Is the National Talent Project Effective?

Evidence from the Chinese Academic Accounting Leading Talents Project

Yin Xingqianga, Hu Ningb∗ and Zhang Limina

（a School of Accountancy, Shanghai University of Finance and Economics, Shanghai, China;b School of Accountancy, Southwestern University of Finance and Economics, Chengdu, China）

Due to information asymmetry and uncertainty in talent selection and measuring innovation output, the influence of talent selection projects on the innovation output of the selected talents has not been adequately tested. Based on the list of re-examination and selection of the two sessions of China's Academic Accounting Leading Talent Project of the Ministry of Finance, this paper directly evaluates the policy effect of the talent project using the method of Difference-in-Difference (DID). We find that, compared with the talents who are not selected in the project, the chosen talents publish more papers after being selected (18.2% higher), and more articles signed as the first author. The incremental downloads and citation rates of these papers after the selection are also more significant than those of the unselected ones. A series of sensitivity test also supports our main findings. Additional research finds that the results of the talent project are more significant for scholars who published fewer papers in the past and for scholars who got doctorates degree from "non-985" universities. In addition, the number of papers on which the selected talents collaborated also increased. The above findings document that Chinese government projects aimed at the selection and cultivation of talent have a significantly positive effect.

1. Introduction

In the face of increasingly fierce competition from international technology and talents, the Central Committee of the Communist Party of China (CPC) and the State Council of the People's Republic of China (PRC) have actively been breaking down barriers to personnel training, updating the concept of talent training, innovating talent training models, and promoting comprehensive reform of the personnel training system. Experts are selected and cultivated in various disciplines through a series of policies and methods1 such as Father of China's Hydrogen Bomb, and the Two Academies (the Chinese Academy of Sciences, and the Chinese Academy of Engineering). Such experts have great significance for and far-reaching influence on the invigoration of China through science and education and the policy on developing a quality workforce. To a certain extent, it has boosted the rapid development of China in the past 40 years. General Secretary Xi

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∗Corresponding author. Email: huningfox@aliyun.com

Jinping clearly stated in the report of the 19th National Congress that talents are strategic resources for realizing national rejuvenation and winning international competitive status. Provinces actively compete to attract talent away from other provinces,2 further highlighting the importance of "prosperity for talented people" (Chen, 2011). The new era brings new missions and challenges for the selection and cultivation of high-tech talents, who will directly affect the continued growth of China's economy and comprehensive national strength.

Reasonable and effective human capital development is a key driver of economic growth (Benhabib & Spiegel, 1994; Islam, 1995; Yang, Gong, & Zhang, 2006), and is also the focus of policymakers' continued attention. According to endogenous growth theory (also known as the "new growth theory"), knowledge is the only source of economic growth that can continue to receive incremental returns (Romer, 1987; Becker & Barro, 1988; King & Robson, 1993). Talent selection projects are important all over the world for promoting political officials or selecting social elites; this is especially true for China, which is still in a period of transition. The government has led the cultivation of a large number of professional talents, as highlighted by various Chinese talents search programmes, such as the Two Academies, the Changjiang Scholars Programme, the Thousand Talents programme, and the New Century Talent Project. Since the Ministry of Education and the Li Ka Shing Foundation of Hong Kong jointly funded the "Changjiang Scholars Award Scheme" in 1998 to raise the academic status of China's higher education institutions and revitalize China's higher education, most provinces and cities in China have followed suit to attract talents. According to our statistics, until now there are more than 50 kinds of talents and scholars projects, often named after famous mountains, rivers, or regions.

Table 1.   Various academic titles in different places in China.

