More but not better: Career incentives of local leaders and entrepreneurial entry in China

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Abstract

This study explores how local leaders' career incentives influence entrepreneurial activity in China. We identify a positive relationship between high-incentive leaders and the entry rate of new manufacturing firms, facilitated by access to capital and land and the implementation of place-based policies. However, firms that enter the market under high-incentive leaders tend to experience lower productivity growth and lower survivability, highlighting a quantity–quality trade-off. This quality deficit is linked to a mismatch between the types of new entrants and local economic fundamentals. Additionally, the responsiveness of manufacturing exit rates, productivity growth of existing manufacturers, and service firm dynamics to leader incentives appears minimal. Overall, by illuminating both the advantages and limitations of second-best institutions through the lens of firm entry, our study provides new insights into the institutions–growth nexus and offers a cohesive framework for understanding the growth and slowdown of the Chinese economy.

Keywords: Informal institution; career incentives; economic growth; firm dynamics; entrepreneurship

JEL Classification: H70, L26, O43, P35

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1 Introduction

By shaping the right incentives for economic agents and reducing transaction costs in the marketplace, institutions are considered a fundamental cause of economic growth (e.g., Acemoglu et al., 2005). However, well-functioning institutions can also emerge in the process of persistent economic development (North, 1990), which begs the question of whether and how a developing economy can achieve sustained economic growth without comprehensive institutional reform being a prerequisite. The case of China offers an ideal setting to study this question. Despite impressive economic growth in recent decades, China has not undergone equally significant institutional overhaul, at least not in areas commonly measured by international agencies. For example, when China achieved a record high annual GDP growth rate of 14.2% in 2007, its ranking in the global Ease of Doing Business indicator that year was only 93 out of 175 countries based on the World Bank's Doing Business Report, just one place above Ghana. In 2023, despite being the world's second-largest economy, China ranked 97th out of 142 countries in the global Rule of Law Index (WJP, 2024). To understand this puzzling phenomenon, recent studies emphasize the political–business relationships rooted in China's merit-based bureaucratic system that serve as a second-best informal institutional remedy (e.g., Bai et al., 2020a; Zhou, 2019).

Specifically, China's political institutions at the local level are considered a regionally decentralized system with a tournament feature (Xu, 2011). The economic performance of a city is intrinsically linked to the likelihood of promotion and career development of its local leaders (Li and Zhou, 2005; Landry et al., 2018), giving local officials high-powered incentive to foster economic development. At the same time, as the formal rule of law is not solidly established and implemented, local leaders can use unconstrained administrative power to stimulate economic development by circumventing rigid regulations, granting permits and contracts, offering cheap land and financial loans, and creating new laws and policies (Bai et al., 2020a). Therefore, in cities where career-driven officials are more willing to lend a helping hand, the *de facto*

cost of doing business is much lower than that documented in official rankings, reconciling the seemingly contradictory observation of robust growth in the context of weak formal institutions in China.

Despite much discussion of China's merit-based promotion system and its economic implications, there is a lack of direct and systematic empirical evidence at the micro level. In this study, we fill this gap by examining how high-incentive local officials affect the quantity and quality of entrepreneurial entry in China, thereby revealing the advantages and limitations of informal institutions. Firm entry and exit provide a well-suited micro-channel to explain the institutions–development nexus for two reasons. First, the level of entrepreneurial activity and the dynamic processes of firm entry and exit are crucial sources of economic growth (Haltiwanger et al., 2017; Asturias et al., 2023). In the case of China, Brandt et al. (2012) reveal that 72% of total manufacturing productivity growth between 1998 and 2007 can be attributed to the effects of net entrants, and Brandt et al. (2023) emphasize the reduced contribution of firm entry to aggregate productivity growth to explain the lack of business dynamism after 2007. Second, the intensity of new firm entry is particularly sensitive to administrative regulation and entry barriers (Djankov et al., 2002; Klapper et al., 2006; Barwick et al., 2022); however, the success of government efforts to promote entrepreneurship remains unclear (Lerner, 2020). Moreover, by leveraging registration data on firm entry and exit, our sample covers all firms ever registered in China, thus providing a more comprehensive, micro-level investigation than studies based on aggregate indicators or those focused on large companies.[1]

We begin by investigating the role of city leaders' career advancement incentives in shaping the entry intensity of manufacturing firms in China. Following Wang et al. (2020), we first construct measures of the career incentive intensity of leaders in prefecture-level cities by es-

[1]As documented in Martinez (2022) and Xiong and Song (2018), GDP data tend to be exaggerated in authoritarian states, particularly in China. Brandt et al. (2023) also identify persistent over-reporting problems in above-scale manufacturing firm survey data commonly used in China. In comparison, firm registration data are less manipulated, offering a more reliable and fine-grained evaluation of the growth implications of informal institutions.

timating their *ex ante* probability of promotion, predicted by their starting age and their level in the political hierarchy.[2] Using panel data from 198 cities across 31 two-digit manufacturing industries from 1998 to 2013, we identify a positive and statistically significant relationship between the career advancement incentives of city leaders and the entry rates of new firms during their tenure. According to our baseline estimates, shifting a local leader's career advancement incentive from the 10th percentile to the 90th percentile is associated with a 4.08 percentage point increase in the entry rate of new firms, which is around 22.91% of the average annual entry rate in our manufacturing sample. The positive impact of motivated local leaders on firm entry is widespread among new entrants of varying sizes and across regions with different geographic and economic attributes. Additional analysis shows that providing critical access to production factors and implementing new place-based policies are tools used by high-incentive politicians to foster local entrepreneurial activities.

To some extent, our findings regarding the quantity margin of new firm entry align with the observation of Bai et al. (2020a) that firm entry is almost free under China's special arrangements. In a counterfactual scenario without a merit-based promotion incentive scheme, cumbersome formal institutions would create formidable barriers to entry, leading to limited entrepreneurial effort and sluggish business dynamism in China. Therefore, taking into account the critical role of new firm entry in driving competition, innovation, and economic growth (e.g., Aghion et al., 2009; Jiang et al., 2021), our findings identify a welfare-enhancing micro process of how informal institutions in China promote regional economic development.

Next, we examine whether new entrants encouraged by motivated local leaders are high-quality firms. To examine the quality implications of firm entry, we compare the survivability and subsequent productivity of new entrants during the tenure of highly motivated local leaders

[2]The assumption is that local officials' career advancement incentives are positively and strongly associated with their *ex ante* probability of promotion under China's age- and hierarchy-sensitive political selection system. In turn, these highly motivated local leaders, competing in the performance-based promotion tournament, are expected to focus more on economic development, particularly at lower administrative levels of government (e.g., Li and Zhou, 2005; Landry et al., 2018).

with those during periods overseen by less motivated officials. We consider several performance indicators, including the one-year survival rate, three-year survival rate, firm longevity (measured in months), and total factor productivity (TFP) of large manufacturing entrants. In all cases, we find a robust negative relationship between the career advancement incentives of local leaders and the subsequent quality performance of new entrants. For example, moving a local leader's career advancement incentive from the 10th percentile to the 90th percentile is associated with a 4.61-month decline in firm survival, which accounts for 10.74% of the average longevity of the firms in our sample. In summary, although highly motivated local leaders appear to facilitate the entry of more new firms, the subsequent performance of these new entrants is not satisfactory, presenting a quantity–quality trade-off. We then test two possible explanations for the observed quality deficit: (1) the corruption motives of high-incentive leaders and (2) the potential misalignment between the type of new entrant and local fundamentals. We obtain evidence that rejects the corruption hypothesis and strongly supports the entrant–city mismatch hypothesis. Specifically, although high-incentive leaders are generally pro-entrepreneurship, we find that the types of firms entering the market during the tenure of such leaders tend to deviate more from the local comparative advantages of the city, and when this is the case, the subsequent quality of these entrants is worse. We discuss these results through the lens of limited policy instruments and political shortsightedness (e.g., Xiong and Song, 2018; Sun, 2023), shedding light on the constraints of informal institutions powered by the tournament system.

Finally, we discuss how entrepreneurial entry not only provides a critical micro-foundation that reveals the advantages and limitations of informal institutions in a large developing economy but our findings also offer a cohesive framework for understanding the recent growth slowdown in China. First, given the evolving economic and political landscape in China and around the world, the connection between career-driven officials and the local economy may have changed over time, particularly since the 2007/2008 financial crisis (Xiong and Song, 2018). Indeed, we find that after 2008, the marginal effect of high-incentive leaders on the entry inten-

sity of new manufacturing firms weakens and that their impact on the quality dimension of new entrants diminishes. The changing—and worsening—balance in the quantity–quality trade-off is indicative of the diminishing role of motivated politicians in jump-starting the local economy, a trend that aligns with the documented decline in business dynamism in China after 2007 (e.g., Cerdeiro and Ruane, 2022; Brandt et al., 2023).

Second, we also explore the association between local leaders with varying career advancement incentives and other measures of firm dynamics, including the exit rate of manufacturing firms, the TFP growth of incumbent manufacturers, and the entry and exit patterns of service firms. In all cases, the coefficient of the career incentive variable is not statistically different from zero. Therefore, political intervention appears to be effective and salient exclusively at the entry margin of manufacturing firm dynamics, further highlighting the profound implications of the quantity–quality dilemma and illustrating the limitations of state capacity. In particular, the lack of responsiveness of service industries to government intervention and local policymaking provides an additional explanation for China's economic slowdown in recent years. During the process of structural transformation of an economy, the rise of the service sector is usually associated with slower aggregate economic growth, as the productivity growth rate of the service sector tends to lag behind that of the manufacturing sector (Boppart, 2014; Timmer et al., 2015). In the case of China, the shift toward a service-oriented economy is further compounded by a decline in the effectiveness of government intervention. Traditional methods used to facilitate the entry of new manufacturing firms, such as providing critical production factors and establishing favorable policies, are ineffective in the diverse and innovation-driven service sector. Therefore, in addition to sectoral productivity differentials, the rise of services in China is accelerating the economic slowdown as second-best institutions gradually lose their efficacy.

To the best of our knowledge, our study is the first to examine the impact of local leaders' career incentives on new firm entry in China and offers new evidence of the relationship between informal institutions and economic growth in a large developing economy. This paper

contributes to several strands of the literature. First, China's merit-based promotion system is often considered the key to the success of its development model (e.g., Xu, 2011; Zhou, 2019). In their recent work, Bai et al. (2020a) introduce a model of special arrangements in China and explain how local governments extending their enormous administrative capacity to favored firms can stimulate growth. Studies also document the beneficial role of politician rotation in facilitating interprovincial trade and investment (Jiang and Mei, 2020; Shi et al., 2021) and in promoting intercity knowledge spillovers (Lin et al., 2023). By identifying the constructive impact of high-incentive officials on the entry intensity of new manufacturing firms, our findings enrich the literature on the particular role of local leaders in resolving institutional frictions. In particular, we report that providing critical access to capital and land and implementing new place-based policies are the core underlying mechanisms through which local leaders stimulate entrepreneurial effort and foster local economic development.

Even more importantly, we discover that manufacturing firms that enter the market during the tenure of high-incentive local leaders tend to be of lower quality, resulting in part from a misalignment between the types of new entrants and local comparative advantages. This quantity–quality trade-off represents a fundamental challenge for second-best informal institutions. In this sense, our results expand the emerging literature that explores the detrimental effects of the high-powered incentives of political agents (e.g., Fisman and Wang, 2017; Acemoglu et al., 2020). In China, Wang et al. (2020) document the critical role of motivated local leaders in land transactions, leading to a distortion of overexpansion . Xiong and Song (2018) model and link the short-term behavior of high-incentive leaders to overleveraging through shadow banking and unreliable economic statistics. Fang et al. (2022) highlight the downside of the political tournament system from the perspective of local protectionism, while Sun (2023) demonstrates how political shortsightedness can harm innovation. Complementing these studies, our focus on entrepreneurial entry and firm dynamics is directly linked to the growth implications of informal institutions. Following the important work of Zilibotti (2017), our findings provide a coherent paradigm for understanding both China's outstanding economic performance and its

subsequent economic slowdown in the process of intersectoral structural transformation. Using firm registration data and a cohesive framework, our findings crystallize the micro-channel of what works and what does not in the institutions–economy nexus in China, offering important policy implications for developing countries in general.

Finally, our study contributes to research on firm entry and entrepreneurship in emerging economies (Ghani et al., 2014a; Quatraro and Vivarelli, 2015). Specifically, an emerging literature examines the decline of business dynamism in advanced economies (e.g., Decker et al., 2016; Akcigit and Ates, 2021), focusing on the drivers and outcomes of new firm entry (or lack thereof). In China, Brandt et al. (2020) and Bai et al. (2021) reveal the negative role of the state in the creation of new firms. Jia et al. (2021) explore the influence of parental background on entrepreneur formation, and Cui and Li (2023) examine how trade policy uncertainty affects the entry of new domestic firms. By focusing on the role of local leaders, our study reveals an unexplored but important institutional determinant of firm entry in China (e.g., Bruno et al., 2013).

This article is structured as follows. In Section 2, we present our data and methods. We report our main empirical results and the results of robustness checks on the quantity dimension of new firm entry in Section 3. Section 4 analyzes the quality implications of new entrants. Section 5 presents further analyses to better understand China's economic slowdown. Finally, we present our conclusions in Section 6.

2 Data and Methods

2.1 Career advancement incentives of leaders in prefecture-level cities

In this study, we examine how the career advancement incentives of leaders in prefecture-level cities affect new firm entry in terms of quantity and quality in China. Under China's dual-power political system, each prefecture-level city is governed by a party secretary and a mayor. Given the dominant role of the Chinese Communist Party, we consider the party secretary as the pri-

mary local leader in our analysis, in line with Wang et al. (2020) and Lin et al. (2023). We also assess the potential impact of city mayors in subsequent analyses.

