

# Economic Returns to Deputy Status in Authoritarian Legislatures: Evidence from China

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Thesis submitted in partial fulfillment of the requirements for the degree of  
Master of Arts in the Department of Political Science  
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2015

ABSTRACT

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# Abstract

In explaining legislatures in authoritarian regimes, cooptation theory, selectorate theory, and literature on value of political connections and status suggest higher economic returns to legislators. Using survey data concerning Chinese individuals, this paper empirically explores the effect of legislative deputy status on personal income, and does not find the deputies to be better off than non-deputies. The results are qualitatively the same in a series of Heckman two-stage models and Propensity Score Matching methods. However, it might be too early to declare the failure of those theories in China, and this paper calls for cautious interpretation of the result.

To those who have shared memories with me.

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# List of Abbreviations and Symbols

CCP: Chinese Communist Party

CEO: Chief Executive Officer

CFPS: China Family Panel Studies

LPC: Local People's Congresses

NPC: National People's Congress

PCC: People's Political Consultative Conferences

# Acknowledgements

Thanks to Professor Malesky, Professor Siegel, Professor Vanberg, and Professor Johnston for their kind teaching and insightful advice. Thanks to Haohan Chen, Sha Yu and those who have helped me with data, coding, and plotting.

# 1

## Introduction

It is common to see legislatures in authoritarian regimes. Autocracy with legislatures constitutes 92.5% of the autocratic country-year from 1946 to 1996 (Gandhi and Przeworski, 2006, p. 16). Why do authoritarian countries have legislatures? Democratic countries developed legislatures to secure property rights, constrain the behavior of the governments, and hold the rulers accountable (North and Weingast, 1989), but why do authoritarian countries uphold legislatures? Do legislatures in those countries have the same functions as their democratic counterparts? While traditional views of the nominally democratic institutions treat them as window dressing (Friedrich and Brzezinski, 1961), recent students of authoritarianism suggest that the functions of legislatures in non-democratic regimes include promoting investment and economic growth (Wright, 2008), contributing to the survival of autocrats (Boix and Svolik, 2013; Gandhi and Przeworski, 2007), signaling the strength of the regime (Magaloni, 2006), and distributing rents (Blaydes, 2006).

One popular theory in the literature on authoritarian legislatures is cooptation theory, which maintains that legislatures are ideal for coopting potential challengers to the regimes by sharing spoils or offering policy concessions. However, the micro-

evidence of cooptation theory has yet to be well observed. If the theory is true, we should find members of authoritarian legislatures are better off due to the spoils they receive or have more political clout in policy making because of the policy concessions they enjoy.

Besides, connection or affiliation to the regime establishments in authoritarian countries should bring considerable benefits, as posited by some political economists. Legislature, conferred the power of law making by definition, is thus a prominent institution of the regime. Such prominent position or access to the authority alone should generate much profit, no matter whether authoritarian legislatures serve the purpose of cooption or not.

This paper empirically examines the cooptation theory and the value of political connections in China. In the following section, I outline the theoretical background of the research question, drawing literature on authoritarian institutions and on value of political connections. The third section briefs the relevant information about legislatures in China, including the role of people's congresses and deputies to the congresses. The fourth section describes the individual-level data used in this paper, and the fifth section analyzes if deputies to Chinese congresses acquire higher personal income than non-deputies. The result shows little evidence of higher economic returns to the deputies to the congresses. However, this does not necessarily suggest that China is an exception in the authoritarian literature. Therefore, the sixth section discusses possible explanations of the result such as that the intangible personal income is elusive, that the dimension of policy concessions is not investigated, that the data does not differentiate deputies to different levels of congresses, and that the real cooptation and value of political connections may well concern the Chinese Communist Party rather than the legislatures. The final section concludes.

## Theoretical Background and Literature

There are at least two strands of literature on the economic returns to the members of legislatures. One strand deems legislature as a forum for cooptation in authoritarian politics; the other, though not particularly concerns legislatures, posits financial benefits of political connections to regimes.

### 2.1 Literature on Authoritarian Institutions

Why do some authoritarian regimes develop nominally democratic institutions such as parliaments, elections, and political parties, etc.? This is an intriguing question that has attracted much scholarly attention (Gandhi and Przeworski, 2007; Gandhi, 2008b; Gehlbach and Keefer, 2012; Wright, 2008; Wright and Escrib-Folch, 2011). Nominally democratic institutions serve democratic values such as responsiveness, accountability, and transparency in democratic systems, but it is probably not the case in authoritarian countries. Researchers have observed that authoritarian regimes with single-party (Geddes, 1999; Magaloni and Kricheli, 2010), regular elections (Geddes, 2006), or legislatures (Gandhi and Przeworski, 2007; Wright and Escrib-Folch, 2011) are more durable. Institutions are hence viewed as tools to serve

the autocrats' purposes such as extending their own tenure or generating economic growth. A review (Brancati, 2014) identifies five mechanisms through which these goals are achieved: signaling, information acquisition, patronage distribution, monitoring, and credible commitment.

Notably, cooptation theory enjoys great popularity in this literature, which argues that authoritarian institutions like legislatures are to coopt potential rivals to the regime by offering some spoils or policy influence, and thus reduce the threats to regime and promote the survival of the autocratic rule. Gandhi and Przeworski (2007, p. 1280) claim in detail that:

Autocrats face two types of threats to their rule: those that emerge from within the ruling elite and those that come from outsiders within society. Authoritarian rulers often establish narrow institutions, such as consultative councils, juntas, and political bureaus, as a first institutional trench against threats from rivals within the ruling elite. But we claim that when they need to neutralize threats from larger groups within society and to solicit the cooperation of outsiders, autocrats frequently rely on nominally democratic institutions. Specifically, partisan legislatures incorporate potential opposition forces, investing them with a stake in the ruler's survival. By broadening the basis of support for the ruler, these institutions lengthen his tenure.

