Doing Business in China:

Parental Background and Government Intervention as Determinants of Entrepreneurship *

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Abstract

We examine the parental determinants of entrepreneurship in contemporary China using multiple waves of a nationally representative survey between 2005 and 2012. While intergenerational transmission of entrepreneurship is a well-known regularity, we hypothesize that in an economy in transition out of central planning, those whose parents are government workers may also be more likely to become entrepreneurs. We show that *both* entrepreneurs and government worker parents have a higher likelihood of having children who own incorporated businesses. We then exploit the wide heterogeneity in government involvement in the economy across China. We find that government business-related fiscal expenditure weakens intergenerational transmission of entrepreneurship while it strongly increases the odds that business owners have parents who are government workers. We thus demonstrate that the local economic business environment shapes the influence of parental background on entrepreneurship.

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1 Introduction

For the last two decades, the literature on entrepreneurship has posited a number of environmental and individual factors that influence the choice of becoming an entrepreneur.[1] One of the most robust findings in this literature is parental entrepreneurship: descendants of entrepreneurs have a much higher likelihood of being entrepreneurs themselves (Sørensen 2007). Several potential channels have been probed empirically, and there is evidence for a significant genetic component in entrepreneurship (Nicolaou et al 2008, Lindquist et al 2015), role modeling (Sørensen 2007), and specific human capital and networks associated with a given industry or profession (Dunn and Holtz-Eakin 2000).

While the relative importance of these different channels is still a matter of lively scholarly debate, the literature has so far overlooked the possibility that the institutional environment may shape the importance of parental background for entrepreneurship. This is despite the wide recognition that the institutional environment shapes entrepreneurship opportunities across countries. For instance, Baumol, Litan, and Schramm (2007) characterize countries into "good capitalism" – a mix of big-firm and entrepreneurial capitalism, and "bad capitalism" – state-guided and oligarchic capitalism; Zingales (2012) emphasizes the difference between "crony capitalism" that favors the elites and "a capitalism for the people" which allows open access to opportunities; and the World Bank publishes a yearly Doing Business Report which again highlights how the regulatory environment and state capabilities influence entrepreneurship. Since the skills, attitudes and networks needed for entrepreneurship across these institutional environments are very different, the corresponding relevant parental background should also vary.

The main contribution of this paper is to show that the type of parental background that matters for entrepreneurship changes dramatically with the institutional environment,

[1] See Parker (2009) for an extended discussion of the literature. The factors influencing entrepreneurship range from contextual peer effects (Nanda and Sorensen 2010) and social networks (Roberts and Sterling 2012), to personal characteristics such as overconfidence (Hayward, Mathew, Shepherd and Griffin 2006), and tolerance of uncertainty (Holm, Opper, and Nee 2013)

more specifically with the role of government in business. The setting for our empirical analysis is modern China, a context with two particular features that are very useful for the analysis. First, while modern China offers space for successful entrepreneurship, as exemplified by examples such as Alibaba and Tencent, the government is still a central agent in the economy. Second, the transition towards a market economy has been geographically uneven, and currently there is a wide heterogeneity in government involvement in the economy. While some provinces have followed a bottom-up free enterprise route to economic development, others have instead focused on large conglomerates and heavy government intervention. For example, Huang (2008) contrasts Shanghai, a provincial-level municipality that has championed state-led capitalism, with Zhejiang, which exemplifies entrepreneurial capitalism. Both of these provinces are among the most developed in China. However, there are substantially more private firms and registered patents per capita in Zhejiang than in Shanghai.

The paramount role of the government in the economy suggests that an entrepreneurial career may require access to specific knowledge on the internal workings of government as well as networks that extend into government institutions. Hence, in terms of determining one's entrepreneurial aptitude, having parents who work in the government (henceforth, "cadre parents") may be as important as having parents who are entrepreneurs.[2] Moreover, those with cadre parents should have a larger advantage in those provinces where the government has larger involvement in the economy. Therefore, by comparing the relative importance of entrepreneurial and cadre parental background across provinces, we can infer whether the institutional environment is determining the networks and specific human capital that are necessary for entrepreneurship with the advantage of a within-country design, which keeps other potential confounders constant.

[2]Both types of parental links are often emphasized by observers and scholars. As put by the Financial Times (2015), "lift the curtain on many a rags-to-riches story in China, and one finds a father or grandfather who was a businessman or a government official." https://www.ft.com/content/9ddb3ffc-5734-11e5-9846-de406ccb37f2. Consistent with this, while Fan, Wong, and Zhang (2007) and Li et al. (2008) find that political connections influence the performance of Chinese firms, Djankov et al (2006) show that having friends and family members who are entrepreneurs is an important driver of entrepreneurship in China.

Using multiple waves of the Chinese General Social Survey (CGSS) we show that both entrepreneur parents and cadre parents have higher likelihood of having offspring who own incorporated businesses ("business owners" henceforth). This is not the case for self-employment, a finding that highlights the need to distinguish between categories of entrepreneurs (Åstebro et al 2011, Levine and Rubinstein 2017, Fairlie and Fossen 2018). We then show that the influence of parental background on business-ownership is contingent on government intervention, measured by provincial government spending on business activities over GDP ("government business spending" henceforth).[3] More specifically, we show that the propensity of cadre parents to have business-owner children is strongly increasing in government business spending. In contrast, the higher is government involvement in the economy, the lower is the likelihood that business owners have entrepreneurial parents These differing patterns are both statistically and economically significant: one standard deviation increase in government business spending is associated with a 0.75 percentage points reduction in the probability that children of entrepreneurs are business owners and a 0.5 percentage point increase in the probability that children of cadres are business owners. These are very large effects since the average probability of business-ownership is 2.2%.[4]

These findings are not confounded by the level of economic development across provinces or by individual characteristics of respondents, such as the level of education. We conclude that the local institutional environment is a crucial determinant of the kind of parental background that is relevant for business ownership, and that having parents in government can be as important as family experience in business in driving *private* entrepreneurship when the state looms large over the local economy. Consistent with this interpretation, we show that business owners are, relative to the rest of respondents, more likely to identify political connections as a key determinant of career success, and this attitude is even more salient in provinces with more government spending on business.

[3] In Section 2 we justify this measure of government involvement at length.