Following the literature (e.g., Wang et al., 2020; Fang et al., 2022), we measure the intensity of city leaders' career advancement incentives by their *ex ante* probability of promotion. Wang et al. (2020) argue that given the mandatory retirement age for local officials in China, which varies depending on their political ranks, age and initial hierarchical level are important predictors of the likelihood of political promotion. Therefore, we use this approach to construct our main measure of the intensity of career advancement incentives. Specifically, we define a promotion dummy variable equal to 1 if a city's party secretary was promoted to a higher-level position at the end of their term, and 0 otherwise. We then regress this promotion dummy on the party secretary's starting age and starting level dummies, and their interactions, using the following logistic regression:

$$log(\frac{p_{s,i}}{1-p_{s,i}}) = \beta_0 + \beta_1 Age_{s,i} + \beta_2 Level_{s,i} + \beta_3 Age_{s,i} \times Level_{s,i} + \epsilon_{s,i} \quad (1)$$

where $p_{s,i}$ is the probability that party secretary *s* was promoted to a higher-level position at the end of their term in city *i*. $Age_{s,i}$ and $Level_{s,i}$ denote the starting age and starting level of party secretary *s* at the beginning of their term in city *i*.

Column 1 of Table 1 presents our results, which are highly consistent with the findings of Wang et al. (2020). Local leaders' starting age, starting level, and their interactions are strong predictors of their probability of promotion. The younger and the lower-ranking a politician is, the higher their likelihood of being promoted. Therefore, we use the coefficients of starting age, starting level, and their interaction terms to predict the likelihood of promotion for each of the 747 local leaders in our sample, following the strategy of Wang et al. (2020). We assume that a leader's career advancement incentives are strongly and positively correlated with their ex ante probability of promotion. Thus, we use the predicted *ex ante* probability of promotion as a measure of the career incentives of leader s in city i, denoted by $CI_i(s)$.

We also consider two alternative measures of career advancement incentives. First, as discussed in Wang et al. (2020), whether a leader has prior experience working in the central government and whether they have a graduate degree may increase their probability of promotion. In Column 2 of Table 1, we include dummies for prior central government experience and graduate degrees in our promotion probability estimation, using the predicted values to construct our first alternative measure of career advancement incentives. In our sample, having a graduate degree increases the probability of promotion, whereas experience in the central government has no significant effect. Second, following Fang et al. (2022), we incorporate city-level indicators, including population size and the GDP growth rate in the year a leader takes office, into our analysis. Both indicators are statistically significant and positively associated with leaders' probability of promotion. We use the predicted values from Column 3 to construct our second alternative measure of career incentives.

Overall, the three measures are strongly correlated with each other, with an average pairwise correlation of 0.78 (statistically significant at the $p < 0.01$ level). We adopt the predicted *ex ante* probability of promotion from Column 1 of Table 1 as our main career incentive measure, as it relies more on exogenous personal characteristics at the start of a leader's tenure than the other measures and aligns with the analysis of Wang et al. (2020). We later demonstrate that our findings are robust to alternative career incentive variables.

2.2 Estimation strategy

In China's merit-based promotion system, regional economic performance is a crucial indicator in the political evaluation and selection matrix of local leaders, with greater importance at lower administrative levels of government (Jia et al., 2015; Landry et al., 2018). Therefore, city-level politicians with stronger career advancement incentives are expected to devote more effort to developing the local economy than their counterparts. To evaluate the impact of local leaders

on entrepreneurial dynamics across regions and industries, we consider a city-industry level estimation as follows:

$$E_{ijt} = \alpha + \beta CI_{it}(s) + \gamma LQ_{ijt} + \delta X_{ijt} + \eta Z_{it} + \mu_{ij} + \mu_{jt} + \mu_{pt} + \epsilon_{ijt} \tag{2}$$

where E_{ijt} represents the intensity of entrepreneurial activities in manufacturing industry *j* in city *i* in year *t*, measured by the entry rate of new firms. The entry rate of new firms at the city-industry level is defined as the ratio of the number of new entrants to the number of existing firms in each city-industry cell for each year.[3] $CI_{it}(s)$ is the intensity of the career advancement incentives of leader *s* in city *i* in year *t*. The career incentive intensity of each leader at the start of their term is measured by their *ex ante* probability of promotion based on their starting age, starting level, and their interactions, as discussed in Section 2.1. We assume that the career incentives of leader *s* remain constant throughout their tenure in city *i*. We examine and verify that the dynamic effects of leader tenure are relatively smooth, and thus we focus on comparing leaders with varying career advancement incentives.

As the literature (e.g., Ellison and Glaeser, 1997; Ellison et al., 2010; Kerr and Kominers, 2015) highlights that Marshallian externalities facilitate the entry of new firms, we use the location quotient (LQ_{ijt}) as a measure of time-varying agglomeration forces at the city-industry level. Following Delgado et al. (2010), $LQ_{ijt} = \frac{e_{ijt}/e_{it}}{e_{jt}/e_t}$, where e_{ijt} denotes the number of firms in manufacturing industry *j* in city *i* in year *t*, e_{it} indicates the total number of firms in city *i*, e_{jt} denotes the number of firms in industry *j* at the national level, and e_t is the total number of firms in the country in year *t*. This variable measures an industry's concentration at the city level relative to its concentration at the national level. Higher industry concentration in a city may indicate that supplier conditions are better, human capital resources are more compatible , and the exchange of ideas and technologies between similar businesses is more efficient (Ghani et al., 2014a; Guo et al., 2016). As such, γ is expected to be positive.

[3] In later analyses, we replace the dependent variable with quality measures of new entrants, the exit rate of manufacturing firms, and related indicators of service firms, among others.

Furthermore, studies show that there is a negative relationship between entry regulation and institutional barriers and entrepreneurship (e.g., Djankov et al., 2002; Klapper et al., 2006). Focusing on China, Brandt et al. (2020) identify location-specific barriers to entry by estimating a Hopenhayn–Melitz model with wedges and demonstrate the causal relationship between barriers to entry and the size of the public sector. We therefore adopt the intensity of state-owned enterprises (SOEs) at the city-industry level, denoted by X_{ijt}, as a proxy for the barriers to firm entry into the local market. We expect δ to be negative.

Our use of panel data enables us to control for a granular set of fixed effects. Specifically, we use city-industry fixed effects (μ_{ij}) to control for unobserved, time-invariant characteristics at the city-industry level, such as technical and competition factors at the industry level, regional cultural heritage, and natural advantage channels at the city-industry level, which are related to the cost of entry and entrepreneurial decisions (e.g., Fritsch and Falck, 2007; Glaeser and Kerr, 2009; Chatterji et al., 2014). We also use industry-year fixed effects (μ_{jt}) to control for time-varying factors at the industry level, such as tariff movements associated with WTO membership, industrial policy at the national level, and exogenous technological changes and demand shocks at the sectoral level. Although city-year fixed effects cannot be controlled in our setting, we use province-year fixed effects (μ_{pt}) to capture province-specific policy and leadership variations, business cycle fluctuations, and other unobserved aggregate time-varying factors. Overall, the above fixed effects control for fundamental comparative advantage factors that affect firm entry into a specific city-industry cell and that are invariant over our sample period. They also eliminate differences across industries that are common to all cities and exclude common variations at the province-year level. What remains are the unexplained city-industry variations in firm entry that we attempt to explain through time-varying city-level differences, such as local leaders' varying career advancement incentives.

To rule out other prefecture-level confounding factors, we also control for a set of city-level

time-varying determinants (via Z_{it}) that may be related to firm entry dynamics. First, market size expansion and industrialization tend to have a positive impact on the creation of new firms (Sato et al., 2012; Parker, 2018). We use city-level nominal GDP per capita, population size, and the share of the non-agricultural sector in GDP as proxies for these effects. Second, during our sample period, China gradually relaxed its restrictions on foreign direct investment (FDI). The impact of FDI on local firm entry is indeterminate and context-specific (Hong et al., 2021). On the one hand, FDI could crowd out entrepreneurship through the occupational choice channel by offering higher wages and better positions to talented individuals. On the other hand, it could generate a knowledge spillover mechanism that would disseminate technological and foreign know-how and trigger new business ventures (Acs et al., 2013). We adopt a city's annual FDI inflow to account for the potential impact of FDI. Third, we calculate the intensity of college students, defined as the number of college students per 10,000 residents, to capture the effect of human capital on entrepreneurial activities. Finally, we include the presence of special economic zones (SEZ) to account for place-based policies that may result in the creation of new firms by reducing non-market frictions and facilitating business operations (Lu et al., 2019; Tian and Xu, 2022). ϵ_{ijt} is the standard error clustered at the city leader level.

In subsequent robustness analyses, we also consider alternative specifications of city-level and leader-level estimations and obtain consistent findings. However, we adopt a specification at the city-industry level for our baseline analysis for three reasons. First, studies show that local agglomeration forces play a key role in entrepreneurial activities (e.g., Ellison and Glaeser, 1997; Ellison et al., 2010; Duranton and Kerr, 2015). The incumbent industrial structure of each region affects the marginal entry cost for specific new businesses through the availability of shared suppliers, labor inputs, and innovative ideas; these metrics are calculated (and thus should be controlled for) at the city-industry level (Delgado et al., 2010; Chatterji et al., 2014). As such, given that our panel analysis is performed at the city-industry-year level, our results are more comparable to previous findings based on similar specifications (e.g., Kerr and Nanda, 2009; Delgado et al., 2010; Kaplan et al., 2011; Ghani et al., 2014b; Kong et al., 2021). Second,

a city-industry level estimation aligns with a data-generating process wherein an entrepreneurial entry decision is made at the level of a city-industry pair. This scenario occurs in various theoretical frameworks. For example, Caliendo et al. (2019) develop a dynamic spatial model of trade and migration and define a local labor market as being located in a specific US state. Expanding this line of research, Caliendo and Parro (2020) consider the dynamic choices of firm location in a country at the level of a region–sector pair. Therefore, examining the entry of new firms at the city-industry level aligns with micro-level behavior and accurately reflects the data-generating process. Third, as Chinese industries and regions are characterized by strong heterogeneity, our setting at the city-industry level facilitates empirical identification (Bruno et al., 2013) and enables us to explore the underlying mechanisms and regional heterogeneity (Aghion et al., 2008; Ghani et al., 2014b).

2.3 Data

This study primarily investigates the impact of local leaders' career advancement incentives on the entry of new manufacturing firms in terms of quantity and quality, although we also report related findings for the service sector in the last section. For our core analysis, we compile panel data from 198 prefecture-level cities and 31 two-digit manufacturing industries in China from 1998 to 2013 .

To construct our career advancement incentive measure, we manually collect the biographical information and career trajectories of all prefecture-level leaders to estimate their *ex ante* probability of promotion. This information includes their years of tenure, date of birth, hierarchical rank, education level, prior work experience, and subsequent political status after leaving the prefecture-level city. We also cross-check the data on hierarchical levels, tenure years, and subsequent positions using the Chinese Political Elite Database (Jiang, 2018). There are 747 city leaders in our sample from 1998 to 2013. In our sample, the average tenure of a prefecture-level party secretary is 3.65 years. The mean and standard deviation of the intensity of career

incentives are 0.34 and 0.20, respectively, which are very close to the estimates in Wang et al. (2020).[4]

We use the firm registration database published by the State Administration for Industry and Commerce of China (SAIC) to obtain firm entry and exit data. This dataset covers all firms registered in China, providing information on their geographic location, main business scope, and entry and exit dates, among other details. Because the SAIC provides more comprehensive data than those published by the Annual Survey of Industrial Firms (ASIF) database, using registration data is more appropriate for analyzing entrepreneurship and firm dynamics in developing countries (Li and Rama, 2015; Tian and Xu, 2022).[5] We use data from the 2004 Economic Census as a reference to check the number of firms in each city-industry-year cell. The entry rate of new firms is measured by dividing the number of new firm registrations by the total number of firms in each city-industry cell for each year. As discussed in Shi et al. (2021), before 2014, local bureaus of industry and commerce conducted annual inspections of all Chinese firms. Deregistered or inactive firms were classified as exiting firms. We use this information to compute the duration of firm survival, measured in months. We also calculate the one-year (three-year) survival rate of firms at the city-industry level, measured as the ratio of the number of surviving firms to the total number of new firms one year (three years) after entry.

Regarding the other variables, we construct a location quotient measure based on the registration data. We use the ASIF database to calculate firm-level TFP, an SOE intensity variable at the city-industry level, and industry-specific (entry-level) capital and land intensity. For industry-level capital intensity, we first identify all new entrants in each year, calculate their capital-output ratio, and then construct our industry-level measure by averaging this ratio over

[4]The sample period in Wang et al. (2020) is 2000–2011, and they adopt a linear probability model (LPM) for promotion estimation. Robustness tests confirm that our results hold when using alternative estimation methods, such as the LPM or probit model.

[5]One concern may be that new firms register but do not carry out significant economic activities for diverse reasons. However, this should not be a concern for manufacturing firms, the subject of our research. We cross-check our registration data with data from the 2004 Economic Census and the results show that 95.3% of the manufacturing firms in our sample engage in production to some extent, according to the census data.

all firm-years in our sample. Our measure of industry-specific land intensity is constructed analogously using corporate land transaction data sourced from Wang et al. (2020). For innovation intensity, we match the patent information of China's State Intellectual Property Office to above-scale manufacturing firms in the ASIF database based on He et al. (2018) and calculate the number of invention patent applications at the industry level by aggregating the information at the firm level. We use the 2002 national input–output table to calculate industry-specific government purchase intensity. We obtain data on city-year characteristics including GDP per capita, population size, FDI, college student intensity, the share of the non-agricultural sector, and fiscal transfers from the China City Statistical Yearbooks and the China Regional Economic Statistical Yearbooks. The data on SEZs are obtained from the Catalogue of China's Development Zones (2018 version). Leader-specific corruption information is obtained from China's Corruption Investigations Dataset of Harvard Dataverse (Wang and Dickson, 2022). We infer province-level support for a prefecture-level city through textual analysis of annual government reports, the detailed manuscripts of which are downloaded from the PKU Law database (www.pkulaw.com). Table 2 provides the summary statistics of all variables.