Gandhi and Przeworski recognize that the distribution of spoils does not necessarily require a legislature to facilitate the process, but their general argument still presumes that legislatures in authoritarian regimes mitigate threats of subversion through two ways: sharing spoils, and making policy concessions. Some research carries forward the latter aspect and links access to policy making with credible commitment, investment, and economic growth (Gandhi, 2008a; Wright, 2008).

The premise of the literature on authoritarian institutions is that the institutions matter and serve the purpose of the authoritarian leaders. Specifically, cooptation theory proposed by Gandhi assumes that legislatures are ideally suited to coopt po-

tential rivals and to induce cooperation, and so finally enhance regime durability or improve economic performance. Because theorists seek to generalize and make their theories apply worldwide, country-specific differences are hence paid less attention. Legislatures might play a critical role in some authoritarian countries like Malaysia, while in other regimes the legislatures matter not that much; instead, the real policy process takes place in other institutions. For example, the power center in Vietnam is located in the Central Committee of the Vietnamese Communist Party (Malesky et al., 2011). Some scholars of authoritarian institutions have emphasized the pivotal role of ruling party (Geddes, 1999; Gehlbach and Keefer, 2011, 2012; Magaloni, 2006; Svobik, 2012). For example, Geddes (1999) models the residents in single-party regimes as playing a “stag hunt” game, in which everyone is better off if cooperate and remain united. The party has control of educational and career opportunities, which can be used to coopt people, and individuals have incentives to cooperate and join the party regime. Gehlbach and Keefer (2011) argue that institutionalized ruling party facilitates collective action against the autocrat and defense of property, and therefore attracts investment. Differing from Gandhi’s theory of cooptation by “exchange”, party-based cooptation developed by Svobik (2012) resembles “sunk investment” since the coopted have to provide costly service to the party regime before they are allowed to reap the benefits. In short, in some authoritarian countries the legislatures matter little but other institutions, such as the ruling party, play the decisive role.

Though macro cross-national studies seem to support the implications of cooptation theory by finding associations between authoritarian legislatures and autocrat’s survival or economic growth, the micro-evidence is yet to be well exploited. A study by Malesky and Schuler (2010) lends some support to the micro-logic of the cooptation theory by finding assembly delegates speaking for their local constituencies in Vietnam. Nevertheless, given the authoritarian nature of Vietnamese National

Assembly, it is difficult to assess how much influence the delegates have over policy making or how many policy concessions the authority has granted to the coopted potential challengers.

The distribution of spoils through authoritarian legislatures assumed by the cooptation theory is less studied. However, compared to assessing the intangible and unmeasurable policy concessions the autocrats have given, it might be relatively easier to find out how much spoils the rulers have spent on the coopted.

If people's congresses in China work as forums for coopting potential challengers, we expect to find that deputies to the congresses receive material gains or have a say in formulating policies. Given the limitation of the data, however, it is currently impossible to explore how much impact the deputies have on policies in the congresses, so this study only seeks to investigate the facet of distributing spoils. On top of cooptation theory, the literature on rent distribution theory (Lust-Okar, 2006) and selectorate theory (Bueno de Mesquita et al., 2003) also predicts that autocrats distribute private goods to their selectorate. Deputies to the people's congresses in China have the *de jure* power to elect and remove government officials at their respective levels, so they are the formal selectorate of the governmental leaders. Given the small quantity of deputies, selectorate theory expects private side payments to the deputies to maintain their support and the "winning coalition".

## 2.2 Literature on Value of Political Connections

Another strand of literature delves into the financial value of political connections, affiliation, and status (Fisman, 2001; Khwaja and Mian, 2005; Li et al., 2008). Unlike literature on authoritarian institutions, this strand of literature is mainly a collection of empirics without developing a systematic theory. The basic assumption of this literature seems quite intuitive and straightforward: power is such a salient resource that it should bring benefits to those who have access to it. Particularly, in



post-communist countries, political connections are precious for private businesses because of the lingering legacy of state control of key resources. In these transition economies, private businesses still face obstacles and discrimination implicitly or even explicitly. Therefore, cultivating good relations with government is conducive to running business (Li et al., 2008).

The financial value of political connections in democracies has been studied by some political economists (Eggers and Hainmueller, 2009; Querubin and Snyder, 2011; Roberts, 1990). Democracies usually have good governance and rule of law; in comparison, premature legal system, distorted market mechanism, and unconstrained power are common scenes in authoritarian countries. If political connections or status could bring financial benefits in democracies, one might infer that connections to power in authoritarian countries should be more beneficial to individuals or businesses.

Many scholars in this field aim at effects of political connections on performance of firms. For example, in Suharto's Indonesia, Fisman (2001) finds that the share price returns of firms dependent on connections to Suharto family declined after the dissemination of rumors about Suharto's bad health, and the more politically connected firms experienced more decline. In Chinese setting, Li et al. (2008) estimate the value of Chinese Communist Party membership to private enterprises and find that the Party membership has favorable impacts on companies' performance and obtaining loans from state banks. They also reveal that the value of this political connection is greater in regions with weak market institutions or legal system. Moreover, Li and his coauthors incidentally test whether membership of people's congresses or people's political consultative conferences matters for the performance of firms, only to find it insignificant. Truex (2014) indicates that companies with their CEOs in the National People's Congress gain an additional 1.5% points in returns, and smaller companies tend to receive larger additional returns.

Some research examines the return of political connections or status to individuals or households. For instance, Morduch and Sicular (2000) use samples from a Chinese county in Shandong Province and find that Party membership does not directly bring rents, but it increases the probability of being a village cadre, and the households of these cadres earn 16-18% more than non-cadre households. Similarly, Walder (2002) finds a larger advantage of cadre status with the help of data from Chinese national household survey. Two pieces of work by Jin et al. (2014) and Zhang et al. (2012) confirm economic returns to village cadre status in rural China as the income of cadres are higher than non-cadre individuals or households. Their work also report separate returns to Communist Party membership. While these researchers are aware of the potential unobserved heterogeneity that might bias the results and hence control for the influence of personal ability or other human capital variables, their research could not solve the problem convincingly. To address this problem, Li et al. (2007) adopt twins data from urban China to estimate the economic returns to Party membership, arguing that twins are genetically identical and share the same family background, so the effects of unobserved personal ability and family background should be minimized.

