



Becoming global billionaires from mainland China: 2004–2018

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Abstract This paper documents the increase in the number of global billionaires from mainland China between 2004 and 2018. One of the key findings is that under conditions of an open economy, grassroots billionaire entrepreneurs (e.g., Jack Ma) could mitigate political economy as well as financial frictions via capital injections from foreign venture capitalists. By building a unique database, I report that (i) the politically unconnected billionaire entrepreneurs financed by foreign venture capitalists are more likely to go public their companies outside mainland China (mainly in Hong Kong and the USA), use offshore financing vehicles, and enter the innovation sector and (ii) the politically connected global billionaire entrepreneurs,

however, are closely associated with a record of state-owned enterprise (SOE) restructuring.

Plain English Summary The increase in the number of billionaire entrepreneurs (e.g., Jack Ma) from mainland China between 2004 and 2018 is a new phenomenon, which necessitates a reassessment of the crony capitalism arguments, the types of entrepreneurs, and the sources of innovation. This paper has important implications for future research on entrepreneurship in a global economy and the design of relevant policies.

Keywords Global billionaires · China · Entrepreneurship

JEL Classification L26 · M13 · O1 · O3 · P31

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1 Introduction

In a global economy, genuine entrepreneurship can sometimes overcome the difficulties posed by inefficient institutions created by state actors and bring out unexpected responses with good outcomes. On May 5, 2013, Jack Ma, the founder of Alibaba Group, delivered a public speech at an event co-hosted by Alibaba Group and the Regions of Innovation and Entrepreneurship (SPRIE) of the Graduate School of Business at Stanford University.¹ Two noticeable facts stood out

¹ Freeman Spogli Institute for International Studies, Stanford University (2013, May 6). *Jack Ma: Ideas and Technology Can Change the World*.

for this newly minted global billionaire entrepreneur. As Jack Ma admitted in his speech, without Silicon Valley, there could never be Alibaba, let alone its success. Importantly, before plunging into the Internet business, Ma was an English teacher from a humble background in a country where success is often perceived to be driven purely by political connections.

This research deals with the speed and magnitude at which the number of global billionaires from mainland China has caught up with that of the USA (Abramovitz, 1986) and conceptualizes this phenomenon as one of the “China puzzles” (Xu, 2011). The main contribution of this paper is to provide direct statistical evidence on the joint impact of political connections and foreign exposure on firm behaviors, particularly financing decisions. The sample of Chinese billionaire entrepreneurs is a novel set for understanding the dynamics of government-business relations in a fast-growing economy and offers institutional settings for understanding the nexus between stages of economic development and entrepreneurship (Acs et al., 2008). A key objective of this study is to evaluate whether and to what extent becoming global billionaires from mainland China is associated with engaging in collusive behavior with the state.

Complementing cross-country empirical papers on global billionaires (Bagchi & Svejnar, 2015), this paper offers a systematic empirical assessment of global billionaire entrepreneurs from mainland China. Specifically, this study exploits the empirical context to develop a difference-in-difference kind of estimate of the joint effect of political connections and foreign exposure on billionaire financing behaviors. From the construction of dataset, my analysis builds on two wealth compiling lists: the World’s Billionaires compiled by Forbes and Hurun’s China list. Then, a number of measures on political connections and foreign exposure are constructed. In this way, this paper seeks to estimate the effects driven by political connections and those by foreign exposure. One key finding from this approach is to identify different types of entrepreneurship within the constructed datasets. Beyond the main results, I am able to provide a series of robustness checks to reinforce the overall interpretation.

Broadly speaking, this research attempts to assess the crony capitalist argument (McGregor, 2010; Pei, 2016) within the Chinese context. Crony capitalism is often considered as an imperfect

solution to commitment problems and is prevalent among authoritarian states, which cannot credibly commit to non-expropriation of entrepreneurs and business persons. The inability to provide credible commitments to property protection makes economic growth and innovation difficult to achieve under the shadows of expropriations (Aguiar & Amador, 2011; Johnson et al., 2002). Therefore, economic growth can be crony capitalist in those contexts, which are driven by a model of a cozy, if not outright collusive, relationship between connected firms and elites from the Communist Party of China (CPC). In light of this, Acemoglu and Robinson (2012) assert that China is unlikely to have innovation-driven growth under extractive institutions.

Connected firms can be found everywhere in the world (see Khwaja and Mian (2005; Leuz & Oberholzer-Gee, 2006; Cingano & Pinotti, 2013; Akcigit et al., 2018)). Indeed, Haber (2002, 73) notes from experiences of Latin America, “the current focus on the existence of either limited governments (which can sustain growth) versus predatory governments (which hamper growth) is limited because it ignores the fact that commitment is a matter of degree. Rather than a binary choice, establishing credible commitments is a problem of selecting a particular governance structure from a continuum of different degrees of commitment that a political system can sustain. In fact, limited and predatory governments are but two extreme cases of political structures that integrate private and public interests.”

Following this insight, this paper investigates how commitment problems can be attenuated within the window period and explores the role of foreign financing and venture capitalists (VCs). In my empirical analysis, I report that the channeling mechanism through which crony capitalistic elements might work came mostly through the restructuring state-owned enterprise (SOE) and that the fraction of this kind of billionaire entrepreneurs is about one out of five—much less than the crony capitalist argument would have predicted. In addition, this finding is clearly complemented by the existence of self-made billionaire entrepreneurs in the Internet businesses from my database—Jack Ma (Alibaba), Pony Ma (Tencent), Robin Li (Baidu), William Ding (NetEase), Richard Liu (JD), and others. These examples highlight the important role of

Table 1 Summary statistics

| Panel A: database information: Forbes (augmented by Hurun Top 300) | | | | | |
|---|-------------|-------------|--------------------------|--------------------------|--------------------------|
| Total number of billionaire entrepreneurs: 317 (413) | | | | | |
| Identified billionaire entrepreneurs: Forbes (augmented by Hurun Top 300): 301(376) | | | | | |
| Panel B: Summary statistics for Forbes (Plus Hurun Top 300) | | | | | |
| Variable (range/type) | Mean | SD | 1 st Quartile | 2 nd Quartile | 3 rd Quartile |
| Family (un)connectedness (0–1) | 0.94 (0.94) | 0.24 (0.24) | 1 (1) | 1 (1) | 1 (1) |
| Job (un)connectedness (0–1) | 0.72 (0.73) | 0.45 (0.45) | 0 (0) | 1 (1) | 1 (1) |
| First scoop of gold (0–1) | 0.83 (0.83) | 0.38 (0.38) | 1 (1) | 1 (1) | 1 (1) |
| Unconnectedness index (0–3) | 2.49 (2.50) | 0.82 (0.83) | 2 (2) | 3 (3) | 3 (3) |
| English speaking (0–1) | 0.05 (0.06) | 0.22 (0.24) | 0 (0) | 0 (0) | 0 (0) |
| Foreign education (0–1) | 0.02 (0.03) | 0.15 (0.18) | 0 (0) | 0 (0) | 0 (0) |
| Foreign financing (0–1) | 0.08 (0.09) | 0.28 (0.28) | 0 (0) | 0 (0) | 0 (0) |
| Foreign management (0–1) | 0.09 (0.07) | 0.28 (0.26) | 0 (0) | 0 (0) | 0 (0) |
| Foreign exposure index (0–4) | 0.24 (0.26) | 0.69 (0.72) | 0 (0) | 0 (0) | 0 (0) |
| College education (0–1) | 0.53 (0.54) | 0.50 (0.50) | 0 (0) | 1 (1) | 1 (1) |
| Elite college (0–1) | 0.27 (0.30) | 0.44 (0.46) | 0 (0) | 0 (0) | 1 (1) |
| CEO (0–1) | 0.93 (0.93) | 0.26 (0.26) | 1 (1) | 1 (1) | 1 (1) |
| Female (0–1) | 0.06 (0.06) | 0.24 (0.24) | 0 (0) | 0 (0) | 0 (0) |
| Listing (0–1) | 0.79 (0.76) | 0.41 (0.43) | 1 (1) | 1 (1) | 1 (1) |
| Foreign listing (0–1) | 0.25 (0.26) | 0.44 (0.44) | 0 (0) | 0 (0) | 1 (1) |
| SOE restructuring (0–1) | 0.16 (0.15) | 0.37 (0.36) | 0 (0) | 0 (0) | 0 (0) |
| Offshore vehicle (0–1) | 0.26 (0.26) | 0.44 (0.44) | 0 (0) | 0 (0) | 1 (1) |
| Party organ (0–1) | 0.69 (0.64) | 0.46 (0.48) | 0 (0) | 1 (1) | 1 (1) |
| TMT sector entry (0–1) | 0.36 (0.33) | 0.48 (0.47) | 0 (0) | 0 (0) | 1 (1) |

Although these two lists are based on different valuation techniques, the variations among top 300 billionaires are quite small. Data source: Forbes’ the World’s Billionaire List, Feb. 2017 version. Hurun’s China Rich List, 2016 version

financial innovation (e.g., the use of the variable interest entities) as a commitment device critical, in the window period, to the economic performance of the Chinese state.²

The prediction of the crony capitalistic argument posits that Chinese global billionaire entrepreneurs are mostly if not all the product of corruption and state capture. If so, these billionaire entrepreneurs are such kind of billionaires, how would Masayoshi Son, a savvy venture capitalist (VC) from Silicon Valley, come to place his bet on Jack Ma?