3 The effect of local leaders on the entry intensity of new firms

3.1 Baseline results

We begin by examining the effects of local leaders' career incentives on the intensity of entrepreneurial activities in China. The baseline results are reported in Table 3, with robust standard errors clustered at the prefecture-leader level. footnoteWe also run robustness checks with standard errors clustered at the prefecture level and prefecture-industry level for all estimations. The results remain unchanged. Column 1 includes our variable of local leaders' career incentive intensity and all fixed effects. Column 2 adds our measures of location quotient and SOE intensity at the city-industry level. Columns 3 and 4 gradually incorporate different city-level

confounding factors. Overall, we find that cities whose leaders have a higher *ex ante* probability of promotion are associated with a higher level of entry of new manufacturing firms. The relationship is both statistically and economically significant. Based on our preferred specification in Column 4, a one standard deviation increase in the intensity of local leaders' career incentives increases the entry rate of new manufacturing firms by 0.99 percentage points. If we shift local leaders' career advancement incentives from the 10th percentile to the 90th percentile, the associated increase in the entry rate of new firms is 4.08 percentage points, or about 22.91% of the average annual entry rate of manufacturing firms (i.e., 17.8%) in our city-industry sample. Consistent with previous studies (e.g., Delgado et al., 2010), the location quotient is positive and statistically significant in all cases, confirming the importance of the agglomeration economy. More barriers to entry, proxied by greater SOE intensity in a city-industry cell, reduce the intensity of entrepreneurial activities. New firm entry is also positively associated with locations with larger populations, higher non-agricultural ratios, more FDI, and the presence of SEZs.

The impact of local leaders' career advancement incentives on manufacturing firm entry is widespread across firms of varying sizes. On the one hand, given China's unique political–business dynamics (Haveman et al., 2017; Ding et al., 2018; Bai et al., 2020a), it is possible that highly motivated politicians tend to attract large investments and big corporations, rather than focusing their efforts on small businesses. If China's special arrangements are indeed unique and favor only selected large entrants that can be touted as political achievements or generate personal benefits for local leaders, our results should be driven by the entry of large firms into each prefecture. On the other hand, studying the effect of a regulatory reform in Portugal that substantially reduced firm entry costs, Branstetter et al. (2014) find that the reform increased new firm entry and employment, but mainly among marginal firms. Therefore, if the helping hand of the government is generic and systematically lowers entry barriers, it should lead to new firm entry at the margin, allowing relatively small businesses to enter the market (which otherwise would not have been able to do so). If this is the case in China, we expect to observe a statistically significant association only between career incentive intensity and the entry rate

of small firms.

To examine these two opposing possibilities, we split the sample to measure the entry rate of new firms separately for large and small firms. Specifically, we define large firms as above-scale firms in the ASIF sample (i.e., firms with sales above RMB5 million), while the entry rate of small firms is computed by excluding new ASIF firms from the registration data in each city-industry-year cell. We rerun our baseline specification and report the results in Columns 1 and 2 of Table 4. We observe that the intensity of career incentives is positively associated with the creation of both large and small firms. However, the effect on small (below-scale) firms is more pronounced. Specifically, a one standard deviation increase in the intensity of career incentives leads to a 0.26 standard deviation increase in the entry rate of large firms and a 1.63 standard deviation increase in the entry rate of small firms.

Furthermore, we evaluate whether our findings are region-specific by exploring the effects on subsamples of cities with different geographic locations and levels of economic development. We calculate the average GDP per capita of each city between 1998 and 2013 and divide them into two income groups based on the median value. Columns 3 and 4 of Table 4 present the results for coastal cities and inland cities, respectively. Columns 5 and 6 report the results for high-income and low-income cities, respectively. The results show that the impact of local leaders' career incentives is widespread across cities with different geographic and income attributes. We report the split sample results for the regional estimation to be consistent with the split sample estimation by firm size in the first two columns. We also estimate an interaction term between regional characteristics (i.e., a coastal dummy or a high-income dummy) in Appendix Table A1. The interaction term is not statistically significant, indicating a similar impact across different cities.

Overall, these results confirm that our baseline findings are not driven by any specific subsample. More importantly, they illustrate that local politicians with strong career advancement

motivations are willing and able to stimulate new business creation across firms of varying sizes, and that their impact is pervasive across regions with different levels of economic development. From the perspective of new firm creation, our study partly validates the keen observation of Bai et al. (2020a) that "the Chinese system is best described not simply as a regime of special deals but one where there is almost 'free entry' into special deals (p. 342)." Therefore, despite China's weak formal institutions and its consistently low ranking in global surveys on the Rule of Law or Ease of Doing Business, China's business dynamism has been strong with booming entrepreneurial activities. The alignment of political aspirations with economic objectives creates a second-best institutional remedy for promoting economic growth in a large developing economy.

3.2 Robustness analyses

3.2.1 Alternative measures, estimator, and specifications

In this subsection, we perform a series of tests to check the robustness of our main findings. First, we consider the impact of alternative measures. Instead of using the entry rate of new firms in each city-industry cell, we adopt the logarithm of the number of newly registered firms in each city-industry as the dependent variable. Second, we use the two alternative measures of career incentives discussed in Section 2.1 as our main independent variables. The results are reported in Columns 1–3 of Table 5 and are consistent with our main findings.

Next, recent studies emphasize the potential estimation bias of log-linear regression models when the outcome variable is skewed by many zeros (e.g., Cohn et al., 2022; Chen and Roth, 2024). Although our baseline setting does not involve a log-transformation and there are a limited number of zeros in our main dependent variable (only 10.2%), we re-estimate our baseline specification using the Poisson estimator as a robustness check. The Poisson results are reported in Column 4 of Table 5 and are consistent with our main results.

We also consider three alternative specifications. Although the party secretary is the *de jure* and *de facto* local leader in a prefecture-level city in China, the mayor also plays an important role, particularly in matters of economic development. To rule out the potential impact of city mayors, we measure each mayor's *ex ante* probability of promotion analogously and include this variable in our estimation. Column 5 of Table 5 shows that the career advancement incentives of party secretaries remain a strong determinant of local firm entry, with the same magnitude as our baseline estimates, whereas those of mayors are not statistically significant.

Next, we aggregate all manufacturing industries in each city into one broad sector to calculate the entry rate of new manufacturing firms at the city level and estimate a city-level specification. In this case, we replace city-industry fixed effects with city fixed effects. The results are reported in Column 6 of Table 5 and our conclusion remains unchanged. Finally, we consider a leader-level specification similar to that of Wang et al. (2020). We use the average annual entry rate of new firms for each leader during their tenure as the dependent variable. Column 7 presents our leader-level results, which are similar to the main results, confirming our main finding that the career incentives of local leaders are associated with increased manufacturing entrepreneurial activities in China.

3.2.2 Additional robustness checks

In our empirical setting, an endogeneity problem may arise due to the potentially non-random allocation of city leaders. If high-incentive leaders tend to be assigned to cities with poor economic performance or higher growth targets, and if there are unobserved contemporaneous policy interventions in these cities that are positively associated with new business creation, our identified relationship between the intensity of local leaders' career incentives and the entry rate of new firms could be spurious.

First, to examine whether there may be a systematic connection between the appointment of local leaders with varying career incentives and a city's pre-existing economic conditions, we

consider a leader-level estimation. In this estimation, the dependent variable is the career incentives of the incoming local leader and the independent variables are a set of city-level attributes during their tenure. Specifically, our independent variables include GDP per capita, population size, non-agricultural share in GDP, FDI, college student intensity, presence of SEZs, and entry rate of manufacturing firms. Details are provided in Appendix Table A2. In Columns 1-2 of Table A2, the independent variables are the respective growth rates averaged across the two years prior to the leader's start-office year in a city. In Columns 3-4, the independent variables are the respective values averaged across all years during the tenure of the previous leader. Prefecture-city fixed effects and year fixed effects are controlled for in Columns 2 and 4. Overall, we find no statistically significant association between the appointment of leaders with varying career incentives and the pre-existing economic conditions of local regions.[6]

Second, under the one-level-down political system in China, prefecture-level party secretaries are mainly evaluated and appointed by province-level leaders. If the assignment of city leaders coincides with other policy interventions from the provincial government, estimation bias could arise due to omitted variables. To alleviate this concern, we use two approaches to quantify a provincial leader's potential support for a city and control for their effects in our estimation.

In the first approach, we draw on the emerging literature that directly infers government policy intentions and actions through textual analysis of government work reports (e.g., Wang and Yang, 2021; Lin et al., 2023). Specifically, we obtain all annual provincial government reports from the PKU Law database during our sample period. Next, we identify keywords related to the name (including abbreviations) of each prefecture-level city and calculate the frequency of mention of each city in the forward-looking part of the provincial government reports, which outlines the main targets and development plans for the coming year. We assume that the more a city is mentioned in the provincial government report, the more likely it is to be important for

[6]Wang et al. (2020) also verify that the personal characteristics of appointed leaders (such as age, rank, and education) are irrelevant to the economic conditions of the cities where they are appointed.

provincial development, potentially receiving additional policy support. We include our mention frequency variable in the baseline specification and report the results in Column 1 of Table 6. We observe that the mention frequency variable is not statistically significant, and our core estimate of career incentive intensity remains unchanged. We also use a subsample of all cities with a below-median number of mentions for each province-year, assuming that the degree of provincial attention and intervention is limited for these cities. The results reported in Column 2 indicate that among the cities rarely mentioned in provincial government reports, the impact of local leaders' career incentives on new firm entry remains significant and sizable.

Besides direct references in government reports, another proxy measure that can be indicative of provincial-level backing is the fiscal transfer a city receives. Jiang and Zhang (2020) show that provincial leaders tend to allocate more transfers to localities governed by officials with whom they have informal political connections through past experiences. We collect and compute the annual city-level fiscal transfers following Jiang and Zhang (2020) and include this variable in our estimation. Column 3 shows that after controlling for the number of mentions and fiscal transfers, our findings remain unchanged. Column 4 of Table 6 reports the results for a subsample of cities with below-median annual fiscal transfers within a province-year, and the key coefficient is still positive and significant.

In addition, if the appointment of party secretaries with high incentives is driven by a city's poor past economic performance, the observed positive correlation may reflect a pattern of regression to the mean, that is, the entry rate naturally rebounds after a period of underperformance. First, as shown above, we do not find a significant connection between pre-existing city-level economic conditions and the appointment of leaders with varying career advancement incentives. Second, we include in our baseline estimation the annualized GDP growth rate and the entry rate of new firms during the previous leader's tenure. If there is a mean reversal trend, the coefficients of these two variables should be significant and negative. The results are shown in Column 5 of Table 6. The associations between economic performance during the previous

leader's tenure and the current rate of new firm creation are statistically indistinguishable from zero, and the inclusion of these two variables does not affect our main coefficient .

Finally, we perform a falsification test by regressing the contemporaneous entry rate of new firms on the career advancement incentives of the immediate successor in each city. We adopt a leader-level specification for this analysis and present the results in Column 6 of Table 6. The coefficient of career incentive intensity is not statistically significant, confirming that our identified relationship is not driven by statistical chance.

3.3 Sectoral heterogeneity and potential mechanisms

Taking advantage of the panel data structure, we investigate the varying effects of career incentives on new firm entry across different industries and infer the potential mechanisms at work. In this section, we test whether the marginal effect is heterogeneous across industries with varying degrees of capital intensity, land intensity, government purchase intensity, and innovation intensity.

First, during the development process of the Chinese economy, the reform of the factor market has lagged behind that of the product market. The capital market, in particular, is dominated by state influence, political favoritism, and abundant misallocation (e.g., Chen et al., 2017; Wu, 2018). As most Chinese commercial banks are state-owned, they do not have the autonomy to extend credit based solely on market and profit considerations. Instead, they tend to act in accordance with national policy agendas and local development plans. Financing constraints constitute a crucial barrier to entry for manufacturing firms (Kerr and Nanda, 2011); therefore, a highly motivated local leader could facilitate new firm entry by coordinating bank–business relationships and helping new firms obtain credit. If this is the case, we should observe a more prominent marginal effect of career advancement incentives on new firm entry in capital-intensive industries than in their counterparts.

To empirically test this conjecture, we calculate the capital-output ratio of all above-scale entrants in the ASIF database and aggregate it into an industry-level capital intensity measure at the two-digit industry level. We create a dummy variable equal to 1 (0) for industries that are above (below) the median capital intensity. We augment the baseline specification (Equation 2) to include the interaction term between the capital intensity dummy and the career incentive intensity of local officials. The results are reported in Column 1 of Table 7. The interaction term is positive and statistically significant, indicating that the marginal effect of local leaders is more pronounced for capital-intensive firms at the time of entry than for other firms.

Second, Henderson et al. (2022) document the political manipulation of local land markets. Wang et al. (2020) specifically associate land transactions and urban expansion with the career advancement incentives of prefecture-level party secretaries. With local governments playing a central role in urban planning and land development, offering land at lower prices could be a potential channel through which city leaders help create new manufacturing firms. To test this conjecture, we compute a land intensity measure by merging the land transaction data with ASIF entrants and normalizing the firm-level land values by their total output levels. Next, we create a dummy variable equal to 1 (0) for industries that are above (below) the median land intensity level and interact it with the career incentive intensity variable in the baseline specification. Column 2 of Table 7 shows that the marginal effect of local leaders is stronger for land-intensive industries than for other industries, indicating that land provision is an underlying mechanism.

Third, Fang et al. (2022) demonstrate how the allocation of government procurement contracts, which constitute an important source of public spending with spillover effects on the local economy, could also be shaped by political considerations and competition among local leaders. We explore this channel by computing a government purchase intensity variable based on the 2002 national input–output table. We use the intermediate usage matrix and calculate the

demand intensity of each industry by the public sector.[7] We again construct a dummy variable indicating industries with above-median government demand. The interaction term between the government purchase intensity dummy and the career incentives of local leaders is not statistically significant (Column 3 of Table 7). Alternatively, we can use the government expenditure item among the end-use categories in the input–output tables to calculate government demand intensity. When using this indicator, the interaction term remains not statistically significant. Overall, public spending is not a strong enough factor to boost entrepreneurial activities. This is not surprising given that firm entry is a decision that takes into account expected long-term returns. With the high turnover rate and relatively short tenure of local leaders, guaranteeing public spending is not a stable source of expected revenue.

