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Does government paternalistic care promote entrepreneurship in China? Evidence from the China Employer-Employee Survey

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ABSTRACT

This article examines whether government paternalistic care exerts positive effects on entrepreneurship in China, and the channels through which paternalistic care affects entrepreneurship, using data from the 2015 baseline of the China Employer-Employee Survey (CEES). The data suggests that over 70% of manufacturing firms received at least one type of government paternalistic care, though the distributions are different depending on the firm's size, ownership, industry, firm and entrepreneur's age. The empirical analysis indicates that government paternalistic care negatively affects entrepreneurship by diminishing innovation capability. Human capital and imported intermediate goods should be the driving forces for a firm's development, but government paternalistic care has a counterproductive effect on those two factors, thereby impeding entrepreneurship. The results show that those good intentions have gone awry. The government should gradually terminate its paternalistic policies for firms, and firms need to promote their own solid innovation capability.

Abbreviations: CEES: China Employer-Employee Survey SOE: State-owned enterprise

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Paternalistic care; entrepreneurship; innovation; subsidy; human capital; imported intermediate goods

JEL CLASSIFICATION
E62; L26; L53

1. Introduction

Since the 1930s, entrepreneurship has become a focus in studies about the driving forces of economic growth, and was considered as one of the key drivers that contribute to corporate performance and economic growth (Schumpeter 1934). Therefore, enterprises and policy makers in all countries desire institutions and policies that aim at promoting entrepreneurship. In former socialist countries and later in transition economies, this type of paternalism was very popular, especially for state-owned enterprises (SOEs; Kornai 1980, 1986; Kornai, Maskin, and Roland 2003). Efficiency and paternalism are ordinarily incompatible (Zamir 1998), soft-budget constraints and policy burden are the key reasons for this incompatibility (Kornai, Maskin, and Roland 2003; Lin and Li 2008; Gong and Xu 2008), and the efficiency loss of SOEs hinders development of the private sector (Liu and Shi 2010). Though the motives are complex, a good original incentive to promote performance and entrepreneurship may result in

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the drawbacks and inefficiency related to paternalistic care for SOEs (Kornai, Maskin, and Roland 2003).

To consider paternal-filial relationship, not only public sector and SOEs, Chinese culture has a long history of connections that exist between the government and private sector. The classic masterpiece *Zhong Yong* in *Book of Rites* (礼记 • 中庸), which was written before 400 BC, states that the emperor should love his people like sons. It established the standard mindset for bureaucracies and feudal officials in China that, the local official in charge of a county was called the parent magistrate (*Fumuguan*, 父母官), and such officials were proud of taking responsibility of everything within their counties. Pre-modern firms were also subject to administration by county magistrates or higher officials. After the establishment of new China (1949), stemming from the central planned economy institutions, the government kept providing paternalistic care to firms in certain areas using financial support, reallocation of factors of production, tax credits, subsidies, low interest rate loans, and appropriation.

Following the deep economic downturn since 2008, China's national government has proposed and implemented several economic policies to spur economic growth, where promoting entrepreneurship and innovation has played a significant role (Cheng and Song 2016). To echo this barometer, provincial and local governments have strong motivation to provide more paternalistic care for local firms and introduce similar policies, such as innovation subsidies and tax rebates (Lu and Pan 2015). SOEs constitute only a relatively small portion of the firms that receive government paternalistic care. A very limited part of paternalistic care was accorded to firms that needed to be rescued for such reasons as being 'too big to fail', investing to recoup past investments (Dewatripont and Maskin 1995), and corruption (Boycko, Shleifer, and Vishny 1996). However, most of the paternalistic care was advanced to firms in the private sector to boost performance and innovation.

From the perspective of firms, entrepreneurs have strong motives to take advantage of the changed institutions and policies to succeed in their business activities (Zou 2002; Li, Feng, and Jiang 2006; Cheng and Hu 2016). To obtain better funding for their firms, entrepreneurs tend to apply for all kinds of subsidies and tax rebates their firms are qualified for, such as technological innovation, new energy development, and export rebate. However, the effects of these policies on firms are still unclear. Private firms have much harder budget constraints than SOEs, and do they generate much better results than SOEs after receiving paternalistic care? Not only in China, but also in many other countries, the effects of paternalistic care (like subsidies) are disputable (Lach 2002; Feldman and Kelley 2006; Wei and Liu 2015; Wallsten 2000; Bernini and Pellegrini 2011). The difficulties exist mainly in terms of data accessibility. In China, data provided by the National Bureau of Statistics are confined to enterprises above a designated size, smaller firms are not included. Thus, there is a lack of information to make a reliable assessment of the above effects on entrepreneurship as a whole, especially for small and medium-sized enterprises.

