or want variety may be more likely to change professional fields (or to accumulate different types of skills) and also prefer self-employment. In addition, high-ability individuals are also more likely to accumulate multiple skills during the migration period and to start businesses at home. Omitting those unobservables would lead to biased estimates on the balanced skill effect. Finally, there may exist measurement errors associated with self-reported previously accumulated skills. Since the information on previous job experiences or accumulated skills is retrospective, it is possible that people may be reluctant to recall or cannot memorize something that had happened many years before.

To overcome these econometric concerns, we will turn to the instrument variables method.[10] As documented in the existing literature (Dobrev and Barnett, 2005; Elfenbein et al., 2010; Gompers et al., 2005; Wagner, 2004), compared with large enterprises, small firms tend to provide better opportunities for workers to closely observe how to run a small business and to engage in multifunctional roles. The small-firm experience can thus make workers more likely to develop diverse skills which are helpful in later entrepreneurship. Therefore, a possible instrument

[10] Because the migration duration and migrant entrepreneur status may be correlated with the error term in the equation (1), we do not include them in the model when doing the IV analysis.

candidate may be related to the firm size of returnees' previous employment if the employer-employee matched data is available.

As we have mentioned in the second section, the Yangtze River Delta region is one of the two main destinations for China's rural-urban migration.[11] It is also among the most economically dynamic regions in China and the most dynamic manufacturing regions in the world (Bellandi and Lombardi, 2012; Chen, 2007; Huang et al., 2008).[12] One prominent feature of the Yangtze River Delta is its flourishing private economic activities since early 1990s.[13] The private sector is dominated by numerous small firms in this region, where clustering has deepened the labor division in the production process and thus small firms can flourish by only focusing on narrowly defined stages of the production (Huang et al., 2008). According to China's first national economic census (National Bureau of Statistics of China, 2006), the number of small firms with less than 20 employees in the Yangtze River Delta accounts for about one third of the total number of the nation in 2004.

Therefore, we will use the following variable as the IV for individual skill variety: the dummy variable indicating whether one ever worked in the Yangtze River Delta during his/her previous migration. Since there are so many small firms in the Yangtze River Delta, migrants in this region should be more likely to work for small firms than in other regions and thus be more likely to develop diverse skills, including both managerial and non-managerial skills. Actually, according to the rural migrant survey of the 2007 wave of CHIP (Chinese Household Income Project)[14], the migrants working in small firms with less than 20 employees represents 53.87% of the migrants in the Yangtze River Delta and about three quarters of migrants work in small firms with less than 100 employees.[15] We expect that ever working in the Yangtze River Delta should be correlated with returnees' likelihood of developing varied skills

[11] Another main migration destination is the Pearl River Delta. The two regions account for about one half of China's total rural-urban migration and two thirds of inter-provincial migration (National Bureau of Statistics of China, 2010; 2012).

[12] The regional GDP accounts for about one quarter of the nation, and its per capita GDP more than doubles that of the nation in 2006 (National Bureau of Statistics of China, 2007).

[13] According to National Bureau of Statistics of China (2007), the industrial output created by the region's private sector accounts for more than one third of that of the nation.

[14] The rural migrant survey covers eight provinces or municipalities in China: Anhui, Guangdong, Henan, Hubei, Jiangsu, Shanghai, Sichuan, and Zhejiang. CHIP (Chinese Household Income Project) is large household survey aiming to measure and estimate the income distribution and related issues in China. For detailed introduction to this survey, please refer to the ICPSR website: http://www.icpsr.umich.edu/icpsrweb/ICPSR/studies/21741.

[15] People may be concerned why the Pearl River Delta dummy is not selected as the instrument variable since it is another important migration destination and is also among the most economically developed regions in China. However, because in the Pearl River Delta the private sector is usually dominated by relatively larger export-oriented firms, migrants are less likely to work for small firms. According to the rural migrant survey mentioned above, this proportion of migrants working for small firms with less than 20 employees is only 32.31% in the Pearl River Delta. Actually, when we add the Pearl River Delta dummy to the first stage equation in the following IV analysis, the coefficient on this dummy variable is statistically insignificant.

during their migration period.

We use a two-stage econometric model to examine the effect of balanced skill profile on the likelihood of later entrepreneurship.[16] In the first stage, a linear probability model is used to estimate the determinants of individual balanced skill profile:

$$BS_i = Z_i\delta_1 + X_i\delta_2 + u_i, \quad (2)$$

where BS_i is the dummy variable for whether one had accumulated balanced skills (both managerial and non-managerial skills) during the migration period, X_i is a set of individual, household, and township-level variables defined before, and Z_i is the instrument variable indicating whether one ever migrated to the Yangtze River Delta.

However, people may be worried about the weak instrument problem because the Yangtze River Delta only rose as China's second economic growth engine since early 1990s (Chen, 2007).[17] Rural people may be less likely to migrate to the Yangtze River Delta before 1990 due to few job opportunities there. Nevertheless, since there are only about six percent of migrants who retuned before 1990 in the survey used in this paper, this concern may be negligible. To minimize this concern, we will use another IV – the dummy for whether to migrate to the Yangtze River Delta after 1990 – to show the robustness of the results.