[4] In Table A6 in the appendix we show that our findings related to cadre parents can be replicated using the China Family Panel Survey (CFPS). Unfortunately, entrepreneur parents are not readily identified in the CFPS.

The rest of the paper is organized as follows. Section 2 describes the background and the data. Section 3 presents the main empirical patterns. Section 4 presents further evidence for the mechanism behind our findings and concludes.

2 Background and Data

We combine individual-level surveys with provincial-level data in our analysis. We first describe the individual-level data. We then explain government business-related spending and the drivers of its variation.

2.1 Individual-level Data: Parental Background and Entrepreneurship

We obtain our individual-level data from the Chinese General Social Survey from 2006 to 2013 (CGSS), a Chinese version of the General Social Survey in the U.S. conducted by the National Opinion Research Center. The CGSS is also a part of the International Social Survey Program (ISSP) that covers 48 countries. The CGSS is a repeated cross-sectional survey, jointly conducted by the Renmin University of China and the Hong Kong Science and Technology University. Our sample includes five waves of the survey conducted in 2006, 2008, 2010, 2012, and most recently in 2013, which collects information in the year before the survey (i.e., 2005, 2007...,2012).[5] A typical wave of the CGSS includes about 10,000 urban and rural households. Given our interest in doing business, we focus on 22,801 urban residents aged between 25 and 80. Our sample covers all the 31 provinces in mainland China and provides a province-level panel dataset.

Business Owners In order to classify respondents into entrepreneurship status we use two categories. The first is *self-employed*, which includes owners of non-incorporated small

[5]We cannot use earlier waves as before 2006 the survey did not ask about the status of being an entrepreneur or parental government background.

businesses.[6] The second is *business owner*, which comprises all owners of incorporated businesses, who must pay corporation tax and follow corporation law. The existing literature often uses an encompassing category of self-employment as a proxy for entrepreneurship, but recent contributions have shown this can be problematic as it mixes necessity and opportunity.[7] As shown in Table 1, business-owners account for 2.2% of our sample. Since the surveys are implemented at the household level, this number can be considered as 2.2% of the households have business owners. In contrast, 7% of them have self-employed individuals. We use the term "entrepreneur" to refer to both categories when needed in the analysis (that is, "entrepreneurs" are those who are either self-employed or business owners).

Parental Background We focus on two parental backgrounds. The first one captures whether at least one parent works in government or in a public organization affiliated with the government (known as "shi ye dan wei" in Chinese, meaning public institutions). We call it a *cadre parent* for brevity. We include those in the public institutions because many public institutions are essential branches of the Chinese government, endowed with great power and influence. For example, the three major institutions that supervise and regulate the whole financial sector, the China Banking Regulatory Commission, the China Securities Regulatory Commission, and the China Insurance Regulatory Commission, are not officially a part of the government, but are public institutions. The parents' employer is defined as their employer at the time when the respondent was 14 years old (except for the 2005 data in which it is when the respondent was 18 years old). As reported in Table 1, 19% of urban households belong to the cadre parent group.

The second important parental background is entrepreneurship. In the first two waves of the GCSS the information on parental occupations is less precise than the information on respondents. In particular, in the 2005 and 2007 waves the survey does not distinguish between self-employed parents and parents owning business merges them into a single cat-

[6] Only 17% of this category hire any other worker, and none of them hire more than 8 people.
[7] See Levine and Rubinstein (2017) and Fairlie and Fossen (2018).

egory. In order to preserve sample size, the analysis in the main paper will use the term "entrepreneur parents" which uses this category for the 2005 and 2007 waves and merges business-owners and self-employed parents for the 2009-2012 waves.[8]

Individual Characteristics The GCSS also contains additional information on the respondents that we use in the analysis. In particular, it includes gender, age and marital status as well as minority classification. Of particular interest might be the fact that we have information on whether the respondent has a college degree.

2.2 Provincial Variation in Government Intervention

Government spending over GDP has been shown to be useful in capturing the influence of the government on economic activities (Alesina et al. 2002). One advantage in our context is that we can focus on government spending on business activities ("government business spending" henceforth) as opposed to expenditure on public services and insurance programs. To this end, we obtain data on provincial fiscal spending from 2005 to 2012 from the statistical yearbooks.[9] To zoom into government's influence in business, we focus on expenditure in two categories: infrastructure, and manufacturing, commerce, and finance (MCF). Even though the level of disaggregation reported in the statistical yearbooks varies by year, we can always aggregate up to these two categories, and we refer to the total as *government business spending*.[10] To make this measure comparable across provinces, we divide fiscal spending on business-related activities at the province level by provincial GDP. On average, government business spending accounts for 16% of provincial total fiscal expenditure and, as reported in Table 1, it amounts to about 3% of provincial GDP.

Two additional facts support the relevance of this proxy as a measure of government

[8]Besides constraints imposed by the data, there is a good reason to merge these two categories. China did not begin transitioning towards market economy until the late 1970s. As a consequence, for older respondents, it is impossible for their parents to have been business owners when they were 14.

[9]Spending is a better measure than revenue since the majority of tax revenue is collected by the central government, but the majority of fiscal spending remains in lower level governments.

[10]Details of what is in each category each year are in Appendix Table A2.

intervention in the economy. First, in Table A1 in the Appendix we show that our measure of business-related spending is strongly correlated with private firms' receipt of government subsidies. More specifically, using data from the second National Economic Census (NEC), we show that a one standard deviation increase in provincial business spending over GDP (0.02) is associated with a 0.6 percentage point increased probability of subsidy receipt, a very large effect compared to the mean probability (1.3 percentage points). This relationship is also true at the intensive margin and is robust to introducing firm-level controls.

The second fact pertains to the large fiscal economic stimulus plan that the Chinese central government approved in November of 2008 to combat the effects of the great recession and which was explicitly designed to increase business activity. Of the 4 trillion RMB stimulus package, 25% was devoted to reconstruction work in the regions destroyed by the 8-magnitude Sichuan earthquake in 2008. However, a full 75% of the remainder went to government business spending.[11] At the provincial level, our measure of business-related spending went from about 2.4 percent (of provincial GDP) prior to the stimulus package to 4.8 percent post the stimulus package, while the increase in other fiscal expenditure was modest and proportionally insignificant. As a result, almost 70% of the provincial fiscal expansion between 2008 and 2010 is in this category of spending.