Following Schumpeterian theory, entrepreneurship is observed through innovation and 'entrepreneurial activities of the firm' (Schumpeter 1934; Leibenstein 1968; Miller 1983; Baumol 1990; Li et al. 2009). Innovative entrepreneurial activities include both innovative inputs and outputs. The inputs are usually measured by R&D investment

decisions and R&D intensity (Chen and Miller 2007), while the outputs are measured in terms of patented invention (Aghion, 1993) and renewal and upgrading cycle of products (Bayus 1988; Li et al. 2012; Smith and Tushman 2005). Innovative outputs are more appropriate for an examination of innovation capability, because for firms that rely on government paternalistic care, government spending can lead a firm to invest in R&D, but cannot make the firm innovate (Cowling 2016). Using the quantity of patents to reflect entrepreneurship risks the exclusion of firms that make minor innovations on existing products and small firms that are unconcerned about protecting intellectual property rights. An innovative entrepreneur will place greater emphasis on product or service innovation so as to satisfy or create new demand, thereby gaining market share and profits. Thus, the renewal and upgrading cycle of products is a more appropriate measure (Bronzini and Piselli 2016).

Labor and capital are the two key factors of production for economic growth, especially for the development of firms. The complementarity relationship between R&D investments and human capital accumulation has been tested in numerous studies (Grossmann 2007). Higher innovation performance may be achieved through direct or indirect public investment by raising both human capital and the capacity to innovate (Agénor and Neanidis 2015). Imported intermediate inputs and variety effects may help promote firms' R&D and innovation (Feenstra 1994; Broda and Weinstein 2006; Goldberg et al. 2010). Through absorption and the imitative behavior of firms, increased variety of imported intermediate goods contributes to improvements in the productivity of final goods and innovation capability (Grossman and Helpman 1991). If a firm has potential innovation capacity constrained solely by budget, government paternalistic care could to some extent release such constraints. Such a firm would then have greater capital reserve, by which it could employ better managers or workers to accumulate human capital, or purchase more imported intermediate goods to raise physical capital inputs. In reality, evidence indicates that firms do not use such funding to improve their employment status or R&D expenditure (Wallsten 2000). Government with low constraints on budget are eager to offer paternalistic care to firms, if the application process is inefficient or fails to provide competitive screening of firms that deserve funding, or the cost of application is fairly low, firms may simply tend to seek funding, rather than improving innovation capability. Thus, two possible channels that paternalistic care affects firms are reducing human capital input and decreasing the amount of imported intermediate goods.

This study aims to examine whether government paternalistic care has a positive effect on the entrepreneurship of firms in China, and the channels through which paternalistic care affects entrepreneurship, using a newly collected stratified sampling survey data to examine the status of firms in 2014 (some questions collected data from 2013).

This article is divided into five sections. Section 2 introduces our data and variables. Section 3 describes patterns of paternalistic care in Chinese manufacturing sector. Section 4 presents the results of our empirical analysis. Section 5 concludes and provides some implications for policy, as well as directions for future research.

2. Data source and variables

This study uses a unique matched employer-employee survey data focusing on manufacturing firms in China. This recently constructed matched dataset was

developed by the China Employer and Employee Survey (CEES), conducted by Wuhan University in conjunction with Hong Kong University of Science and Technology, Tsinghua University, and the Chinese Academy of Social Science. Based on stratified random sampling of both firms and employees, the survey is representative for the overall situation of manufacturing industries in China. The sample was obtained as follows. First, firms were sampled by the size of their labor force according to the third Economic Census Database. Second, 20 teams of enumerators were organized to visit those firms, which were located in 19 different counties across 13 cities in Guangdong province, to collect the questionnaires. Third, 6-10 employees at each firm were sampled using stratified random sampling. Approximately 30% of the sampled employees were middle and senior managers, and 70% were front-line workers.[1]

The dataset consisted of 570 firms and 4794 employees matched with the firms.[2] It covered comprehensive information about the firms, including sections on basic information (e.g., firm age, ownership and location), production and sales conditions, R&D and innovation, quality competitiveness, and human resources. It also comprised extensive detailed information about the employees (e.g., middle and senior managers, other administrative staff, technical and design personnel, sales personnel, and front-line workers), such as demographic information (sex, age, education), work experience, insurance and non-cash benefits, and personalities. Appropriate for the empirical purposes of the present study, the CEES dataset had abundant information about government paternalistic care, such as several kinds of subsidies and tax rebates, and information about the innovation input and output, which was applied to measure entrepreneurship.