Since our instrument variables only pertain to the previous migration destination, they may not be directly related to labor market performance of return migrants in home regions. But people may still be concerned about the validity of the instrument variables. For instance, the risk-loving or high-ability migrants, especially those from the less developed central or western regions, might tend to choose the Yangtze River Delta as their destination, where both a lot of exciting job opportunities and large uncertainties exist.

Nevertheless, people may not know much about the destination when they make migration decisions.[18] Therefore, it is unlikely that migrants purposely select certain destinations. Actually, their destination choices are usually determined by historical village migration networks, which can help individuals overcome informational barriers and even psychic costs (Chen et al., 2010; Zhao, 2003). According to the

[16] We use the two-stage linear probability model to examine the effect of balanced skills accumulated during the migration on the possibility of returnees' later entrepreneurship since the linear probability model can allow us to conveniently implement the two-stage IV estimation procedure (Angrist and Pischke, 2009).

[17] The Pearl River Delta region was the first to receive massive foreign investment and to start export-oriented manufacturing during the 1980s after China's reform and opening up.

[18] The returnee survey used in this paper also asked the following question: "How much did you know about the destination at your first migration?" The responses with "no" or "little" account for nearly 90% of the total, suggesting that people may not know much about the destination.

village survey used in this paper, the migrants who went to the village's three main destinations in 2006 account for more than three quarters of the total village migration size, suggesting that the choice of migration destination may not be individually determined to a large extent.

To further justify the exogeneity of the IVs used in this paper, we also provide some descriptive statistics in terms of the destination as the Yangtze River Delta. As shown in Table A1, there are almost no statistically significant differences in observed individual characteristics between the two groups (those who have ever migrated to the Yangtze River Delta and those who have not). Although we cannot ensure that there is no differences in unobservable factors between the two groups, the above descriptive results seem to suggest that the choice of the Yangtze River Delta as the destination is exogenously determined.

5. Results

In this section, we first use the number of professional fields to measure individual skill set, which has been frequently used in the previous studies (Lazear, 2005; Silva, 2007). We then use instead the categorized accumulated skills with both OLS and IV methods in section 5.2.

5.1 Number of professional fields

Table 4 reports the OLS estimates of the self-employment choice. We find a positive and statistically significant relationship between the variety of professional fields and the likelihood of becoming an entrepreneur. Even after controlling for family background and township-level variables, the coefficient is still statistically significant. The results are consistent with the predictions of Lazear's Jack-of-all-trades theory (Åstebro and Thompson, 2011; Lazear, 2004, 2005; Wagner, 2003, 2006).[19]

As expected, married, younger, more educated, and more experienced individuals are more likely to become entrepreneurs after return. Those with previous self-employment experience tend to be entrepreneurs after they return home. The

[19] We also repeat the regressions with the categorized number of professional fields (three types: one field, two fields, three or more fields) and obtain similar results.

above results suggest that those with high levels of human capital may be more likely to start their businesses after return. Surprisingly, female returnees are more likely to become entrepreneurs in rural China than males, which seems to be inconsistent with other relevant studies (such as Démurger and Xu, 2011). The possible explanation may be that there are few off-farm employment opportunities in home regions that are suitable for females, especially in the less developed central and western regions.[20] As a result, female returnees are usually forced to be self-employed.[21]

Those who are in the families with more labor resources and less land burden also tend to become entrepreneurs. Finally, compared with their counterparts in the western region, those return migrants in the eastern region are less likely to engage in entrepreneurial activities. This may reflect the fact that there are much more local wage employment opportunities available in the eastern region than in the central or western region. Therefore, returnees in the eastern region may be more likely to do the wage work, while returnees in the central or western region may be forced to be self-employed.

[Table 4 about here]

5.2 Skills accumulated during the migration period

In addition to the aforementioned balanced skill set measure, we also use another direct measure of skill set: the accumulated skill profile during the migration period. Following the way of Ganotakis (2012), we categorize the skill profile into four types: no skill, non-managerial skill only, managerial skill only, and managerial & non-managerial skills.[22] It is expected that the combination of complementary skills has a positive effect on the likelihood of entrepreneurship.