Fourth, we evaluate the potential differential effect across industries with varying levels of innovation intensity. To this end, we calculate the number of invention patent applications at the industry level by aggregating patent information at the firm level, create a dummy variable for above-median innovation intensity, and include it in our baseline estimation as an interaction term with our career incentive measure. The results are presented in Column 4 of Table 7, showing that the marginal effect of career incentives is homogeneous across industries with different levels of innovation intensity. Therefore, local leaders with stronger career advancement incentives do not disproportionately promote innovative entrepreneurial efforts. This can result from a lack of motivation or a lack of resources. First, as discussed in Sun (2023), high-incentive leaders tend to pursue a short-sighted development strategy that favors infrastructure investment and limits science and technology spending. Second, even if a leader is motivated to promote the creation of firms in innovation-intensive industries, the provision of capital and land may be secondary to the development of these firms, while the necessary core technological comparative advantage cannot be generously supported by the government.

[7]The public sector includes the scientific research industry; the professional, technical, and other scientific and technological services industry; the geological survey industry; the water management industry; the environmental resources and public facilities management industry; the resident services and other services industry; the education industry; the health care industry; the social security and social welfare industry; the culture, arts, radio, film, and television industry; and public administration and social organizations.

Column 5 of Table 7 reports the results combining all four interaction terms, yielding consistent findings. After including all four interaction terms, the stand-alone effect of career incentives remains statistically significant, but the magnitude of the coefficient becomes smaller, which signals the explanatory power of the proposed channels.[8] Overall, our findings confirm the importance of financing and land provision in the creation of manufacturing firms. As these production factors are strictly controlled by the Chinese government, we can infer that local leaders with strong career advancement incentives attempt to boost the entry of new manufacturing firms by offering critical access to capital and land. Conversely, public spending and government procurement do not appear to be viable sources for fostering entrepreneurial activities. Although motivated local leaders do not seem to contribute to the creation of innovation-driven business ventures, we also do not observe a negative spillover effect that crowds out innovative new entrants.

In addition, it is widely documented that place-based policies play an important role in China's development strategy (Zheng et al., 2017; Lu et al., 2019). Our results confirm the importance of SEZs in triggering the creation of new local firms. Based on Column 4 of Table 3, cities with SEZs are associated with a 0.67 percentage point increase in the entry rate of new manufacturing firms. We therefore examine whether local leaders tend to stimulate the creation of new firms by creating new SEZs. Specifically, we adopt the newly created SEZ dummy as the dependent variable and regress it on the career advancement incentives of local leaders. The following control variables at the city level are included: GDP per capita, population size, non-agricultural share, FDI inflow , college student intensity, and city fixed effects and province-year fixed effects.

The results are reported in Column 6 of Table 7. We find that the probability of a city

[8]Including the capital and land intensity interaction terms accounts for approximately 45.5% of the positive effect of career incentives on new firm entry.

establishing a new SEZ increases with the career advancement incentives of local leaders.[9] Therefore, place-based policies such as SEZs are tools used by highly motivated local leaders to promote the creation of new firms. This finding is also consistent with those of Shen et al. (2022) that city leader turnover leads to significant changes in place-based policies and that highly motivated leaders for career advancement tend to implement greater changes in place-based policies.

4 What about quality?

4.1 The effect of local leaders on the quality of new entrants

Bai et al. (2020a) argue that Chinese local governments often use their discretionary power to offer preferential treatment to firms in ways that enhance overall economic efficiency. Brandt et al. (2020) and Jiang et al. (2021) illustrate the importance of removing barriers to entry to promote market competition and economic growth. If local leaders with strong career advancement incentives can mobilize local resources to increase the entry of more new manufacturing firms, which would otherwise be blocked by China's rigid formal institutions, the political system seems to offer a second-best informal remedy. However, before reaching this conclusion, we need to investigate the impact of local leaders on the quality performance of new firms.

First, we examine the survivability of firms entering the market for years with local leaders with varying career advancement incentives. Using registration and deregistration data from 1998 to 2016, we calculate the one-year (three-year) survival rate of firms at the city-industry level, which is the ratio of the number of surviving firms to the total number of new firms one year (three years) after entry.[10] We use the one-year and three-year survival rates of firms sepa-

[9]The results remain unchanged when we perform logistic regression or Poisson estimation. Note also that if the establishment of SEZs is causally related to career incentives, our baseline coefficient for the effect of local leaders on the entry rate of new firms (as presented in Column 4 of Table 3) may be underestimated, given that we also control for the number of contemporaneous SEZs in each city.

[10]Specifically, we define the k-year survival rate in each city-industry-year as $S_{ijt}^{k} = \frac{Exist^{t-k}ijt}{NEij,t-k}$, where $NE_{ij,t-k}$ is the total number of new firms in city i in industry j in year $t-k$, and $Exist_{ijt}^{t-k}$ is the number

rately as dependent variables and re-estimate our baseline specification. As shown in Columns 1 and 2 of Table 8, the coefficients in both cases are significant and negative, indicating that firms that enter the market during the tenure of high-incentive leaders tend to experience lower survivability.

As a complementary firm-specific measure, we calculate the total time (in months) each firm remained in the market based on its registration and deregistration dates, using registration data up to the end of 2020. For firms that remain active after 2020, their survival status is unknown. Therefore, for ease of comparison, we only include firms that exited the market by the end of 2020 in our regression analysis.[11] Adopting as the dependent variable the total survival time of each firm entering the market in a specific city-industry-year, we find that firms entering the market in city-years with leaders with stronger career incentives exhibit shorter survival (Column 3 of Table 8). Moving local leaders' career advancement incentives from the 10th percentile to the 90th percentile is associated with a 4.61-month decline in firm survival, which accounts for 10.74% of the average survival time in our sample.[12]

Using the experiences of Mexico and Portugal, Kaplan et al. (2011) and Branstetter et al. (2014) evaluate the effects of entry regulation reform on entrepreneurship. Both studies find that such a reform lowers barriers to entry and causally induces the entry of a greater number of new firms. However, the overall impact is concentrated on marginal firms, and thus the long-term growth implications of firm entry are limited. If motivated local leaders in China promote firm entry by systematically lowering the cost of entry at the margin, additional entrants may be smaller, less productive firms that are more likely to exit the market within a short period, thereby pulling down the average survival rate. In Section 3.1, we demonstrate that local leaders with strong career incentives lead to the entry of both large and small firms,

of surviving firms in year t that entered the market in year $t-k$.

[11] Alternatively, we use all firms and calculate their survival time by the end of 2020 using a truncated sample; our results remain unchanged.

[12] For the sake of brevity, we relegate the associated robustness checks regarding quality to Appendix Section C and Table A3.

implying that the Chinese mechanism does not systematically change entry barriers at the margin but offers widespread but selective treatment to all firms. We now specifically examine the potential impact of local leaders on the survivability of firms of different initial sizes. To do this, we augment Column 3 by including an interaction term between firm-specific registration capital at the time of entry and the career incentive variable. We report the results in Column 4 of Table 8. The amount of initial registration capital is positively associated with firm longevity, consistent with the literature on firm dynamics, which indicates that larger (and probably more productive) new firms tend to survive longer (e.g., Hopenhayn, 2014). The interaction term is not statistically significant, while the stand-alone effect of our career incentive variable remains negative and significant. This demonstrates that the negative impact of motivated local leaders on firm survivability is widespread across firms of varying sizes.[13]

Furthermore, we examine the productivity dynamics of large, above-scale manufacturing firms using the ASIF data from 1998 to 2007. The calculation of firm-specific TFP follows the approach outlined by Yu (2015). Column 5 of Table 8 compares the TFP of new firms across city-years with local leaders with varying career incentives. The estimated coefficient is indistinguishable from zero, suggesting that the productivity of large manufacturing firms entering the market in city-years with highly motivated leaders does not differ from that of firms entering the market under less motivated leaders at the time of entry. Interestingly, when we analyze the subsequent TFP performance of these firms, we observe that the TFP growth rate of firms entering the market during city-years with highly motivated leaders is notably sluggish. Figure 1 shows the estimated coefficients of the TFP gap between the two groups of firms during the first four years after entry. In the third and fourth years after entry, as shown in Columns 6 and 7, respectively, firms initially created under high-incentive leaders are significantly less productive than their counterparts created during the tenure of leaders with low incentives. We acknowledge that this TFP result is severely limited by data availability. Nevertheless, it offers

[13] As an alternative test, we divide firms based on their registration capital into two categories and estimate the results for each subsample. In both groups of firms, new entrants in city-years with high-incentive leaders are associated with shorter survival.

complementary evidence that, together with the survivability results, presents a consistent finding: although highly motivated local leaders can promote the entry of more new manufacturing firms, the quality of these new firms is not desirable. Furthermore, the quality deficit, common across firms of varying sizes, is not merely a reflection of a general reduction in barriers to entry.

4.2 Potential explanations for the quantity–quality trade-off

We aim to understand the observed quality deficit (linked to high-incentive leaders) by evaluating two potential explanations. First, we test whether corruption plays a role in this finding. For instance, if local officials are deeply corrupt, they may allow only personally connected firms to enter the market. Highly motivated leaders may be incentivized to engage in reciprocal deals in anticipation of future monetary returns or political assistance, and these connected firms are likely to be less productive. To assess this conjecture, we construct a leader-specific corruption indicator by merging the names of our 747 local leaders with China's Corruption Investigations Dataset (Wang and Dickson, 2022), cross-checking their tenure and career trajectories. The variable $Corrupt(s)$ takes a value of 1 if leader s was investigated during the anti-corruption campaign after 2013 and 0 otherwise. It is assumed that officials subject to subsequent investigations were proportionately more involved in corrupt deals before 2013. We then augment the baseline specification by interacting this indicator with our career incentive variable and report the results in Column 1 of Table 9. The coefficient of the interaction term is close to zero and is not statistically significant, showing that the corruption motive does not explain the association between the intensity of career incentives and the quantity of new firms. Furthermore, we examine the link between leader-specific corruption and the quality of new firms, using the one-year survival rate and total survival time separately as dependent variables. In Columns 2 and 3 of Table 9, we can see that the interaction terms between the corruption indicator and the intensity of career incentives remain not statistically significant. This indicates that the quality deficit associated with leaders with strong career advancement incentives is not related to their level of corruption.

As discussed in Wang et al. (2020), the opportunity costs of corruption are actually higher for younger city leaders with stronger career incentives than for their counterparts; hence, they are less likely to engage in corrupt deals. Although Shi et al. (2021) document a pattern of co-movement of interregional investments in China following bureaucratic transfers, they also show that officials with promotion incentives appear to be more cautious than their counterparts. In addition, political connections between government officials and firms typically occur within big corporations. Even among the top 1,205 listed companies in China, Ding et al. (2018) find that only 18.1% of these firms are locally connected during the 2004–2013 period. Therefore, in the pool of 1.24 million registered manufacturing firms in China (in our sample), the likelihood of dominant political connections is limited. In summary, corruption motives and personal connections cannot explain the observed poor quality of new firms entering the market during the tenure of local leaders with strong career advancement incentives.

Next, we turn our attention to the possible cause of the mismatch between the types of new entrants and local fundamentals. In China's tournament system, local leaders rotate constantly, with an average tenure of only 3.65 years during our sample period. The best performing and most highly motivated leaders have higher expectations of leaving a city soon, which may lead to potential shortsightedness in development strategy and policy implementation (e.g., Xiong and Song, 2018; Sun, 2023). As shown in Section 3.3, local leaders tend to attract new manufacturing firms by offering critical access to factors of production such as capital and land, resulting in a disproportionate increase in capital- and land-intensive entrants during the tenure of high-incentive leaders. However, given distinct initial conditions and local comparative advantages, it is reasonable to expect that some localities may not be suitable for capital- or land-intensive types of manufacturing production. We also show that another way for local leaders to trigger entrepreneurial activities is to implement new place-based policies. As also documented in Shen et al. (2022), city leader turnover often leads to abrupt changes in place-based policies in China, the effects of which are even more prominent among leaders with strong ca-

reer advancement incentives. Again, place-based policies such as SEZs are not expected to be one-size-fits-all solutions across all regions, not to mention the deliberate and constant change in policy implementation. In this context, even if local leaders are benevolent, development-oriented, and actively lend a helping hand to promote the entry of new local firms, given the limited means of intervention at their disposal, the type of new entrants in some cities may not align with the external market environment or existing local fundamentals. When this is the case, the subsequent performance of new entrants, in terms of productivity growth and survival rates, will be weakened.

To test the explanatory power of the entrant–city mismatch conjecture, we categorize industries in each city-year into different groups based on their city-industry-year location quotient. Recall that the location quotient variable reflects the clustering of economic activities by calculating the intensity of an industry in a city relative to the national average. As our specification is at the two-digit industry level, this measure serves as a proxy for both product similarity and supply chain proximity, given that the majority of intermediate input usage occurs within a two-digit industry. If an industry ranks high in the initial location quotient ranking, we infer that the city has favorable conditions, such as a strong customer base, geographic advantages, knowledge spillovers, supply chain availability, and compatible factors of production, for the development and growth of this industry (e.g., Delgado et al., 2010; Kerr and Kominers, 2015). Our previous results regarding both the quantity and quality of new entrants confirm the importance of the location quotient variable. In Column 4 of Table 3, the entry rate of new firms is positively and significantly associated with the location quotient at the city-industry level. In Table 8, the one-year and three-year survival rates, as well as the TFP of new entrants (both at the time of entry and four years after entry), are higher in city-industry cells with a higher location quotient.

For our empirical analysis, we consider two dichotomizations of industries in each city-year. First, we define the indicator variable $matched_{ijt}^{50}$, which takes a value of 1 if industry j in

city i in year t is above the median (i.e., the 50th percentile) in the city-industry-year location quotient ranking, and 0 otherwise. Second, we define the indicator variable $matched_{ijt}^{25}$, which takes a value of 1 if industry j is among the top 25th percentile of the location quotient ranking in the city, and 0 otherwise.[14] We believe that industries ranked high in the location quotient ranking have comparative advantages consistent with local fundamentals. We then augment the baseline specification with interaction terms between career incentive intensity and these two indicator variables and report the results in Columns 4 and 5 of Table 9, respectively. In both estimations, the location quotient variables (i.e., $matched_{ijt}^{50}$ and $matched_{ijt}^{25}$) are crucial (and positive) predictors of the entry rate of new firms. However, the coefficients of the interaction terms are negative and statistically significant, indicating that although high-incentive leaders are generally pro-entrepreneurship, the types of firms that enter the market during their tenure tend to deviate considerably from local fundamentals.