To explain the rise of Jack Ma and others, this research concentrates on the systematic application of offshore financing vehicles, embodied in the use of variable interest entity (VIE) as an innovative device

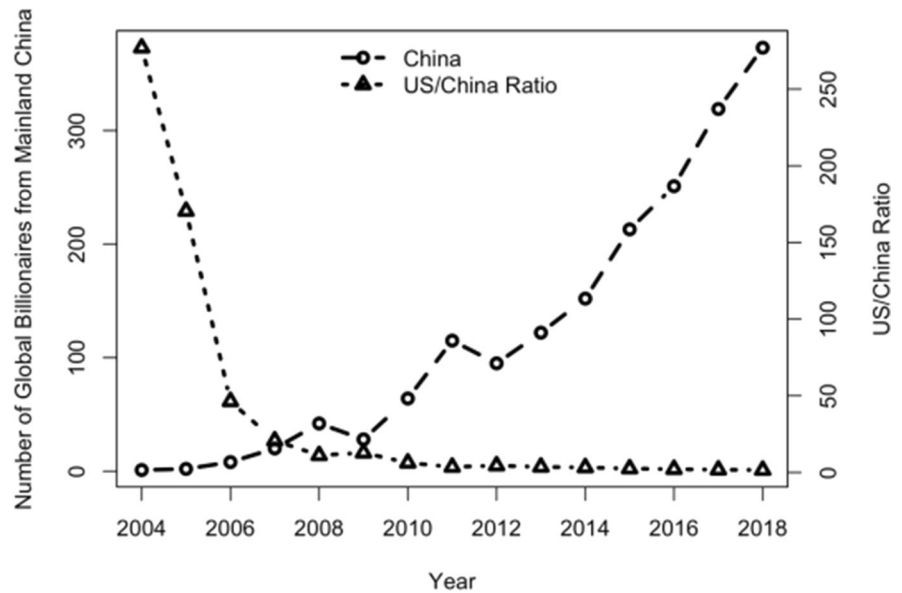
of operating superstar firms in mainland China.³ The failure to shed these financial innovations in a proper light disavows the potential of a genuine process of creative destruction within an authoritarian state (Aghion & Howitt, 1992).

The finding in this paper also adds to the financial development literature (King & Levine, 1993; Rajan & Zingales, 2003). Drawing from the Chinese experiment as a case study, Allen et al. (2005) observed, “China’s venture capital industry, since its inception in the 1980s, is underdeveloped and its role in supporting the growth of young firms is very limited.” Based on the evidence reported in this study, the role of China’s venture capital industry in facilitating growth and innovation in a global economy merits re-evaluation. Unlike earlier assessments on offshore

² Table C.1 from the appendix lists a few exemplary Internet billionaire entrepreneurs from mainland China with short descriptions from the World’s Billionaires, Forbes.

³ See the next section on the institutional context and a more detailed discussion of VIE as a commitment technology.

Fig. 1 Evolutions of numbers of global billionaires: mainland China versus the USA, 2004–2018. Notes: Global billionaire is defined as a person exceeding a net worth of 1 billion US dollars for that year. Data: the World's Billionaire Database, Forbes, various years



vehicles,⁴ I report an overlooked mechanism through which grassroots entrepreneurs could collaborate with foreign venture capitalists (VCs) as a way of attenuating both political economy and financial friction despite financial underdevelopment and political bias.

This idea of mingling with foreign investors as a potentially disciplinary device on the behavior of an authoritarian government, whose concern over reputation effect on development commitments puts a check on the potentially perverse behaviors, can be traced back to the developmental state literature, where consistent with many successful developmental state stories (Amsden, 1992; Wade, 1990; Woo-Cumings, 1999),⁵ the nature of an open economy plays a critical role in both disciplinary and facilitative ways in a catching-up development (Lee & Lim, 2001).

The structure of the paper is as follows. Section II outlines the institutional context. The following section characterizes my conceptual framework and derives three testable predictions. Section IV presents the database and the core empirical findings. Section

V provides three case studies using the proposed conceptual framework. The final section concludes.

2 The institutional context

The rise of billionaire entrepreneurs from mainland China on the global stage was not limited to Jack Ma and his renowned Alibaba. Figure 1 documents the empirical facts underlying this paper—the evolution of the number of global billionaires between 2004 and 2018, documented by Forbes's World's Billionaires database. Starting from zero in 2003, the number of global billionaires from mainland China increases to three hundred and seventy-three in 2018, about 60% of the US total. One major contribution of this paper is to examine the sample of these billionaire entrepreneurs and how the foreign financing channel fueled their successes. In doing so, two broad dimensions of entrepreneurship are considered: domestic political connections and international linkages.

2.1 Market reform, cronyism, and entrepreneurial types

Contemporary analysis of the Chinese political economy tends to place a heavy emphasis on the collusive aspect of government-business relations (e.g., see

⁴ Ding (2000), for example, conceptualizes nomenklatura privatization amid tension between transnationalization and state ownership in China's offshore businesses.

⁵ For a recent survey on the developmental state literature, see Haggard (2018).

examples in coal mining (Jia & Nie, 2017; Shi & Xi, 2018), housing markets (Fang et al., 2019), bureaucracy (Zhou, 2017) (esp. ch. 6 and 7), connection building (Kung & Ma, 2018), and corruption cycles (Chen & Kung, 2018; Lan & Li, 2018)). While the risk of expropriation in an authoritarian state cannot be zero, this analysis continues the early discussion on Chinese entrepreneurs (Djankov et al., 2006; Li et al., 2012) by considering different types and fractions of entrepreneurship within the billionaire sample.⁶

Understanding the behavior of billionaire entrepreneurs, who are conceptualized as a pernicious type, the products of crony capitalist regimes, as exemplified by the motto of billionaire entrepreneur Wang Jianlin, “stay close to the government, yet stay away from politics”,⁷ can be a challenge to assessing China’s overall entrepreneurial activity. In overcoming such methodological difficulties, this study operationalizes collusive behaviors through the construction of a variable: the incidence of restructuring of state-owned enterprises (SOEs), a process that is prone to local capture, authority leakage, and corruption.⁸

Compared with politically connected entrepreneurs, Liu Yonghao does not enjoy the luxury of SOE restructuring during the early part of his career. As a Financial Times article reported,⁹ “In 1982, he and his three brothers quit their government jobs and sold their bicycles and watches to raise \$120 in start-up capital. They invested in breeding quails and chickens to sell to other farmers near their home in rural Sichuan province and soon branched out into the animal-feed business.”

⁶ For more studies on Chinese entrepreneurs and their democratizing potentials, see Dickson (2003) and Tsai (2007).

⁷ There are many versions of the same phrase, [yuanli zhengzhi, qinjin zhengfu], also available from one of the English sources, South China Morning Post (2014, Dec. 20). *Dalian Wanda’s Wang Jianlin avoids politics, stays close to government.*

⁸ Over the process of the construction of datasets, among those billionaire entrepreneurs (about 5%, 16 out of 317 in total) with unclear histories using public information, it is difficult to categorize their entrepreneurial type without reliable public information. It is these billionaire entrepreneurs that defy simple groupings of the proposed conceptual and necessitate a case-by-case research when new information is available in the future.

⁹ Financial Times (2011, June 6). *Liu Yonghao: from chicken farmer to billionaire.*

However, it is noted that the presence of SOE restructuring might not be equated with the stealing of state assets, but raising the probability of it. There are two kinds of restructuring SOEs: one is an efficient improving exit scheme arranged by the local governments through an agreed management buy-out (MBO), and the other is a pernicious state-asset expropriation via insiders and local business and government elites. This first kind of SOE restructuring might be typified by Pang Kang (Forbes 2017, net worth: USD 3.8 B.), a Guangdong local. He joined a state-owned soy sauce factory immediately after college. Later, Mr. Pang moved through the ranks and files in the state-owned factory from a line manager to the chairman of the company before privatization through an MBO deal. He led the company to become the largest manufacturer of soy sauce in the world and went through an IPO on the Shanghai Stock Exchange. On the contrary, Wang Wenliang (Forbes 2017, net worth: USD 1.2 B.) is a classic example of a billionaire entrepreneur who masterfully colluded with key party officials. He bribed the (then) party secretary of Dandong (later put on trial and as of 2018 was serving his sentence) who helped him capture a majority stake in Dadong Port Group, near North Korea, at below-the-market prices. Overall, there is some degree of usefulness in my approach to broadly categorize entrepreneurial types within a window period of investigation.