Table 5 present the results with the heterogeneity of accumulated skills as the balanced skill measure.[23] The first two columns use the categorized accumulated skill variable, while the third and fourth columns use the dummy variable for both

[20] The paid employment opportunities in the central and western regions are usually limited to construction or other physically demanding jobs that are suitable for men.
[21] We will further explore this issue in the section 6.3.
[22] We also use the number of self-reported accumulated skills to measure the skill set and still find the statistically significant and positive relationship between this measure and the possibility of entrepreneurship.
[23] We construct the accumulated skill profile by categorizing no response to the survey question as no skill. However, this way of measuring individual skill profile may be subject to measurement errors. Those who are unwilling to respond may actually have accumulated some skills. To minimize this concern, we repeat our analysis by excluding the no-response sample. The results show that those who accumulated both managerial and non-managerial skills still tend to be entrepreneurs.

managerial and non-managerial skills. Our results show that individuals with both managerial and non-managerial skills are more likely to be entrepreneurs. This suggests that balanced skills rather than only technical or managerial skill are more important for starting a business, strongly supporting Lazear's Jack-of-all-trades theory. Managerial skill is assumed to be complementary to other inputs such as labor and physical capital by improving the marginal productivity of other inputs (Bruhn et al., 2010). The results are also consistent with Ganotakis (2012), which shows that the coexistence of complementary skills among founders leads to higher level of firm performance.

In addition, the accumulated managerial skill of return migrants seems to be more important than non-managerial skills in their business startups in rural China. This finding is important since the managerial skill is largely missing in developing countries like China while it is one key input factor associated with the business success (Bloom et al., 2012; Bruhn et al., 2010; Ng, 2005). Since there exists few entrepreneurship training opportunities in China, migration experience may serve as the only way for many rural people to enhance their managerial skills (Zhao, 2002).

[Table 5 about here]

However, the simple OLS estimates may suffer the endogeneity bias because unobserved factors may simultaneously determine the accumulated skill profile and entrepreneurship after return. In the following analysis, we will use the instrument variables method to address this concern. Table 6 reports the second-stage regression results for the likelihood of being an entrepreneur after return. The first-stage linear probability model results for whether returnees accumulated balanced skills (both managerial and non-managerial skills) during the migration are presented in Table A2.

We use four groups of different IVs (or combinations of IVs) to examine the effect of balanced skills on later entrepreneurship. The first column of Table 6 uses the dummy variable for whether one had migrated to the Yangtze River Delta. Considering the fact that the Yangtze River Delta only rose as China's second economic growth engine since early 1990s (Chen, 2007), in the second column we use instead another IV – the dummy for whether to migrate to the Yangtze River Delta after 1990. Finally, we add the dummy variable for whether one had migrated to the Pearl River Delta in the third and fourth columns to check our previous conjecture that migration experience in the Pearl River Delta is not favorable for individuals to

develop balanced skills.

As shown in the bottom of Table 6, the first-stage F statistics for the first two groups of IVs are both more than 10, a rule-of-thumb value proposed by Staiger and Stock (1997) to detect the weak instruments. In contrast, the first-stage F statistics for the third and fourth columns are rather small, suggesting that the dummy variable for whether one had migrated to the Pearl River Delta may not be an appropriate IV candidate. In the following analysis, we will thus focus on the results in the first two columns of Table 6.

After accounting for the endogeneity of balanced skill profile, the IV regressions yield similar results when compared with previous OLS results. Although the standard error associated with the key explanatory variable is much larger than in the OLS estimation in Table 5, the effect is still statistically significant at the 10% level. The relative larger balanced skill effect may suggest that the attenuation bias (induced by the misreporting of retrospective information on previously accumulated skills) is larger than the omitted variables bias. In addition, the results in the first two columns suggest that the concern about whether one can similarly accumulate balanced skills before 1990s in the Yangtze River Delta seems to be negligible.

[Table 6 about here]

6. Extensions

6.1 Ever entrepreneur after return

Nevertheless, one may be concerned that current entrepreneurs are those who have become accustomed to home environments and successfully survived after return. Therefore, the aforementioned balanced skill effect may be on the survival rate of businesses rather than on the possibility of business startups. To minimize this selection bias concern, next we use whether one has been self-employed after return rather than one's current occupation status.

As reported in the first two columns of Table 7, the results with the likelihood of ever self-employment are very similar to previous results. Both OLS and IV results show that balanced skill profile has a positive and statistically significant effect on the possibility of ever being self-employed after return, suggesting the robustness of

previous results.

[Table 7 about here]

6.2 Incorporated entrepreneur

The balanced skill set may be more important for an entrepreneur whose business is officially incorporated than for an informal own-account worker (such as street vendors) who does not have to manage others (Lazear, 2005). The first group may be described as opportunity entrepreneurs, the second one as necessity entrepreneurs (Langowitz and Minniti, 2007; Parker, 2009, pp. 11; Reynolds et al., 2001). Necessity entrepreneurs may be forced into starting businesses because they cannot find other proper wage job opportunities. By contrast, opportunity entrepreneurs are those who actively seek unique market opportunities and are assumed to play a more important role in promoting the economic growth.

In this subsection, we limit entrepreneurs to those incorporated ones and repeat previous analyses with this new entrepreneur definition.[24] As reported in the third and fourth columns of Table 7, while the OLS estimate of the balanced skill effect is almost the same as before, the IV estimate is much larger than previous estimates and statistically significant at the 5% level.[25] It suggests that the balanced skills can contribute to a 122.6% higher likelihood of being an incorporated entrepreneur, lending support to our previous conjecture that large incorporated business owners are usually required to perform more roles than unincorporated entrepreneurs.