In sum, this measure of provincial spending over GDP is a credible proxy for government involvement in business.

Variation in Government Business Spending In our study period – 2005 to 2012– the variation in provincial government business spending over GDP is primarily driven by differences across province, as opposed to differences over time: provincial fixed effects account for 72% of the variation. Interestingly, this cross-province variation is not related to relative economic development.[12] Instead, it captures long-term differences across provinces

[11] For the breakdown of the stimulus package, announced by the National Development and Reform Commission, see: http://www.eeo.com.cn/ens/finance_investment/2009/03/07/131626.shtml.

[12] Indeed, the correlation between government business spending over GDP and GDP per capita is very small and insignificant (-0.04, p-value of 0.657). Appendix Figure A1 shows the relationship between business spending over GDP and GDP per capita in the year 2005.

in the economic role of the government, reflected in the fact that 55% of the cross-provincial variation in government business spending in 2007 is explained by the share of State Owned Enterprises (SOEs) in manufacturing in 1985.[13]

2.3 Descriptive Patterns

We now present three descriptive patterns using data aggregated at the province level. First, as shown in panel (A) of Figure 1, there is a negative correlation between government business spending and the share of respondents who are business owners. Thus, higher business spending does not imply a better business environment. If anything, it indicates more government intervention that hinders entrepreneurship. Second, panel (B) shows that the difference between cadre children and non-cadre children in becoming a business owner is larger in provinces with higher business spending. A one standard deviation increase in government business spending (0.02) increases the difference by about 0.75 percentage points or 35% of the mean. In other words, cadre children are more likely to become businessmen relative to others in provinces with higher business spending. Third, panel (C) shows that the opposite is true for children on entrepreneur parents. In provinces where government involvement is low children of entrepreneurs have a much higher likelihood than other in owning a business, but this advantage disappears in provinces with high government involvement. We test the robustness of these patterns with individual-level information in the next section.

3 Empirical Results

We first explore the relationship between parental background, self-employment and business ownership, followed by an analysis of the effect of the local economic context on these

[13]Please see Table A3. It is worth noting that our measure of business spending does not include the role of State Owned Enterprises (SOEs). This is because our parental background measures parents who work in *government* institutions and therefore it does not include those working in SOEs. While the distinction is conceptually important, it turns out to not be empirically crucial due to the strong correlation detailes above.

relationships.

3.1 Parental Background and Doing Business

To examine the difference in the probability of being a business owner between those with entrepreneur parents, cadre parents and commoner families, we employ both ordinary least squares (OLS) analysis and multinomial logistic analysis. The advantage of a simple OLS estimate is that it is transparent and we can compare the estimates with those from the subsequent interaction analysis; the disadvantage is that it omits the fact that respondents face a multiple choice problem as they can only choose one occupation. This turns out to be very important in the case of descendants of cadres, since they have a high propensity of working for the government.[14]

OLS Analysis Table 2 reports the results of regressions of the following form:

$$occupation_{i,p,t} = \beta_1 cadreparent_{i,p,t} + \beta_2 entrepreneurparent_{i,p,t} + province\_year_{p,t} + \varepsilon_{i,p,t}, \tag{1}$$

where $occupation_{i,p,t}$ is a dummy indicating whether an individual i surveyed in province p and year t is an entrepreneur, self-employed or a business owner, depending on the column. $cadreparent_{i,p,t}$ is a dummy indicating having at least one parent working in government. $entrepreneurparent_{i,p,t}$ is a dummy indicating at least one parent is an entrepreneur. A set of province dummies, year dummies, and their interaction terms (all included in $province\_year_{p,t}$) help control for the general difference in running a business across provinces, so our coefficients of interest are identified out of within province-year variation. Accordingly, we cluster the standard errors at the province-year level.

Column (1) of Table 2 reports that having an entrepreneur parent increases by almost 8 percentage points the probability of the respondent being an entrepreneur, while having

[14] While about 18% of respondents have a government job, 34% of children of cadres have a government job.

a cadre parent is associated with no significant difference. An entrepreneurial parent thus increases the likelihood of entrepreneurship by a factor of 1.8, which is in line with the findings in the literature in other countries[15]

In Columns (2) and (3) we look separately at the two categories that comprise entrepreneurship, namely business-owners and self-employed. Column (2) reports that both types of parental background increase the odds of business-ownership. From a sample mean of 2.2% business owners, entrepreneurial parents are associated with 1.6 percentage point increase, while cadre parents are associated with a 0.6 percentage point increase. While entrepreneurial parental background is stronger, both are statistically and economically significant.

In Column (3) we have the results for self-employed respondents. Having a cadre parent *reduces* the probability of being self-employed, by 0.9 percentage points over a baseline of 7%. This is not the case for entrepreneur parents, who almost double the probability of their children being self-employed. The contrast between Column (2) and Column (3) is consistent with the idea that owning an incorporated business is likely related to the concept of opportunity entrepreneurship, while being self-employed most likely captures necessity. Indeed, given the high likelihood of cadre descendants of attaining a desirable government job themselves, they would likely only become entrepreneurs if this career was lucrative and ambitious. It thus makes sense that children of cadres have higher odds of becoming business-owners, but lower odds of becoming self-employed.

Multinomial Logistic Estimates With a multinomial logistic setup, we can compare the relative risk of being a business owner, working in the government, and having other occupations. We report the estimates of having cadre parents or entrepreneur parents in Table 3, column (1). In addition, to avoid individual confounders, in column (2) we control for the following individual characteristics: age, marital status, ethnic minority status and college education.

[15]See Lindquist et at (2015).

Results are clear-cut. For those with cadre parents relative to those with non-cadre parents: (1) the relative risk for working in the government relative to having other jobs (i.e. neither in government nor being a business owner) increases by a factor of 2, *ceteris paribus* the other variables in the model; and (2) the relative risk for being a business owner relative to having other jobs increases by a factor of 1.4. In contrast, for those with entrepreneur parents, only the relative risk of being a business owner is 1.6 times higher than those without entrepreneur parents, while the relative risk of working in the government is not significantly different.

In sum, those with cadre parents have, on average, a higher probability of *both* working in the government and being a business owner.