2.2 Financial innovation in a global economy

Complementing analysis on urban entrepreneurship (Huang, 2008), a driving channel underlying the rise of Chinese global billionaires is motivated by an observation that once foreign VCs back up a potential grassroots entrepreneur, the risk of asset expropriation drops. In the case of Robin Li, the founder of Baidu, a New York Times article wrote after Li became one of the youngest billionaires from mainland China, “The partners raised \$1.2 million from two Silicon Valley venture capital firms, Integrity Partners, and Peninsula Capital, and with their seed money in hand, flew to China and founded Baidu in a hotel room overlooking Beijing University’s campus. Nine months later, in September 2000, two other venture capital firms, Draper Fisher Jurvetson and IDG

Technology Venture, pumped another \$10 million into the startup.”¹⁰

To understand how financial innovation fuels the rise of Chinese billionaires, this paper highlights the systematic application of offshore vehicles, embodied in the use of variable interest entity (VIE) structures. The VIE structure is known to play a crucial role in not only floating China’s first generation of Internet companies on the New York Stock Exchanges and NASDAQ,¹¹ but also facilitating the Chinese state’s internationalizing strategies (Murtinu & Scalera, 2016). The first-ever documented case of VIE structures was the listing of Sina (NASDAQ: SINA) as early as 2000. Sohu (NASDAQ: SOHU), another Internet company from mainland China, founded by Charles Zhang, was also listed in NASDAQ around that period. As of 2017, most of the publicly listed Chinese companies on the NYSE, the NASDAQ, the Hong Kong Stock Exchange, and others were structured with VIE. For the channeling mechanism to work, it is important to describe the working functions of a variable interest entity. The use of the variable interest entities (VIEs) underpins most of the public listing of Chinese companies overseas, including sovereign wealth funds.¹² Public shareholders are investors holding equities of overseas-listed Chinese companies. The privately listed company usually is incorporated as an offshore company entity (e.g., from the Cayman Islands.). Apart from the two offshore structures mentioned above, the other remaining components are financial as well as legally within Chinese jurisdiction. WFOE, representing a shorthand for the wholly foreign-owned enterprise, owned by an offshore entity, is an entity used by multinationals operating in China under strict regulation. The VIE is a Chinese domestic company owned by a Chinese citizen,¹³ usually the leading man in the

company. Legal contracts are set up to bind each component into a comprehensive whole.¹⁴

The VIE structure functions through loan agreements, exclusive call option agreements, and others such that different legal entities within and outside the Chinese border can be glued together. There are five major reasons why billionaire entrepreneurs love to apply for a VIE. First, it opens up an avenue for grassroots entrepreneurs to look for financing outside of China in the global capital market. Second, unlike a foreign-owned company registered with the Chinese government, the VIE structure bypasses, to some degree, tedious bureaucratic red tape over foreign capital regulations in some restricted areas of business in China, especially in the innovation sector. Third, the user (e.g., the entrepreneurs) of the VIE structure can easily leverage these financing vehicles to float the company outside of China’s capital market, in the Hong Kong Stock Exchange, the New York Stock Exchange (NYSE), the NASDAQ, and others. Fourth, as of 2017, mainland China, Hong Kong, and Singapore Stock Exchange do not allow the issuance of dual-class stock, which is common among high-tech companies in the USA. By listing themselves on the US stock market, these Chinese companies can benefit from the financial innovations available only in America. Finally, most of the high-tech companies are backed by non-Chinese venture capitalists; the floating of the invested company outside China makes a convenient financial exit for these investors to reap their financial returns.

The combination of an offshore holding company in the Cayman Islands and a variable interest entity (known as VIE) within mainland China is one of the major characteristics of the financial structure of Alibaba, a publicly listed company on the New York Stock Exchange (NYSE), outcomes of financing decisions made by these entrepreneurs to attenuate, if not circumvent completely, both the financial and political economy frictions. Given the fact that whether or not these structures have been applied can be observed in the Orbis database, this paper concentrates on two observed outcomes, which include the choice to float their companies publicly outside

¹⁰ New York Times (2006, Sept.17). *The Rise of Baidu (That’s Chinese for Google)*.

¹¹ An example of VIE used by Alibaba can be found in the Appendix.

¹² Figure A.1 as a basic structure in the Appendix.

¹³ When the founder does not hold Chinese passport, the VIE would need to be owned by a trusted employee from the senior management from the Chinese side.

¹⁴ Figure A.2 in the Appendix characterizes the operating VIE structure used by Alibaba, sourced from the company’s Registration Statement to the SEC, an independent agency of the US government responsible for the regulation of the securities industry.

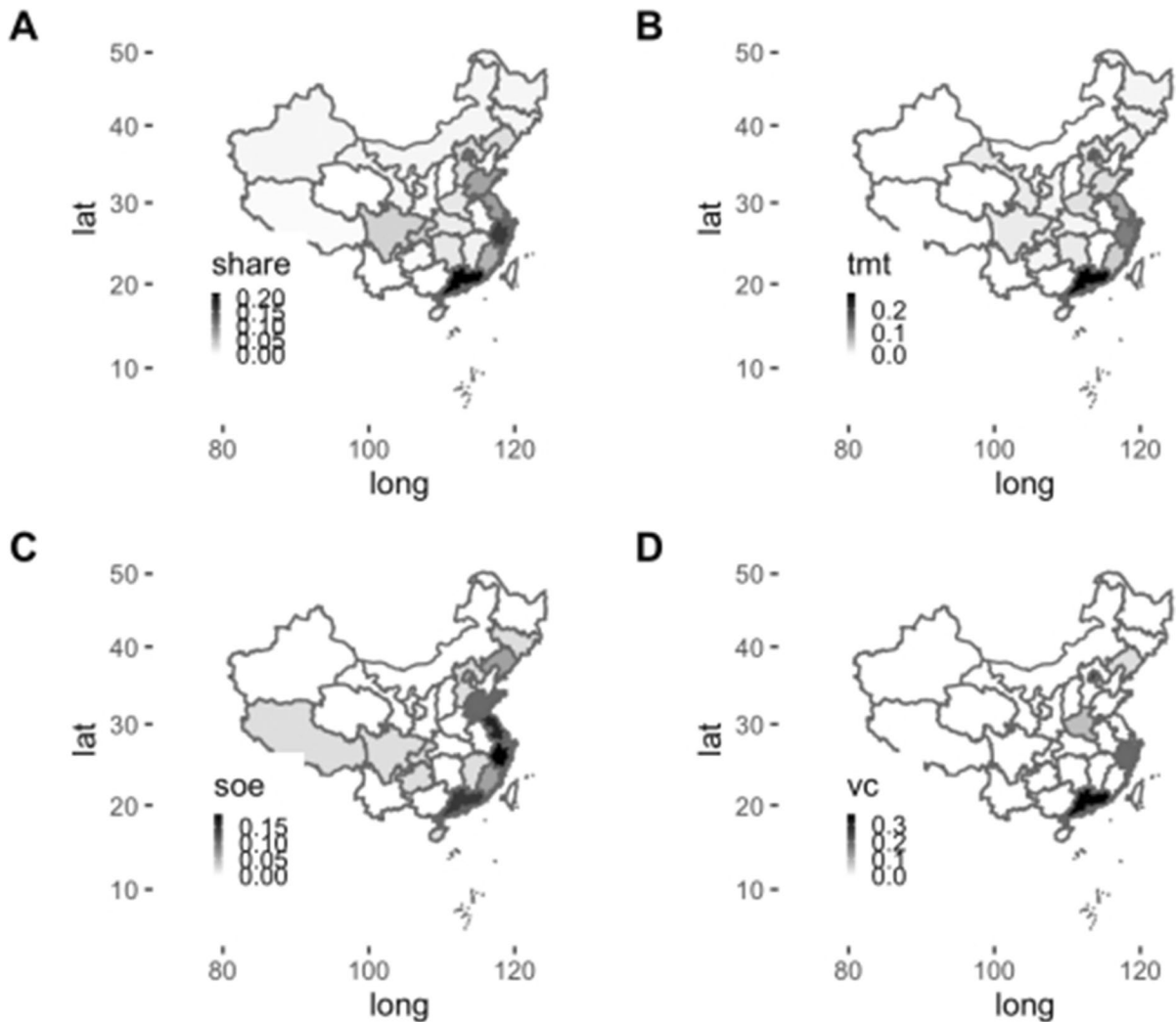


Fig. 2 The geography of global billionaires from China. Notes: This figure characterizes the geographical share of various variables at the province level: share of total numbers (A), fraction of entry into TMT sectors (B), fraction of SOE

restructuring episodes (C), and fraction of using foreign VCs (D). Data: the World’s Billionaire Database, Forbes, various years

mainland China or not and the decision to apply off-shore entities or not. The empirical part of the paper focuses on these dependent variables as the main outcomes of interest.

3 A conceptual framework

The conceptual framework hinges on four features: (i) entrepreneurs are confronted with liquidity needs

in planning their optimal investments; (ii) liquidity provisions are limited and allocated with reference to political backgrounds, an empirical fact that differentiated access to finance has been a norm in China, as well as in many developing countries; (iii) one extra financing option is made available from foreign VCs in the context of a global economy; and (iv) finally, the risk of asset expropriation is superimposed in both closed and open economy context in addition to the channel through access to finance.