It is worth noting that older people and men are more likely to be incorporated entrepreneurs, in contrast with previous findings that younger people and females tend to be self-employed. This may suggest that the operation of an incorporated enterprise requires much more resources than own-account self-employment and only those male or senior people with larger social networks are capable of fulfilling this role.[26]

[24] We also repeat the analysis by defining entrepreneurs as employers who hire paid workers, and find similar results since most of own-account workers are unincorporated while most of employers are incorporated.

[25] For instance, the results in the first column of Table 6 shows that balanced skills can lead to a 77.2% higher probability of being self-employed.

[26] For example, incorporated business owners have to negotiate with banks to obtain loans or even to coordinate the relationship with local government officials, especially in developing countries like China (Yueh, 2009). By contrast, unincorporated street vendors may not face financial constraints and their jobs are relatively simple: get goods from wholesalers and sell them to people just passing by.

6.3 Excluding those with previous self-employment experience

Finally, the skills accumulated during the migration period may not be as important for migrant entrepreneurs as for migrants without previous self-employment experience. Those migrant entrepreneurs may have been self-employed before their migration. In the following analysis, we examine the balanced skill effect on returnees without self-employment experience during the migration by excluding those migrant entrepreneurs from our sample.

As Table 8 indicates, both OLS and IV estimates on the balanced skill effect are larger than previous estimates without excluding migrant entrepreneurs. This suggests that those returnees who previously worked as wage earners do benefit more from the balanced skills accumulated during the migration, highlighting the potential developmental impact of rural-urban migration for rural people in China.

[Table 8 about here]

7. Conclusion

This paper has studied the relationship between accumulated balanced skill profile and later entrepreneurship using a large nationally representative return migrant survey in rural China. Our study is the first to estimate the causal effect of balanced skill profile on the possibility of entrepreneurship. The results show that even after accounting for its potential endogeneity, the balanced skill profile still has a positive and statistically significant effect on the likelihood of later entrepreneurship, lending support to Lazear's Jack-of-all-trades hypothesis. The results are robust to alternative definitions of entrepreneur.

Our study relates to the two strands of important literature. On the one hand, it contributes to the scant empirical evidences on Lazear's Jack-of-all-trades theory in developing countries, where entrepreneurs have to deal with almost all aspects of business operation due to underdeveloped markets and ill-functioning legal system or institutions. Therefore, entrepreneurs in developing countries are expected to be more of generalists than their market economy counterparts. On the other hand, due to the lack of off-farm job opportunities in rural China (especially in less developed central and western regions), rural-urban migration provides rural people an important

avenue to accumulate skills. This study directly examines the relationship between skills accumulated during the migration and later entrepreneurship and thus adds to the existing debate on the development impacts of return migration.

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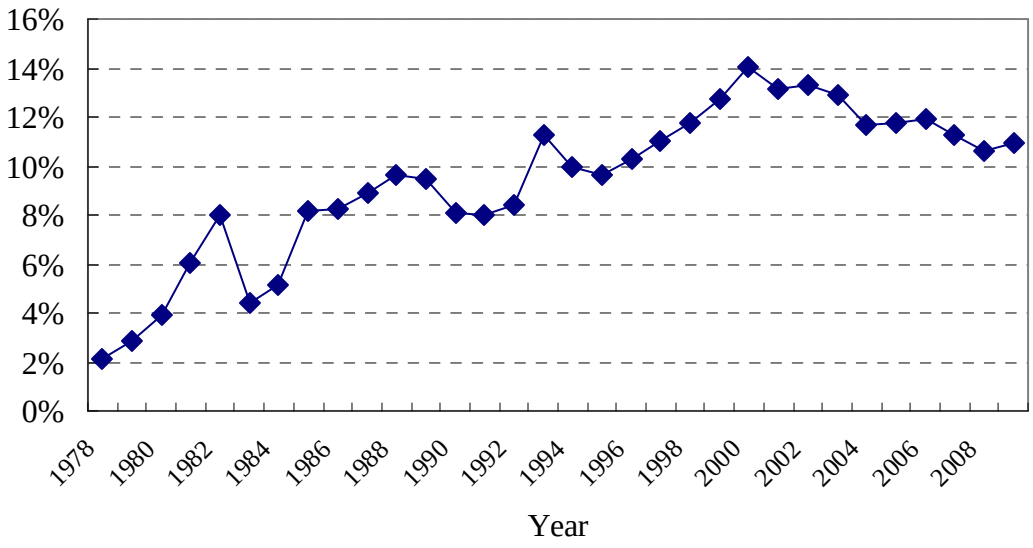

Data source: *China Yearbook of Rural Household Survey 2010*.