Named after rivers	Named after mountains	Named after regions
Yellow River Scholars, Qianjiang Scholar	Taishan Scholar, Huangshan Scholar	Oasis Scholar, Yan Zhao Scholar
Zhujiang Scholar, Wanjiang Scholar	Huashan Scholar, Hengshan Scholar	Chutian Scholar, Tianfu Scholar
Minjiang scholars, Three Gorges Scholars	Hengshan Scholar, Lushan Scholar	Three Qin Scholars, Three Jin Scholars
Zhijiang Scholar, Longjiang Scholar	Tianshan Scholar, Everest Scholar	Qianling Scholar, Ba Gui Scholar
Xiangjiang Scholar, Songjiang Scholar	Kunlun Scholar, Jinggangshan Scholar	Beiyang Scholar, Qilu Scholar
Liangjiang Scholar, Ganjiang Scholars		Central Plains Scholar, Oriental Scholar
		Qiongzhou Scholar

Notes: Statistics do not include all kinds of scholars in China.

As various talent projects are being carried out in full swing, the performance of these projects has attracted the attention of the society and the government. On the one hand, the government selects relevant candidates by setting selection criteria (including material scoring, professional written tests, and interviews, etc.), by inviting experts and scholars with various professional backgrounds or industry expertise to carry out intensive training for selected talents, by matching funding to generate incentives (Adams & Griliches, 1998; Payne & Siow, 2003; Jacob & Lefgren, 2011), and by offering congenial academic environments (Burt, 2001; Jaffe, Trajtenberg & Henderson, 1993; Granovetter, 2005). It

will ultimately contribute to the accumulation of human capital, and promote selected scientific research or academic exploration. That is to say, the leading talent project is human capital investment by the government, and the cultivated human capital will bring about the increase and improvement of output (Arora & Gambardella, 2005; Ouyang et al., 2015; Tian, Sun, & Lu, 2015). On the other hand, because of information asymmetry, long-term continuous investment of the human capital, relatively slow output process (Azoulay, Zivin, & Manso, 2011), and vague indicators of measuring output, those entrusted by the government with the task of selection may easy to succumb to moral hazard or indulge in favoritism (Durante, Labartino, & Perotti, 2011; Zinovyeva & Bagues, 2015; Fisman et al., 2017). What is more, some talent projects lack supervision and governance in later stages. Even if these projects can select excellent talents, some of them may stop focusing on academic work after they obtain resources, a high salary, or administrative positions. Talent projects supported by the government may have significant increase in output, measured by publications and patents, due to the accumulation of human capital; however, information asymmetry and agency cost make it challenging to evaluate the real role of talent projects. Our central question is the following: Have various government-led talent selection projects successfully completed their expected goals, and ultimately promoted the increase in the output of selected talents? Although the relevant issues need to be urgently explored, there is little empirical literature on it; two exceptions are Jaffe (2002) and Jacob & Lefgren (2011).

The Ministry of Finance launched the National Accounting Leadership (Backup) Talent Development Project in September 2005 to improve and cultivate a group of high-level accounting talents with broad research horizons, a knowledge base that is optimized for their jobs, practical experience, outstanding innovation ability, and high professional ethics. This is in line with the national strategy of strengthening the country through talents, by actively adapting to economic and social developmental needs. The Ministry of Finance has so far cumulatively recruited 1,658 scholars in 41 groups, in four categories—enterprises, administrative institutions, certified public accountants, and academics. Of these, 716 students have graduated after completion of the 6-year training programmes.

Most of the relevant literature on the evaluation of accounting talent projects has confirmed that innovation output (such as the publication of academic papers) increases after the selection of scholars; this is taken as evidence of successful implementation (Ouyang et al., 2015; Tian, Sun, & Lu, 2015). Although this kind of research demonstrates effectiveness of talent projects to a certain extent, it ignores candidates from the shortlist who were not selected; consequently, this literature might be measuring the learning effect of participating in the programmes and the macro time trend, rather than the appropriateness of the initial selection. It is difficult to directly and accurately assess the causal effect of the implementation of the talent selection projects without considering scholars who were shortlisted but not selected—this is what we do.