Most of the studies focus on the political affiliation with the Chinese Communist Party or the cadre status, but few work has been done to appraise the value of deputy status to congresses, especially local people's congresses. Some extant studies probe into returns to deputy status with respect to firm performance, rather than personal income. Using data at individual level, this paper contributes to the literature by taking a step to fill the gap.

## People's Congresses and Deputies in China

People's congresses play the *de jure* role of electing government officials at corresponding levels. According to Article 62 and 63 of Constitution of China, the National People's Congress has the power to elect (or decide) and remove the President and the Vice-President, the Premier, Vice-Premiers, State Councilors, Ministers, Chairman of the Central Military Commission, the President of the Supreme Court, the Procurator-General of the Supreme People's Procuratorate. Article 101 stipulates the formal authority of local people's congresses to elect governments by stating that:

At their respective levels, local people's congresses elect, and have the power to recall, governors and deputy governors, or mayors and deputy mayors, or heads and deputy heads of counties, districts, townships and towns. Local people's congresses at and above the county level elect, and have the power to recall, presidents of people's courts and chief procurators of people's procuratorates at the corresponding level.

The *de jure* roles of people's congresses also include law or regulation making, supervision of governments and courts, approving government budget and work report.

Notwithstanding, how much *de facto* power the people's congresses exercise is the subject of hot debate. Some China experts tend to believe that the people's congresses have evolved beyond the humiliating nickname of "rubber stamps" (Cho, 2009; Manion, 2008, 2014). Besides, people's congresses may have different strength on different dimensions. As Almen (2013, p. 238) suggests: "Studies on the National People's Congress have highlighted its influence over law making. However, when it comes to the power to supervise the government it is generally acknowledged that local people's congresses' supervision authority is greater than that of the NPC." Though the people's congresses might have wielded more power and exerted more influence on the governments, it is widely acknowledged that the political status and power of governments outweigh that of congresses, and, ultimately, the paramount source of power is still the Chinese Communist Party, especially its upper echelon (Central Committee, Politburo, and Politburo Standing Committee).

The plenary session of the congresses is held only once a year for a short period of time, and most of the deputies serve on a part-time basis. The National People's Congress consists of nearly 3,000 deputies (between the number of 2970 and 2987 since 1983). According to Electoral Law of China, the base number of provincial people's congresses is 350, and each province can add 1 deputy for every 150 thousand population (centrally administered municipalities can add 1 deputy for every 25 thousand population). For example, Hubei Province has a population of 57.79 million, and its current (2013) provincial people's congress consists of 731 deputies ( $350 + 57.79 \div 0.15 = 735 \approx 731$ ). Usually the number of deputies is not allowed to exceed 1,000, even for populous provinces. For prefectural level congresses, the base number is 240, and each prefecture can add 1 deputy for every 25,000 population, but the cap is 650. For the county level, the base number is 120 and every 5,000 population can have an additional deputy. For the township level the base number of deputies is 40 and every 1,500 population is allowed to have an additional one.

Allocation plans specifying deputy quotas are also implemented at various levels. Women, ethnic minorities, and different professions (workers, peasants, intellectuals, cadres, military, etc.) are allocated certain quotas. Each provincial People's Congress Standing Committee can decide within its jurisdiction (Sun, 2014). A summary of the number of deputies at various levels of people's congresses is presented in Table 3.1.

What do the deputies actually do in the congresses? Cho (2009, pp. 91-110) argues that deputies have been more active and their role fulfillment has changed dramatically since 1990s. He summarizes that the deputies perform the roles of supervision, reflection, and policy-providing. Specifically, deputies with worker or peasant background are active in reflecting opinions of constituencies and supervisory activities, while intellectuals tend to perform the role of policy-providers by utilizing their specialized knowledge and research to make policy proposals. Deputies who come from private business sector are more interested in exemplary role, and enthusiastically disseminate state policies, observe government rules, and engage in economic-related activities and development. When the congresses are not in session, those part-time deputies usually go back to their life. But the deputy status keeps with them until the next election. Whether the deputy status has an impact on their personal income is an interesting question worth pursuing.

Table 3.1: Number of people's congress deputies at various levels (November 1, 1994)

Divisions	Number of People's Congresses	Deputies (%)
National People's Congress		2,979 (0.08%)
Local People's Congresses	Provincial level (31)	20,989 (0.6%)
	Cities divided into districts (189) and autonomous prefectures (30)	83,155 (2.8%)
	County level (2,897)	651,311 (18.6%)
	Township level (48,172)	2,743,378 (78.3%)
Total		3,501,812 (100%)

*Source:* Cho (2009, p.86)

## Data and Key Variables

The dataset at individual level is from China Family Panel Studies (CFPS), funded by 985 Program of Peking University and carried out by the Institute of Social Science Survey of Peking University.

The sample covers 25 provinces in China, and 16,000 households are interviewed intensively. The 2010 survey records 33,600 individuals' detailed information about age, gender, ethnicity, residential address, household registration (*hukou*) status, family members, education, health, marriage, occupation, income, leisure time activities, and the like. The survey also asks the respondents to self-evaluate their state of health, relations with other people, the ability to get along well with others, etc. The respondents are then required to take two tests on word and math capacity. Finally, after the questionnaire is done, interviewers rate each respondent's comprehension, intelligence, health conditions, level of Mandarin Chinese, verbal expression, credibility, and so forth.