3.2 Parental Background and Local Economic Context

Now we turn to the analysis of the influence of parental background as a function of the local economic context. More specifically, we ask whether the association between parental occupation and business ownership varies with the level of government intervention in the economy.

Table 4 contains our main analysis. We enrich our specification (1) above introducing interaction terms between parental indicators and provincial government business spending over GDP. We demean the business spending by its sample mean so the interaction coefficient can be interpreted as the effect of parental occupation at the mean value of provincial spending.

In column (1) we examine parental background of respondents who are entrepreneurs. There is no significant effect of the interaction terms: by this definition, entrepreneurship has a strong intergenerational component which does not vary by local economy context. The picture changes when we disaggregate entrepreneurship into self-employment and business ownership. While results for self-employment again do not vary with government intervention (see column (2)), business ownership changes quite drastically with the environment. More

specifically, column (3) reports that those with cadre parents strongly increase their odds of owning a business the larger is government intervention in the economy. In contrast, respondents with entrepreneur parents see their relative odds of becoming business owners erode with government intervention. Adding the interaction of individual characteristics with government intervention (column (4)) or controlling for provincial GDP per capital (column (5)) does not change this conclusion. In fact, the coefficients of interest become more precisely estimated.

The interaction between parental background and government intervention is not only statistically but economically significant. The standard deviation of provincial business spending is 0.02. The coefficients in column (4) therefore imply that an increase of province government spending by a standard deviation is associated with a reduction in the business-ownership likelihood of the children of entrepreneurs of 0.75 percentage points. Therefore, two standard deviations are enough two wipe out the main effect of having an entrepreneur parent. In contrast, an increase by a standard deviation is associated with 0.5 percentage points increase in the odds that cadre children own a business. This is a very large effect considering their average effect was 0.6% (column 2 of Table 2).

Our findings above suggest that the probability of becoming a business owner is affected by parental background and local economic government intervention. There are two main challenges to this interpretation. First, government business spending may be correlated with other provincial characteristics. Second, having cadre parents may capture other parental characteristics such as more human capital to do business.

Note that column (5) addresses the first concern. The fact that the interaction of parental background with GDP per capita is not significant suggest that our findings are not driven by provincial economic characteristics such as the level of development. In addition, in Appendix Table A4 we show that the interaction effect of parental background and other types of government spending is neither economically nor statistically significant. In the same table we also show that having cadre parents helps children obtain jobs in gov-

ernment, but this does not vary by provincial business spending. Hence the link is very specific between parental background, ownership of an incorporated business and provincial fiscal expenditure on business matters. To examine the importance of the second concern recall that in columns (4) and (5) of Table 4 we have included the interaction of personal characteristics and government business spending. Hence our results are not driven by, say, the different importance of having a college degree for entrepreneurship across provinces.[16]

4 Discussion and Conclusion

While there exists an extensive literature on the determinants of entrepreneurship, few studies have paid attention to the interaction of individual characteristics and government policies. In this study, we first document the advantage of children with cadre parents in doing business. More importantly, we show that the effect of parental background on children's involvement in business is affected by the government's involvement in the economy.

The literature has discussed many potential reasons for the intergeneration association of occupations.[17] While disentangling the relative roles of the different mechanisms is beyond the scope of this paper, we can provide some pieces of evidence consistent with the increased relative importance of networking links within government, as well as specific human capital related to the government, associated with provinces with higher government intervention.

First, recall that as discussed in Section 2, in Table A1 in the appendix we show that higher government business spending is associated with a higher percentage of firms acknowledging receipt of government subsidies, as well as higher levels of subsidy. Firms seeking these subsidies need to be incorporated, and would benefit both from specific human capital related to how better successfully apply for those subsidies as well as from favorable treatment of their applications due to the influence of networks that extent within government. This can explain the fact that (1) the patterns we uncover are only present for incorporated

[16] In Appendix Table A5 we also show that our results are robust to the subsample of natives to each province, allaying any concern that selective migration might be behind our findings.

[17] See Parker (2009).

business owners, (2) those with cadre parents are more often business owners the higher is government intervention and (3) children of entrepreneur parents are no more successful business-owners than average respondents when government intervention is high enough.

Second, we can provide direct evidence that business-related fiscal spending is correlated with the attitude of business owners towards the government. The CGSS survey data in 2005 includes a subjective evaluation on the determinants of career success. Panel C of Table 1 lists four determinants of career success covered by the survey: connections with political power, hard work, luck, and ambition. Each factor is rated as one of the following: essential, very important, important, not very important, not important at all, and hard to say or cannot choose. For each factor, we code the answer of "essential" as 1 and the rest as 0. Table 1 shows that on average, luck is regarded to be less essential than the rest. We use this information to examine how government spending affects people's perception on what determines one's career success. Column (1) of Table 5 shows that on average, business owners are 9 percentage points more likely to see political connections as a key determinant in career success. When government business spending increases by one standard deviation (2 percentage points), this effect doubles. For the other three determinants in columns (3)-(8), neither the average effect of being a business owner nor its interactive effect with government spending is positive and significant. These results suggest that connections with the government are essential elements for the successful conduct of business, and that their relative importance strongly increases with the degree of involvement of the government in the economy. Furthermore, this seems to be a well recognized fact by business owners.

Our results have a number of implications for our understanding of entrepreneurship and the business environment. First, we contribute to the literature on parental determinants of entrepreneurship by demonstrating that the economic context matters for intergenerational transmission. Not only government intervention weakens it, but it also fosters the influence of contacts within government, and with it the number of children of government cadres who become businessmen. This suggests that the current debate on the relative im-

portance of different channels of intergenerational transmission needs to acknowledge that the contribution of each factor is likely to be highly contingent on context.

Second, we show in a novel context that disaggregating entrepreneurship into its different components of necessity and opportunity is a useful analytical tool: the importance of cadre parents and government intervention is circumscribed to incorporated businesses and it does not affect self-employment, which mostly captures necessity entrepreneurship in the context of China.

Third, we demonstrate that "crony capitalism" varies greatly across regions, thus contributing to the literature on modes of capitalism which has so far focused on cross-country variation. Relatedly, while there is an extant literature that emphasizes the importance of personal links to power in the conduct of business (Fisman 2001, Khwaja and Mian 2005, Faccio 2006), we are the first to note that these links systematically bias the characteristics of the entire set of business owners and therefore that these effects are not limited to very large enterprises. More generally, we have shown that institutional context is important enough to shape the set of people who engage in business. We hope that further research can dilucidate the welfare implications of this phenomenon.