The talent projects disclose the list of candidates shortlisted and the ones finally selected. This selection and publication process has actually formed a quasi-natural experiment that provides a possibility to evaluate the effect of the talent projects. Through the distribution of the re-test and the school finally selected, we find that the geographical

distribution of the re-examined and finally selected scholars is relatively uniform over 19 provinces, municipalities, and autonomous regions in China—the eastern coast (Shanghai, Guangdong, and Xiamen), the northeast (Dalian), the central (Wuhan and Hunan), the southwest (Sichuan, Chongqing, and Yunnan), and the northwest (Shanxi and Xinjiang). See Table 2 for details.

Table 2.　Overview of the talents entering the re-test and final selection in 2011 and 2013.

Panel A: The number of the talents entering the re-test and final selection in 2011			
University	Number of the retested	Number of the selected	Proportion
Central University of Finance and Economics	4	2	0.5
Renmin University of China	3	2	0.67
Sun Yat-sen University	3	2	0.67
Jinan University	3	1	0.33
Southwest University of Finance and Economics	3	2	0.67
Shanghai Lixin College of Accounting	2	1	0.5
Xiamen University	2	2	1
Shandong Economic University	2	1	0.5
Central South University of Finance, Economics and Law	1	0	0
Yunnan University of Finance and Economics	1	1	1
Inner Mongolia University	1	0	0
Inner Mongolia University of Technology	1	0	0
Beijing Jiaotong University	1	0	0
Beijing Business University	1	1	1
Beijing University of Technology	1	1	1
Beijing University of Aeronautics and Astronautics	1	0	0
South China University of Technology	1	1	1
Nanjing University of Finance and Economics	1	1	1
Sichuan University	1	1	1
Fudan University	1	1	1
Anhui University of Technology	1	0	0
Anhui University of Finance and Economics	1	1	1
Guangdong Institute of Finance	1	0	0
Xinjiang University Of Finance and Economics	1	1	1
Hangzhou University of Electronic Science and Technology	1	0	0
Wuhan University	1	1	1
Tsinghua University	1	1	1
Suzhou University	1	0	0
Zhengzhou Institute of Aeronautical Industry Management	1	1	1
Capital University of Economics and Business	1	1	1
Total	44	26	0.591
Panel B:　The number of the talents entering the re-test and final selection in 2013			
University	Number of the retested	Number of the selected	Proportion
Central South University of Finance, Economics and Law	4	2	0.5
Central University of Finance and Economics	4	2	0.5

Dongbei University of Finance and Economics	3	2	0.67
Sun Yat-sen University	2	1	0.5
Beijing Business University	2	1	0.5
Xiamen University	2	2	1
Zhejiang Gongshang University	2	1	0.5
Southwest University of Finance and Economics	2	1	0.5
Xi'an Jiaotong University	2	1	0.5
Shanghai Jiaotong University	1	1	1
Shanghai Maritime University	1	0	0
Shanghai University of Finance and Economics	1	1	1
Renmin University of China	1	1	1
China University of Mining and Technology	1	0	0
Yunnan University of Finance and Economics	1	1	1
Inner Mongolia University	1	1	1
Beijing Jiaotong University	1	1	1
Beijing Foreign Studies University	1	1	1
Beijing University of Technology	1	0	0
Beijing University of Aeronautics and Astronautics	1	1	1
Beijing University of Posts and Telecommunications	1	1	1
East China University of Science and Technology	1	0	0
Nanjing Audit University	1	1	1
Nanjing Institute of Finance and Economics	1	0	0
Sichuan University	1	0	0
Anhui University of Finance and Economics	1	0	0
University of Foreign Trade and Economics	1	1	1
Guangdong Institute of Business	1	1	1
Jinan University	1	0	0
Jiangxi University of Finance and Economics	1	1	1
Tsinghua University	1	1	1
Hunan University	1	1	1
Shihezi University	1	1	1
Fujian Agricultural and Forestry University	1	1	1
Suzhou University	1	1	1
Northwest University of Technology	1	0	0
Southwest University	1	1	1
Chongqing University	1	0	0
Capital University of Economics and Business	1	1	1
Total	53	33	0.623