The most relevant information to this paper is the deputy status of the respondents. The No. A7 question in the questionnaire asks the respondents:

Which of the following organizations do you have membership? (You can choose more than one)

1. Chinese Communist Party
2. Democratic Parties (*minzhu dangpai*)<sup>1</sup>
3. Deputies to the people's congresses at the county level or above
4. Delegates of the people's political consultative conferences at the county level or above
5. Labor Union (*gonghui*)
6. Communist Youth League of China
7. Women's Federation (*fulian*)
8. Federation of Industry and Commerce (*gongshanglian*)
9. Informal sodalities, such as community, the Internet, salon, etc.
10. Religious groups
11. Private entrepreneur's associations
12. Self-employed worker's associations
77. Other formally registered associations, such as industry association, academic association, professional association, etc.
78. Not a member of any of the organizations above

In the data, 58 of the 33,600 respondents (or 0.17%) are deputies to the people's congresses at the county level or above; 20 (or 0.06%) are delegates of the people's political consultative conferences at the county level of above. Though the ratio is low, it is reasonable given the huge Chinese population and the small number of deputies. In contrast, in the data 2,525 (or 7.51%) respondents are members of the Chinese Communist Party, a ratio similar to the proportion of Communist Party members in the whole population. A dummy variable is used to indicate the deputy status: if the respondent is a deputy, the "deputy" variable is coded as 1 and other-

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<sup>1</sup> Democratic Parties, or the United Front, refer to the eight legally permitted political parties in China. But they are usually not viewed as opposition parties, and they are not allowed to contest power with the Chinese Communist Party.



wise 0.

The dependent variable is the personal income of respondents. To obtain an accurate amount of personal income, the survey asks in detail about the monthly salary, flexible pay, overtime pay, allowance, bonus, rewards, gifts given by employers, income from part-time jobs, doles from governments or alms from friends, and a self-reported amount of total personal income last year. In the end, the researchers of Institute of Social Science Survey of Peking University give an estimate income for each respondent in the data. In the regressions, the natural logarithm of personal income is employed.

The primary independent variable of interest in this paper is the deputy status. Since the survey only asks whether the respondent is a member of people’s congresses at the county level or above but does not differentiate which level the respondent joins (in other words, we do not know whether the deputy is to a county-level people’s congress or to a provincial congress), we are currently unable to discern the possible heterogeneous effects of different levels of congresses on personal income. Whether the deputy is a part-time rank-and-file legislator or a member of the standing committee is also not recorded in the survey data.

In some models I pool deputies to people’s congresses and delegates of the people’s political consultative conferences (PCCs). Though not legislatures, the PCCs are conferred by the Constitution and laws the functions of political consultation, supervision, and policy advising. As the plenary session of the people’s congresses and the yearly meeting of the people’s political consultative conferences are typically held at around the same time, they are referred as the “Two Meetings (*lianghui*)” in China, and receive broad media coverage during their sessions. So in some models I test if members of the “Two Meetings” at the county level or above are more affluent than others.

Other covariates in the series of specifications include gender (“male” = 1 if the re-

spondent is a male and 0 if is female), age (absolute value) and its quadratic form (age squared and then divided by 100), education (years of education), Party membership (“Party member” = 1 if the respondent is a member of the Chinese Communist Party, and otherwise 0), urban status (“urban” = 1 if the respondent lives in urban area, and otherwise 0), ethnicity (“ethnic Han” = 1 if the respondent is an ethnic Han, and 0 if he/she is ethnic minorities<sup>2</sup>), household registration status (“*feinong hukou*” = 1 if the respondent’s household registration status is non-agricultural, and 0 if it is agricultural<sup>3</sup>), administrative status (“admin” = 1 if the respondent has administrative or managerial responsibilities in his/her work, and otherwise 0), interpersonal skills (“interpersonal” represents the respondent’s relations with other people, scaled from 1 to 5, the larger the better, rated by the respondent himself/herself), personality (“getalong” measures the hardness of getting along well with the respondent, scaled from 1 to 5, the larger the easier to get along well, rated by the respondent himself/herself), health (“health.s” indicates the self-evaluated state of health of the respondent, scaled from 1 to 5, the larger the healthier; “health.i” represents the respondent’s state of health rated by the interviewers, scaled from 1 to 7, the larger the better), intelligence (“test score” is the total score of the word and math tests taken by the respondent; “intelligence.i” is a rating by the interviewers, scaled from 1 to 7, the larger the more intelligent; “compre” scales from 1 to 7, rated by the interviewers to reflect the respondent’s comprehension). Table 4.1 summarizes the descriptive statistics of the variables of interest.

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<sup>2</sup> In China, ethnic Han is the majority, and all other ethnic groups are referred as ethnic minorities.

<sup>3</sup> Household registration, or *hukou*, is a Chinese official document that records information about family members and relations. The *hukou* is registered either as “agricultural” (*nongye hukou*) or “non-agricultural” (*fei nongye hukou*), and historically the “non-agricultural” status enjoys some favorable treatment in areas such as education, social security, and job opportunities. But now the importance of this status has declined.

Table 4.1: Summary statistics of key variables

Statistic	N	Mean	St. Dev.	Min	Max
male	33,600	0.485	0.500	0	1
age	33,600	45.515	16.406	16	110
education (year)	33,590	6.284	4.969	0.0	22.0
Party member	33,600	0.075	0.264	0	1
urban	33,600	0.464	0.499	0	1
ethnic Han	33,600	0.916	0.278	0	1
<i>feinong hukou</i>	33,600	0.292	0.455	0	1
admin	33,600	0.033	0.179	0	1
interpersonal	31,848	3.973	0.857	1	5
getalong	31,790	4.048	0.853	1	5
health.s	33,587	4.177	1.016	1	5
health.i	33,577	5.106	1.316	1	7
test score	33,563	27.000	17.030	0	58
intelligence.i	33,577	4.876	1.280	1	7
compre	33,577	4.841	1.432	1	7
deputy status	33,600	0.002	0.042	0	1
delegate of PCCs	33,600	0.001	0.024	0	1
income	31,967	10,129.27	20,179.85	0	800,000

## Methods and Results

Various methods are employed to analyze the data to see if personal income is higher for deputies than non-deputies.

### 5.1 OLS Models

To examine whether being a deputy to the people's congresses (at the county level or above) affects individual income, I first employ OLS models. The equation is:

$$\text{Income} = \beta_0 + \beta_1 D + X\delta + \epsilon,$$

where income is the natural logarithm of personal income, and  $D$  is the deputy status dummy variable. The vector  $X$  represents a series of sets of covariates that include human capital, region, industry, demographic characters, social class and status, and interpersonal skills.  $\epsilon$  is the collection of unobserved random variables that are not captured in the regressions. If deputies do receive higher economic returns, we should find  $\beta_1$  to be positive and statistically significant.