For the innovative capability of entrepreneurs, this study uses the renewal and upgrading cycle of products as a proxy of innovation output, which is measured by the time needed to upgrade a new product. The shorter the renewal and upgrading cycle of its products, the more innovative the firm is. To investigate the mechanism whereby government paternalistic care affects entrepreneurship, the proportion of employees who received a housing rental allowance provided by the employer is used as a proxy of a firm's human capital input, the higher the proportion is, the greater emphasis the firm places on human capital. Imported intermediate goods could be derived directly from the CEES dataset.

To address the effects on innovation outputs, though other forms of paternalistic care may also affect the innovation results, the purposes of those means are complex. So technological innovation subsidies obtained from the government for 2012–14 is taken as a proxy for the paternalistic care received by a firm. A firm having once received government technological innovation subsidies is regarded as having been treated with paternalistic care.

To control the possible effects of other variables on the dependents, the study assesses certain characteristics of the firms, such as firm size (Ettlie and Rubenstein 1987), firm age (Zhou et al. 2007), R&D and other inputs (Cohen and Levinthal 1990), entrepreneur's characteristics (Wang 2014; Bönte, Falck, and Heblich 2009; Wiersema and Bantel 1992; Hambrick and Mason 1984), corporate governance and ownership (Li, Su, and Dong 2006; Deng and Dart 1999), business model and industry (Dai, Yu, and Maitra 2014). Manufacturer location and time effects are also controlled.

3. Patterns in paternalistic care of governments

Table 1 presents the description of the variables of paternalistic care. According to the results, 70.21% of Chinese manufacturing enterprises received at least one type of government paternalistic care. In terms of each item, 23.77% of the enterprises got technological innovation subsidies, 9.50% got land purchasing subsidies, 22.87% enjoyed tax deductions or exemptions, 18.10% acquired tax refund, 54.72% had export rebates, while 42.78% of the enterprises got the preferential credits. It indicates that export rebates, preferential credits, and technological innovation subsidies are the most dominant types.

For further information, Table 2 shows paternalistic care classified by industry, from which we can find significant differences. We divide the industries into seven groups. Enterprises in chemical industry had the largest proportion of acquiring technological innovation subsidy, land purchasing subsidy, tax deductions or exemptions and preferential credits, which are 69.20%, 22.20%, 60.00% and 100.00%, respectively. 25.50% of enterprises in the machine & equipment industry got tax refunds, which is the largest among seven groups. And for enterprises in the electronic device industry, the proportion of export rebates is highest, conveying the strong paternalistic care for export enterprises. The results presented in Figure 1 show a more visible difference among the seven subgroups while export rebates are comparatively highly prevalent.

Table 1. Description of the variables of paternalistic care.

Paternalistic care type	Total	Yes/No	No.	%
Technological innovation subsidy	551	Yes	131	23.77%
		No	420	76.23%
Land purchasing subsidy	379	Yes	36	9.50%
		No	343	90.50%
Tax deductions or exemptions	551	Yes	126	22.87%
		No	425	77.13%
Tax refund	547	Yes	99	18.10%
		No	448	81.90%
Export rebates	519	Yes	284	54.72%
		No	235	45.28%
Preferential credits	187	Yes	80	42.78%
		No	107	57.22%
Receive at least one type	564	Yes	396	70.21%
		No	168	29.79%

Table 2. Description of the paternalistic care by sector.

	Technological innovation subsidy		Land purchasing subsidy		Tax deductions or exemptions		Tax refund		Export rebates		Preferential credits	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Food	24	16.70	19	0.00	25	**44.00**	24	16.70	25	**24.00**	14	35.70
Textile & leather	90	5.60	61	4.90	90	8.90	89	14.60	84	**60.71**	22	45.50
Chemical	13	**69.20**	9	**22.20**	15	**60.00**	14	14.30	13	**30.77**	4	**100.00**
Nonmetal	63	22.20	52	13.50	63	20.60	63	14.30	61	**42.62**	23	39.10
Metal	60	18.30	49	14.30	60	20.00	59	18.60	57	**43.86**	28	28.60
Machine & equipment	56	**30.40**	37	10.80	55	20.00	55	**25.50**	50	**62.00**	20	**40.00**
Electronic device	173	**36.40**	109	10.10	170	**28.80**	172	21.50	162	**67.90**	57	**47.40**
Others[3]	72	11.10	43	4.70	73	17.80	71	12.70	67	**46.27**	19	**47.40**