There are two kinds of entrepreneurs (connected versus unconnected) that maximize the private return to a business project, which might encounter liquidity needs in the course of its project life. In a closed economy, a finite amount of liquidity services is prioritized to the politically connected entrepreneurs via the state-owned banking system. In an open economy, however, politically unconnected entrepreneurs can circumvent these frictions by approaching foreign VCs. The conceptual framework is therefore derived as an optimal investment planning problem for these two kinds of entrepreneurs under two kinds of regimes (closed versus open). The starting point is to derive the optimal contract for each kind of entrepreneur, subject to their future investment needs as a result of a heterogeneous liquidity shock. Relating this to two kinds of institutional frictions: the higher setup costs needed to pay from the unconnected type because of possible expropriation risks and prioritized liquidity services to connected agents.

The inefficient cost from the political economy side went through the differentiated setup cost through high risks of asset expropriation for the unconnected entrepreneurs. Under this context, only those with high liquidity realization from the unconnected entrepreneurs can self-finance themselves and sustain the accumulation process. Political economy frictions render an underinvestment effect on this group. Independent of existing friction, financial friction from distorted allocative credit policy creates another layer of inefficiency. Assuming away risks of expropriation with a focus solely on liquidity constraints, I demonstrate how it would impact the politically connected and unconnected agents differently in a closed regime. Under this scenario, the assumed behavior for state-owned banks is that liquidity services are prioritized to connected agents. When there is plenty of liquidity service from the state-owned banks, it will make no difference whether an entrepreneur is politically connected or not. While liquidity is in short supply, the allocation rule from state-owned banks discriminates against the politically unconnected in terms of liquidity service provision, even at the expense of economic efficiency. In extreme cases, even the politically connected entrepreneurs among themselves cannot have a fully funded service given a limited amount of liquidity.

Under the Chinese context, extreme cases are unlikely to hold. This implies that the preferential treatment by state-owned banks, whether this results from financial underdevelopment or other enforcement issues, generates allocative distortions among potential entrepreneurs in favor of the politically connected ones via the liquidity provision channel. The option to get financing from outside VCs from a foreign country attenuates two major frictions facing grassroots entrepreneurs: the risk of asset expropriation and the financing (liquidity) constraints to reinvestment. The cost of using offshore vehicles through costly external financing from foreign VCs, however, is the sharing of future private benefits.

An open economy provides an improved matching between high-return projects and financial resources through better allocative liquidity services to those productive entrepreneurs and de-emphasis on political connections. Built on two kinds of costs: risks of asset expropriation via higher setup costs, and political misallocation of liquidity via state-owned banks, the above discussion outlines three testable predictions:

- **H-1:** The politically unconnected billionaire entrepreneurs with some degree of foreign exposure have a higher tendency of being financed by foreign VCs through an offshore entity to overcome liquidity needs and attenuate political economy frictions.
- **H-2:** The politically connected billionaire entrepreneurs are less likely to solicit outside funding with their access to state-owned banks and less concerned about the risk of expropriation.
- **H-3:** The politically unconnected grassroots billionaires without sufficient degrees of foreign exposure are capable of financing themselves via bootstrapping

4 An empirical implementation

4.1 Dataset construction

Financing decisions are critically made by entrepreneurs to grow their companies, especially in an environment with political friction. Thus far, this paper

has proposed a new conceptual framework and outlined its underlying political economy and financing logic. To what extent the conceptual framework can contribute to the explanation of this “China puzzle” regarding entrepreneurship and innovation hinges on the feasibility of experiments. Ideally, the experiment would track a large number of entrepreneurs with varying degrees of political connections and foreign exposures through various stages of their companies and relate their success as well as failure to the interconnections between their decisions and the institutional context. Data availability issues (e.g., survivorship bias), however, allow me to study only the superstar performers, who are self-made billionaire entrepreneurs, captured by Forbes and Hurun China’s Rich List.¹⁵

To construct a database, I build on two billionaire lists: the World’s Billionaires compiled by Forbes, Feb. 2017 version, and Hurun’s China Rich List, 2016 version, from which the name of the entrepreneur, his/her company name, net worth, and industrial information are gathered. Although these two lists apply different valuation techniques and thresholds on billionaire entrepreneurs, among the top 300 billionaires on the list, the extent of overlap constitutes more than 75 percentage points. The primary sample of interest is based on the 317 billionaires from Feb. 2017, Forbes, to which additional names from Hurun’s top 300 are added as a sensitivity check against the unique selection criteria used by Forbes.

4.1.1 Main outcome variables: financing decisions

From these two lists, I manually construct a database where key observable financing decisions made by these global billionaire entrepreneurs are located as proxies. In doing so, I employ the Orbis database to track down these billionaire entrepreneurs on both lists. Careful attention is paid to the choice of listing locations¹⁶ and the incidence of an offshore variable

¹⁵ Hurun China Rich List has been compiled by Mr. Rupert Hoogewerf, a British businessman and publisher. The cut-off threshold is considerably lower, at about 2 billion RMB (approximately 300 million USD).

¹⁶ Specifically, a dummy variable is constructed for listed companies. For listed companies, whether it is listed within mainland China or outside is a critical variable for the story. A listing entity outside mainland China is counted as *foreign listing*, which includes the following combinations in my

interest entity (VIE) structure,¹⁷ which are two major outcomes of interest. Having coded these two outcome variables, I supplement the database with detailed official website research on the company associated with billionaire entrepreneurs on these two lists. From the history page (usually) of each company linked to the billionaire entrepreneur on the list, I code two dummies to two events: (a) whether or not the company was financed by a foreign VC¹⁸ and (b) whether or not the company was restructured (i.e., privatized) by a state-owned enterprise (SOE).¹⁹ Using the original two lists, I construct a dummy variable regarding entry into TMT sectors, which is a shorthand for the technology, media, and telecom sector, a term used by market participants. Notice that the foreign financing binary enters into foreign exposure measure.

4.1.2 Measures of political connectedness

To understand the social origins of these billionaire entrepreneurs, I use a different index to measure the political (un)connectedness (i.e., the social origin) of a billionaire entrepreneur. To construct measures on political (un)connectedness from public information, three measurements are constructed: (a) the social origin/family background²⁰; (b) the occupational experience before founding his/her own company²¹;

Footnote 16 (continued)

sample: Hong Kong/Shanghai, Hong Kong/Shenzhen, Hong Kong/Shenzhen/London/Kuala Lumpur, Hong Kong/Shenzhen/Singapore, New York Stock Exchange, New York Stock Exchange/Shanghai, NASDAQ, Shanghai/Singapore, and Shenzhen/Hong Kong, Shenzhen/Hong Kong/Australia.

¹⁷ The possible combinations of offshore entities in my sample include Australia, Bermuda/Hong Kong, Cayman Islands, Cayman Islands/Hong Kong, Hong Kong only, Singapore, the Virgin Islands/Cayman Islands, and the Virgin Islands/Hong Kong.

¹⁸ This includes financing from overseas Chinese, say an angel investor from Hong Kong. Only pre-IPO foreign investments would enter into the calculation. Coding these variables sometimes requires extensive research beyond the company’s website.

¹⁹ A record of SOE restructuring does not necessarily indicate local capture or corruption. This is a mistake made by many authors in this field.

²⁰ Whether or not the entrepreneur is connected with the top circles of political elites at birth.

²¹ This means the degree to which her prior occupation is related to the state and how that job link is connected with her own business. Lower tier, peripheral public sectors jobs are not deemed as “politically connected”.

and (c) the first “scoop of gold” experience,²² which measures at best the root of the business model, reflective of the potential type of an entrepreneur.²³ It is through these considerations that I construct several empirical measures of political (un)connectedness from three factors: family and social origin, job and occupation, and the root of the business model (via the first “scoop of gold”). Finally, all three measures are summed into an aggregate score.²⁴

4.1.3 Measures of foreign exposures

To capture the degree of foreign exposure for each billionaire entrepreneur, I search via the Orbis database for non-Chinese names on the board or senior management of the company. A binary measure for being able to speak English is coded as a way to gauge foreign ties. Another binary measure captures the foreign education binary.²⁵ Along with financing by foreign VCs, the total foreign score is composed of the sum of four binary measures: English speaking, foreign education, the presence of a foreign VC financing event, and the presence of foreign management (as of 2018).

4.1.4 Control variables

From the company’s official website, I gather information on the founding year, founding headquarters, and the current headquarters at the city level. To account for the founders’ effects (Fauchart & Gruber, 2011; Grilli et al., 2020), a CEO dummy is coded to distinguish the primary leadership of the firm (“the founding CEO”) from other co-founders who share the same company-level information. As highlighted in the empirical and theoretical literature on the economics of entrepreneurship (Lofstrom et al., 2014; Bönte & Piegeler, 2013), a further set of control variables was coded. A binary variable for female

billionaires is constructed. Information on the educational attainments of a given entrepreneur is also coded using three measures: (i) whether or not she has a college education; if so, (ii) whether or not she has attended an elite college; and (iii) whether she had a foreign degree. The identification of a communist party organ within the company is coded to finalize data gathering at the firm level.²⁶

Panel A of Table 1 summarizes the general information on global billionaire entrepreneur data from Forbes and Hurun China’s Rich List. Among 317 billionaires from mainland China, about 95% of them are identified (i.e., the firm and personal level information are complete), while for the expanded dataset, the missing rate is around 9%. Panel B shows the summary statistics for the major variables along with their quartile information. The proportion of politically connected types from family background, job connections, and first scope of gold experience is about 6%, 28%, and 17%, respectively. Foreign exposures are low, averaging at 0.24 with a possible maximum of 4. Only 2% of them have foreign degrees if they do have college degrees at all. Seven percent of them are co-founders and investors rather than CEOs of the firm. For about 70% of the firms, this paper reports on a party organ within the firm. About 80% of the companies are public, among which the fraction of listing outside mainland China is around one quarter, a proportion similar to the incidence of offshore vehicles. Comparing the Forbes and the expanded dataset, the difference in measurements across variables is rather small.