Figure 1 Share of Non-agricultural Income from Household Business in Per Capita Rural Household Income (1978-2009)

Table 1 Previous Professional Fields of Return Migrants (%)

	All	Worker	Entrepreneur		
			Whole	Unincorporated	Incorporated
Manager/boss	7.05	6.44	7.34	6.70	9.18
Technician	1.43	1.07	1.60	1.27	2.54
Office Clerk	2.08	1.07	2.54	1.61	5.27
Sales person	8.62	5.80	9.93	9.52	11.13
Security guard worker	1.60	1.93	1.45	1.54	1.17
Agricultural worker	7.36	15.57	3.54	3.89	2.54
Mining worker	4.43	4.40	4.44	4.29	4.88
Manufacturing worker	33.94	23.85	38.62	37.67	41.41
Construction worker	42.08	45.01	40.72	39.61	43.95
Car/truck driver	9.10	8.16	9.53	9.12	10.74
Restaurant/hotel servant	6.34	2.47	8.13	8.65	6.64
Other services worker	19.25	15.15	21.16	21.65	19.73
Number of observations	2935	931	2004	1492	512

Table 2 Accumulated Skills by Return Migrants (%)

	All	Worker	Entrepreneur		
			Whole	Unincorporated	Incorporated
Managerial skill	12.48	7.83	14.95	13.80	18.24
Communicative skill	3.13	1.07	4.09	3.95	4.49
Agricultural skill	6.54	16.00	2.15	2.01	2.54
Mining skill	1.91	1.50	2.10	1.61	3.52
Food processing skill	2.35	1.40	2.79	2.82	2.73
Sewing/shoe making skill	4.77	3.11	5.54	4.76	7.81
Carpenter/furniture making skill	3.58	2.47	4.09	3.15	6.84
Metallurgical skill	2.28	0.75	2.99	3.08	2.73
Other manufacturing skill	6.71	4.94	7.53	6.10	11.72
Construction skill	21.94	23.63	21.16	21.78	19.34
Professional skill	2.28	1.50	2.64	2.35	3.52
Cooking skill	3.82	2.15	4.59	4.96	3.52
Repairing skill	9.91	8.27	10.68	11.60	8.01
Car-driving skill	8.25	5.59	9.48	9.32	9.96
Other skill	2.73	1.72	3.19	3.62	1.95
Number of observations	2935	931	2004	1492	512

Note: "Professional skill" type includes accounting, finance, computer, and medical skills. "Other skill" type includes haircutting, waste recycling, and etc.

Table 3 Descriptive Statistics of Main Variables

	All	Worker	Entrepreneur		
			Whole	Unincorporated	Incorporated
Number of professional fields	1.36	1.27	1.40	1.38	1.46
Number of accumulated skills	0.92	0.82	0.97	0.93	1.06
Categorized accumulated skills					
No skill (%)	23.58	28.27	20.91	21.69	18.65
Non-managerial skill only (%)	63.94	63.9	64.15	64.51	63.11
Managerial skill only (%)	5.3	3.44	6.34	6.33	6.35
Managerial & non-managerial skills (%)	7.18	4.39	8.61	7.47	11.89
Individual characteristics					
Age	39.30	40.47	38.75	38.18	40.42
Male (%)	91.96	94.84	90.62	89.21	94.73
Married (%)	97.26	95.89	97.89	97.71	98.43
Education level					
Illiterate or elementary school (%)	11.96	16.30	9.97	9.54	11.26
Middle school (%)	64.63	67.72	63.21	65.48	56.52

High school or college (%)	23.41	15.97	26.82	24.98	32.21
Household characteristics					
Number of working adults	2.71	2.58	2.77	2.74	2.84
Number of children under 16	1.04	0.99	1.06	1.09	1.00
Land (*mu*)	9.09	13.71	6.95	7.40	5.65
Township characteristics					
Per capita income in 2000	2025	2154	1964	1928	2069
Western region (%)	31.04	23.74	34.43	35.32	31.84
Central region (%)	37.27	33.30	39.12	38.47	41.02
Eastern region (%)	31.69	42.96	26.45	26.21	27.15
Migration-related variables					
Years of migration experience	5.79	5.59	5.89	5.57	6.83
Migrant entrepreneur (%)	21.90	17.93	23.73	22.47	27.40
Number of observations	2935	931	2004	1492	512

Table 4 OLS Estimates of Being a Current Entrepreneur: Professional Fields

	(1)	(2)	(3)	(4)	(5)
Key explanatory variable					
Number of professional fields	0.073***	0.067***	0.062***	0.054***	0.046***
	(0.013)	(0.013)	(0.013)	(0.013)	(0.013)
Individual characteristics					
Age		-0.005***	-0.006***	-0.005***	-0.006***
		(0.001)	(0.001)	(0.001)	(0.001)
Male		-0.129***	-0.134***	-0.115***	-0.12***
		(0.029)	(0.029)	(0.028)	(0.029)
Married		0.258***	0.293***	0.291***	0.291***
		(0.061)	(0.063)	(0.062)	(0.061)
Education level (reference: illiterate or elementary school)					
Middle school		0.074**	0.082***	0.1***	0.1***
		(0.03)	(0.03)	(0.03)	(0.03)
High school or college		0.181***	0.185***	0.201***	0.196***
		(0.032)	(0.033)	(0.032)	(0.032)
Household characteristics					
Number of working adults			0.047***	0.048***	0.049***
			(0.007)	(0.007)	(0.007)
Number of children under 16			0.005	0.003	0.001
			(0.012)	(0.012)	(0.012)
Land			-0.001***	-0.001***	-0.002***