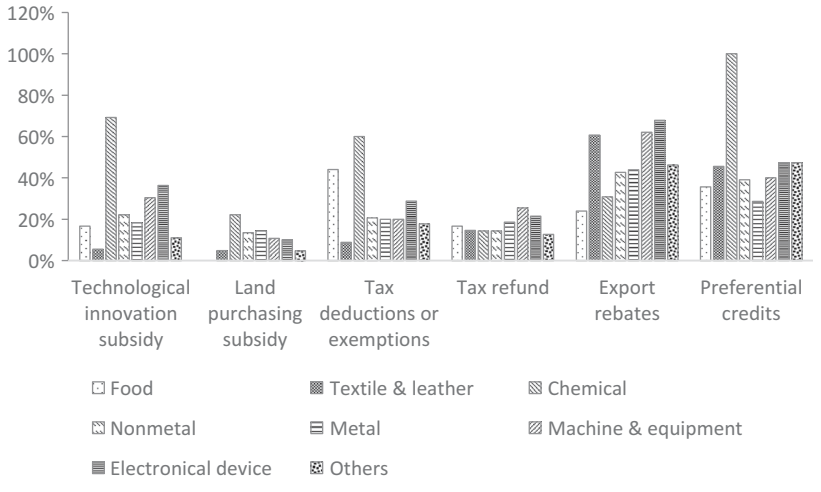

Figure 1. Description of paternalistic care by sector

Table 3 and Figure 2 illustrate the paternalistic care among different sizes of firms. It is obvious that larger firms enjoy more paternalistic care from the government. Apart from land subsidy, all percentages in large firms are much higher than the other two groups, while small and micro firms got the least paternalistic care in all items, except for the preferential credits. 54.80% of large firms enjoyed technology innovation subsidies, more than twice that of medium-sized firms and four times larger than small and micro firms; 49.50% of large firms enjoyed tax deductions or exemptions, almost three times that of medium firms and over three times that of small and micro firms; 34.80% of large firms got tax refunds; 85.88% of large firms enjoyed export rebates, more than twice that of small and micro firms; and 64.90% of large firms enjoyed preferential credits, nearly twice that of medium-sized firms.

We next turn to the differences of paternalistic care among firms with different ownership. Table 4 and Figure 3 presents the description of paternalistic care grouped by ownership. Compared with private and foreign enterprises, SOEs have great superiority for all kinds of paternalistic care. 69.00% of SOEs got technological innovation subsidies, 48.40% got tax deductions or exemptions, and 26.70% got tax refunds, much higher than the other two groups. Especially in technological innovation subsidy, SOEs are over two times and even three times that of private and foreign firms. It also suggests that private firms even have less advantages than foreign firms in getting paternalistic care. To illustrate, for land purchasing subsidy, tax refunds and preferential credits, private firms are far fewer than foreign firms.

Table 3. Description of paternalistic care by firm size.

	Technological innovation subsidy		Land purchasing subsidy		Tax deductions or exemptions		Tax refund		Export rebates		Preferential credits	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Large	93	54.80	67	13.40	91	49.50	92	34.80	85	85.88	37	64.90
Medium	171	28.70	120	15.80	173	19.70	171	21.10	161	68.32	65	30.80
Small & Micro	272	11.00	180	4.40	271	15.90	269	10.40	257	36.96	81	42.00

Figure 2. Description of paternalistic care by firm size

Table 4. Description of the paternalistic care by ownership.