All of the models control for provincial and industry dummies to account for differences in income affected by geography and industry. Since the focus is on the

personal income, I first drop all respondents with income of zero or missing value in the data. The results are displayed in Table 5.1.

The coefficients of the variable “deputy” are greater than zero in most specifications, indicating a positive relationship between deputy status and personal income, but they are not statistically significant across all models. Column 1 of Table 5.1 shows the result of a model that regresses income on the deputy status. Column 2 shows the estimates of a model that includes covariates that are universally recognized as affecting personal income. As expected, males receive higher income than females. The effect of age exhibits an inverted “U” shape relationship. Education has a positive and significant impact on income. Model 3 includes health, interpersonal skills, and some explanatory variables (urban status, ethnic Han status, non-agricultural household registration status, administrative status) that may affect personal income in China. Model 4 is essentially the same as model 3, except that I use interviewers’ evaluation on respondents’ health. The signs of the coefficients are in the expected direction. Model 5 includes membership of Chinese Communist Party to separate the impact of deputy status and Party membership, as most deputies to the people’s congresses are Party members. Not surprisingly, Party membership has a positive coefficient that is significant at one-percent level. Model 6 pools deputies to people’s congresses and delegates of the people’s political consultative conferences (the “Two Meetings (*lianghui*)”) to see their joint influence. The result indicates that there is no evidence either deputies or delegates receive income premium through their political status.

It is possible that there is unobserved heterogeneity that has biased the results. For example, ability could both affect income and the probability of being elected as a deputy. However, as I control for the human capital variables (intelligence, years of education, state of health, interpersonal skills, personality), the unobserved personal ability bias should have been greatly reduced.

Table 5.1: OLS regressions with income greater than zero

	<i>Dependent variable: ln(income)</i>					
	(1)	(2)	(3)	(4)	(5)	(6)
deputy	0.162 (0.196)	0.044 (0.184)	0.041 (0.180)	0.074 (0.181)	-0.052 (0.184)	
male		0.567*** (0.018)	0.564*** (0.018)	0.580*** (0.017)	0.550*** (0.018)	0.550*** (0.018)
age		0.063*** (0.003)	0.059*** (0.003)	0.057*** (0.003)	0.063*** (0.003)	0.063*** (0.003)
age sq		-0.073*** (0.003)	-0.068*** (0.003)	-0.067*** (0.003)	-0.074*** (0.003)	-0.074*** (0.003)
edu year		0.070*** (0.002)	0.026*** (0.003)	0.045*** (0.002)	0.066*** (0.002)	0.066*** (0.002)
party member					0.262*** (0.033)	0.261*** (0.033)
Two Meetings						0.035 (0.164)
urban			0.275*** (0.021)	0.276*** (0.021)		
ethnic Han			0.102*** (0.036)	0.115*** (0.036)		
<i>feinong hukou</i>			0.294*** (0.024)	0.298*** (0.025)		
admin			0.392*** (0.044)	0.385*** (0.044)		
interpersonal			0.039*** (0.012)			
getalong			0.032*** (0.012)			
health.s			0.088*** (0.009)			
test score			0.009*** (0.001)			
compre				-0.003 (0.011)		
health.i				0.058*** (0.009)		
intelligence.i				0.041*** (0.011)		
Province dummies	Yes	Yes	Yes	Yes	Yes	Yes
Industry dummies	Yes	Yes	Yes	Yes	Yes	Yes
Observations	25,052	25,045	24,887	25,023	25,045	25,045
R <sup>2</sup>	0.238	0.331	0.355	0.351	0.333	0.331

Note:

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

In the next test, I run the same regressions except that the dependent variable does not exclude observations with income of zero. Table 5.2 displays the result of OLS regressions. There are some minor changes in the result, but the most dramatic one is the coefficients of the deputy status are positive and statistically significant at 10% confidence level through all specifications, even for the “Two Meetings (*lianghui*)” variable. This disparity suggests that the OLS estimation is not reliable in this situation. In the dataset, in fact, 6,915 (or 20.6%) respondents have zero income, in addition to 1,633 (or 4.9%) respondents who have missing value in their personal income. The proportion is so large that other methods have to be adopted to further analyze the correlation.

## 5.2 Heckman Selection Models

Heckman two-stage method is especially suitable here. There is a relatively large proportion of respondents who do not have jobs and therefore have zero income, so the sample is censored in a sense and OLS estimation is thus biased and inconsistent. Heckman models should resolve this problem. In the first stage, gender, age and its quadratic form, education, state of health and interpersonal skills are included in a probit selection equation to model if the observation has an income greater than zero. Then in the second stage, income with positive amount is regressed on deputy status and the covariates specified previously. Table 5.3 reports the result from the second stage of Heckman models.<sup>1</sup>

The first thing to note is that all coefficients of deputy status remain statistically insignificant again, so is the coefficient of the “Two Meetings (*lianghui*)”. Most of the covariates, such as gender, age, education, urban status, ethnicity, household

<sup>1</sup> The table does not report the result from the first stage. In fact, the signs of all coefficients are in the expected direction and are statistically significant, except for the variable of interpersonal skills.