Finally, we explicitly analyze the quality implications by replacing the dependent variable with survivability measures and report the results in Columns 6–9 of Table 9. Columns 6 and 7 use the one-year survival rate as the dependent variable, while Columns 8 and 9 adopt firm longevity as the dependent variable based on a firm-level specification.[15] In Column 6, the coefficient of the career advancement incentive variable remains negative and statistically significant, while its interaction term with $matched_{ijt}^{50}$ is positive but not significant. In Column 7, the coefficient of the interaction term between the career advancement incentive variable and $matched_{ijt}^{25}$ is positive and statistically significant. This shows that new firms entering the market during the tenure of highly motivated leaders have lower overall viability than their counterparts; nevertheless, if a new firm enters an industry that is strongly aligned with local clustering and comparative advantages, the negative marginal effect of high-incentive leaders on the quality deficit is alleviated. Using firm survival time as the dependent variable, Columns

[14]For each city, the correlation of the location quotient ranking over the years is very strong, with an average correlation coefficient of 0 .88. We also conduct sensitivity tests using the location quotient ranking from the previous year or taking the all-time average to generate the location quotient ranking in each city. The findings remain unchanged.

[15]Using the three-year survival rate yields similar results, which are not presented here for the sake of brevity.

8 and 9 present consistent findings.

Overall, we find that the lackluster quality of new firms entering the market during the tenure of highly motivated leaders may be attributed in part to incongruity between entrant types and local fundamentals. In a recent study, Lin et al. (2023) reveal the positive impact of political rotation on knowledge spillovers. In particular, they report that prefecture-level party secretaries bring the knowledge they accumulated in previous cities to their new positions through rotation and tend to implement similar industrial policies, such that the export patterns become similar after rotation. Instead of focusing on contemporaneous export performance and associated comparative advantages, our analysis is more general in terms of firm coverage and highlights the entry and exit margins of firm dynamics under leaders with varying career advancement incentives. However, according to our findings, the knowledge spillovers documented in Lin et al. (2023) may not necessarily be beneficial in the long term if the two cities are very distinct in terms of resource endowments and initial comparative advantages. Our findings are more in line with those of Wang et al. (2020) and Fang et al. (2022), who emphasize the potentially distortionary impacts of overly motivated local leaders in China. The multifaceted and complex evaluation of China's tournament competition system testifies to the complex relationship between informal institutions and economic development, requiring further research.

5 Auxiliary analyses and implications for China's economic slowdown

After decades of impressive economic growth, China's growth trajectory slowed markedly after the 2007/2008 financial crisis. Brandt et al. (2023) use firm productivity estimates from 1998 to 2013 to understand the decline in business dynamism in China, highlighting the overall loss of momentum in the private sector and the reduced contribution of new firm entry to aggregate productivity improvement. Zilibotti (2017) offers a comprehensive discussion of China's strengths and weaknesses as it transitions from an investment-driven growth paradigm to an

innovation-driven paradigm. In this subsection, we explore the evolving effects of local leaders on manufacturing entrepreneurship during our sample period and examine the impact of high-incentive officials on other important indicators, including productivity growth and exit rates of incumbent manufacturers and entry and exit patterns of service industries. Collectively, we demonstrate that analyzing the nexus between the career incentives of local leaders and entrepreneurial dynamics in China provides a cohesive framework for understanding both the growth and the gradual slowdown of the Chinese economy.

First, we demonstrate above that highly motivated local leaders attract more manufacturing entrepreneurial activities during their tenure than less motivated local leaders, but the subsequent productivity and survivability of these new firms are not satisfactory. This quantity–quality trade-off illustrates the limits of informal institutions propelled by China's merit-based promotion system. Can the benefits outweigh the losses? According to our empirical results based on the full sample from 1998 to 2013, shifting the career incentive intensity of local leaders from the 10th percentile to the 90th percentile is associated with a 22.91% increase in the entry rate of new firms and a 10.74% decrease in the longevity of these new entrants (percentages calculated relative to sample averages). If we impose the naive assumption that the impact of new entrants on aggregate growth is the same for all firms and is linear with respect to the total number of months they survive[16], then our baseline results imply that gains in quantity can outweigh the loss in quality. In this case, informal institutions do serve as a second-best remedy, which is consistent with the broader picture of business dynamism and economic growth in China. We acknowledge that a thorough welfare analysis requires a structural model that takes into account the detailed mechanisms underlying the effect of new entrants on aggregate productivity growth, such as pro-competitive effects (Jiang et al., 2021) and crowding-out effects, which is beyond the scope of this study. Nevertheless, we can infer the evolution of the effectiveness of the informal institutional arrangement by examining the dynamic change of the

[16]This is an oversimplified and unrealistic assumption for the sake of discussion. Please note that the marginal impact of local leaders is widespread across firms of varying sizes in both our quantity and quality analyses, so it is not straightforward to formulate a step function for the welfare implications of the quantity–quality trade-off.

quantity–quality trade-off within our sample.

The identified marginal effect of local leaders on new firm entry is likely to change over time. Although economic development is often considered a key indicator in the evaluation and promotion of local leaders, recent studies emphasize the multitasking concerns that shape the motivations and executive focus of Chinese bureaucrats in a changing economic and political landscape. For instance, Chen et al. (2018) and Cao et al. (2021) discuss how local officials maintain an intricate balance between economic development objectives and environmental protection targets, with the latter becoming increasingly important as the country faces pollution problems after rapid manufacturing expansion. Furthermore, the massive stimulus package introduced after the 2007/2008 financial crisis shifted the mandate and policy agenda of local officials toward public spending and infrastructure development (Bai et al., 2020b; Dinlersoz and Fu, 2022).

To evaluate possible changes in the quantity–quality trade-off, we create the dummy variable $Post_{08}$, which takes a value of 1 for all years between 2008 and 2013, and 0 for all years between 1998 and 2007. The results that include the interaction term between $Post_{08}$ and the career incentive intensity variable are presented in Columns 1 and 2 of Table 10. The dependent variable is the entry rate of new manufacturing firms in Column 1 and the survival duration of firms in Column 2. Interestingly, the coefficients of the interaction term are negative and statistically significant in both estimations, suggesting that the impact of local leaders on entrepreneurial intensity becomes less prominent after the financial crisis and that their effect on the quality of new entrants weakens further. Numerically, the positive marginal effect of career incentives on the entry rate of new manufacturing firms decreases by 5.54% after 2008, compared with the pre-2008 period, and the negative marginal effect of career incentives on firm survival increases by 7.49%. Although still effective, the impact of career-driven local leaders on the local manufacturing economy has been moderate in recent years. The declining role of motivated political leaders in boosting local manufacturing entrepreneurship is likely to be

due to a combination of factors: multitasking in political evaluations, the changing political atmosphere, the natural diminishing returns of repeated industrial and place-based policies, local resource constraints after the financial crisis, and the collapse of global exports hampering manufacturing expansion. In any case, the winding down of a previously strong growth mechanism due to the political–business interplay can partly account for the decline in business dynamism in China after 2007.

In addition, we consider other margins of firm dynamics by examining whether local leaders with strong career incentives can contribute to the development of incumbent manufacturers or extend the longevity of existing firms. Specifically, Column 3 of Table 10 reruns the baseline specification by replacing the dependent variable with the exit rate of manufacturing firms in each city-industry. Column 4 adopts a firm-level specification (with firm fixed effects) using the annual TFP growth rate of above-scale manufacturers as the dependent variable. In both cases, the coefficient of the career incentive variable is close to zero and is not statistically significant, indicating that even highly motivated leaders are unable to facilitate improvements in manufacturing productivity or to prevent businesses from exiting the market. Under the assumption that local leaders with stronger career advancement incentives are more eager to promote the local economy, our findings further highlight the important role of encouraging the entry of new manufacturing firms as a dominant strategy to achieve their economic objectives.

Finally, we turn to the potential impact of high-incentive leaders on the development of service firms. Columns 5 and 6 of Table 10 use the entry and exit rates of service firms at the city-industry level, respectively, as dependent variables according to the baseline specification. We observe that the intensity of local leaders' career incentives is associated neither with the entry of new service firms nor with their exit patterns. The influence of local leaders on the service sector is minimal, either because of a lack of incentives or a lack of policy tools. On the one hand, the development of service firms may be smaller scale and take longer than that of manufacturing firms, thus producing lower returns on short-term economic targets and ranking

lower on the list of political priorities. On the other hand, given the diverse nature of service industries, local leaders may not have a systematic approach to contributing to the development of the service sector. As we document, their dominant strategies are to provide capital and land and build new SEZs, which may not be as effective in promoting the entry of new service firms.

As a country undergoes structural transformation, the share of manufacturing in the overall economy continues to decline, while the share of the service sector gains weight. As productivity growth in the service sector tends to be slower than that in the manufacturing sector, structural changes and the rise of services usually result in a deceleration of the aggregate growth rate (Boppart, 2014; Timmer et al., 2015). Based on our findings, China's structural transformation process bears an additional burden, compared with other countries, that drags down its aggregate economic growth rate. That is, the active role and helping hand of highly motivated local governments are no longer enough to jump-start the local economy when the service sector becomes important. The problem of incentive compatibility within China's current political system is less concerning. According to the recent literature on multitasking in political evaluations (Chen et al., 2018; Cao et al., 2021), local leaders in China are expected to respond quickly to specific policy agendas if the central government provides concrete directives and incentives to develop the service sector, although the related mechanism design is bound to be complex, if not unfeasible (Fisman and Wang, 2017). Most importantly, the quantity–quality trade-off in the service sector may be even more severe than the situation we identify in the manufacturing sector, as the development of innovation-intensive service firms tends to be more adventurous, diverse, and unpredictable than that of manufacturing firms. In this sense, we expect the overall role of local leaders in promoting economic growth to be increasingly constrained with the rise of services in the country.

In summary, our findings not only reveal the central role that the entry of manufacturing firms plays when motivated local leaders attempt to promote the local economy but also provide a general framework for analyzing the growth and slowdown of a developing country operating

under second-best institutions.

6 Conclusion

When the career advancement of local officials hinges on economic development, this provides a strong incentive for highly motivated leaders to jump-start the local economy with various types of administrative assistance and interventions. This particular dynamic between local politicians and businesses is considered a unique feature of Chinese institutions that can explain the seemingly contradictory observation of robust economic growth in the context of weak formal institutions. Through the lens of new firm entry, this paper offers comprehensive, micro-based evidence that illustrates both the advantages and limitations of "second-best" informal institutions. Specifically, we follow Wang et al. (2020) in constructing a career incentive measure for party secretaries in prefecture-level cities using their *ex ante* probability of promotion, which is predicted by their age and their political hierarchy at the start of their tenure. Using panel data from 198 cities and 31 manufacturing industries covering the period from 1998 to 2013, we find that the career advancement incentives of local leaders are positively and significantly associated with the entry rate of new manufacturing firms. However, they are negatively associated with the survivability and productivity dynamics of new entrants, presenting a quantity–quality trade-off. Furthermore, the entry and exit rates of service firms, the exit rate of manufacturing firms, and the productivity growth of incumbent manufacturers do not respond to the career incentives of local leaders. Our findings not only shed new light on the nexus between informal institutions and economic growth but also provide a coherent framework for understanding the ups and downs of the Chinese economy.

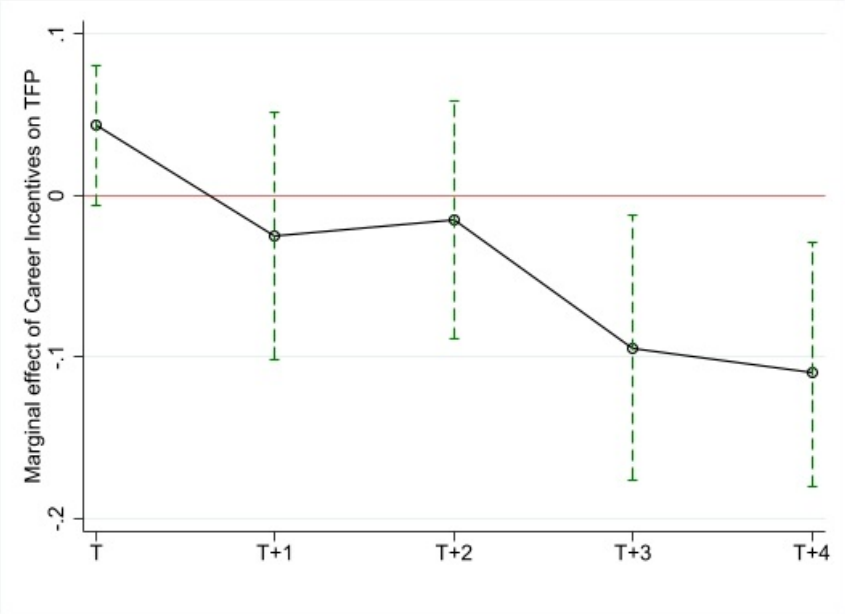

Figure 1: The effects of local leaders' career incentives on the dynamics of firm productivity

Note: The coefficients are estimated separately by replacing the dependent variable in Equation (2) with the TFP of new entrants in year T. Period T denotes the year a manufacturing firm enters the market. Period $T + n$ indicates n years after entry. At the time of entry, new firms in city-years with high-incentive leaders are indistinguishable from those entering city-years with low-incentive leaders in terms of TFP. In the third and fourth years after entry, firms initially established under high-incentive leaders are significantly less productive than their counterparts. Our TFP estimation follows Yu (2015) and is based on the ASIF sample from 1998 to 2007.