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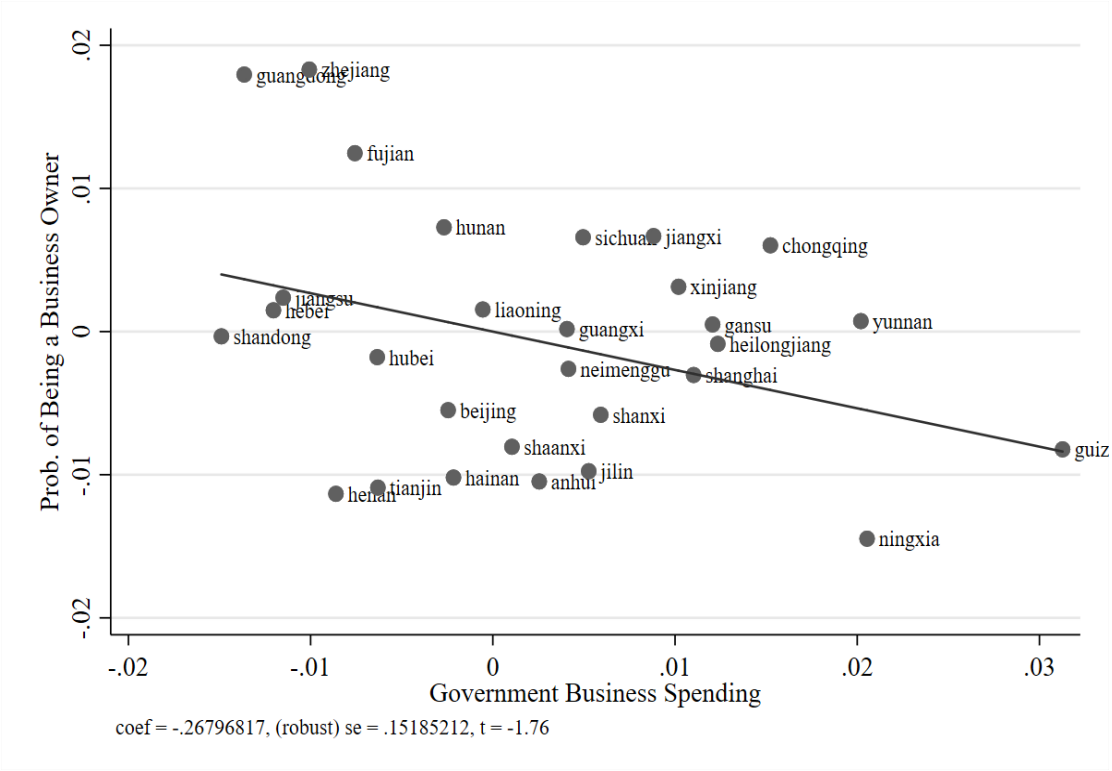
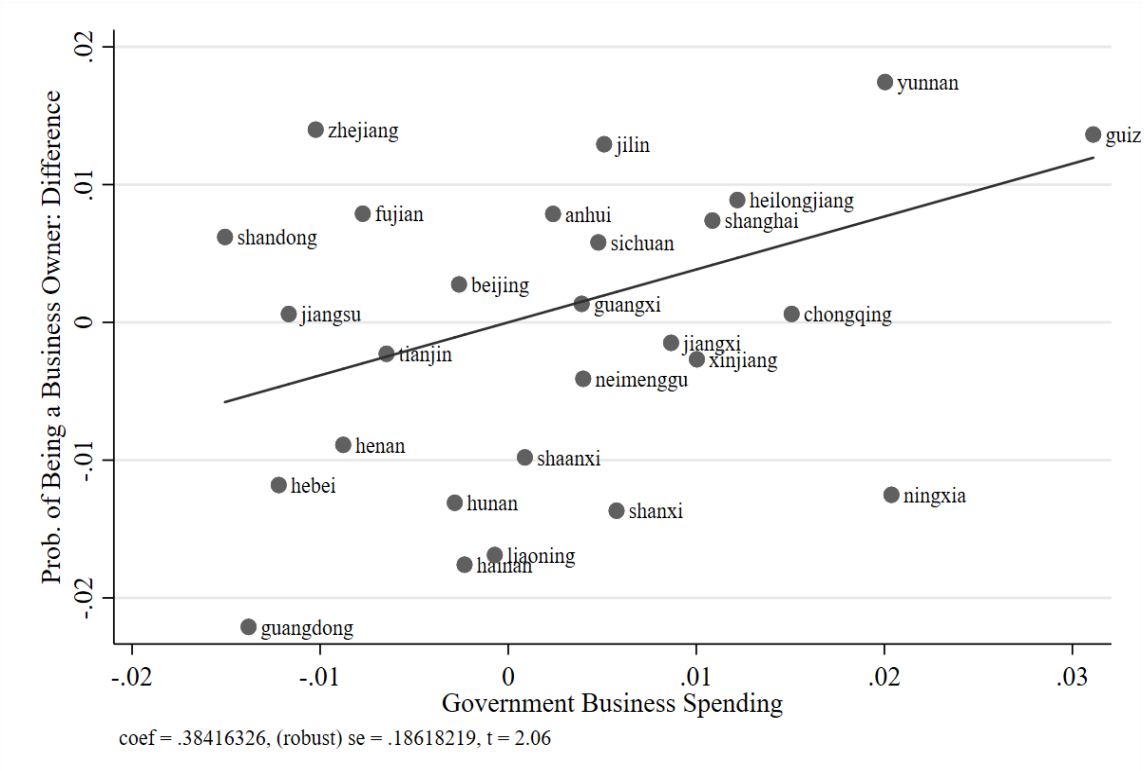
Figure 1: Descriptive Patterns