			(0.0004)	(0.0004)	(0.0004)
Township characteristics					
Per capita income in 2000				-0.01	-0.011
				(0.012)	(0.012)
Region dummies (*reference: western region*)					
Central region				-0.027	-0.024
				(0.02)	(0.02)
Eastern region				-0.145***	-0.139***
				(0.025)	(0.025)
Migration-related variables					
Years of migration experience					0.004*
					(0.002)
Migrant entrepreneur					0.074***
					(0.02)
Constant	0.593***	0.577***	0.467***	0.47***	0.481***
	(0.02)	(0.076)	(0.079)	(0.079)	(0.079)
Pseudo R2	0.009	0.042	0.065	0.084	0.09
Observations	2708	2634	2610	2610	2610

Notes: Standard errors are in parentheses. All results are robust variance estimates. *** significant at 1%, ** significant at 5%, * significant at 10%.

Table 5 OLS Estimates of Being a Current Entrepreneur: Accumulated Skills

	(1)	**(2)**	**(3)**	**(4)**
Key explanatory variables				
Categorized accumulated skills (reference: no skill)				
Non-managerial skill only	0.045**	0.041*		
	(0.022)	(0.022)		
Managerial skill only	0.133***	0.103***		
	(0.038)	(0.039)		
Managerial & non-managerial skills	0.148***	0.13***		
	(0.035)	(0.036)		
Categorized accumulated skills (reference: no skill or only one skill)				
Managerial & non-managerial skills			0.109***	0.093***
			(0.031)	(0.032)
Individual characteristics				
Age	-0.005***	-0.006***	-0.005***	-0.006***
	(0.001)	(0.001)	(0.001)	(0.001)
Male	-0.107***	-0.114***	-0.107***	-0.114***

	(0.029)	(0.029)	(0.029)	(0.029)
Married	0.293***	0.292***	0.297***	0.296***
	(0.061)	(0.061)	(0.062)	(0.061)
Education level (reference: illiterate or elementary school)				
Middle school	0.09***	0.092***	0.095***	0.096***
	(0.03)	(0.03)	(0.03)	(0.03)
High school or college	0.189***	0.186***	0.195***	0.191***
	(0.032)	(0.032)	(0.032)	(0.032)
Household characteristics				
Number of working adults	0.049***	0.05***	0.051***	0.051***
	(0.007)	(0.007)	(0.007)	(0.007)
Number of children under 16	0.002	0.0004	0.004	0.001
	(0.012)	(0.012)	(0.012)	(0.012)
Land	-0.001***	-0.001***	-0.001***	-0.002***
	(0.0004)	(0.0004)	(0.0004)	(0.0004)
Township characteristics				
Per capita income in 2000	-0.014	-0.014	-0.012	-0.013
	(0.012)	(0.012)	(0.012)	(0.012)
Region dummies (*reference: western region*)				
Central region	-0.033	-0.029	-0.031	-0.027
	(0.02)	(0.02)	(0.02)	(0.02)
Eastern region	-0.144***	-0.14***	-0.149***	-0.143***
	(0.025)	(0.025)	(0.025)	(0.025)
Migration-related variables				
Years of migration experience		0.004**		0.004**
		(0.002)		(0.002)
Migrant entrepreneur		0.067***		0.074***
		(0.021)		(0.02)
Constant	0.515***	0.517***	0.535***	0.535***
	(0.077)	(0.077)	(0.078)	(0.077)
Pseudo R2	0.087	0.092	0.083	0.09
Observations	2610	2610	2610	2610

Notes: Standard errors are in parentheses. All results are robust variance estimates. *** significant at 1%, ** significant at 5%, * significant at 10%.