Table 1: Promotion probability of party secretaries at the prefecture-city level

Dependent variable: Promotion dummy	(1)	(2)	(3)
Starting age	-0.1234***	-0.1156***	-0.4508*
	(0.0142)	(0.0146)	(0.2519)
Dummy: Deputy-province	-8.6986***	-8.9556***	-11.5513***
	(1.3903)	(1.4106)	(3.0871)
Dummy: Province or above	-0.4814	-0.3494	5.8484
	(0.3241)	(0.3417)	(15.5836)
Starting age×Dummy: Deputy-province	0.1542***	0.1587***	0.1447**
	(0.0277)	(0.0282)	(0.0667)
Starting age×Dummy: Province or above	0.0383***	0.0348***	-0.1039
	(0.0031)	(0.0038)	(0.2670)
Dummy: Central work experience		0.2747	0.7285*
		(0.1791)	(0.3995)
Dummy: Graduate degree		0.2000*	0.3003
		(0.1102)	(0.4797)
Population size			1.5282***
			(0.5928)
GDP growth rate			2.4494*
			(1.3026)
Constant	5.6780***	5.2451***	1.4811
	(0.7061)	(0.7457)	(3.2850)
R-squared	0.1411	0.2888	0.3727
Observations	747	747	747

Note: The dependent variable is a dummy variable equal to 1 if a local leader was promoted to a higher-level position at the end of their term, and 0 otherwise. We perform logistic regression, with standard errors reported in brackets. The predicted values capture local leaders' *ex ante* probability of promotion. The predicted value presented in Column 1 is our baseline measure of the career incentive intensity of local leader s in city i, denoted by $CI_i(s)$; those presented in Columns 2 and 3 are our alternative career incentive measures. *** p<0.01, ** p<0.05, * p<0.1.

Table 2: Summary statistics

Variable	Mean	S.D.	Min.	Max.	Definitions
Career incentives	0.34	0.20	0.05	1	Career advancement incentives of party secretaries at the prefecture-level city
Manufacturing firm entry rate	17.80	13.58	0.00	100	Entry rate of manufacturing firms at the prefecture-industry level
Manufacturing firm exit rate	4.53	9.27	0.00	100	Exit rate of manufacturing firms at the prefecture-industry level
1-year survival rate	0.81	0.23	0.00	1	Manufacturing firms' one-year survival rate at the prefecture-industry level
3-year survival rate	0.76	0.25	0.00	1	Manufacturing firms' three-year survival rate at the prefecture-industry level
Survival month	42.89	44.42	0.00	260	Survival duration of new manufacturing firms (in months)
Total factor productivity (TFP)	0.27	0.47	-8.60	10	TFP of new, above-scale manufacturing firms (in log)
Service firm entry rate	14.30	14.37	0.00	100	Entry rate of service firms at the prefecture-industry level
Service firm exit rate	4.56	8.36	0.00	100	Exit rate of service firms at the prefecture-industry level
Location quotient	1.01	0.92	0.01	5.69	Agglomeration measure at the prefecture-industry level
SOE intensity	0.10	0.20	0.00	100	Number of SOEs at the prefecture-industry level
GDP per capita	2.59	2.62	0.31	12.29	Prefecture-level GDP per capita (RMB10,000)
Population size	437.13	231.43	45.82	1203.64	Prefecture-level total population (10,000 people)
Non-agricultural share in GDP	85.11	8.92	46.85	98.82	Prefecture-level share of the non-agricultural sector in GDP
Foreign direct investment (FDI)	5.28	10.76	0.00	136	Prefecture-level FDI inflows (USD1 billion)
College student intensity	208.50	220.91	13.00	1003	Prefecture-level enrollment of college students per 10,000 residents
Special economic zones (SEZ)	0.94	0.24	0.00	1	Prefecture-level indicator variable for the presence of SEZs
Number of mentions	1.92	3.19	0.00	30	Prefecture-level number of mentions in the forward-looking part of the provincial government report
Fiscal transfer	44.91	62.71	0.00	122.01	Prefecture-level value of fiscal transfers received from provincial governments (RMB1 billion)
Registration capital	1018.77	8568.58	1.00	1,000,000	Registration capital of new manufacturing firms (RMB10,000)

Table 3: The effects of local leaders' career incentives on the entry rate of manufacturing firms: Baseline estimates

Dependent variable: Firm entry rate	(1)	(2)	(3)	(4)
Career incentives	7.0535***	6.9800***	7.0657***	7.0666***
	(0.6190)	(0.6354)	(0.6343)	(0.6291)
Location quotient		3.8516***	3.8929***	3.8969***
		(0.3464)	(0.3454)	(0.3454)
SOE intensity		-1.7670***	-1.5486***	-1.6045***
		(0.4645)	(0.4467)	(0.4529)
GDP per capita			-0.4935	-0.4901
			(0.4460)	(0.4460)
Population size			3.4804**	3.4097**
			(1.4297)	(1.4081)
Non-agriculture share			0.3010***	0.2759***
			(0.0419)	(0.0426)
Foreign direct investment				0.5629***
				(0.1620)
College student intensity				0.3164
				(0.2123)
Special economic zone				0.6674**
				(0.3278)
Constant	15.3393***	14.1956***	-27.4128**	-32.4062***
	(0.2301)	(0.2582)	(10.7224)	(10.8609)
Prefecture-industry FE	Yes	Yes	Yes	Yes
Industry-year FE	Yes	Yes	Yes	Yes
Province-year FE	Yes	Yes	Yes	Yes
R-squared	0.3814	0.3875	0.3895	0.3899
Observations	78,165	78,165	78,165	78,165

Note: The dependent variable is the entry rate of manufacturing firms at the prefecture-industry level. Our *career incentives* variable is constructed using the predicted value from Column 1 of Table 1, following Wang et al. (2020). *Location quotient* and *SOE intensity* are controls at the prefecture-industry level. *GDP per capita*, *population size*, *foreign direct investment*, and *college student intensity* are expressed in logarithmic form. *Special economic zone* is a dummy variable that takes a value of 1 if there is an SEZ in a prefecture-level city. Standard errors, reported in brackets, are heteroskedasticity-robust and clustered at the prefecture leader level. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

Table 4: The effects of local leaders' career incentives on the entry rate of manufacturing firms: Subsample results

	(1) Above-scale firms	(2) Below-scale firms	(3) Coastal cities	(4) Inland cities	(5) High-income cities	(6) Low-income cities
Career incentives	1.3434***	8.4333***	6.7263***	7.6500***	5.7762***	8.3518***
	(0.3585)	(0.8176)	(0.7822)	(1.0273)	(0.9355)	(0.8846)
Location quotient	0.3841***	2.0116***	3.9160***	4.0802***	4.2940***	3.7633***
	(0.0948)	(0.2774)	(0.6142)	(0.4086)	(0.5979)	(0.4286)
SOE intensity	-2.3952***	-1.4737***	-0.8959	-2.1283***	-2.1528***	-0.7844
	(0.1899)	(0.5424)	(0.6926)	(0.6132)	(0.7281)	(0.6173)
Other city-level controls	Yes	Yes	Yes	Yes	Yes	Yes
Prefecture-industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Industry-year FE	Yes	Yes	Yes	Yes	Yes	Yes
Province-year FE	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.3499	0.4434	0.4335	0.3705	0.4463	0.3736
Observations	78,165	78,165	40,945	37,220	40,123	38,042

Note: In Columns 1 and 2, the dependent variable is the entry rate of manufacturing firms at the prefecture-industry level, based on above-scale manufacturing firms from the ASIF database and below-scale firms, respectively. In Columns 3–6, the dependent variable is the total entry rate of manufacturing firms at the prefecture-industry level. All city-level control variables are estimated as in the baseline analysis, and their details are not reported for brevity. Standard errors, reported in brackets, are heteroskedasticity-robust and clustered at the prefecture leader level. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

Table 5: Robustness analysis: Alternative measures, estimator, and specifications

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Alternative measurement			Poisson	Alternative specifications		
	Number of new entrants	CI^1	CI^2	Estimation	Incl. mayor's incentive	City-level	Leader-level
Career incentives (of party secretaries)	0.8583***	4.2025***	3.8300***	0.4274***	7.0798***	8.2169***	12.6110***
	(0.0625)	(0.5144)	(0.4326)	(0.0332)	(0.6285)	(0.6515)	(1.8483)
Career incentives of city mayors					1.3926		
					(1.8285)		
Location quotient	8.0325***	3.8714***	3.8867***	0.1201***	3.8976***		
	(2.0316)	(0.3466)	(0.3462)	(0.0151)	(0.3454)		
SOE intensity	-0.1232***	-1.5611***	-1.5787***	-0.0794***	-1.6097***		
	(0.0416)	(0.4534)	(0.4533)	(0.0231)	(0.4530)		
Other city-level controls	Yes	Yes	Yes	Yes	Yes	Yes	No
Prefecture FE	No	No	No	No	No	Yes	Yes
Prefecture-industry FE	Yes	Yes	Yes	Yes	Yes	No	No
Industry-year FE	Yes	Yes	Yes	Yes	Yes	No	No
Province-year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.6548	0.3885	0.3888	0.2638	0.39	0.8226	0.4216
Observations	78,165	78,165	78,165	78,165	78,165	2,638	740

Note: Columns 1–3 use alternative measures of dependent and independent variables. Column 1 adopts the logarithm of the number of newly registered firms as the dependent variable. Columns 2 and 3 use alternative measures of career incentives, which are the *ex ante* probability of promotion based on Columns 2 and 3 of Table 3. The dependent variable in Columns 4–7 is the entry rate of manufacturing firms. Column 4 reports the regression results based on Poisson estimation. Column 5 includes the career incentive intensity of city mayors. Columns 6 and 7 present our estimation results based on city-level and leader-level specifications, respectively. All city-level control variables are estimated as in the baseline analysis; details are omitted for brevity. Standard errors, reported in brackets, are heteroskedasticity-robust and clustered at the prefecture leader level. *** p<0.01, ** p<0.05, * p<0.1.

Table 6: Additional robustness and identification checks

	(1)	(2)	(3)	(4)	(5)	(6)
	Mentioning		Fiscal transfer		Mean reversal	Falsification
Career incentives	7.0750***	7.2110***	7.0741***	8.9356***	6.9074***	0.5349
	(0.6284)	(0.7361)	(0.6277)	(0.9751)	(0.6287)	(2.1624)
Number of mentions	0.1438		0.1431	-0.0068		
	(0.1779)		(0.1777)	(0.2986)		
Fiscal transfer			0.1969			
			(0.1854)			
Average GDP growth (previous tenure)					-4.4901	
					(3.0759)	
Average firm entry rate (previous tenure)					-0.0040	
					(0.6930)	
Location quotient	3.8962***	4.3668***	3.8998***	5.3254***	4.1090***	
	(0.3453)	(0.4567)	(0.3455)	(0.6120)	(0.3648)	
SOE intensity	-1.6081***	-1.4923**	-1.6110***	-1.9235***	-1.6068***	
	(0.4527)	(0.6168)	(0.4524)	(0.5894)	(0.4590)	
Other city-level controls	Yes	Yes	Yes	Yes	Yes	No
Prefecture FE	No	No	No	No	No	Yes
Prefecture-industry FE	Yes	Yes	Yes	Yes	Yes	No
Industry-year FE	Yes	Yes	Yes	Yes	Yes	No
Province-year FE	Yes	Yes	Yes	Yes	Yes	No
R-squared	0.3900	0.4175	0.3900	0.4389	0.3962	0.5318
Observations	78,165	46,863	78,165	38,935	76,361	526

Note: The dependent variable is the entry rate of manufacturing firms at the prefecture-industry level. *Number of mentions* denotes the number of times a prefecture-level city is mentioned in the forward-looking section of the annual provincial government report, expressed in logarithmic form. *Fiscal transfer* represents the amount of fiscal transfers received by a prefecture-level city from a higher-level government, also expressed in logarithmic form. Column 2 presents the estimation results for the subsample of cities with below-median mentions in government reports, while Column 4 provides the results for the subsample of cities with below-median fiscal transfers within a province. Column 6 reports the results of a leader-level falsification test by regressing the contemporaneous entry rate of new firms on the career incentives of the immediate successor in each city. All city-level control variables are estimated as in the baseline analysis; details are omitted for brevity. Standard errors, reported in brackets, are heteroskedasticity-robust and clustered at the prefecture leader level. *** p<0.01, ** p<0.05, * p<0.1.

Table 7: Industry heterogeneity and implications for underlying mechanisms

	(1) Capital	(2) Land	(3) Gov. purchase	(4) Innovation	(5) Combined	(6) Newly created SEZ
Career incentives	6.2110***	5.4549***	7.0241***	7.4788***	4.1105***	0.5442***
	(0.6722)	(1.0701)	(0.6328)	(0.7173)	(1.2341)	(0.1226)
Career incentives×Above-median capital intensity	1.8747***				2.2634***	
	(0.6233)				(0.6600)	
Career incentives×Above-median land intensity		1.0495*			1.4587**	
		(0.6336)			(0.6402)	
Career incentives×Above-median gov. purchase intensity			-0.0929		-0.2942	
			(0.3883)		(0.4057)	
Career incentives×Above-median innovation intensity				-0.8383	-0.5049	
				(0.6450)	(0.6732)	
Location quotient	3.8949***	3.8647***	3.8650***	3.8965***	3.8945***	
	(0.3452)	(0.3462)	(0.3460)	(0.3454)	(0.3454)	
SOE intensity	-1.6062***	-1.7909***	-1.7906***	-1.6064***	-1.6138***	
	(0.4526)	(0.4634)	(0.4632)	(0.4530)	(0.4525)	
Other city-level controls	Yes	Yes	Yes	Yes	Yes	Yes
Prefecture FE	No	No	No	No	No	Yes
Prefecture-industry FE	Yes	Yes	Yes	Yes	Yes	No
Industry-year FE	Yes	Yes	Yes	Yes	Yes	No
Province-year FE	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.3900	0.3885	0.3885	0.3900	0.3901	0.4055
Observations	78,165	78,165	78,165	78,165	78,165	2,440

Note: The dependent variable is the entry rate of manufacturing firms at the prefecture-industry level in Columns 1–5. In Column 6, the dependent variable is a dummy that takes a value of 1 if a new SEZ is established in a city-year, and 0 otherwise. The stand-alone effect of industry-specific intensity is absorbed by prefecture-industry fixed effects. All city-level control variables are estimated as in the baseline analysis; details are omitted for brevity. Standard errors, reported in brackets, are heteroskedasticity-robust and clustered at the prefecture leader level. *** p<0.01, ** p<0.05, * p<0.1.