This paper adopts the Difference-in-Difference (DID) model and attempts to directly evaluate the effectiveness of the talent project. Using data from the re-examination and selection in two sessions of the academic accounting leading talent programmes under the Ministry of Finance, we compare the finalists and the unselected scholars in terms of their output changes after the selection process. Compared with scholars who were

shortlisted but not selected, the finalists published more papers, and the probability of producing high-quality authoritative journals was 18.2% higher. In particular, selected scholars published 12 more papers on average in CSSCI journals compared to the unselected ones. Articles published by the selected scholars also had significantly larger incremental downloads and citation rates. We also find that, among those selected, the output increment is more significant for scholars who had fewer publications in leading journals prior to their selection and got their doctoral degrees from "non-985" universities. What is more, the number of papers coauthored by the selected talents after the selection also increased.

This paper has three main contributions. First, talent selection projects may have apparent output effects due to government support and investment; however, it may be challenging to play the role of talent cultivation due to information asymmetry or agency problems. Based on the theory of human capital, this paper enriches the research on the accumulation of human capital and the improvement of output by means of the research scene of the academic accounting of the Ministry of Finance. In particular, unlike the literature that has examined the general human capital accumulation and economic growth (e.g., Benhabib & Spiegel, 1994; Islam, 1995; Yang, Gong, & Zhang, 2006), this paper supplements and enriches the research about the outcomes of the accumulation of senior human capital from the perspective of professional talent cultivation. Secondly, because of lack of primary data and the ambiguity of measures of ability, most literature affirms the validity of the talent projects (e.g., Ouyang et al., 2015; Tian, Sun, & Lu, 2015), based on the change in academic achievements before and after selection, but this research result is not only vulnerable to individual learning effects and selection errors but also ignores the prevailing influence of external environments, such as the difficulty of publishing in periodicals and time trends. So, it is difficult to assess the causal effect of talent project implementation comprehensively and accurately. Based on the data (the re-examination list) of two sessions of academic accounting leading talent projects of the Ministry of Finance, this paper uses Different-in-Difference (DID) to reveal the causal effect between the talent project and its innovation output, and directly evaluate the policy effect of the talent project. Thirdly, since the establishment of the "Changjiang Reward Program", talent projects have been extensively implemented at both national and provincial levels. Has the government-driven talent project achieved the expected goal or not? Prior research has not given direct empirical evidence. This paper effectively evaluates the policy effects of talent projects through the implementation of the Ministry of Finance's academic accounting leading talent project. It also provides precise policy evaluation and empirical reference for the selection and implementation of relevant government talent projects.

The structure of the rest is as follows: The second section introduces the background of the leading talent project, summarizes a possible channel through which the talent project affects the innovation output based on the theory of human capital, and presents the research questions of this paper. The third section presents the design of the empirical research and offers basic descriptive statistics. The fourth section offers the test result, regression analysis, and tests of robustness. The fifth section contains further analysis and discussion. The sixth section concludes and offers policy implications.

2. Research background, theoretical analysis and research questions

2.1. Research background

As a basic and applied discipline, accounting has for a long time played an irreplaceable role in economic transformation. The rapid and high-quality development of the economy requires high-quality accounting support. China's continuing education and personnel training in accounting has achieved remarkable results since the economic reform and opening up. It initially formed a network of continuing education and training for junior, middle, and senior accounting personnel and accounting staff nationwide, which has improved the professional skill and the knowledge structure of accountants. By the end of 2004, the number of accountants with junior or intermediate accounting professional technical qualifications was 5.168 million, constituting 52.48% of the total accounting staff in China, while this proportion was 33.88% in 1993. The number of accounting personnel with senior accountant qualifications was 68 thousand, and the corresponding ratio rose from 0.4% in 1993 to 0.7% in 2004. However, with deepening economic globalization and rapid advancement in science and technology, the structure and overall quality of accountants cannot meet the needs of the economy and the society, especially when it comes to high-skilled and comprehensive senior accounting talents urgently needed for modernization. In response, the Ministry of Finance issued the "Notice of Senior Accounting Talents Training from the Ministry of Finance" (Finance and Accounting [2005] No. 15) and "Notice of the Program for the approval of the Accounting Society of China (ASC) on the selection and training of senior accounting talents and accounting academic leaders reserve talents from the Ministry of Finance" (Finance and Accounting [2005] No. 16). These two notices initiated the selection and training of practical and academic accounting leaders. The accounting talent project is an essential part of the construction of a talent team, and a necessary force and means to maintain the market economic order, promote scientific development, and promote social harmony. As a state-led professional talent training program, the national accounting leading talent training programme is regarded as the most effective strategic investment project in terms of input and social impact, bringing the latest training methods to China's accounting professionals (Ouyang et al., 2015). Establishment of this programme is a milestone in the cultivation of academic scholarship in Chinese accounting. It not only provides a broad platform for academic accounting scholars but also further broadens the horizons of academic accounting research. It will provide a reliable way of bridging the gap between China and advanced countries in accounting research (Tian, Sun, & Lu, 2015).

