Reaching for the Goal: Do Economic Growth Targets Drive FDI Inflows in China?

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Abstract. This paper studies the impacts of economic growth targets on foreign direct investment (FDI) in prefecture-level cities. In China's political promotion system, it is found that local governments seek to achieve such targets by introducing more FDI. And favorable investment environments for foreign enterprises strengthen the effects of economic growth targets on FDI inflows. Such a finding provides a new insight into the determinants of FDI inflows from the perspective of government target management.

Keywords: economic growth target · foreign direct investment · investment environment · promotion tournament

1 Introduction

The Chinese government at three levels (central, provincial and prefectural) sets economic growth targets at the beginning of each year to guide resource allocation and economic development in their respective jurisdictions. Given that the economic growth target is a key indicator for superiors to evaluate the performance of subordinates, local officials attach great importance to it. In the Chinese promotion tournament, the economic target is typically set in a top-down amplification pattern, leading to more pressure on lower-level governments (Li et al., 2019 [8]; Lv, Liu, and Li, 2020 [11]). In the context of fiscal decentralization and political centralization in China, local officials play leading roles in the development of the regional economies, and their promotions are closely related to how well the development proceeds (Xu and Gao, 2015 [13]). Therefore, local officials have strong incentives to set and achieve high growth targets to signal their governing ability to their superiors (Li et al., 2019 [8]; Chai et al., 2021 [4]). After the announcement of targets, local officials will take positive measures to ensure the achievement of the targets. Investment is the main driver of China's economic growth (Lessmann, 2013 [7]; Ali et al., 2013 [1]; Lammarino, 2018 [6]). In addition to domestic investment, FDI also plays an important role in Chinese economic growth because of its positive spillover effects on technology transfer, local employment, and economic productivity (Cui et al., 2019 [3]; Wu and Burge, 2018 [12]). However, under the pressure of economic growth targets, little attention has been paid to whether local officials will introduce more FDI.

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Setting targets for economic growth facilitates the organizational concentration of resources and usually positively affects final performance (Locke, 2000 [10]; Li et al., 2019 [8]). As suggested by Xu and Gao (2015) [13], officials can directly affect economic growth by setting targets. The extensive implementation of the target accountability system at all levels of government puts pressure on local officials to achieve their targets. Meanwhile, the opportunity for promotion provides incentives for local officials to achieve economic goals. FDI is an effective way to directly promote economic growth, and local officials will naturally consider introducing FDI (Alvarado et al., 2017 [2]) if the local investment environments are favorable for foreign enterprises. Hence, this paper predicts that economic growth targets can drive FDI inflows.

This paper contributes to a better understanding of how the government's initiative to set economic targets affects the operation of the real economy and enriches the literature on the relationship between government economic planning and the market. Moreover, this study extends the determinants of FDI inflows. FDI is not a one-way decision of foreign enterprises based on regional markets, financial resources, labor costs, etc., but is also affected by whether local officials are motivated to actively introduce FDI.

The remainder of the paper is organized as follows. Section 2 provides the definition of variables, sample and methodology. Section 3 presents empirical results and robustness tests. Section 4 shows the main findings of this paper.

2 Data and Methods

Data on prefecture-level economic growth targets from 2007 to 2017 are manually collected from the Report on the Work of the Local Governments. Prefecture-level FDI inflows and other variables are obtained from the CEIC database. In this paper, OLS regressions are conducted using a pooled sample of 2,649 observations, and then random and fixed effects panel regressions are implemented using balanced panel data with 1,397 observations. To mitigate potential heteroscedasticity, this paper also uses the GLS and GMM methods for robustness tests. The baseline regression model can be expressed as follows:

$$\begin{aligned} \mathrm{LogFDI}_{i,t} = & \beta_0 + \beta_1 \mathrm{LogTarget}_{i,t} + \beta_2 \mathrm{LogGDPL}_{i,t-1} + \beta_3 \mathrm{LogWage}_{i,t-1} \\ & + \beta_4 \mathrm{LogPop}_{i,t-1} + \beta_5 \mathrm{LogPatent}_{i,t-1} + \mathrm{Yeardummies} + \delta \end{aligned} \quad (1)$$

The variables are defined in Table 1. i and t represent the city and time subscripts, respectively. City fixed effects are included in the OLS regression method. To explore whether the investment environment for foreign enterprises has a moderating effect on the relationship between LogTarget and LogFDI, this paper adds the term IE (a higher proportion of foreign-related taxes in a region's GDP suggests that the investment environment for foreign enterprises has formed a scale, which is conducive to the foreign investment) and the interactive term (LogTargeti, t×IE i, t-1) to Eq. (1).