	Technological innovation subsidy		Land purchasing subsidy		Tax deductions or exemptions		Tax refund		Export rebates		Preferential credits	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
State-owned	29	69.00	22	13.60	31	48.40	30	26.70	27	48.15	15	60.00
Private-owned	273	22.00	190	8.40	270	21.50	268	13.40	259	38.61	113	35.40
Foreign-owned	232	18.10	153	9.80	231	18.20	230	21.70	215	75.81	53	52.80

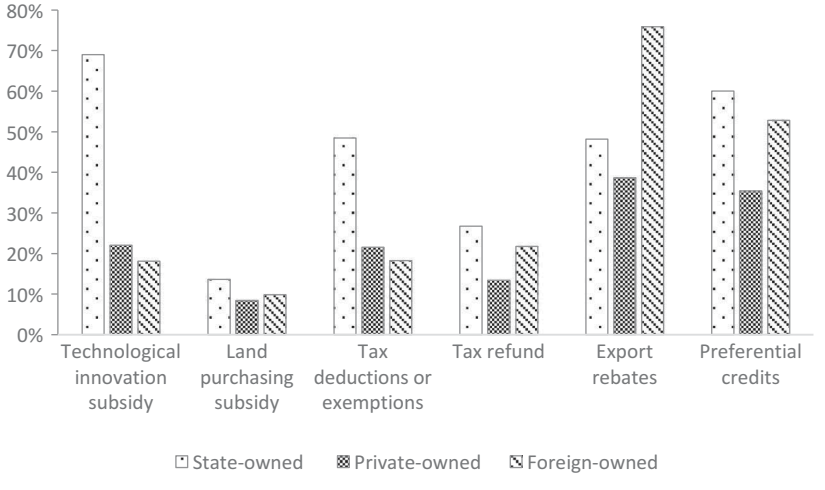

Figure 3. Description of paternalistic care by ownership

The results shown by Table 5 and Figure 4 depict the differences in paternalistic care from the perspective of a firm's age. According to the registration year, firms are divided into five groups (Before 1995, 1995–2000, 2000–2005, 2005–2010 and After 2010). It is manifest that firms with longer duration, especially firms founded before

Table 5. Description of the paternalistic care by firm age.

	Technological innovation subsidy		Land purchasing subsidy		Tax deductions or exemptions		Tax refund		Export rebates		Preferential credits	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Before 1995	65	32.30	51	9.80	66	33.30	66	18.20	63	69.84	22	50.00
1995–2000	82	28.00	59	8.50	82	24.40	81	17.30	74	51.35	28	53.60
2000–2005	155	31.00	114	9.60	154	29.90	153	24.80	147	65.31	64	53.10
2005–2010	152	18.40	111	9.90	151	19.20	149	16.80	145	45.52	54	27.80
After 2010	97	11.30	44	9.10	98	9.20	98	10.20	90	44.44	19	26.30

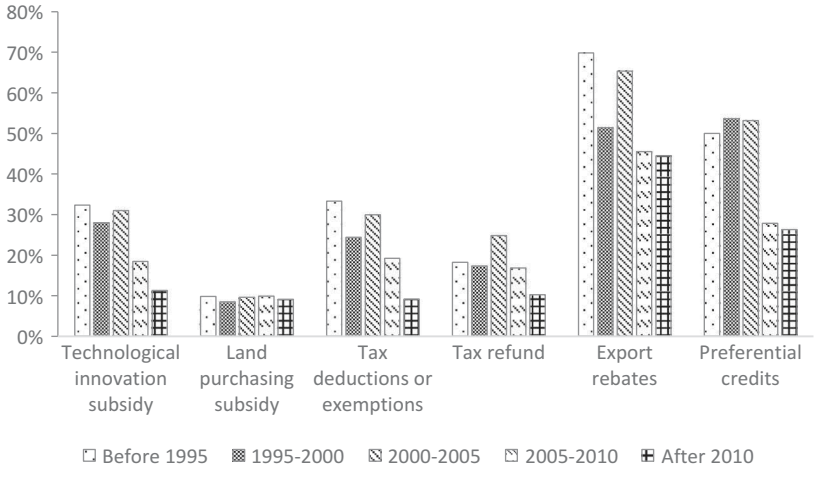

Figure 4. Description of paternalistic care by firm age

2005, are more likely to gain paternalistic care from the government. More than 50% of firms had preferential credits in these three groups (Before 1995, 1995–2000 and 2000–2005), which is twice that of younger firms (2005–2010 and After 2010). Firms founded after 2010 had the smallest probability in getting paternalistic among all groups of firms. The proportions of technological innovation subsidy, land purchasing subsidy, tax deductions or exemptions, tax refunds, export rebates, and preferential credits in this group are only 11.30%, 9.10%, 9.20%, 10.20%, 44.44% and 26.30%, respectively.