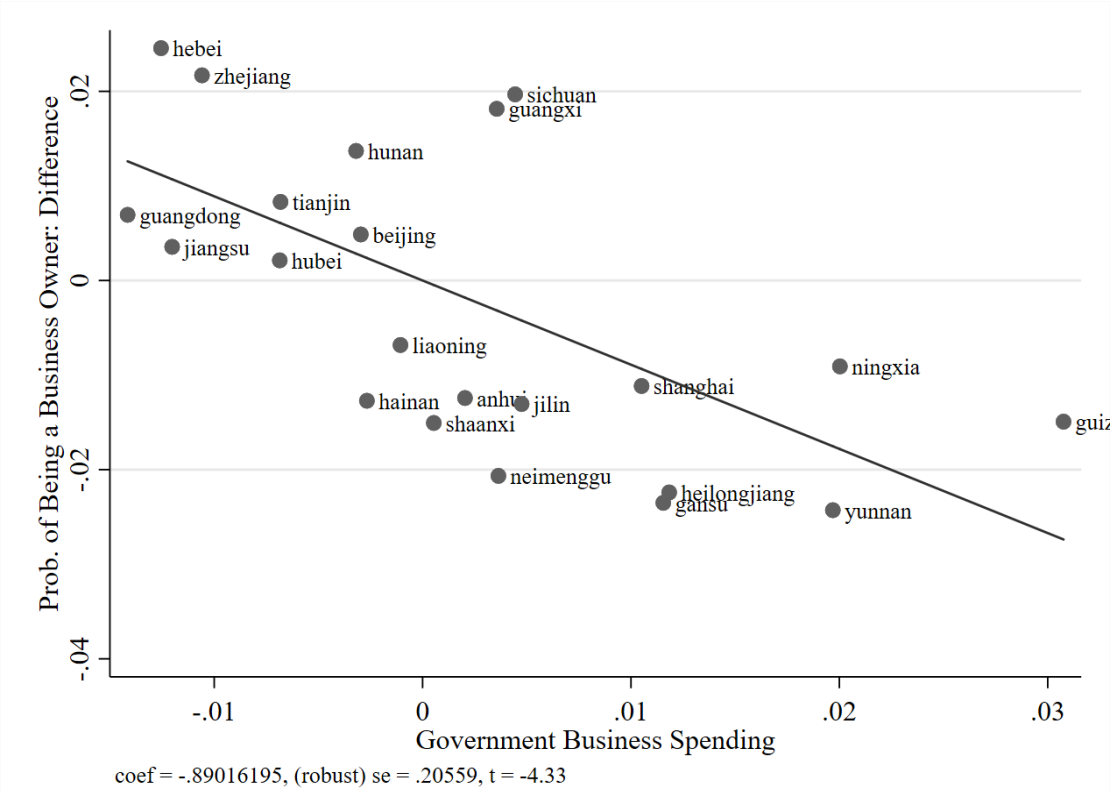
A. Probability of Being a Business Owner vs. Government Business Spending



B. Difference between Cadre Children and Others in Being a Business Owner



C. Difference between Entrepreneurial Children and Others in Being a Business Owner



Notes: Panel (A) shows that the share of business owners is lower in provinces with higher business spending. Panel (B) shows that the difference between cadre children and commoner children increases with government business spending. Panel (C) shows that the difference between entrepreneurial children and commoner children increases with government business spending. Outliers are excluded in these two figures. The regressions are weighted by the number of observations in each province.

Table 1 Summary Statistics

Variable	Mean	Standard Dev
A. CGSS 2005-2012, N=22,801		
Entrepreneur	0.129	0.335
Firm owner	0.022	0.146
Self-employed	0.107	0.310
Cadre parents	0.192	0.394
Entrepreneur parents	0.050	0.219
College	0.259	0.438
Female	0.504	0.5
Married	0.928	0.258
Ethnic Minorities	0.060	0.237
B. Provincial Characteristics 2005-2012		
Provincial government business-related spending over GDP	0.029	0.020
Provincial government other spending over GDP	0.151	0.067
C. Key Determinants in Career Success, from CGSS 2005, N=4,690		
Connection with powerful officials	0.248	0.432
Hard work	0.324	0.468
Luck	0.104	0.305
Ambition	0.348	0.476

Notes: This table presents the summary statistics for the main variables. CGSS covers both urban and rural households. We focus on the urban ones.

Table 2 Average Effect of Cadre Parents on the Prob. of Being an Entrepreneur

	(1) Y=entrepreneur (0/1)	(2) Y=business owner (0/1)	(3) Y=self-employed (0/1)
Cadre Parents	-0.003	0.006**	-0.009*
	(0.006)	(0.003)	(0.005)
Entrepreneur Parents	0.079***	0.016***	0.063***
	(0.014)	(0.006)	(0.013)
Province FE*Year FE	Y	Y	Y
Observations	22,801	22,801	22,801
R-squared	0.041	0.015	0.039

Notes: This table shows that those with cadre parents are more likely to become business owners but are less likely to be self-employed, indicating that it is useful to differ self-employment from business owners. Standard errors are clustered at the province-year level. Significance level: **p<0.1, **p<0.05, ***p<0.01*.

Table 3 Multinomial Logit Estimates of Average Effect of Cadre Parents on the Prob. of Being a Business Owner

(Dependent Var.: Business Owner =0/1)

	(1)	(2)
Reference group: other jobs		
Work in government		
Cadre Parents	2.212***	2.027***
	(0.101)	(0.098)
Entrepreneur Parents	0.984	0.980
	(0.085)	(0.086)
Working as a business owner		
Cadre Parents	1.628***	1.399***
	(0.187)	(0.165)
Entrepreneur Parents	1.783***	1.564***
	(0.313)	(0.266)
Province FE*Year FE	Y	Y
Individual. Char.		Y
Observations	22,801	22,801

Notes: The coefficients reported are relative risk ratios. They show that those with cadre parents have a higher propensity to obtain a job in government and becoming a business owner. In contrast, those with entrepreneur parents do not exhibit such higher propensity for a job in government. Take column 1 for example, the relative risk of working in government over other jobs (not a business owner) is 2.212 for cadres relative to non-cadres. Standard errors are clustered at the province-year level.