Similar to other talent selection, the selection of leading academic accounting talents has three steps.[3] First, the applicants submit relevant materials, such as education experience and previous research output, which the selection agency evaluates and grades in order to determine the list of participants for the initial test. Second, an initial written assessment is carried out. Most questions are subjective and divergent, which is used to test the participants' ability to use basic theory while remaining open to speculation. On the basis of the original ratings in the first step and the average scores in the first test, the selection committee determines the list of participants for a re-test. This re-test is the third and final step. It takes the form of an interview, which mainly examines the participants' communication skills and on-the-spot resilience. The selection agency

then determines the final list of the national accounting leaders based on the total score of the three steps. For example, the 2011 governmental academic accounting leading talent training and selection work was launched in April 2011. The initial selection had 133 outstanding talents from 83 universities in 26 regions (provinces, autonomous regions or municipalities). Of these 44 candidates were interviewed, and 26 of them were selected as the 2011 national academic accounting leader talents. The interview enrollment rate and interview pass rate were 33.08% and 59.09% respectively. Since the project discloses the list of candidates who enter the re-test and the final selection, the process forms a quasi-natural experiment and provides an opportunity to evaluate the talent project. In addition, unlike other comprehensive talent projects, the Ministry of Finance's academic accounting leading talent project is a professional talent project and a state-led professional talent project with Chinese characteristics. Therefore, this scenario not only provides some empirical insights for other related talent selection project but also provides more reliable support for the evaluation of talent project policies.

2.2. Theoretical analysis and research questions

Due to the information asymmetry in the talent selection process and the uncertainty of innovation output, the success of the talent selection project is mainly determined by the fairness and reasonability in the selection process, and by whether it provides useful guidance and support for the scholars chosen. Actually, the effectiveness of implementing the talent selection project mainly have the following two aspects. We discuss details of these two aspects below.

On the positive side, the leading talent project implemented by the Ministry of Finance can promote research output by enhancing human capital of those selected. As mentioned before, candidates are required to submit detailed professional information and go through a step-by-step screening mechanism that confers an informational advantage on the government when it comes to selecting talented persons. Second, the ASC will invite experts and professors from different backgrounds to conduct intensive training in various academic and practical fields for the selected talents, which not only helps to broaden their horizons, optimize their knowledge structure, and enrich their practical experience, but also helps develop their ability to discern and strengthens their academic innovation (Azoulay, Zivin, & Manso, 2011). In addition, various resources or platforms provided by the government effectively enhance the publication and patent output of schools and scholars (Adams & Griliches, 1998; Payne & Siow, 2003; Jacob & Lefgren, 2011). Many of the selected talents have similar academic backgrounds, basic knowledge, and academic interest, which undoubtedly greatly reduces the communication cost and learning cost among those selected (Iaria, Schwarz, & Waldinger, 2018). Frequent learning, communication, and discussion are also conducive to the formation of certain social network relationships among the selected talents, and this social connection due to the social network is conducive to the formation of mutual competition and incentives (Coleman, 1988; Granovetter, 2005) and learning effects (Jaffe, 1989; Jaffe, Trajtenberg & Henderson, 1993; Burt, 2001), which in turn may lead to an increase in outcomes and output. Based on this the academic accounting leading talent selection project of the Ministry of Finance will help improve the output of the selected talents through human capital accumulation (Arora & Gambardella, 2005; Ouyang et al., 2015; Tian, Sun, & Lu,

2015).