We next explore the difference of getting paternalistic care across firms with different entrepreneur's ages. When the sample respondents are divided into five cohorts (Before 1950, 1950–1960, 1960–1970, 1970–1980, 1980–1990), we observe a distinct age effect (Li 2016) in getting paternalistic care from the government in Table 6. 26.70% firms in the Before 1950 cohort enjoyed tax deductions or exemptions, 23.3% gained tax refund, 67.86% acquired export rebates and 66.7% got preferential credits, which are all highest among the five groups. On the contrary, for the 1980–1990 group, the proportion of getting technological innovation subsidy, tax deductions or exemptions and tax refund are the smallest presented in Figure 5, which are only 8.70%, 13.00% and 13.60%, respectively. This phenomenon may have high correlation with the rich experience and

Table 6. Description of the paternalistic care by entrepreneur's birth year.

	Technological innovation subsidy		Land purchasing subsidy		Tax deductions or exemptions		Tax refund		Export rebates		Preferential credits	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Before 1950	29	20.70	19	10.50	30	26.70	30	23.30	28	67.86	6	66.70
1950–1960	113	21.20	77	7.80	113	16.80	111	18.00	106	64.15	35	45.70
1960–1970	234	26.50	166	12.70	232	26.70	231	20.30	214	53.27	87	42.50
1970–1980	123	25.20	80	6.30	125	21.60	124	13.70	119	47.06	42	38.10
1980–1990	23	8.70	16	0.00	23	13.00	22	13.60	23	47.83	10	60.00

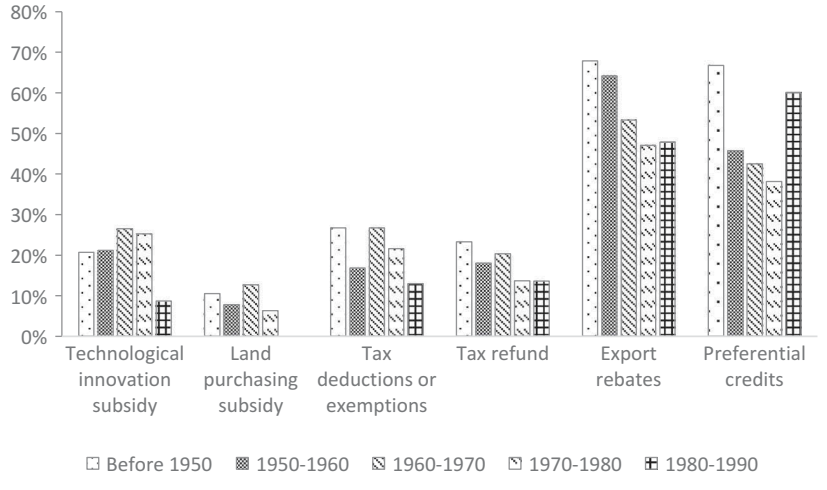

Figure 5. Description of paternalistic care by entrepreneur's birth year

social capital of aged entrepreneurs. But when considering innovation related item, entrepreneurs born in 1960–1980 have more of an advantage that other groups.

4. Empirical analysis

A fixed effects regression is used to test whether and how the government paternalistic care could affect entrepreneurship. Figure 6 presents the descriptive statistics of the renewal and upgrading cycle of products, the proportion of employees with a housing rental allowance, and the proportion of imported intermediate goods among subsidized and non-subsidized firms. Figure 6 indicates whether and how government paternalistic care could affect entrepreneurship. Figure 6 shows that the average renewal and upgrading cycle of products (logarithm) of the subsidized firms was 5.793; that of non-subsidized firms was much shorter, only 5.552. The figure indicates that non-subsidized firms spent less time introducing new products or upgrading previous products and that government paternalistic care may have counterproductive effects on entrepreneurship. Figure 6 also gives some implications on the channels through which paternalistic care takes effect. With subsidized firms, the proportion of employees with a housing rental allowance (logarithm) and proportion of imported intermediate goods (logarithm) were 3.310 and 2.784, respectively. Those results are both lower than