Table 6 IV Estimates of Being a Current Entrepreneur: Accumulated Skills

	(1)	**(2)**	**(3)**	**(4)**
Key explanatory variables				

Categorized accumulated skills (reference: no skill or only one skill)				
Managerial & non-managerial skills	0.772*	0.837*	0.855*	0.903*
	(0.46)	(0.484)	(0.467)	(0.492)
Individual characteristics				
Age	-0.005***	-0.005***	-0.005***	-0.005***
	(0.001)	(0.001)	(0.001)	(0.001)
Male	-0.103***	-0.102***	-0.103***	-0.102***
	(0.032)	(0.033)	(0.033)	(0.034)
Married	0.253***	0.253***	0.249***	0.25***
	(0.067)	(0.068)	(0.068)	(0.068)
Education level (reference: illiterate or elementary school)				
Middle school	0.079**	0.076**	0.077**	0.074**
	(0.034)	(0.035)	(0.034)	(0.035)
High school or college	0.141***	0.135***	0.135***	0.13**
	(0.049)	(0.052)	(0.049)	(0.053)
Household characteristics				
Number of working adults	0.052***	0.052***	0.052***	0.052***
	(0.008)	(0.008)	(0.008)	(0.008)
Number of children under 16	0.007	0.007	0.007	0.007
	(0.013)	(0.013)	(0.013)	(0.014)
Land	-0.001***	-0.002***	-0.001***	-0.002***
	(0,0004)	(0.0005)	(0.0004)	(0.0005)
Township characteristics				
Per capita income in 2000	-0.016	-0.014	-0.016	-0.015
	(0.012)	(0.013)	(0.013)	(0.013)
Region dummies (*reference: western region*)				
Central region	-0.011	-0.011	-0.008	-0.009
	(0.028)	(0.028)	(0.028)	(0.029)
Eastern region	-0.136***	-0.14***	-0.134***	-0.138***
	(0.03)	(0.031)	(0.031)	(0.031)
Constant	0.538***	0.542***	0.538***	0.542***
	(0.081)	(0.082)	(0.082)	(0.083)
First-stage F statistic	11.65	10.74	6.05	5.46
Overidentification test of all instruments				
Hansen J statistic: Chi-sq (p-value)			1.53(0.22)	1.92(0.17)
Observations	2577	2555	2577	2555

Notes: Standard errors are in parentheses. All results are robust variance estimates. *** significant at 1%, ** significant at 5%, * significant at 10%. The IV used in the first column is the dummy variable for whether one had migrated to the Yangtze River Delta; the IV used in the second column is the dummy variable for whether one had migrated to the Yangtze River Delta after 1990s; the IVs used in the third column are the dummy variables for whether one had migrated to the Yangtze River Delta and for whether one had migrated to the Pearl River Delta; the IVs used in the fourth column are the dummy variables for whether one had migrated to the Yangtze River

Delta after 1990s and for whether one had migrated to the Pearl River Delta.

Table 7 Robustness Checks: An Ever Entrepreneur or an Incorporated One

	Ever entrepreneur		Incorporated entrepreneur	
	OLS	**IV**	**OLS**	**IV**
Key explanatory variables				
Categorized accumulated skills (reference: no skill or only one skill)				
Managerial & non-managerial skills	0.117***	0.705*	0.104***	1.226**
	(0.021)	(0.4)	(0.033)	(0.53)
Individual characteristics				
Age	-0.002**	-0.003**	0.002**	0.002*
	(0.001)	(0.001)	(0.001)	(0.001)
Male	-0.065***	-0.064**	0.046*	0.051
	(0.023)	(0.026)	(0.025)	(0.033)
Married	0.249***	0.225***	0.031	-0.028
	(0.06)	(0.065)	(0.041)	(0.058)
Education level (reference: illiterate or elementary school)				
Middle school	0.079***	0.062**	0.006	-0.021
	(0.028)	(0.031)	(0.023)	(0.03)
High school or college	0.178***	0.131***	0.078***	-0.009
	(0.029)	(0.043)	(0.027)	(0.051)
Household characteristics				
Number of working adults	0.034***	0.035***	0.013*	0.017*
	(0.007)	(0.007)	(0.007)	(0.009)
Number of children under 16	0.015	0.016	-0.002	0.002
	(0.011)	(0.012)	(0.01)	(0.013)
Land	-0.002***	-0.002***	-0.001**	-0.001*
	(0.0004)	(0.0004)	(0.0003)	(0.0004)
Township characteristics				
Per capita income in 2000	-0.017	-0.02*	0.011	0.002
	(0.011)	(0.012)	(0.009)	(0.012)
Region dummies (*reference: western region*)				
Central region	-0.033**	-0.012	0.02	0.059**
	(0.017)	(0.023)	(0.018)	(0.03)
Eastern region	-0.134***	-0.119***	-0.033	-0.002
	(0.023)	(0.027)	(0.021)	(0.031)
Constant	0.605***	0.605***	-0.067	-0.073
	(0.073)	(0.075)	(0.058)	(0.073)
First-stage F statistic		11.65		11.65

Observations	2577	2577	2577	2577

Notes: Standard errors are in parentheses. All results are robust variance estimates. *** significant at 1%, ** significant at 5%, * significant at 10%. The IV used in this table is the dummy variable for whether one had migrated to the Yangtze River Delta.