Table 4 Interactive Effects of Cadre Parents and Government Business Spending

	(1)	(2)	(3)	(4)	(5)
	Y=entrepreneur (0/1)	Y=self-employed (0/1)	Y=business owner (0/1)		
Cadre Parent * Business Spend.	0.277	0.066	0.211*	0.250**	0.249**
	(0.317)	(0.352)	(0.115)	(0.117)	(0.117)
Cadre Parent	-0.003	-0.009*	0.006**	0.003	0.003
	(0.006)	(0.005)	(0.003)	(0.003)	(0.003)
Entrepreneur Parent * Business Spend.	0.535	0.926	-0.391*	-0.373*	-0.392*
	(0.622)	(0.590)	(0.208)	(0.201)	(0.202)
Entrepreneur Parent	0.079***	0.063***	0.016***	0.014**	0.014**
	(0.014)	(0.013)	(0.006)	(0.006)	(0.006)
Cadre Parent * GDP Per Capita					-0.000
					(0.001)
Entre. Parent * GDP Per Capita					-0.003
					(0.002)
Province FE*Year FE	Y	Y	Y	Y	Y
Business Spend*Individual Characteristics				Y	Y
Individual Characteristics				Y	Y
Observations	22,801	22,801	22,801	22,801	22,801
R-squared	0.041	0.039	0.015	0.023	0.023

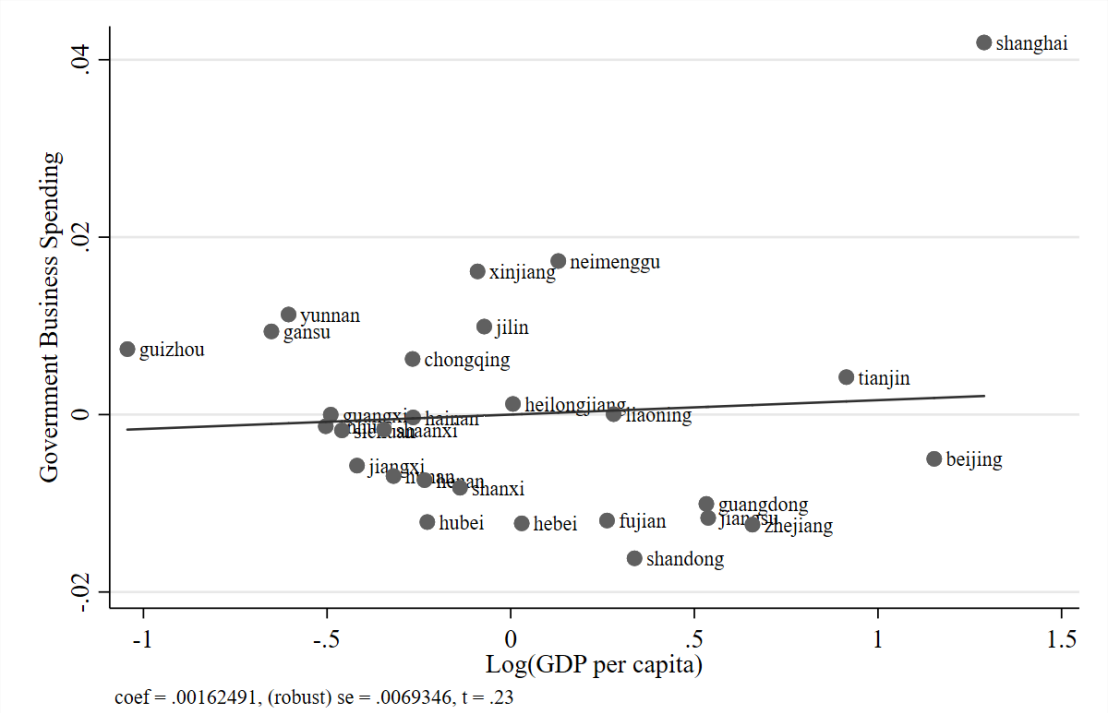
Notes: This table shows that the advantage in becoming a business owner (1) increases with government involvement in the economy for those with cadre parents and (2) decreases with government involvement for those with entrepreneur parents. Individual characteristics include: age, gender, marital status, ethnic minority status, and a dummy for college education. Standard errors are clustered at the province-year level. Significance level: **p<0.1, **p<0.05, ***p<0.01*.

Table 5 Self-evaluations of the Key Determinants in Career Success

	(1) Power	(2) Power	(3) Hard Work	(4) Hard Work	(5) Ambition	(6) Ambition	(7) Luck	(8) Luck
Business Owner	0.091**	0.126***	0.072*	0.054	0.010	0.002	-0.005	-0.017
	(0.040)	(0.034)	(0.041)	(0.042)	(0.045)	(0.039)	(0.018)	(0.016)
BusinessOwner*Business Spending		5.428**		-2.916		-1.217		-1.894
		(2.291)		(3.330)		(2.880)		(1.130)
Province FE	Y	Y	Y	Y	Y	Y	Y	Y
Individual. Char.	Y	Y	Y	Y	Y	Y	Y	Y
Observations	4,690	4,690	4,690	4,690	4,690	4,690	4,690	4,690
R-squared	0.100	0.101	0.067	0.067	0.073	0.073	0.034	0.035

Notes: The dependent variable is a dummy variable if a respondent considers the factor listed in the first row as an "essential" determinant in career success. This table shows that business owners appreciate power more, especially in provinces with high business spending. The individual characteristics include gender, college education, ethnic minority status, marriage status, and age. Standard errors are clustered at the province level. Significance level: **p<0.1, **p<0.05, ***p<0.01*.

Figure A1. Business Spending and GDP per capita across Provinces, 2005



Notes: This figure shows that the cross-provincial correlation between government business spending and GDP per capita is weak in the year of 2005 (the first year of our sample), suggesting that government involvement in the economy cannot be fully explained by economic development stage per se.

Table A1 Correlations between Government Spending and Firm Subsidies in 2008

	(1)	(2)	(5)
Subsidy	0/1	0/1	ln(Sub), subsidy recipients
Business Spending	0.304**	0.315**	19.113**
	(0.148)	(0.150)	(6.958)
ln #Employee		0.004***	0.139***
		(0.001)	(0.027)
ln Asset		0.002***	0.517***
		(0.000)	(0.029)
GDP Per Capita		0.001**	-0.139***
		(0.001)	(0.033)
Industry FE	Y	Y	Y
Ownership FE		Y	Y
Observations	3,298,048	3,227,381	42,292
R-squared	0.098	0.102	0.345

Notes: This table shows that government business spending is positively correlated with subsidies for firms, using the census data on all firms in 2008. Standard errors are clustered at the province level. Standard errors are clustered at the province level. Significance level: **p<0.1, **p<0.05, ***p<0.01*.