Table 5.2: OLS regressions with income including zero

	<i>Dependent variable: ln(income)</i>					
	(1)	(2)	(3)	(4)	(5)	(6)
deputy	1.022** (0.450)	0.796* (0.435)	0.745* (0.433)	0.789* (0.434)	0.720* (0.435)	
male		1.546*** (0.039)	1.517*** (0.039)	1.563*** (0.039)	1.533*** (0.039)	1.532*** (0.039)
age		0.064*** (0.007)	0.064*** (0.007)	0.058*** (0.007)	0.064*** (0.007)	0.064*** (0.007)
age sq		-0.078*** (0.007)	-0.076*** (0.007)	-0.075*** (0.007)	-0.079*** (0.007)	-0.079*** (0.007)
edu year		0.074*** (0.005)	0.027*** (0.008)	0.060*** (0.005)	0.071*** (0.005)	0.071*** (0.005)
Party member					0.202*** (0.075)	0.201*** (0.075)
Two Meetings						0.752* (0.388)
urban			0.242*** (0.047)	0.262*** (0.047)		
ethnic Han			0.368*** (0.079)	0.411*** (0.079)		
<i>feinong hukou</i>			0.042 (0.055)	0.059 (0.055)		
admin			0.351*** (0.109)	0.352*** (0.109)		
interpersonal			0.018 (0.026)			
getalong			0.074*** (0.026)			
health.s			0.104*** (0.019)			
test score			0.013*** (0.002)			
compre				-0.064*** (0.024)		
health.i				-0.025 (0.020)		
intelligence.i				0.123*** (0.025)		
Province dummies	Yes	Yes	Yes	Yes	Yes	Yes
Industry dummies	Yes	Yes	Yes	Yes	Yes	Yes
Observations	31,967	31,957	31,721	31,934	31,957	31,957
R <sup>2</sup>	0.206	0.261	0.266	0.264	0.262	0.262

Note:

\*p&lt;0.1; \*\*p&lt;0.05; \*\*\*p&lt;0.01



registration status, administrative status, interpersonal skills, personality, health status, and intelligence, have the signs of coefficients as expected and are significant at one-percent level. The only minor issue is that the effect of respondent's comprehension rated by the interviewers seems inconsistent through the models. The Heckman selection models should give us more confidence than the OLS method that the evidence from the data does not support the posited affluence for the deputies to the people's congresses than non-deputies.

### 5.3 Propensity Score Matching

Given the small number of deputies and the huge amount of non-deputies in the data, I further analyze the difference in income between deputies and non-deputies through the method of Propensity Score Matching. This technique can reduce selection bias by matching treatment cases with control cases based on propensity score. In this study, the grouping variable is deputy status and the variables being matched on are the selected covariates described before. Alternative groups of matching variables are employed to do the sensitivity analysis. As a baseline, I first use gender, age, education, Party membership, ethnicity, and administrative status for matching. Provincial and industry variables are also included. The result of the Propensity Score Matching is exhibited in Table 5.4.

As can be seen, the matching variables of "treatment group" and matched "control group" are now equalized and look highly similar. Before matching, the deputy group has more males, is older, receives more education, contains much more Party members, has slightly more ethnic Han, and includes far more people with administrative or managerial responsibilities in their work. After matching, those differences are almost balanced. Then the comparison between the deputy group and the matched non-deputy group should give us further evidence regarding the income

Table 5.3: Heckman selection models: second stage

	<i>Dependent variable: ln(income)</i>			
	(1)	(2)	(3)	(4)
deputy	0.052 (0.180)	0.078 (0.182)	-0.047 (0.183)	
male	0.849*** (0.096)	0.791*** (0.075)	0.848*** (0.097)	0.848*** (0.097)
age	0.069*** (0.005)	0.098*** (0.015)	0.077*** (0.005)	0.077*** (0.005)
age sq	-0.084*** (0.006)	-0.110*** (0.015)	-0.092*** (0.006)	-0.092*** (0.006)
edu year	0.034*** (0.004)	0.049*** (0.003)	0.073*** (0.004)	0.073*** (0.004)
Party member			0.250*** (0.033)	0.249*** (0.033)
Two Meetings				0.038 (0.163)
urban	0.274*** (0.021)	0.276*** (0.021)		
ethnic Han	0.100*** (0.036)	0.116*** (0.036)		
<i>feinong hukou</i>	0.293*** (0.025)	0.300*** (0.025)		
admin	0.382*** (0.045)	0.380*** (0.044)		
interpersonal	0.042*** (0.012)		0.039*** (0.013)	0.039*** (0.013)
getalong	0.032*** (0.012)		0.039*** (0.012)	0.039*** (0.012)
health.s	0.110*** (0.012)		0.119*** (0.012)	0.119*** (0.012)
test score	0.009*** (0.001)			
compre		-0.002 (0.011)		
health.i		0.055*** (0.009)		
intelligence.i		0.042*** (0.011)		
Province dummies	Yes	Yes	Yes	Yes
Industry dummies	Yes	Yes	Yes	Yes
Observations	31,760	33,567	31,772	31,772
R <sup>2</sup>	0.355	0.351	0.339	0.339
$\rho$	0.764	0.619	0.797	0.799
Inverse Mills Ratio	1.136*** (0.376)	0.888*** (0.307)	1.216*** (0.377)	1.219*** (0.376)

Note:

\*p&lt;0.1; \*\*p&lt;0.05; \*\*\*p&lt;0.01

disparity. To offer some intuitive visualization, the income distribution of the two groups is illustrated in Figure 5.1, and the means and 95% confidence intervals of incomes of deputies and non-deputies are plotted in Figure 5.2.

T-test is used to compare the mean incomes of the two groups. Based on the result from the Heckman models, I set the null hypothesis as the average incomes of two groups are equal.<sup>2</sup> The result from the baseline matching shows that the null hypothesis cannot be rejected because the p-value is as large as 0.59. The results derived from alternative sets of matching variables are qualitatively the same. M2 is another matching which adds urban status and *hukou* status to the baseline matching. M3 adds more human capital variables (interpersonal skills, personality, self-rated health status, and test score) to M2, and M4 also includes more human capital variables, except that self-rated variables are replaced by interviewers-rated variables, such as health, intelligence, and comprehension. Figure 5.3 shows the differences in means of incomes of deputies and non-deputies from various matchings, and confidence intervals are also plotted. The figure indicates that the differences in means of incomes are not statistically different from zero. Till now, we have found little evidence supporting better economic returns to deputies than non-deputies.

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<sup>2</sup> I also tried another null hypothesis that “the mean income of the deputy group is greater than that of the non-deputy group (matched)” and the results are qualitatively the same, not matter whether I adopt equal variance assumption or unequal variance assumption.