A close inspection reveals the geographical features of innovation with Chinese characteristics. The top five cities where the innovation-driven entrepreneurs, as measured by entries into the TMT sector, choose to base their companies (percentage of total TMT-related entrepreneurs), are Shenzhen (17.74%), Beijing (16.94%), Hangzhou (9.68%), Shanghai (8.06%), and Guangzhou (3.23%). The top three cities, where an SOE restructuring event is associated with a billionaire entrepreneur, are Ningbo (8.62%), Foshan (5.17%), and Shanghai (5.17%). This pattern of concentration is further corroborated by Fig. 2

²² In other words, the degree of which the first scoop of gold is made via political connections.

²³ Regarding political (un)connectedness the defining criteria is the extent to which the inherited or acquired ties with respect to the communist state are strong.

²⁴ Each measure of political connectedness is converted into a measure of unconnectedness, with a value of one denoting political unconnectedness, for analytical convenience.

²⁵ Degrees, excluding honorary degrees, are counted. Foreign education includes degrees from Hong Kong and Macau.

²⁶ The existence of such organs can be found via Internet search relating the name of the company to events of party study groups.

representing provincial shares: SOE-structuring episodes were much more dispersed across the country, while foreign VC financing was concentrated within a few provinces.

5 Empirical strategy

The ideal experiment would observe losers, less successful entrepreneurs (those who are far below the billionaire benchmark), successful entrepreneurs who slightly miss the billionaire benchmark, and those billionaire entrepreneurs at a particular time point. While acknowledging survivorship bias, this paper provides a novel approach to examine the relationship between political connections and foreign exposures regarding entrepreneurs and firm-level financing structures. For valid testing of the conceptual framework outlined in the theoretical section, this empirical section deals with the following question: given the fact that these people are successful billionaire entrepreneurs, how do their political connections and foreign exposure jointly affect their observable financing decisions (e.g., listing and offshore choices) at the firm level?

The main specification in my analysis relies on the following model. The model has a spirit of difference-in-difference approach, where the impact of foreign exposure was distinguished within the set of unconnected billionaire entrepreneurs. The primary outcome variables focus on the determinants of financing decisions at the firm level ($Y_{e,t,c}^{Firm}$) made by the billionaire entrepreneur (e) at the founding year (t) based in the founding city (c)²⁷ with respect to various measures of political unconnectedness (P_e) and foreign elements (F_e):

$$Y_{e,t,c}^{Firm} = constant + \alpha [1|P_e \geq \delta_{threshold}^u] + \beta [1|F_e \geq \delta_{threshold}^f] + \theta [1|P_e \geq \delta_{threshold}^u] \times [1|F_e \geq \delta_{threshold}^f] + \gamma X_e + \mu_c + \varpi_t + \varepsilon_{\tilde{c}} \tag{1}$$

where $\delta_{threshold}^u$ and $\delta_{threshold}^f$ are the selecting parameters governing the unconnected index and foreign exposure index through which the threshold of meeting a sufficient degree of unconnectedness and

foreign exposure can be allowed to vary. The main coefficients of interest are placed on α , which is an estimate of the effect of a politically (un)connected entrepreneur on the probability of making certain financing decisions, and β , which relates the foreign exposure of an entrepreneur to financing decisions. The interaction term θ , fundamental to the validity of the conceptual framework, captures the effect on firm-level decisions made by those billionaire entrepreneurs who meet both thresholds for being politically unconnected and foreign exposed. The specification corrects for potential confounding bias through the specification of error term structures, whereas μ_c captures the founding city fixed effects and ϖ_t controls for year fixed effects and X_e are other control variables associated with the entrepreneur (e.g., a dummy for a college degree). I cluster the standard errors, $\varepsilon_{\tilde{c}}$, by the city of the current (as of 2017) headquarters (\tilde{c} , as opposed to c in the fixed effect) of the company to admit covariance structures within the city level.

6 Main result

To gauge the appropriate cutoff parameters of $\delta_{threshold}^u$ and $\delta_{threshold}^f$ for distinguishing entrepreneurship types, a preliminary analysis was conducted to test all possibilities. It turns out that setting both variables to a value of two could deliver consistent specifications for the empirical results.

Following the preliminary analysis, I begin to distinguish the impact of foreign exposures on financing decisions, taking into account the role of political connections. With the application of offshore vehicles as dependent variables, my application specification allows for an estimation of foreign impacts distinct from the traditional divide between politically connected and unconnected entrepreneurs. The estimated coefficient is strongly positive and highly significant from the OLS results from Table 2. On average, high concentrations of foreign exposure and low concentrations of political connectedness implied an increase of nearly 96% in the use of offshore financing vehicles (panel A, specification (1)). To prevent a specific sample bias from the Forbes dataset, I re-apply the specification to Hurun’s expanded dataset with an estimated impact of 66%, still highly significant (panel A, specification (2)). To focus on the founding

²⁷ For multiple bases, the decision is to use the headquarter as the founding base. This is collected and verified from the website of the company, usually in the history page.

billionaires, this effect was robust to CEO subsamples (panel A, specification (3)). These results suggest that both political connection and foreign exposure impact billionaires' outward-oriented financing decisions in a non-trivial way.

Although appropriate as a benchmarking exercise, OLS might fail to capture the non-linear features within the dataset. I, therefore, employ a logistical regression for another measurement of outward-oriented financing decisions: listing outside of mainland China (panel B). The estimated coefficients for models are reported as an impact on odds ratios. For each of these models, the joint impact of political unconnectedness and foreign exposure implied a large impact, ranging from 15.98 to 17.83. These estimated coefficients implied large differences among Chinese billionaires regarding their efforts toward the global economy.

Overall, the results using both Forbes and Hurun datasets in this section provide evidence of both political connectedness and foreign exposure impact on the financing behavior of billionaire entrepreneurs, supporting hypothesis H-1. These estimates, in addition, were robust to a different choice of standard errors.²⁸ While the estimated effects vary, the consistent significance of evidence implies not merely quantitative but qualitative differences among subgroups of billionaire entrepreneurs. This is one of the core findings of my analysis.

7 Further analysis

My analysis so far has focused on financing decisions. Beyond decisions over the public listing and using offshore vehicles, billionaire entrepreneurs reveal other observable decisions along their path to success. In this section, I investigate two potential outcomes and relate them to plausible entrepreneurship types. Regarding this margin of variation, this paper considers two more dependent variables: entering into innovative (TMT) sectors and historical records of state-owned enterprise (SOE) restructuring. Intuitively, if a billionaire enriches himself or

herself through collusive relations with the state, the probability of experiencing an SOE restructuring was higher. Such an opportunity requires access to power and political brokers, which cannot be easily available for grassroots billionaires. Furthermore, policy support and easy credits could discourage the motivation of billionaires from engaging in highly risky innovative activities. Therefore, the selection of industry to enter could be driven by the consideration of political connections and the availability of foreign venture capital support. This intuition was supported by the constructed dataset.²⁹

To test the above conjecture, Table 3 reports the joint effect of political connection and foreign exposure on entering into TMT sectors and the incidence of SOE restructuring episodes by employing variants of Eq. (1). In panel A, I find across specifications the likelihood of venturing into the TMT sector increases significantly when the billionaire entrepreneur passes the threshold measure of two for the exposure measure (from (1) to (4), panel A) ranging from 0.64 to 0.86. Recall that these specifications offer estimated coefficients against the benchmark, which are the politically connected billionaire entrepreneurs with limited foreign exposures. This means that among billionaire entrepreneurs with both a high degree of political connectedness and foreign exposure, the chances of making inroads into high-tech sectors is high, as the risks of commitment problems become minimized. For unconnected grassroots entrepreneurs with foreign exposure, the overall likelihood of entering into the TMT sector as a measure of innovation was about 30 to 40 percentage points higher than the benchmark. This result was robust when converting foreign exposure to VC support incidence and Hurun's expanded dataset.

When it comes to the case of SOE restructuring, against the benchmark, all other billionaires were about 25 to 35% less likely to experience an SOE restructuring episode. Both political unconnected

²⁸ Adding year and current headquarter FE does not alter the results fundamentally.