Table 1. Definitions of variables (self-drawing)

Variable	Definition		The value of logarithm		Non-logarithm
		N	Mean	S. D	Mean
LogFDI	The natural logarithm of the annual realized FDI inflows at the prefecture-level	2649	5.455	1.694	849.200
LogTarget	The natural logarithm of the prefecture-level economic growth target given in the *Report on the Work of the Local Governments*	2649	-2.216	0.250	0.113
LogGDP	The natural logarithm of the real GDP at the prefecture-level	2649	7.059	0.942	1925.000
LogWage	The natural logarithm of the average wage at the prefecture-level	2649	1.343	0.405	4.156
LogPop	The natural logarithm of the population at the prefecture-level	2649	5.940	0.620	460.400
LogPatent	The natural logarithm of the number of ultimately granted patents at the prefecture-level	2649	-0.311	1.704	3.319
IE	The ratio of the total foreign-related tax revenues of the State Administration of Taxation to GDP at the provincial level[1]	2649	0.016	0.015	0.016

Note: the units of *FDI*, *GDP*, *Wage*, *Pop*, and *Patent* are in millions of US dollars/year, 100 millions of yuan/year, 10 thousands of yuan/year, 10 thousands of people, and thousands, respectively.

3 Results

Table 2 reports the empirical results of this paper. The results show that LogTarget has a stable and significant effect on LogFDI at the 1% level under different estimating methods. In this regard, it suggests that setting a higher economic growth target increases the pressure on local officials to achieve the growth targets, which results in local governments seeking to introduce more FDI to help them realize their targets. This finding is consistent with the prior studies of Li et al. (2019) [8] and Liu et al. (2020) [9], which suggest that local officials face the promotion tournament in terms of economic development, and FDI is a crucially determinant of economic growth. In addition, using the same control variables in Column (1), the regression result between the model with and without LogTarget shows a gradual increase in explanatory power (△R2: 29.62***), △R2 shows the explanatory strength of the model is significantly improved when the explanatory variable of economic growth target (LogTarget) is added, indicating that the

[1] Data on foreign-related tax revenues at the prefecture-level could not be obtained.

Table 2. The results of main tests (self-drawing)

Variable	Dependent variable: *LogFDI*						
	Cross section data		Balanced panel data				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	OLS	OLS	Random	Fixed	Fixed	GLS	GLS
LogTarget	1.031***	0.638***	1.065***	1.142***	0.531***	1.137***	0.886***
	(4.87)	(2.65)	(8.33)	(8.74)	(3.47)	(6.82)	(4.27)
IE		58.632***			87.465***		27.302**
		(2.78)			(7.69)		(2.17)
LogTarget×IE		24.034***			33.949***		8.819*
		(2.72)			(7.46)		(1.65)
LogGDP	0.313*	0.290	0.798***	0.436***	0.400***	1.053***	1.079***
	(1.70)	(1.58)	(8.44)	(3.61)	(3.35)	(15.61)	(16.07)
LogWage	0.175	0.106	-0.134	-0.111	-0.237	-0.478***	-0.595***
	(0.69)	(0.44)	(-0.66)	(-0.52)	(-1.12)	(-2.72)	(-3.47)
LogPop	0.306	0.332	-0.085	0.200	0.331	-0.347***	-0.350***
	(0.80)	(0.86)	(-0.64)	(0.45)	(0.75)	(-6.21)	(-6.32)
LogPatent	0.088	0.077	0.274***	0.183***	0.181***	0.358***	0.320***
	(1.37)	(1.24)	(6.37)	(3.74)	(3.77)	(10.73)	(9.42)
Constant	1.120	0.231	3.298***	4.024	1.988	3.690***	2.888***
	(0.74)	(0.15)	(3.72)	(1.46)	(0.72)	(6.58)	(4.40)
Year	Yes	Yes	Yes	Yes	Yes	Yes	Yes
City	Yes	Yes					
N (Group)	2649	2649	1397(127)	1397(127)	1397(127)	1397(127)	1397(127)
Adj_R^2	0.868	0.870					
$\triangle R^2$	29.62***						
Hausman test			28.04 (0.0207)				
$R^2_{overall}$			0.2512	0.5242	0.482		
R^2_{within}			0.2512	0.2591	0.293		
$R^2_{between}$			0.6661	0.6033	0.532		

Note: *t* statistics are reported in parentheses, *t* statistics in Column (1)-(2) are based on two-way (city level and year level). ***significant at the 1% level; **significant at the 5% level; *Significant at the 10% level.

economic growth target is an important factor affecting the inflows of FDI. The marginal effect of LogTarget on LogFDI is 4.73% (1.031 * 0.250/5.455). Clearly, the above tests show that the results of this paper are statistically and economically significant. Moreover, the coefficients on LogTarget × IE are positively significant at the 1% level in all columns, except at the 10% level in Column (7). These findings support the prediction that better investment environments for foreign enterprises strengthen the effects of economic growth targets on FDI inflows. There is still a positive and significant association between LogTarget and LogFDI in Columns (2), (5), (7) again validating the findings of this paper. For the control variables, the coefficients on LogGDP are consistent with the study of Hsu et al. (2019) [5], implying that market size can partially explain the FDI inflows. When using balanced panel data to estimate the findings of this paper, LogPatent has a significant positive effect on LogFDI. It suggests that the local technology level will affect the entry of foreign enterprises, which is opposite to the finding of Hsu et al. (2019) [5] using provincial data. Due to the length of paper, the result using GMM methods is not shown.