Table 8 Robustness Checks: Excluding Those with Previous Self-Employment Experience

	Current entrepreneur		**Incorporated entrepreneur**	
	OLS	**IV**	**OLS**	**IV**
Key explanatory variables				
Categorized accumulated skills (reference: no skill or only one skill)				
Managerial & non-managerial skills	0.157***	0.946*	0.126***	1.674**
	(0.038)	(0.528)	(0.041)	(0.677)
Individual characteristics				
Age	-0.006***	-0.006***	0.002*	0.002
	(0.001)	(0.002)	(0.001)	(0.002)
Male	-0.124***	-0.138***	0.053**	0.025
	(0.032)	(0.037)	(0.026)	(0.04)
Married	0.325***	0.282***	0.038	-0.028
	(0.067)	(0.072)	(0.041)	(0.062)
Education level (reference: illiterate or elementary school)				
Middle school	0.109***	0.089**	-0.002	-0.041
	(0.034)	(0.038)	(0.026)	(0.035)
High school or college	0.197***	0.146***	0.052*	-0.041
	(0.038)	(0.05)	(0.03)	(0.055)
Household characteristics				
Number of working adults	0.054***	0.058***	0.013*	0.023**
	(0.009)	(0.01)	(0.007)	(0.011)
Number of children under 16	0.0001	0.0002	-0.006	-0.006
	(0.014)	(0.015)	(0.01)	(0.015)
Land	-0.002***	-0.002***	-0.0005	-0.001
	(0.001)	(0.001)	(0.0004)	(0.001)
Township characteristics				
Per capita income in 2000	-0.015	-0.017	0.006	0.001
	(0.013)	(0.013)	(0.009)	(0.012)
Region dummies (*reference: western region*)				
Central region	-0.03	-0.009	0.004	0.052
	(0.024)	(0.031)	(0.021)	(0.037)
Eastern region	-0.146***	-0.132***	-0.046**	-0.004

	(0.029)	(0.034)	(0.023)	(0.037)
Constant	0.524***	0.535***	-0.043	-0.042
	(0.086)	(0.091)	(0.06)	(0.084)
First-stage F statistic		10.63		10.63
Observations	2015	2015	2015	2015

Notes: Standard errors are in parentheses. All results are robust variance estimates. *** significant at 1%, ** significant at 5%, * significant at 10%. The IV used in this table is the dummy variable for whether one had migrated to the Yangtze River Delta.

Appendix

Table A1 Differences in Individual Characteristics between Returnees Who Have Been to the Yangtze River Delta and Those Who Have Not

	Ever been to the Yangtze River Delta	Never been to the Yangtze River Delta	Difference
	(1)	(2)	(1) - (2)
Age	39.58	39.11	0.47
Male (%)	92.19	92.01	0.18
Married (%)	98.33	96.95	1.38*
Years of Schooling	9.32	9.29	0.03
Education level			
Illiterate or elementary school (%)	12.54	11.94	0.6
Middle school (%)	62.54	65.43	-2.89
High school or college (%)	24.92	22.63	2.29

Notes: * significant at 10%.

Table A2 Linear Probability Model of Whether One Have Accumulate Balanced Skills: First-Stage Results

	(1)	(2)	(3)	(4)
Instrument variables				
The Yangtze River Delta as destination	0.048***		0.05***	
	(0.014)		(0.014)	
The Yangtze River Delta as destination after 1990s		0.047***		0.049***
		(0.014)		(0.015)
The Pearl River Delta as destination			0.007	0.005
			(0.013)	(0.013)
Individual characteristics				
Age	0.0002	0.0002	0.0001	0.0003
	(0.001)	(0.001)	(0.001)	(0.001)
Male	-0.004	-0.004	-0.003	-0.004
	(0.019)	(0.019)	(0.019)	(0.019)
Married	0.047**	0.046*	0.048**	0.046**
	(0.024)	(0.024)	(0.024)	(0.024)
Education level (reference: illiterate or elementary school)				

Middle school	0.027**	0.03**	0.027**	0.03**
	(0.013)	(0.013)	(0.013)	(0.013)
High school or college	0.076***	0.079***	0.076***	0.079***
	(0.018)	(0.017)	(0.018)	(0.017)
Household characteristics				
Number of working adults	-0.002	-0.002	-0.003	-0.002
	(0.005)	(0.005)	(0.005)	(0.005)
Number of children under 16	-0.002	-0.001	-0.002	-0.002
	(0.007)	(0.007)	(0.007)	(0.007)
Land	0.0001	0.0001	0.0001	0.0001
	(0.0002)	(0.0002)	(0.0002)	(0.0002)
Township characteristics				
Per capita income in 2000	0.009	0.009	0.009	0.009
	(0.006)	(0.006)	(0.006)	(0.006)
Region dummies (*reference: western region*)				
Central region	-0.043***	-0.042***	-0.043***	-0.042***
	(0.013)	(0.013)	(0.013)	(0.013)
Eastern region	-0.036**	-0.035**	-0.035**	-0.034**
	(0.015)	(0.015)	(0.015)	(0.015)
Constant	-0.005	-0.011	-0.008	-0.013
	(0.037)	(0.036)	(0.038)	(0.038)
R2	0.02	0.02	0.02	0.02
Observations	2577	2555	2577	2555

Notes: Standard errors are in parentheses. All results are robust variance estimates. *** significant at 1%, ** significant at 5%, * significant at 10%.