²⁹ Higher probability of entries into TMT sectors is governed by outer regions of the *Political Unconnected Index* \times *Foreign Exposure Index* space (panel A, Figure [contourline] in the Appendix). In contrast, panel B finds a dense region associated with SOE restructuring records for those billionaire entrepreneurs who fail to meet the criteria for both the foreign exposure and political unconnectedness.

Table 2 Main results

| | (1) | (2) | (3) |
|---|---------------------------|---------------------------|---------------------------|
| <i>Panel A. Dependent variable: $Y_{e,t,c}^{Firm}$: offshore = 1</i> | | | |
| Method: OLS | | | |
| $\hat{\theta}$ | 0.96 (0.26) [0.26] | 0.66 (0.20) [0.25] | 0.56 (0.20) [0.28] |
| Controls | Yes | Yes | Yes |
| Sample | Forbes | Hurun | Hurun: CEO |
| Size | 301 | 375 | 348 |
| | (4) | (5) | (6) |
| <i>Panel B. Dependent variable: $Y_{e,t,c}^{Firm}$: offshore = 1</i> | | | |
| Method: OLS | | | |
| $\hat{\theta}$ | 17.83 (2.90) [3.10] | 17.10 (1.95) [2.05] | 15.98 (2.61) [2.80] |
| Controls | Yes | Yes | Yes |
| Sample | Forbes | Hurun | Hurun: CEO |
| Size | 301 | 375 | 348 |

Control variables include gender and education. Standard errors in parentheses are clustered at the level of current headquarters (city level). For panel A, the Huber-White robust standard errors are reported in brackets. For panel B, a method suggested by Cameron et al. (2011) is reported in the bracket using both current and first headquarters as multiway clusters

measures and foreign exposure measures predict strongly against the possibility of an SOE restructuring event, which was sometimes associated with privatization deals with local governments.

Taking stock, two additional findings on the revealed choices of the sample of billionaire entrepreneurs stand out. First, innovation, as measured by TMT sectoral entry, was highly associated with foreign exposure in a global economy. Second, the rise of billionaire entrepreneurs with strong political ties was more often than not associated with an incidence of SOE restructuring. The finding here offers support for hypothesis H-2.

8 Robustness checks

This section explores a number of robustness checks related to the main empirical results. The results established in previous sections document strong evidence for different types of billionaire entrepreneurs. My analysis thus far, however, has not addressed a number of confounders and potential issues of robustness.

8.1 Measurement issues

A worrying concern regards the robustness of using the threshold methods in connection with a composite index of foreign exposures and political connections. One might wish to know the major components driving the behaviors of different types of billionaire entrepreneurs. To check the core components of these two composite indexes, I repeat the previous analysis separately using each of the binary measures as substitutes for the previous composition of foreign and political connections to see which combinations best replicate the main results. Table 4 reports my findings.

Two observations can be drawn. I find that the ability of billionaire entrepreneurs to speak adequate English and have a degree from outside mainland China separates to a large extent the entrepreneurial type. This observation is consistent with Hurun’s expanded dataset and its CEO subsample. Second, the political connection measure was driven primarily by job ties rather than family backgrounds. This seems

Table 3 Further analysis

| | (1) | (2) | (3) | (4) |
|--|-----------------|-----------------|-----------------|-----------------|
| <i>Panel A. Dependent variable: $Y_{e,t,c}^{Firm}$: TMT = 1</i> | | | | |
| Method: OLS | | | | |
| $\hat{\alpha}$ | 0.16 (0.11) | 0.17 (0.11) | 0.16 (0.08) | 0.16 (0.08) |
| $\hat{\beta}$ | 0.81 (0.12) | 0.64 (0.17) | 0.86 (0.14) | 0.85 (0.13) |
| $\hat{\theta}$ | -0.84 (0.18) | -0.50 (0.20) | -0.78 (0.19) | -0.86 (0.21) |
| Foreign measure | Threshold | VC | Threshold | Threshold |
| Controls | Yes | Yes | Yes | Yes |
| FE | Yes | Yes | Yes | Yes |
| Sample | Forbes | Forbes | Hurun | Hurun: CEO |
| Size | 301 (5) | 301 (6) | 375 (7) | 347 (8) |
| <i>Panel B. Dependent variable: $Y_{e,t,c}^{Firm}$: SOE = 1</i> | | | | |
| Method: OLS | | | | |
| $\hat{\alpha}$ | -0.35 (0.13) | -0.33 (0.13) | -0.31 (0.10) | -0.33 (0.10) |
| $\hat{\beta}$ | -0.25 (0.14) | 0.05 (0.33) | -0.26 (0.12) | -0.26 (0.12) |
| $\hat{\theta}$ | 0.30 (0.17) | 0.30 (0.33) | 0.32 (0.14) | 0.34 (0.15) |
| Foreign measure | Threshold | VC | Threshold | Threshold |
| Controls | Yes | Yes | Yes | Yes |
| FE | Yes | Yes | Yes | Yes |
| Sample | Forbes | Forbes | Hurun | Hurun: CEO |
| Size | 301 | 301 | 375 | 347 |

Standard errors in parentheses are clustered at the level of current headquarters (city level)

to indicate that the early part of the career of billionaire entrepreneurs matters in separating their business models and sectoral entries.

8.2 The presence of party organ

According to the document, *Working Regulation on Grassroots Organs related to CPC and State* [zhongguo gongchandang danghejiguan jicengzuzhi gongzuotiaoli], which was initially implemented in 1998 and has been updated in 2010, the presence of party organ is required for firms of a certain size. This document designates three cutoffs for setting up a party organ (>3 party members), branches (>50 party members), and committees (>100). In practice, the

strict boundary can be relaxed depending on working needs and the type of firm. Therefore, it is unsurprising to witness a party organ set up for many a company founded by the global billionaire entrepreneur as a compliance to the rule of CPC regarding grassroots organizations.

Does the presence of a party organ affect firm decision making? Could billionaires with a close connection with the state be more eager to demonstrate their affinity through the setting up of party organizations? Table 5 offers some preliminary glimpses: the presence of party organs has poor explanatory power regarding firm policies. The effect of party organs cannot be significantly different from zero for various outcome variables. This finding is consistently found

Table 4 Robustness: measurement

| | (1) | (2) | (3) | (4) |
|--|-----------------|-----------------|----------------|----------------|
| <i>Panel A. Dependent variable: $Y_{e,t,c}^{Firm}$: offshore = 1</i> | | | | |
| Method: OLS | | | | |
| $\hat{\theta}$ | 0.54 (0.32) | 0.75 (0.33) | 0.86 (0.28) | 0.77 (0.27) |
| Foreign measure | English | Education | Threshold | Threshold |
| Political measure | Job tie | Job tie | Job tie | Job tie |
| Controls | Yes | Yes | Yes | Yes |
| Sample | Forbes | Forbes | Hurun | Hurun: CEO |
| Size | 301 | 301 | 375 | 347 |
| | (5) | (6) | (7) | (8) |
| <i>Panel B. Dependent variable: $Y_{e,t,c}^{Firm}$: foreign listing = 1</i> | | | | |
| Method: logistic | | | | |
| $\hat{\theta}$ | 15.39 (1.89) | 16.59 (1.53) | 3.88 (1.55) | 2.81 (1.51) |
| Foreign measure | English | Education | Threshold | Threshold |
| Political measure | Job tie | Job tie | Job tie | Job tie |
| Controls | Yes | Yes | Yes | Yes |
| Sample | Forbes | Forbes | Hurun | Hurun: CEO |
| Size | 301 | 301 | 375 | 347 |

Standard errors in parentheses are clustered at the level of current headquarters (city level)

across estimation methods and robust to Hurun’s expanded dataset and CEO subsamples.

8.3 Generational consistency

One might be concerned about generational consistency and wonder whether or not age structure could alter comparability across billionaire entrepreneurs. To ensure against this concern, I re-estimate the preferred specification using different subsamples based on the founding year of the company. It ranges from employing 1978 as the beginning year to the year 1992.

Figure 3 plots estimated coefficients from each of the subsample regressions. The main estimates are rather stable, implying that the concerns over age structure and generational comparability might not be as large as one might expect. My analysis ends in 1992 when Deng made his Southern Talk as a shock leading to major attenuation of expropriation risks and strengthening of political commitments. The size of my sample dwindles after that point. Overall, this exercise shows that the main results are robust to generational consistency.

8.4 Random selection

Another potential concern is that the estimated coefficients from my main results are entirely driven by random chance, if not noise in measurements or a biased estimate in standard errors. To investigate this problem, I perform a placebo test to explore its possibility. This test was implemented using a non-parametric permutation strategy testing the effect from the interaction term, $\theta = 0$, for the Forbes data. To calculate the placebo effect, I conduct a permutation of offshore decisions of the observed decisions. Following this, I then re-estimate the main specification, taking the placebo offshore outcome as though the actual observation.