To test the robustness of the previous findings, this paper uses the natural logarithm of one plus the number of annual contracts signed with foreign enterprises (LogContracts) at the prefecture-level as the dependent variable, as shown in panel A of Table 3, where

LogTarget is positively significantly associated with LogContracts for various estimating methods, again validating the results of this paper.

Table 3. Robust tests (self-drawing)

Panel A

Variable	Dependent variable: *LogContracts*				
	(1)	(2)	(3)	(4)	(5)
	OLS	Random	Fixed	GLS	GMM
LogTarget	0.525*** (3.76)	0.491*** (4.50)	0.595*** (5.63)	1.083*** (6.39)	1.003*** (13.56)
Control Variables	Yes	Yes	Yes	Yes	Yes
Constant	-2.381 (-1.26)	1.478* (1.65)	-1.416 (-0.63)	5.182*** (9.09)	5.350*** (18.09)
Year	Yes	Yes	Yes	Yes	Yes
City	Yes				
N(Group)	2649	1397(127)	1397(127)	1397(127)	1397(127)
$\triangle R^2$	0.879				
Hausman test		416.31 (0.0000)			
$R^2_{overall}$		0.5522	0.0799		
R^2_{within}		0.1867	0.2246		
$R^2_{between}$		0.6039	0.0702		

Note: *t* statistics are reported in parentheses. *t* statistics in Column (1) is based on two-way (city level and year level). ***significant at the 1% level; **significant at the 5% level; *Significant at the 10% level.

Panel B

Variable	Dependent variable: *LogFDI*				
	(1)	(2)	(3)	(4)	(5)
	OLS	Random	Fixed	GLS	GMM
Diff	6.472*** (3.80)	6.835*** (5.89)	6.891*** (5.85)	6.866*** (4.74)	3.832*** (5.82)
Control Variables	Yes	Yes	Yes	Yes	Yes
Constant	-2.978* (-1.70)	0.619 (0.73)	-1.019 (-0.37)	0.985** (2.16)	1.266*** (5.04)
Year	Yes	Yes	Yes	Yes	Yes
City	Yes				
N(Group)	2649	1397(127)	1397(127)	1397(127)	1397(127)
$\triangle R^2$	0.907				
Hausman test		19.06 (0.2111)			
$R^2_{overall}$		0.5849	0.4952		
R^2_{within}		0.2295	0.2348		
$R^2_{between}$		0.6607	0.5507		

Note: *t* statistics are reported in parentheses. *t* statistics in Column (1) is based on two-way (city level and year level). ***significant at the 1% level; **significant at the 5% level; *Significant at the 10% level.

In Panel B of Table 3, the difference (Diff) of economic growth targets between prefecture-level cities and their provinces is used as the independent variable in this paper. If the economic growth target of a city is higher than the average level of the province, it suggests the city's economic growth target is high. Panel B of Table 3 shows the result of the alternative independent variable. In all estimation methods, Diff has a positive and significant coefficient at the 1% level, which supports the prediction that setting a higher economic growth target leads to the local governments seeking to introduce more FDI in order to meet their targets. Our results are validated again.

4 Conclusion

This paper applies prefectural-level cross-section and balanced panel data for the period of 2007–2017 to test whether economic growth targets affect FDI inflows in China. The findings suggest that, under pressure to achieve high economic growth targets, local governments will introduce more FDI inflows (sign more contracts with foreign enterprises) to stand out in the promotion tournament. Moreover, local environments favorable for foreign enterprises strengthen the relationship between the economic growth targets and FDI inflows. The above findings are robust to a series of alternative measures of economic growth targets and FDI inflows.

The paper makes the following contributions to the existing literature. First, this study extends the determinants of FDI inflows. FDI is affected not only by regional markets and financial resources but also by whether local officials are motivated to actively introduce FDI. The study provides a new explanation for China's FDI inflows by investigating the role of economic target management. Second, this paper finds that setting a higher economic growth target positively affects the development of the region's economy. In order to reach this target, local governments have a strong incentive to seek to introduce more FDI.

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