Table 5.4: Result from Propensity Score Matching

Variable	treatment		control		control (matched)	
	Mean	St. Dev.	Mean	St. Dev.	Mean	St. Dev.
male	0.621	0.489	0.483	0.499	0.707	0.459
age	57.586	12.456	46.882	15.572	58.379	12.968
edu year	9.172	4.247	6.033	4.949	8.336	4.992
Party member	0.621	0.489	0.077	0.267	0.586	0.497
ethnic Han	0.948	0.223	0.914	0.279	0.983	0.131
admin	0.190	0.395	0.035	0.182	0.155	0.365
N	58		31,899		58	

*Note:* Table shows result of the baseline Propensity Score Matching across deputies (treatment) and non-deputies (control). Provincial and industry indicators are not reported.

FIGURE 5.1: Density of income: deputy group and non-deputy group (matched)

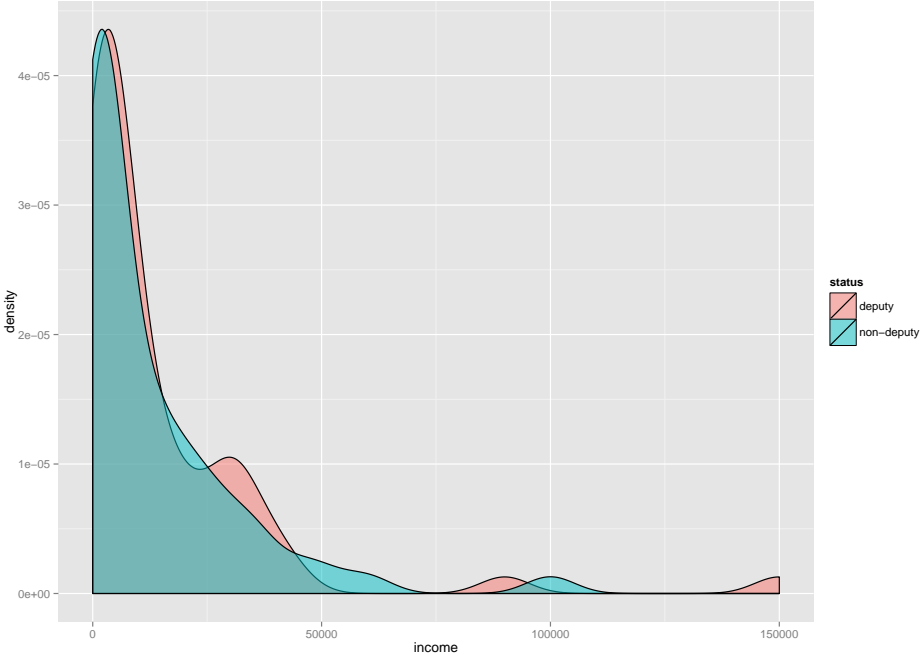
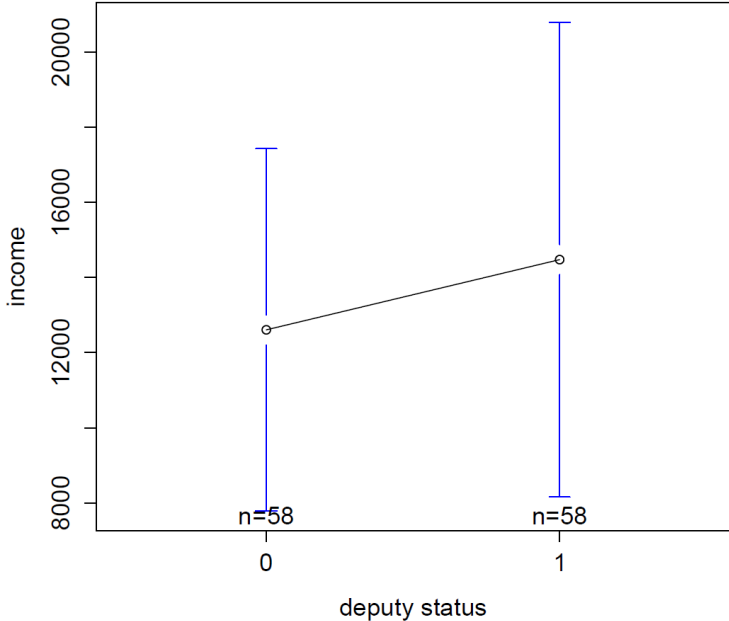
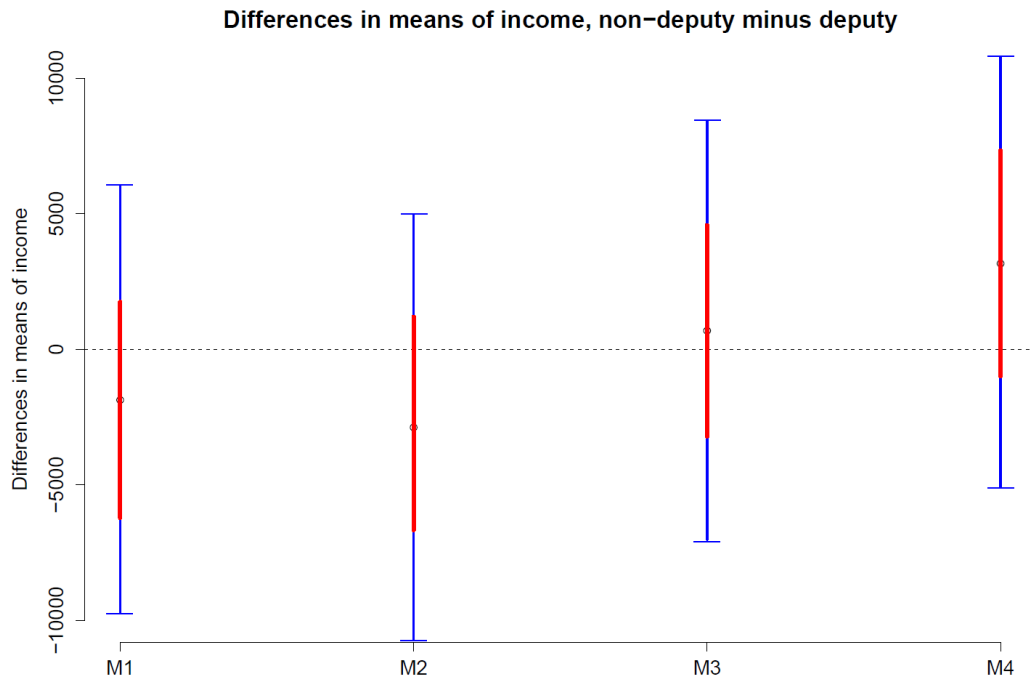


FIGURE 5.2: Income means and 95% confidence intervals: deputies and non-deputies



Note: “0” represents non-deputies, and “1” represents deputies.