Define $F(\hat{\theta})$ to be the empirical cumulative distribution function (ECDF) of the placebo effects, the statistic $1 - F(\theta^*)$ gives a non-parametric p value for the null hypothesis $\theta = 0$ when the realized value is θ^* . The idea is that if the effect generated by the actual data is significant ($\theta = 0.96$, from Table 2, column (1)), then it should be positioned at the high-tail of the ECDF. Figure 4 offers the ECDF of θ for using offshore vehicles, using permutation of 1000 times,

Table 5 Robustness: the presence of party organ

| | (1) | (2) | (3) | (4) |
|------------------|-----------------|-----------------|----------------|----------------|
| <i>Panel A</i> | | | | |
| Method: OLS | | | | |
| 1Party | -0.01 (0.07) | 0.05 (0.07) | 0.03 (0.05) | 0.01 (0.07) |
| Outcome | Offshore | Foreign listing | SOE | TMT |
| FE | Yes | Yes | Yes | Yes |
| Sample | Forbes | Forbes | Hurun | Hurun: CEO |
| Size | 301 (5) | 301 (6) | 375 (7) | 347 (8) |
| <i>Panel B</i> | | | | |
| Method: logistic | | | | |
| 1Party | -0.18 (0.46) | 0.42 (0.42) | 0.58 (0.98) | 0.06 (0.28) |
| Outcome | Offshore | Foreign listing | SOE | TMT |
| FE | Yes | Yes | Yes | Yes |
| Sample | Forbes | Forbes | Hurun | Hurun: CEO |
| Size | 301 | 301 | 375 | 347 |

Standard errors in parentheses are clustered at the level of current headquarters (city level)

5000 times, and 20,000 times, against the preferred estimated of 0.96 shown as the vertical line. This exercise offers additional confidence to the main finding that the observed pattern within my datasets is not driven by pure chance.

8.5 A direct test on the conceptual framework

How does the empirical outlook relate to the proposed conceptual framework? In accordance with the main results, I assign each billionaire entrepreneur to their empirically revealed categories, following the previous threshold rule.

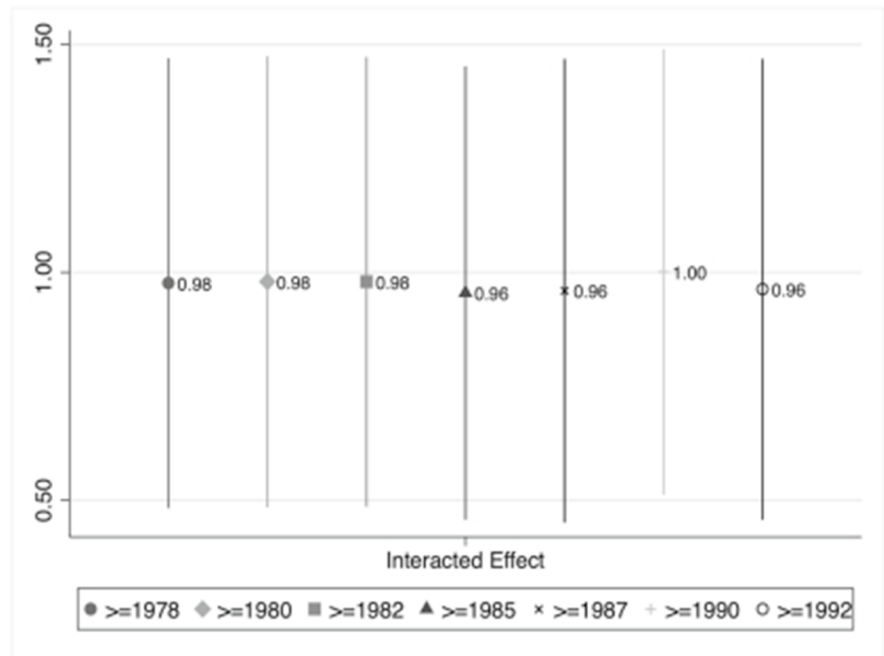
This is done in three steps. First, a billionaire entrepreneur is designated as politically connected if his or her unconnectedness measure was less or equal to one. Second, among the remaining billionaires, their entrepreneurial types are assigned to type II if having equal or greater than two in the aggregate measure of the foreign exposures or having a foreign capital injection before IPO. I make slight exceptions for three billionaires (about 1% of the Forbes and expanded Hurun sample), who, although being able to speak English with foreign university degrees, behave very much like the indigenous type (type III), which are still unassigned after above two steps. Following this exercise, every global billionaire

entrepreneur (317 in total) recorded by Forbes, Feb. 2017, can be assigned to a particular kind of category. As a result, the share of types I, II, and III billionaire entrepreneurs is 20.25%, 7.28%, and 72.78%, respectively, by subsuming all the unidentified billionaires into the connected category (type I).

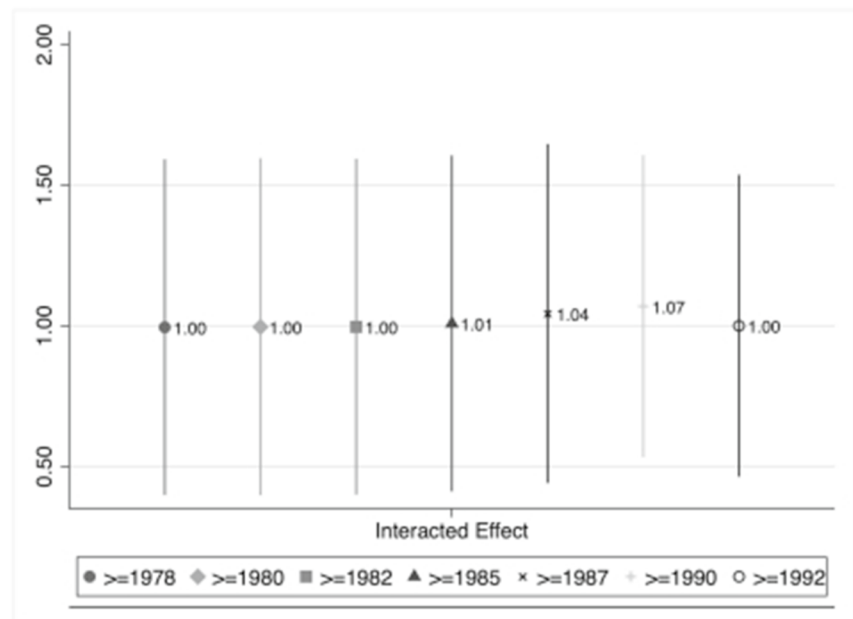
How is the wealth of billionaires related to entrepreneurship type? Fig. 5 plots the density distribution of billionaire wealth against their types. Two findings emerged. The density of foreign exposed type II entrepreneurs exhibits a larger fat-tail than other categories. The grassroots billionaires are concentrated at the lower end of the distribution. This pattern from the dataset suggests that billionaire rankings at the top are strongly associated with innovation and entry into emerging industries in a competitive economy as China's domestic market has been gradually integrated with the world markets from 2004 to 2018.

One might still be concerned about the validity of these categories. To alleviate that concern, I address this issue through Kolmogorov–Smirnov tests in Table 6. Decisions regarding using offshore vehicles and listing outside mainland China constitute major distinctions between unconnected billionaires with foreign exposures (type II) and the other two categories. The type of politically connected billionaire entrepreneurs is impugned

Fig. 3 Age structure and subsample estimation. Note: These two graphs present estimated coefficients from the main specification. Each year presents the founding year of the company as the starting baseline



Panel A: Using Offshore Vehicles



Panel B: Public Listing outside Mainland China

for a higher probability of SOE restructuring, while the probability of such an incidence is indistinguishable from the other two types. The grassroots unconnected type of entrepreneurs

underperforms in the holding of college degrees and is more likely to finance through domestic rather than foreign listings. The findings here are consistent with hypothesis H-3.

Fig. 4 Distribution of placebo estimates: using offshore vehicles. Notes: This figure plots the empirical cumulative distribution function (CDF) constructed from permutations of 1000 times, 5000 times, and 20,000 times. The dependent variable is the usage of offshore vehicles. The vertical line represents the true estimate on the Forbes dataset

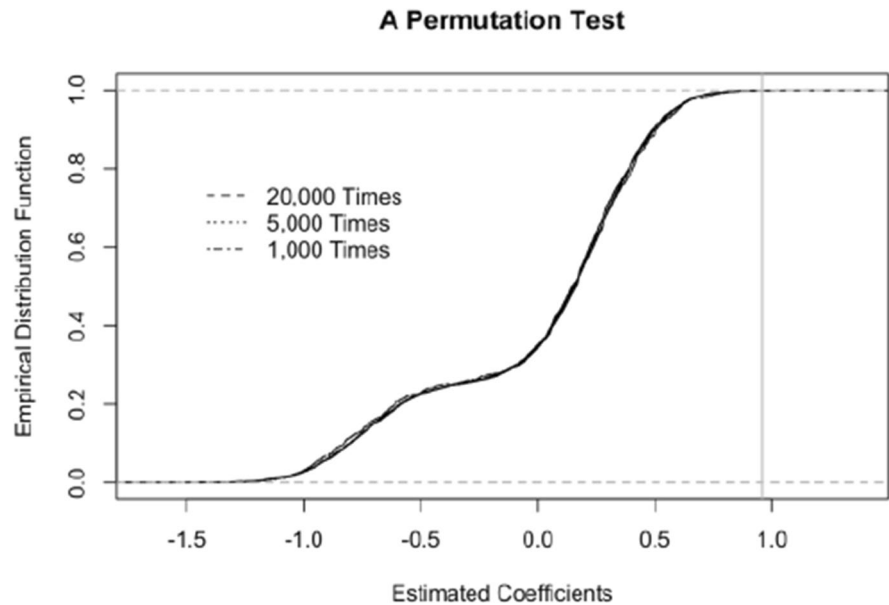


Table 7 reports my analysis from testing the conceptual framework directly. Using type I connected billionaires as the benchmark, the foreign-supported type tends more likely to use offshore financing vehicles, listing outside mainland China, and making entries in the TMT sectors (panel A, columns 1–3), and significantly less likely to engage in an SOE restructuring (panel A, column 4). This finding was

consistent across estimation methods, datasets, and CEO subsamples (panel B).