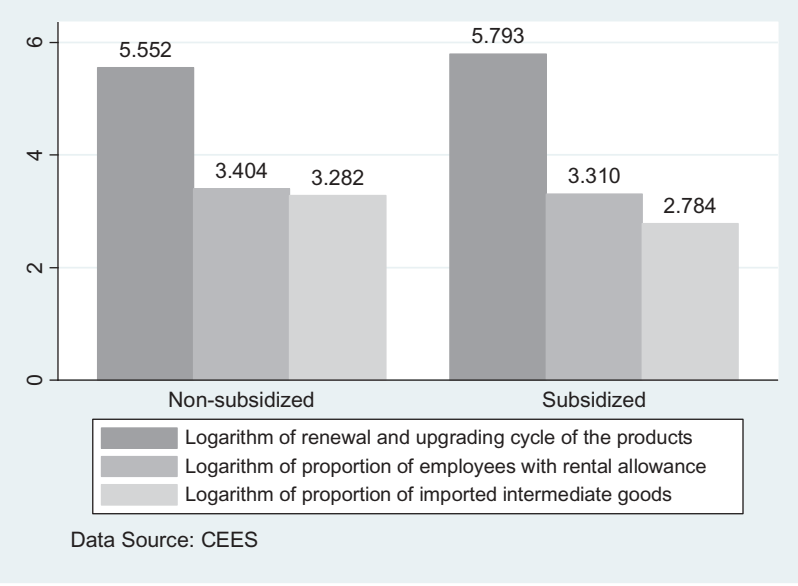

Figure 6. Differences between subsidized and nonsubsidized firms

those for nonsubsidized firms, which demonstrates that paternalistic care may make firms place reduced emphasis on human capital inputs and imported intermediate goods. However, the relationship between paternalistic care and entrepreneurship as well as the channel from which the paternalistic care takes effect demands further investigation.

Table 7 reports the coefficient estimates of the fixed effects regression model with the renewal and upgrading cycle of products as the dependent variable. As evident in Table 7, the coefficient for Subsidy was highly significant with a positive sign. When the other control variables were added, the coefficient increased and the significance remained the same, which indicates that the estimation was robust. As seen in Table 7, model 5 illustrates the results of the complete model, it may be inferred that subsidized firms were 50.7% slower than nonsubsidized firms in renewing and upgrading their products.

Table 8 presents the coefficient estimates of the regression model with the proportion of employees with a housing rental allowance (lnHcapital) and the proportion of imported intermediate goods (lnImport) as the dependent variables. As shown in model 1, the coefficient for Subsidy is negative but not significant. However, when controlled for the manufacturer's business model and the fixed effects in model 2, the coefficient became significant and the subsidized firms invested 27.3% less than non-subsidized firms. This result suggests that government paternalistic care reduces firms' human capital input and hence hinders the promotion of entrepreneurship. As indicated in models 3 and 4, the coefficients for Subsidy were also significantly positive, and the subsidized firms imported 76.8% less intermediate goods than nonsubsidized firms. This indicates that imported intermediate goods represent another channel through which government paternalistic care can take effect.

Table 7. Fixed effects regression of product replacement cycle on government subsidies.

	Model (1)	Model (2)	Model (3)	Model (4)	Model (5)
Variables	lnInnovation	lnInnovation	lnInnovation	lnInnovation	lnInnovation
1.Subsidy	0.189*	0.319***	0.384***	0.361***	0.507***
	(0.103)	(0.113)	(0.111)	(0.115)	(0.128)
Labor	−4.08e-06	−1.36e-05*	−1.77e-05**	−1.88e-05*	−1.76e-05*
	(5.44e-06)	(7.05e-06)	(7.47e-06)	(1.05e-05)	(9.95e-06)
Fage	0.0232***	0.0259***	0.0273***	0.0205*	0.00302
	(0.00718)	(0.00932)	(0.00993)	(0.0105)	(0.0113)
Capital		−6.01e-07	−3.76e-07	−3.26e-07	−9.96e-07**
		(5.55e-07)	(7.21e-07)	(7.05e-07)	(3.95e-07)
Input		3.83e-07***	4.44e-07***	4.32e-07***	6.57e-08
		(1.16e-07)	(1.44e-07)	(1.46e-07)	(1.21e-07)
Rds		0.208**	0.443	0.325	−0.597
		(0.0884)	(0.305)	(0.306)	(0.396)
Board			0.0392	0.0982	−0.220*
			(0.117)	(0.121)	(0.130)
1.ownership			0.831**	0.804*	−0.108
			(0.408)	(0.460)	(0.353)
2. ownership			0.813**	0.757	−0.0279
			(0.408)	(0.466)	(0.355)
Bage				0.0132*	0.0331***
				(0.00720)	(0.00713)
Bedu				0.00221	−0.00932
				(0.0181)	(0.0182)
1. Processing					0.199
					(0.122)
Industry	N	N	N	N	Y
Area	N	N	N	N	Y
Year	N	N	N	N	Y
Constant	5.286***	5.186***	4.329***	3.745***	8.073***
	(0.111)	(0.140)	(0.447)	(0.622)	(0.652)
Observations	858	716	709	684	453
R-squared	0.017	0.025	0.034	0.041	0.296