FIGURE 5.3: Differences in means of incomes and confidence intervals: non-deputies minus deputies



*Note:* M1 is the baseline matching. Matching variables in M2 are “urban” and “*feinong hukou*”, plus variables in M1. Matching variables in M3 are “interpersonal”, “getalong”, “health.s”, and “test score”, plus those in M2. Matching variables in M4 are “interpersonal”, “getalong”, “compre”, “health.i”, and “intelligence.i”, plus those in M2. The red thick lines are 68% confidence intervals, and the blue thin lines are 95% confidence intervals.

# 6

## Discussion

The empirical work has found little evidence supporting the higher personal income of deputies than non-deputies. But one should be cautious when interpreting this result, and it might be too early to announce that the cooptation theory or the value of political connections does not apply to Chinese legislatures.

First of all, it is difficult to assess policy concessions, which is one important component of the cooptation theory. For Gandhi (2008a, p. 11), it is exactly the “closed forum” nature of the authoritarian legislatures that make them ideal for policy concessions: “Compromises can be hammered out without undue public scrutiny, and the resulting agreements can be dressed in a legalistic form and publicized as such.” So it is by nature difficult to capture the effects of deputies on the policies. The data in this study does not make it possible to test the policy dimension of cooptation theory since the survey primarily aimed at family and individual life. As a matter of fact, even the data specifically concerning deputies to authoritarian legislatures hardly enable the probe into the degree of policy influence, let alone to quantify the influence on the policy outcomes. The data compiled by Malesky and Schuler (2010) on the biographies and speech of Vietnamese National Assembly delegates

allows them to analyze delegates' responsiveness to constituencies but not influence on policies. Truex (2014) can test with his data from NPC deputies the financial benefit of "reputation boost" but not the policy influence.

Second, it is hard to measure all the intangible spoils, such as perks and privileges. Even though the survey conducted by Peking University devotes a large section on personal income and seeks to approximate a relatively accurate number by taking into account the salary, flexible pay, bonus, rewards, alms, and the like, some forms of spoils remain elusive. For instance, free travels to other cities or countries, easier access to state institutions (like banks), or favorable treatment in public services (like hospitals or transportations). These benefits are scarcely captured in the survey data. Furthermore, since one-party authoritarian regimes usually have control over educational and career opportunities, and hence social mobility to some extent (Geddes, 1999; Magaloni, 2006; Svobik, 2012), spoils as such are particularly intangible. Therefore, the empirical result that there is little evidence supporting the income premium of the deputies does not necessarily suggest that the deputies receive no intangible benefits.

Third, the majority of the deputies in this data come from the county level people's congresses. If Chinese legislators do receive spoils, we might expect the heterogeneous distribution for different levels of congresses. In other words, deputies to some levels of congresses might receive higher rents than those to other levels. The National People's Congress is high-profile and attracts broad media coverage and draws much attention from domestic and international observers. Truex's (2014) work on National People's Congress explores the effect of positive external perceptions and indicates that this "reputation boost" is primarily responsible for the additional rents to the deputies' firms. If the "reputation boost" mechanism applies to all levels of people's congresses, it is reasonable to believe its effect at the county level would be much smaller than that of the national or provincial one. According



to the number of people's congress deputies at various levels presented in Table 3.1, we can calculate that the deputies to the county level congresses constitutes about 84% of all the deputies at the county level or above. The exact percentage might have changed somewhat nowadays, but we could safely claim that the county level deputies occupy the predominant proportion in the data used in this paper. This large proportion is likely to have driven down the estimated returns to the deputies.

Finally, and most importantly, the real cooptation in China probably takes place in other regime institutions than the legislatures. China scholars have observed the trend that Chinese people's congresses are moving away from "rubber stamps" and being more active and representative, nevertheless the Chinese Communist Party still grips the ultimate power. Though the governments, congresses, and courts have gained more autonomy since the end of Mao's era, those institutions are still largely dominated by the Party (Lieberthal and Burns, 1995; McGregor, 2010). The cooptation theory is probably applicable to Chinese politics, but intensive and extensive cooptation may well occur in the Party rather than in the congresses. Dickson (2003, 2008) provides comprehensive studies on how the Chinese Communist Party successfully coopts the private entrepreneurs and capitalists into the Party and win their support to the regime. The empirical work in this paper also finds that Party membership, instead of deputy status, is a strong predictor of personal income, even after controlling for comprehensive covariates like human capital.

## Conclusion

Traditional view treats nominally democratic institutions as simply “window dressing”. However, recent scholarship on authoritarianism begin with the premise that those institutions matter and function to serve certain purposes such as promoting economic growth or regime durability. In explaining legislatures in authoritarian regimes, cooptation theory, selectorate theory, and literature on value of political connections and status suggest higher economic returns to legislators due to the spoils they receive. Using survey data from Chinese individuals, this paper empirically explores the effect of deputy status on personal income, and does not find the deputies to be better off than non-deputies. The results are qualitatively the same in a series of Heckman two-stage models and Propensity Score Matching methods. However, it might be too early to declare the failure of those theories in China, and this paper calls for cautious interpretation of the result. Future research may investigate if there is heterogeneous distribution of benefits for different levels of legislatures, or where the true cooptation process takes place.

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