Table 8: The effects of local leaders' career incentives on the survivability and productivity of new entrants

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Subsequent survivability				Firm-specific productivity		
	1-yr survival rate	3-yr survival rate	Firm-specific survival month		Entry year	Third year	Fourth year
Career incentives	-0.0362***	-0.0257*	-4.7306**	-5.7207***	0.0435	-0.0942*	-0.1395**
	(0.0136)	(0.0146)	(2.0629)	(2.1644)	(0.0351)	(0.0432)	(0.0674)
Career incentives×Registration capital				12.7595			
				(9.9677)			
Registration capital				37.5739***			
				(3.7601)			
Location quotient	0.0279***	0.0349***	1.6982	1.2442	0.0435**	0.0830*	0.1172***
	(0.0045)	(0.0047)	(1.0848)	(1.0377)	(0.0184)	(0.0446)	(0.0383)
SOE intensity	0.0004	-0.0046	-1.0988	0.3399	0.0301	-0.0067	0.2317*
	(0.0078)	(0.0089)	(1.2989)	(2.2857)	(0.0720)	(0.1057)	(0.1213)
Other city-level controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Prefecture-industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry-year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Province-year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.4941	0.4714	0.2147	0.2849	0.2687	0.3450	0.3743
Observations	66,790	66,790	1,241,721	1,241,721	45,181	16,501	8,717

Note: Columns 1–4 present the results based on the survivability of firms entering city-years with local leaders exhibiting varying career incentives. The dependent variable is the one-year survival rate at the prefecture-industry level in Column 1, the three-year survival rate in Column 2, and the duration of firm survival in months in Columns 3–4. *Registration capital* refers to the amount of firm-specific registration capital at the time of entry, expressed in logarithmic form. Columns 5–7 evaluate the TFP performance of new entrants. The dependent variable in Column 5 is a firm's TFP in the year of entry, while Columns 6 and 7 estimate firms' TFP levels in the third and fourth years after entry, respectively. All city-level control variables are estimated as in the baseline analysis; details are omitted for brevity. Standard errors, reported in brackets, are heteroskedasticity-robust and clustered at the prefecture leader level. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

Table 9: Potential explanation for the quality deficit: Corruption vs. mismatch

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Corruption motives of local leaders			Mismatch between types of entrants and local fundamentals					
	Entry rate	1-yr survival rate	Survival month	Entry rate		1-yr survival rate		Survival month	
Career incentives	7.1056***	-0.0369***	-4.5591**	8.3965***	7.8013***	-0.0420***	-0.0437***	-5.5125***	-8.9002***
	(0.6366)	(0.0137)	(2.1765)	(0.6341)	(0.6294)	(0.0147)	(0.0141)	(2.1274)	(2.3896)
Career incentives×$Corrupt$	-0.2207	0.0054	-1.7531						
	(1.0806)	(0.0288)	(4.6298)						
$Corrupt$	-0.2282	0.0040	0.0079						
	(0.4489)	(0.0124)	(1.9315)						
Career incentives×$matched^{50}$				-2.7190***		0.0124		1.1185	
				(0.6740)		(0.0092)		(1.2669)	
Career incentives×$matched^{25}$					-3.1520***		0.0383***		4.5718**
					(0.9142)		(0.0130)		(1.9064)
$matched^{50}$				1.3722***		0.0032		0.5482	
				(0.3482)		(0.0046)		(0.6128)	
$matched^{25}$					1.9953***		-0.0099		1.0512
					(0.4223)		(0.0060)		(0.7704)
Location quotient	3.8971***	0.0277***	1.7082	3.6742***	3.8299***	0.0255***	0.0259***	1.6539	1.9230*
	(0.3451)	(0.0045)	(1.0885)	(0.3615)	(0.3615)	(0.0048)	(0.0048)	(1.0891)	(1.0543)
SOE intensity	-1.6043***	0.0003	-1.1085	-1.6039***	-1.6022***	0.0006	0.0004	-1.0917	-1.0949
	(0.4529)	(0.0078)	(1.2991)	(0.4520)	(0.4529)	(0.0078)	(0.0078)	(1.2980)	(1.2971)
Other city-level controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Prefecture-industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry-year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Province-year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.3900	0.4941	0.2147	0.3902	0.3903	0.4941	0.4942	0.2147	0.2147
Observations	78,165	78,165	1,241,721	78,165	78,165	78,165	78,165	1,241,721	1,241,721

Note: The dependent variable is the entry rate of manufacturing firms at the prefecture-industry level in Columns 1, 4, and 5; the one-year survival rate in Columns 2, 6, and 7; and firm survival in months in Columns 3, 8, and 9. $Corrupt$ is a leader-level indicator variable that takes a value of 1 if the leader was investigated as part of an anti-corruption campaign, and 0 otherwise. $matched^{50}$ ($matched^{25}$) is an indicator variable that takes a value of 1 if an industry ranks above the 50th percentile (25th percentile) in the city-industry-year location quotient ranking, and 0 otherwise. All control variables are estimated as in the baseline analysis; details are omitted for brevity. Standard errors, reported in brackets, are heteroskedasticity-robust and clustered at the prefecture leader level. *** p<0.01, ** p<0.05, * p<0.1.

Table 10: The effects of local leaders' career incentives on other related indicators

	(1)	(2)	(3)	(4)	(5)	(6)
	Manufacturing				Service	
	Entry rate	Survival month	Exit rate	TFP growth	Entry rate	Exit rate
Career incentives	7.7707***	-5.6268**	0.2044	0.0126	-6.3105	-1.2153
	(0.7541)	(2.2022)	(0.4516)	(0.0129)	(4.4262)	(4.2773)
Career incentive$\times Post_{08}$	-1.7088*	-6.5352**				
	(0.9041)	(3.1886)				
Location quotient	3.8970***	1.5687	-0.8776***	0.0067**	7.3710***	3.6689***
	(0.3454)	(1.0853)	(0.2611)	(0.0029)	(0.8349)	(0.8424)
SOE intensity	-1.6070***	-1.0544	0.3129	-0.0144		
	(0.4527)	(1.2908)	(0.3569)	(0.0114)		
Other city-level controls	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	No	Yes	No	Yes	No	No
Prefecture-industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Industry-year FE	Yes	Yes	Yes	Yes	Yes	Yes
Province-year FE	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.3900	0.2148	0.3387	0.2751	0.2605	0.2162
Observations	78,165	1,241,721	78,165	1,027,231	58,383	58,383

Note: The dependent variable in Columns 1–6 is as follows: the entry rate of manufacturing firms at the prefecture-industry level, firm survival in months, the exit rate of manufacturing firms at the prefecture-industry level, the TFP growth rate of above-scale manufacturing firms, the entry rate of service firms at the prefecture-industry level, and the exit rate of service firms at the prefecture-industry level, respectively. The stand-alone effect of the $Post_{08}$ variable is absorbed by province-year fixed effects. All city-level control variables are estimated as in the baseline analysis; details are omitted for brevity. Standard errors, reported in brackets, are heteroskedasticity-robust and clustered at the prefecture leader level. *** p<0.01, ** p<0.05, * p<0.1.

References

Acemoglu, D., Fergusson, L., Robinson, J., Romero, D., Vargas, J.F., 2020. The perils of high-powered incentives: evidence from colombia's false positives. American Economic Journal: Economic Policy 12, 1–43.

Acemoglu, D., Johnson, S., Robinson, J.A., 2005. Institutions as a fundamental cause of long-run growth. Handbook of Economic Growth 1, 385–472.

Acs, Z.J., Audretsch, D.B., Lehmann, E.E., 2013. The knowledge spillover theory of entrepreneurship. Small Business Economics 41, 757–774.

Aghion, P., Blundell, R., Griffith, R., Howitt, P., Prantl, S., 2009. The effects of entry on incumbent innovation and productivity. The Review of Economics and Statistics 91, 20–32.

Aghion, P., Burgess, R., Redding, S.J., Zilibotti, F., 2008. The unequal effects of liberalization: Evidence from dismantling the license raj in india. American Economic Review 98, 1397–1412.

Akcigit, U., Ates, S.T., 2021. Ten facts on declining business dynamism and lessons from endogenous growth theory. American Economic Journal: Macroeconomics 13, 257–98.

Asturias, J., Hur, S., Kehoe, T.J., Ruhl, K.J., 2023. Firm entry and exit and aggregate growth. American Economic Journal: Macroeconomics 15, 48–105.

Bai, C.e., Hsieh, C.T., Song, Z., 2020a. Special deals with chinese characteristics. NBER Macroeconomics Annual 34, 341–379.

Bai, C.E., Jia, R., Li, H., Wang, X., 2021. Entrepreneurial Reluctance: Talent and Firm Creation in China. Technical Report. National Bureau of Economic Research.

Bai, C.E., Liu, Q., Yao, W., 2020b. Earnings inequality and china's preferential lending policy. Journal of Development Economics 145, 102477.

Barwick, P.J., Chen, L., Li, S., Zhang, X., 2022. Entry deregulation, market turnover, and efficiency: China's business registration reform. Market Turnover, and Efficiency: China's Business Registration Reform (April 16, 2022) .

Boppart, T., 2014. Structural change and the kaldor facts in a growth model with relative price effects and non-gorman preferences. Econometrica 82, 2167–2196.

Brandt, L., Kambourov, G., Storesletten, K., 2020. Barriers to entry and regional economic growth in China. Technical Report.

Brandt, L., Van Biesebroeck, J., Zhang, Y., 2012. Creative accounting or creative destruction? firm-level productivity growth in chinese manufacturing. Journal of Development Economics 97, 339–351.

Brandt, L., Van Biesebroeck, J., Zhang, Y., Wang, L., 2023. Where has all the dynamism gone? Productivity growth in China's manufacturing sector, 1998-2013. Technical Report.

Branstetter, L., Lima, F., Taylor, L.J., Venâncio, A., 2014. Do entry regulations deter entrepreneurship and job creation? evidence from recent reforms in portugal. The Economic Journal 124, 805–832.

Bruno, R.L., Bytchkova, M., Estrin, S., 2013. Institutional determinants of new firm entry in russia: A cross-regional analysis. Review of Economics and Statistics 95, 1740–1749.

Caliendo, L., Dvorkin, M., Parro, F., 2019. Trade and labor market dynamics: General equilibrium analysis of the china trade shock. Econometrica 87, 741–835.

Caliendo, L., Parro, F., 2020. The quantitative effects of trade policy on industrial and labor location. Technical Report.

Cao, G., Weng, X., Xu, M., Zhou, L.A., 2021. Minimum performance target, multitasking, and incentives: theory and evidence from China's air quality controls. Technical Report. SSRN Working Paper.

Cerdeiro, D.A., Ruane, C., 2022. China's Declining Business Dynamism. Technical Report. International Monetary Fund.

Chatterji, A., Glaeser, E., Kerr, W., 2014. Clusters of entrepreneurship and innovation. Innovation policy and the economy 14, 129–166.

Chen, J., Roth, J., 2024. Logs with zeros? some problems and solutions. The Quarterly Journal of Economics 139, 891–936.

Chen, Y., Henderson, J.V., Cai, W., 2017. Political favoritism in china's capital markets and its effect on city sizes. Journal of Urban Economics 98, 69–87.

Chen, Y.J., Li, P., Lu, Y., 2018. Career concerns and multitasking local bureaucrats: Evidence of a target-based performance evaluation system in china. Journal of Development Economics 133, 84–101.

Cohn, J.B., Liu, Z., Wardlaw, M.I., 2022. Count (and count-like) data in finance. Journal of Financial Economics 146, 529–551.

Cui, C., Li, L.S.Z., 2023. Trade policy uncertainty and new firm entry: Evidence from china. Journal of Development Economics 163, 103093.

Decker, R.A., Haltiwanger, J., Jarmin, R.S., Miranda, J., 2016. Declining business dynamism: What we know and the way forward. American Economic Review 106, 203–07.

Delgado, M., Porter, M.E., Stern, S., 2010. Clusters and entrepreneurship. Journal of Economic Geography 10, 495–518.

Ding, H., Fan, H., Lin, S., 2018. Connect to trade. Journal of International Economics 110, 50–62.

Dinlersoz, E.M., Fu, Z., 2022. Infrastructure investment and growth in china: A quantitative assessment. Journal of Development Economics 158, 102916.

Djankov, S., La Porta, R., Lopez-de Silanes, F., Shleifer, A., 2002. The regulation of entry. The Quarterly Journal of Economics 117, 1–37.

Duranton, G., Kerr, W.R., 2015. The logic of agglomeration. Technical Report. National Bureau of Economic Research.

Ellison, G., Glaeser, E.L., 1997. Geographic concentration in us manufacturing industries: a dartboard approach. Journal of Political Economy 105, 889–927.

Ellison, G., Glaeser, E.L., Kerr, W.R., 2010. What causes industry agglomeration? evidence from coagglomeration patterns. American Economic Review 100, 1195–1213.

Fang, H., Li, M., Wu, Z., 2022. Tournament-Style Political Competition and Local Protectionism: Theory and Evidence from China. Technical Report. National Bureau of Economic Research.

Fisman, R., Wang, Y., 2017. The distortionary effects of incentives in government: evidence from china's "death ceiling" program. American Economic Journal: Applied Economics 9, 202–218.

Fritsch, M., Falck, O., 2007. New business formation by industry over space and time: a multidimensional analysis. Regional Studies 41, 157–172.

Ghani, E., Kerr, W.R., O'connell, S., 2014a. Spatial determinants of entrepreneurship in india. Regional Studies 48, 1071–1089.

Ghani, E., Kerr, W.R., O'Connell, S.D., 2014b. Political reservations and women's entrepreneurship in india. Journal of Development Economics 108, 138–153.

Glaeser, E.L., Kerr, W.R., 2009. Local industrial conditions and entrepreneurship: how much of the spatial distribution can we explain? Journal of Economics & Management Strategy 18, 623–663.

Guo, Q., He, C., Li, D., 2016. Entrepreneurship in china: The role of localisation and urbanisation economies. Urban Studies 53, 2584–2606.

Haltiwanger, J., Jarmin, R., Kulick, R., Miranda, J., 2017. High-Growth Firms: Contribution to Job, Output and Productivity Growth. University of Chicago Press Chicago.

Haveman, H.A., Jia, N., Shi, J., Wang, Y., 2017. The dynamics of political embeddedness in china. Administrative Science Quarterly 62, 67–104.

He, Z.L., Tong, T.W., Zhang, Y., He, W., 2018. A database linking chinese patents to china's census firms. Scientific Data 5, 1–16.