Note: Robust standard errors in parentheses. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

5. Conclusions

Using CEES 2015 baseline data, this study investigates the patterns of paternalistic care of government in Chinese manufacturing sector. The Chinese government used multiple means of paternalistic care, such as subsidies, tax rebates and preferential credits, in order to boost entrepreneurship and economic growth. The survey data shows that over 70% of manufacturing firms received at least one type of paternalistic care, though the distributions are different depending on the firm size, ownership, industry, firm and entrepreneur's age.

This study also indicates that paternalistic care from the Chinese government negatively affects the entrepreneurship of firms by reducing their innovation capability. Human capital and imported intermediate goods should be the driving forces for firms' development, but government paternalistic care has a counterproductive effect on those two factors, thereby hindering entrepreneurship. This article provides a different perspective, whereby paternalistic government care is one of many factors that restrain entrepreneurship in Chinese firms. When firms desire government paternalistic care, they will use such policies to their own advantage, which is contrary to the expectations of policy makers. Policy makers should be aware that government paternalistic care is

Table 8. Fixed effects regression of human capital and imported intermediate goods on government subsidies.

	Model (1)	Model (2)	Model (3)	Model (4)
Variables	lnHcapital	lnHcapital	lnImport	lnImport
1.Subsidy	−0.115	−0.273**	−0.705***	−0.768***
	(0.0894)	(0.121)	(0.192)	(0.233)
Labor	5.10e-07	−1.77e-05*	6.17e-05***	8.55e-05***
	(9.10e-06)	(9.89e-06)	(1.67e-05)	(2.85e-05)
Fage	−0.0205***	−0.0307***	0.0128	0.0182
	(0.00551)	(0.00863)	(0.0121)	(0.0129)
Capital	9.76e-07**	1.57e-06**	−3.89e-07	−1.96e-07
	(3.91e-07)	(6.59e-07)	(5.63e-07)	(5.72e-07)
Rds	0.893***	1.335***	0.133	5.090
	(0.242)	(0.458)	(0.321)	(3.235)
Board	0.135	0.177	0.0723	0.0249
	(0.0922)	(0.127)	(0.145)	(0.163)
1.ownership	−0.284	−0.371	−0.546	−0.334
	(0.181)	(0.238)	(0.365)	(0.525)
2. ownership	−0.254	−0.402	0.149	0.121
	(0.189)	(0.244)	(0.388)	(0.568)
Bage	0.00393	−0.00324	0.00158	0.00335
	(0.00510)	(0.00701)	(0.00858)	(0.0100)
Bedu	0.0395***	0.0514***	0.0143	−0.00332
	(0.0143)	(0.0172)	(0.0207)	(0.0247)
1. Processing		0.118		0.131
		(0.105)		(0.180)
Industry	N	Y	N	Y
Area	N	Y	N	Y
Year	N	Y	N	Y
Constant	2.919***	2.752***	2.888***	2.779***
	(0.317)	(0.493)	(0.628)	(0.807)
Observations	375	258	284	241
R-squared	0.104	0.368	0.181	0.340

Note: Robust standard errors in parentheses. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

no longer an effective means of enhancing the entrepreneurship of firms in emerging economies, such as China. The government should gradually terminate paternalistic policies for firms, such as innovation subsidies.

This research has some limitations, which suggest directions for future research. First, the study did not consider the time-lagged effect of paternalistic care on entrepreneurship. To address this issue, further studies should adopt long-panel micro data encompassing several years at firm or plant level. Second, the sample of the current study was obtained from manufacturing companies in China. Therefore, the results may not be fully applied to other industries and countries. Future studies could provide additional insight by comparing different industries and countries.

Notes

1. Three middle and senior managers were randomly sampled if the size of the labor force exceeded 85; otherwise, two middle and senior managers were randomly sampled. Apart from the middle and senior managers, the four to seven front-line workers were randomly sampled among employees. Both the managers and the workers were sampled in stratified manner.
2. In the regression analysis of this study, the dataset was reformatted into a short panel because most of the indicators covered 2 years.

3. This group consists of five industries: Timber processing, wood, bamboo, rattan, palm and straw works; Furniture manufacturing; Paper making and paper products; Printing and record processing; Stationary, education, art, sport and entertainment products.

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