To recap, by analyzing their observed firm behaviors, this paper traced the joint role of foreign exposure and political connectedness. The evidence of different categories and mixed entrepreneurship is inconsistent with the prediction of the theory of extractive institutions and models of crony capitalism.

Fig. 5 Billionaire wealth density by type. Notes: Standard errors in parentheses are clustered at the level of current headquarters (city level)

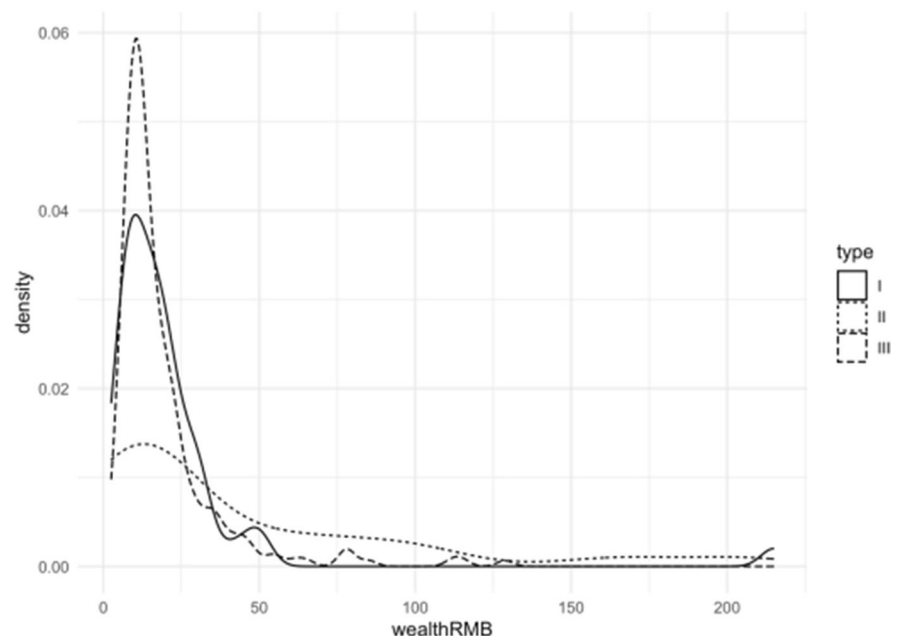


Table 6 Entrepreneurial type and variables

| | (1) I vs III | (2) II vs III | (3) I vs II |
|-------------------|-----------------|------------------|----------------|
| Sample | Forbes | | |
| Offshore | 0.02 (1.00) | 0.66 (0.00) | 0.68 (0.00) |
| Foreign listing | 0.02 (1.00) | 0.48 (0.00) | 0.47 (0.00) |
| Domestic listing | 0.13 (0.56) | 0.56 (0.00) | 0.44 (0.01) |
| Listing | 0.11 (0.73) | 0.08 (1.00) | 0.03 (1.00) |
| Party | 0.02 (1.00) | 0.00 (1.00) | 0.03 (1.00) |
| TMT | 0.06 (1.00) | 0.49 (0.00) | 0.56 (0.00) |
| SOE | 0.40 (0.00) | 0.10 (0.98) | 0.50 (0.00) |
| College degree | 0.00 (1.00) | 0.37 (0.01) | 0.37 (0.03) |
| Elite college | 0.05 (1.00) | 0.26 (0.12) | 0.31 (0.09) |
| Sex | 0.05 (1.00) | 0.01 (1.00) | 0.06 (1.00) |
| Founding year | 0.12 (0.65) | 0.57 (0.00) | 0.56 (0.00) |
| First headquarter | 0.15 (0.35) | 0.21 (0.30) | 0.13 (0.96) |

This table reports Kolmogorov–Smirnov test for equality of distribution. The number in the table gives combined K-S statistics and the associated p-value (in parentheses) of the two-sample test statistic by entrepreneurial type (I, II, or III)

In other words, prior research emphasis is overemphasized the mere *existence* of bad entrepreneurs and ignores the *coexistence* with other categories and their shares, among whom interlinkage with foreign investors and firms might be used as a dividing line conceptually and empirically.

9 Discussion and conclusion

While economists, political scientists, and China experts have come to underline the role of institutions in generating and sustaining economic growth, few efforts have been made to directly address the micro mechanisms of billionaire entrepreneurs from mainland China, or to provide direct statistical evidence about how political connections and foreign linkages jointly impact firm behaviors. Piketty (2014, 535), for example, asked provocatively, “Are China’s millionaires and billionaires, whose names are increasingly prevalent in global wealth rankings, truly the owners of their wealth?”

In the present analysis, guided by a conceptual framework, I address these problems from the angle of political commitment and international finance. Specifically, within the space of billionaire entrepreneurs,

Table 7 A direct test on the conceptual framework

| | (1) | (2) | (3) | (4) |
|------------------|------------------|------------------|-----------------|-----------------|
| <i>Panel A</i> | | | | |
| Method: OLS | | | | |
| 1I/Type I | | | | −0.33 (0.10) |
| 1I/Type II | 0.95 (0.14) | 0.93 (0.16) | −0.24 (0.09) | |
| 1I/Type III | 0.05 (0.12) | 0.03 (0.11) | −0.30 (0.09) | −0.21 (0.06) |
| Outcome | Offshore | Foreign listing | SOE | TMT |
| FE | 301 | 301 | 375 | 347 |
| Sample | Forbes | Forbes | Hurun | Hurun: CEO |
| Size | 301 (5) | 301 (6) | 375 (7) | 347 (8) |
| <i>Panel B</i> | | | | |
| Method: logistic | | | | |
| 1I/Type I | −34.64 (1.66) | −37.75 (3.91) | 16.16 (2.17) | −1.89 (0.87) |
| 1I/Type II | | | | |
| 1I/Type III | −34.33 (1.13) | −37.71 (3.83) | 12.00 (2.36) | −1.16 (0.44) |
| Outcome | Offshore | Foreign listing | SOE | TMT |
| FE | | | | |
| Sample | Forbes | Forbes | Hurun | Hurun: CEO |
| Size | 146 | 156 | 131 | 172 |

Standard errors in parentheses are clustered at the level of current headquarters (city level)

this paper considers how different patterns of firm behaviors can be influenced jointly by political connection and foreign exposure of an entrepreneur, particularly in the early stages of his or her career.

By documenting the increase in the number of global billionaire entrepreneurs from mainland China over the period of 2004–2018, this paper provides a series of contributions to the existing political economy and development of literature by offering contextual evidence from China. Driven by a conceptual framework, I apply a few measures to investigate the joint impact of political connections and foreign influence on firm behaviors. On the one hand, the foreign exposure of a billionaire entrepreneur significantly increases the probability of using offshore financing vehicles and listing outside mainland China. At the same time, these billionaire entrepreneurs are more likely to invest their capital in innovation-related industries. Such billionaire entrepreneurs and their behaviors are contrasted to the

politically connected entrepreneurs, who are more likely to have opportunities to restructure a SOE. These results are subject to the caveats associated with any research on billionaire and entrepreneurship studies on self-constructed datasets; however, my estimates do suggest that there are qualitative differences among Chinese billionaires, neither the crony capitalist argument nor the theory of extractive institutions can properly explain.

The framework and findings offer several areas for future research. First, while the coding work is concentrated on collecting information on the history of billionaire entrepreneurs, unobservable political ties via spouses or family relatives of the entrepreneurs cannot be seen by the outside researcher. Second, while the analysis revolves around a period of China's fast economic growth, recent regulations over VIEs and the emerging generation of Chinese entrepreneurs could alter the patterns observed in my sample. Finally, the focus of the paper has been placed on financing, rather than the role of foreign VCs through the knowledge spillover channel.

In sum, my empirical approach highlights an important but often overlooked problem in the study of entrepreneurship. Simply put, it is fruitful to categorize the different types of entrepreneurs by rejecting the simple assumption that they are the products of crony capitalism. Using the sample of Chinese billionaire entrepreneurs, this paper suggests the need to understand the response of entrepreneurs' financial decisions under inefficient institutions. In the context of globalization, this paper provides evidence that financial market imperfections might be partially offset by ingenious entrepreneurial choices.

Data Availability The dataset and relevant program codes pertinent to this analysis can be requested upon the author.

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