Henderson, J.V., Su, D., Zhang, Q., Zheng, S., 2022. Political manipulation of urban land markets: Evidence from china. Journal of Public Economics 214, 104730.

Hong, S., Reed, W.R., Tian, B., Wu, T., Chen, G., 2021. Does fdi promote entrepreneurial activities? a meta-analysis. World Development 142, 105436.

Hopenhayn, H.A., 2014. Firms, misallocation, and aggregate productivity: A review. Annual Review of Economics 6, 735–770.

Jia, R., Kudamatsu, M., Seim, D., 2015. Political selection in china: The complementary roles of connections and performance. Journal of the European Economic Association 13, 631–668.

Jia, R., Lan, X., i Miquel, G.P., 2021. Doing business in china: Parental background and government intervention determine who owns busines. Journal of Development Economics 151, 102670.

Jiang, H., Zheng, Y., Zhu, L., 2021. Growing through Competition: The Reduction of Entry Barriers in Chinese Manufacturing. Technical Report.

Jiang, J., 2018. Making bureaucracy work: Patronage networks, performance incentives, and economic development in china. American Journal of Political Science 62, 982–999.

Jiang, J., Mei, Y., 2020. Mandarins make markets: Leadership rotations and inter-provincial trade in china. Journal of Development Economics 147, 102524.

Jiang, J., Zhang, M., 2020. Friends with benefits: Patronage networks and distributive politics in china. Journal of Public Economics 184, 104143.

Kaplan, D.S., Piedra, E., Seira, E., 2011. Entry regulation and business start-ups: Evidence from mexico. Journal of Public Economics 95, 1501–1515.

Kerr, W.R., Kominers, S.D., 2015. Agglomerative forces and cluster shapes. Review of Economics and Statistics 97, 877–899.

Kerr, W.R., Nanda, R., 2009. Democratizing entry: Banking deregulations, financing constraints, and entrepreneurship. Journal of Financial Economics 94, 124–149.

Kerr, W.R., Nanda, R., 2011. Financing constraints and entrepreneurship. Handbook of Research on Innovation and Entrepreneurship. Cheltenham: Elgar , 88–103.

Klapper, L., Laeven, L., Rajan, R., 2006. Entry regulation as a barrier to entrepreneurship. Journal of Financial Economics 82, 591–629.

Kong, D., Qin, N., Xiang, J., 2021. Minimum wage and entrepreneurship: Evidence from china. Journal of Economic Behavior & Organization 189, 320–336.

Landry, P.F., Lü, X., Duan, H., 2018. Does performance matter? evaluating political selection along the chinese administrative ladder. Comparative Political Studies 51, 1074–1105.

Lerner, J., 2020. Government incentives for entrepreneurship. Technical Report. National Bureau of Economic Research Cambridge.

Li, H., Zhou, L.A., 2005. Political turnover and economic performance: the incentive role of personnel control in china. Journal of Public Economics 89, 1743–1762.

Li, Y., Rama, M., 2015. Firm dynamics, productivity growth, and job creation in developing countries: The role of micro-and small enterprises. The World Bank Research Observer 30, 3–38.

Lin, J.Y., Liu, S., Xu, J.M., Zhang, H., 2023. Learn, in Order to Practise: The Effect of Political Rotation on Local Comparative Advantage in China. Technical Report.

Lu, Y., Wang, J., Zhu, L., 2019. Place-based policies, creation, and agglomeration economies: Evidence from china's economic zone program. American Economic Journal: Economic Policy 11, 325–60.

Martinez, L.R., 2022. How much should we trust the dictator's gdp growth estimates? Journal of Political Economy 130, 2731–2769.

North, D.C., 1990. Institutions, institutional change and economic performance. Cambridge university press.

Parker, S.C., 2018. The economics of entrepreneurship. Cambridge University Press.

Quatraro, F., Vivarelli, M., 2015. Drivers of entrepreneurship and post-entry performance of newborn firms in developing countries. The World Bank Research Observer 30, 277–305.

Sato, Y., Tabuchi, T., Yamamoto, K., 2012. Market size and entrepreneurship. Journal of Economic Geography 12, 1139–1166.

Shen, Y., Wu, J., Wu, S., 2022. City-chief turnover and place-based policy change: Evidence from china. Journal of Regional Science 62, 1296–1328.

Shi, X., Xi, T., Zhang, X., Zhang, Y., 2021. "moving umbrella": Bureaucratic transfers and the comovement of interregional investments in china. Journal of Development Economics 153, 102717.

Sun, X., 2023. The Innovation Cost of Short Political Horizons: Evidence from Local Leaders' Promotion in China. Technical Report. Working Paper.

Tian, X., Xu, J., 2022. Do place-based policies promote local innovation and entrepreneurship? Review of Finance 26, 595–635.

Timmer, M., de Vries, G.J., de Vries, K., 2015. Patterns of structural change in developing countries, in: Routledge handbook of industry and development. Routledge, pp. 65–83.

Wang, S., Yang, D.Y., 2021. Policy experimentation in china: The political economy of policy learning. Technical Report. National Bureau of Economic Research.

Wang, Y., Dickson, B.J., 2022. How corruption investigations undermine regime support: evidence from china. Political Science Research and Methods 10, 33–48.

Wang, Z., Zhang, Q., Zhou, L.A., 2020. Career incentives of city leaders and urban spatial expansion in china. Review of Economics and Statistics 102, 897–911.

WJP, 2024. WJP Rule of Law Index. Technical Report. World Justice Project.

Wu, G.L., 2018. Capital misallocation in china: Financial frictions or policy distortions? Journal of Development Economics 130, 203–223.

Xiong, W., Song, Z., 2018. The mandarin model of growth. Technical Report. National Bureau of Economic Research.

Xu, C., 2011. The fundamental institutions of china's reforms and development. Journal of Economic Literature 49, 1076–1151.

Yu, M., 2015. Processing trade, tariff reductions and firm productivity: Evidence from chinese firms. The Economic Journal 125, 943–988.

Zheng, S., Sun, W., Wu, J., Kahn, M.E., 2017. The birth of edge cities in china: Measuring the effects of industrial parks policy. Journal of Urban Economics 100, 80–103.

Zhou, L.A., 2019. Understanding china: a dialogue with philip huang. Modern China 45, 392–432.

Zilibotti, F., 2017. Growing and slowing down like china. Journal of the European Economic Association 15, 943–988.

Online Appendix

This appendix provides additional empirical results that support our main results.

A Results of the interaction between career incentives and regional characteristics

In Table 4 of the manuscript, we present our split sample results for the impact of local leaders' career incentives on the entry rate of manufacturing firms in different regions. Here, we augment our estimations with interaction terms. Specifically, $Coast$ is a dummy variable that takes a value of 1 if a city is located in the coastal region of China, and 0 otherwise. $High\text{-}income$ is a dummy variable equal to 1 if a city is above the median of the average GDP per capita ranking during our sample period, and 0 otherwise. We augment the baseline specification in Equation (2) with the interaction terms between our measure of the career incentives of local leaders and these regional dummies. The results are reported in Table A1.

The interaction terms of career incentives with both $Coast$ and $High\text{-}income$ are not statistically significant, indicating that the marginal effect of highly motivated local officials on the entry rate of new manufacturing firms is identical across regions with different geographic attributes or levels of development.

B Results of the association between leader appointment and city-level initial conditions

To rule out potential endogeneity concerns, we test whether the appointment of party secretaries with varying career incentives is systematically correlated with the initial conditions of the city where they are appointed. We use our measure of the career incentives of the incoming local leader as the dependent variable and regress it on a set of pre-tenure city-level attributes, including GDP per capita, population size, non-agricultural share in GDP, FDI, college student intensity, presence of SEZs, and entry rate of manufacturing firms. In Column 1-2 of Table A2, the independent variable is the average growth rate over the two years preceding the year the leader took office in a city, while in Column 3-4, the independent variable is the average value

Table A1: The effects of local leaders' career incentives on the entry rate of manufacturing firms across regions

Dependent variable: Firm entry rate	(1)	(2)
Career incentives	7.4299***	7.4769***
	(1.0306)	(0.8056)
Career incentives×$Coastal$	-0.6174	
	(1.2990)	
Career incentives×$High\text{-}income$		-0.7851
		(1.1849)
Location quotient	3.8979***	3.8986***
	(0.3453)	(0.3455)
SOE intensity	-1.6060***	-1.6047***
	(0.4533)	(0.4529)
Other city-level controls	Yes	Yes
Prefecture-industry FE	Yes	Yes
Industry-year FE	Yes	Yes
Province-year FE	Yes	Yes
R-squared	0.3899	0.3900
Observations	78,165	78,165

Note: The dependent variable is the entry rate of manufacturing firms at the prefecture-industry level. $Coastal$ is a dummy variable that takes a value of 1 if a city is located in the coastal region of China, and 0 otherwise. $High\text{-}income$ is a dummy variable equal to 1 if a city is above the median of the average GDP per capita ranking during our sample period, and 0 otherwise. All city-level control variables are estimated as in the baseline analysis; details are not reported for brevity. Standard errors, reported in brackets, are heteroskedasticity-robust and clustered at the prefecture leader level. *** p<0.01, ** p<0.05, * p<0.1.

Table A2: The association between leader appointment and city-level initial conditions

Dependent Var.: Career Incentives	(1)	(2)	(3)	(4)
	Growth rates		Average values	
GDP per capita	-0.0393	-0.0028	-0.0486	-0.0187
	(0.0871)	(0.1202)	(0.0464)	(0.0803)
Population	-0.2817	-0.0093	-0.0493	0.1874
	(0.2284)	(0.2866)	(0.0534)	(0.1484)
Foreign direct investment	-0.0049	-0.0130	-0.0178	-0.0140
	(0.0149)	(0.0161)	(0.0132)	(0.0161)
Special Economic zones	-0.0360	-0.0633	0.0709	0.0628
	(0.0843)	(0.0923)	(0.0652)	(0.0981)
College student intensity	0.0339	0.0472	-0.0609	-0.0270
	(0.0506)	(0.0473)	(0.0592)	(0.1014)
Non-agriculture sector	0.0079	0.0034	0.0005	-0.0007
	(0.0073)	(0.0094)	(0.0015)	(0.0045)
Manufacturing entry rate	-0.0040	-0.0012	0.0006	-0.0040
	(0.0029)	(0.0034)	(0.0013)	(0.0035)
Constant	0.3267***	0.3236***	1.2672***	-0.4013
	(0.0158)	(0.0190)	(0.1423)	(1.3876)
Prefecture FE	No	Yes	No	Yes
Year FE	No	Yes	No	Yes
R-squared	0.0111	0.5984	0.0119	0.6012
Observations	460	460	460	460

Note: The dependent variable is the career incentives of each incoming prefecture leader. The dependent variable is the career incentives of each incoming prefecture leader. The independent variable in Column 1-2 is the average growth rate over the two years preceding the year the leader took office in a city. The independent variable in Column 3-4 is the average value over all years of the tenure of the previous leader. Standard errors, reported in brackets, are heteroskedasticity-robust. *** p<0.01, ** p<0.05, * p<0.1.

over all years of the tenure of the previous leader. We control for prefecture-city fixed effects and year fixed effects in Columns 2 and 4. In all cases, the coefficients are not statistically significant. This shows that the appointment of high-incentive local leaders is relatively random and is not associated with local economic conditions.

C Robustness analyses: Effects of local leaders' career incentives on the longevity of new entrants

In Table 8 of the manuscript, we show that new firms established during the tenure of high-incentive local leaders tend to have a shorter survival time. Here, we perform a series of additional analyses analogous to the robustness tests for the intensity of new firm entry presented in

Section 3.2.2. Specifically, Column 1 of Table A3 includes the number of mentions received by a city in the forward-looking part of the provincial government report. Column 2 further adds the amount of fiscal transfers received by a city from a higher-level government. Column 3 includes the annual GDP growth rate and the annual entry rate of manufacturing firms averaged over the tenure of the previous leader . In all three cases, the coefficients of career incentives remain negative and statistically significant, confirming that new entrants under high-incentive officials tend to suffer from low survivability. Finally, Column 4 presents a falsification test that regresses a firm's survival time in months on the career incentives of the immediate successor in each city. Reassuringly, the coefficient is not statistically significant.

Table A3: Robustness analyses: Effects of local leaders' career incentives on the quality of new entrants

Dependent variable: Firm survival month	(1) Mentioning	(2) Fiscal transfer	(3) Mean reversal	(4) Falsification
Career incentives	-4.7339**	-4.7435**	-4.7241**	0.9807
	(2.0664)	(2.0819)	(2.0621)	(3.0296)
Number of mentions	0.6614	0.6590		
	(0.4736)	(0.4700)		
Fiscal transfers		-0.0541		
		(0.6041)		
Average GDP growth rate (previous tenure)			0.0362	
			(0.7117)	
Average firm entry rate (previous tenure)			-1.0231	
			(1.1402)	
Location quotient	1.6908	1.6913	1.6984	1.9212
	(1.0832)	(1.0816)	(1.0858)	(1.6699)
SOE intensity	-1.1055	-1.1014	-1.1099	0.1260
	(1.2990)	(1.2959)	(1.2975)	(1.8901)
Constant	99.4528**	99.8877**	97.8203**	115.9212*
	(49.1489)	(49.1196)	(48.9272)	(63.1829)
Other city-level controls	Yes	Yes	Yes	Yes
Prefecture-industry FE	Yes	Yes	Yes	Yes
Industry-year FE	Yes	Yes	Yes	Yes
Province-year FE	Yes	Yes	Yes	Yes
R-squared	0.2147	0.2147	0.2147	0.2141
Observations	1,241,721	1,241,721	1,241,721	947,295

Note: The dependent variable is the longevity of new manufacturing firms, measured in months. *Number of mentions* denotes the number of times a prefecture-level city is mentioned in the forward-looking section of the annual provincial government report, expressed in logarithmic form. *Fiscal transfer* represents the amount of fiscal transfers received by a prefecture-level city from a higher-level government, also expressed in logarithmic form. Column 4 conducts a falsification test by regressing the survival duration of new manufacturing firms on the career incentives of the immediate successor in each city. All city-level control variables are estimated as in the baseline analysis; details are omitted for brevity. Standard errors, reported in brackets, are heteroskedasticity-robust and clustered at the prefecture leader level. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.