Table A2 Definition of Government Business Spending & Other Spending

Year	Business spending	Non-business spending
2005	Infrastructure; Funds to support firms for technology innovation and reform; Policy-related subsidies to firms; Sea exploration and subsidies to FDI and joint-venture firms for land-use; Liquidity funds; Aid to undeveloped regions (fiscal transfer to promote economic development and infrastructure)	All other categories related to public administration, defense, education, health, and social security.
2007	Transportation; Manufacturing/Commerce/Finance-related spending (MCF spending)	General public administration; Foreign Affair; Defense; Public security; Education; Science & Technology; Culture & Media; Social security; Public health; Environmental protection; Community service; Agriculture & irrigation; Others (including interests payment of treasury securities etc.)
Later years	Transportation; Detailed MCF spending（affairs of exploration/power/information; commerce & service; housing security; land & weather; affairs of grain & oil reserve; financial supervision）	The same above + Earthquake relief and rebuild (in 2008, there was a disastrous earthquake in Sichuan and some neighboring provinces)

Notes: We define business spending as spending on infrastructures and MCF (Manufacturing/Commerce/Finance). All the categories are from China Statistic Yearbooks. In 2007, there is only one broad category of MCF spending, which incorporates the related categories in 2005. In later years, the broad definition is divided into more categories again, although with different names. For each category, we refer to the documents from the Ministry of Finance for its definition and sub-categories to make sure our definition is consistent and comparable over years. Our main results are robust to excluding data in 2005 and 2007.

Table A3: Variations in Government Business Spending

Panel A: Business Spending in 2005, 2007, 2009, 2011, 2012		
Province FE	Yes	
R-squared	0.718	
N	144	
Panel B: Business Spending in 2007		
SOE share in 1985	0.043***	
	(0.008)	
SOE share in 2007		0.026***
		(0.005)
R-squared	0.545	0.544
N	27	27

Notes: Panel A shows that in our sample period, provincial fixed effects account for 72% of variation in government business spending. The provincial panel data are not balanced because some provinces are not covered in every wave of the CGSS. Panel B shows that across provinces, government business spending is positively related to the share of SOEs in manufacturing. Furthermore, 55% of the cross-provincial variation in government business spending in 2007 could be explained by the share of SOEs in 1985. The explaining power does not change at all after two decades when we use the contemporary SOE share in 2007. In these regressions, we only use the provinces that are covered in the 2007 wave of the CGSS. We drop Beijing from the regressions because its SOE share in 1985 is not available.

Table A4 Results from Two Placebo Tests

	(1)	(2)	(3)
	Y=business owner (0/1)	Y=government worker (0/1)	
Cadre Parent	0.006**	0.144***	0.115***
	(0.003)	(0.009)	(0.009)
Entrepreneur Parent	0.016***	-0.006	-0.006
	(0.006)	(0.012)	(0.011)
Cadre Parent * Business Spending			-0.065
			(0.408)
Cadre Parent * Other Spending	0.041		
	(0.046)		
Entrepreneur Parent * Business Spend.			-0.729
			(0.717)
Entrepreneur Parent * Other Spend.	-0.099		
	(0.084)		
Province FE*Year FE	Y	Y	Y
Business Spending*Individual. Char.			Y
Observations	22,801	22,801	22,801
R-squared	0.015	0.057	0.141

Notes: This table shows that (1) Cadre Parent*Other Spending does not affect the probability of becoming a business owner, and (2) Cadre Parent * Business Spending does not affect the probability of becoming a government worker. The individual characteristics include gender, college education, ethnic minority status, marriage status, and age. Standard errors are clustered at the province-year level. Significance level: **p<0.1, **p<0.05, ***p<0.01*.

Table A5 Interactive Effects of Cadre Parents and Government Business Spending, in the Sample of Natives

(Dependent Var.: Business Owner =0/1)

	(1)	(2)	(3)
Cadre Parent * Business Spend.	0.245**	0.289**	0.301***
	(0.112)	(0.111)	(0.110)
Cadre Parent	0.002	0.002	0.002
	(0.003)	(0.003)	(0.003)
Province FE*Year FE	Y	Y	Y
Individual Characteristics	Y	Y	Y
Business Spending*Individual. Char.		Y	Y
County FF, 09-12 only			Y
Observations	22,086	22,086	14,505
R-squared	0.022	0.022	0.033

Notes: This table shows that our main finding holds after excluding migrants. Standard errors are clustered at the province-year level. Significance level: **p<0.1, **p<0.05, ***p<0.01*.

Table A6 Interactive Effects of Cadre Parents and Government Business Spending, Data from the CFPS

(Dependent Var.: Self-employed or Business Owner =0/1)

	(1)	(2)	(3)
Cadre Parent * Business Spending	1.594*	1.746**	1.606**
	(0.915)	(0.787)	(0.733)
Cadre Parent	-0.016	-0.018	-0.018
	(0.016)	(0.015)	(0.015)
Province FE	Y		
County FE		Y	Y
Business Spending*Individual. Char.			Y
Individual Characteristics			Y
Observations	6,222	6,222	6,222
R-squared	0.025	0.071	0.0876

Notes: This table shows that the advantage of having a cadre parent in doing business is stronger in provinces with a higher share of business-related fiscal spending in GDP, using the data from the 2012 wave of the CFPS. The CFPS is a nationally representative, biennial general social survey, launched and conducted in 2010 by the Institute of Social Science Survey (ISSS) of Peking University. It is a panel data over individuals or households. Four waves of the data (2010, 2012, 2014, 2016) have been released to public use. This table uses the individual adult survey in 2012, the first wave that records the occupation of respondent's parents when the respondent was 14 years old, which is the same as in the CGSS. As in the CGSS, the analysis is restricted to urban respondents in 25 provinces. Since the CFPS is panel data over individuals, the parents' past occupation is fixed across waves, we only employ one wave of the data to corroborate our finding using multiple-wave CGSS data.

The individual characteristics include gender, college education, ethnic minority status, marriage status, and age. Standard errors are clustered at the province level. Significance level: *$p<0.1$, **$p<0.05$, ***$p<0.01$.