On the negative side, given the information asymmetry, does the government have enough capacity to select relatively better talents from the pool of candidates, especially when departments or persons entrusted by the government may be subject to moral hazard and shirking (Harrison & Harrell, 1993)? If not, the project can hardly select the truly talented candidates. Bielby & Bielby (1999) shows that the organizational form of selection plays a key role improving the allocation of talent in the labor market. Studies have shown that the long-term continuous investment and relatively slow output process in the high human capital industry (for example, education, scientific research, music), lead to relatively vague evaluation indicators of the talents. Combined with the differences in the age and level of the candidates, this makes it difficult to find a unified evaluation system (Seifert & Hadida, 2006), thereby hindering the process of selecting outstanding candidates.

Relational transactions based on closeness of social ties and geographical proximity is common in China. Therefore, insider bias in the selection process could render various talent projects ineffective (Fisman et al., 2017). Fisman et al. (2017) further show that the rent-seeking behavior is typical in the selection process of Chinese academicians, which distorts the allocation of human capital, in turn reducing the efficiency of resource allocation. In addition, even when the agencies select outstanding talents following a rigorous selection plan, the effectiveness of the selected projects is closely related to the external environment and personal characteristics of the talents (Linder & Peters, 1987). For example, when being selected as a young scholar can help one obtain scientific research resources, high salaries, or administrative positions, some of the chosen talents may stop at an opportune moment instead of focusing on academic research. That is to say, the selected skills may lack incentives to achieve the expected training objectives of the talent project due to weak post-supervisory governance and changes in personal preferences, which impairs the talent cultivation role of the project.

Based on the above analysis, this paper attempts to explore the following two unresolved and important questions: Does the accounting academic leading talent project improve the innovation output of selected talents? What is the mechanism through which a successful talent search project works, and what are the reasons behind a failed one?

3. Research Design and Descriptive Statistics

3.1. Model design and variable definition

In order to evaluate the effect of the academic accounting leading talent project, we construct the following regression model (1):

$$DOutput_i = \beta_0 + \beta_1 Nominated_i + Control + \varepsilon \qquad (1)$$

In model (1) the subscript i represents the person. Following the related literature (e.g., Guo and Li, 2017; Liu and Zhao, 2017), the dependent variable (DOutput) is the output of the talents. Because publication of academic papers is time-consuming, we adopt several different measures of output— the change in the total number of papers before and after the selection year (Dnum), the change in the probability of publishing China's authoritative journals[4] (Dtopdum), the change of total first-author papers (Dsumfirst), the number of times of the papers were downloaded (Dload), and the change in the number of citations

(Dcite). We calculate the total (Sum) and the maximum (Max) values of the downloads and citations. The independent variable (Nominated) equals 1 if a scholar is nominated as a leading talent, and 0 otherwise.

In order to avoid the selection bias caused by personal ability, we use the pre-selection output of the talents as a control variable; this includes the number of papers and the number of projects that were awarded a research grant. In particular, we check the following variables before the scholar was selected: whether at least one paper was published in a top Chinese journal (Beftop), the maximum number of the papers downloaded (Befmaxload), and the number of grant/funding applications (Befproject). Further, we also control for other individual characteristics of the candidates, such as having administrative duties (Duty), gender (Sex), years after PhD (Time), whether they are returnees from abroad or not (Foreign), and whether or not they applied for the project the first opportunity (Rep). We also control the school-level variables such as whether they come from 985 universities (Empsch), whether the university belongs to economics and finance (Ecosch), whether their incumbent mater is located in Beijing (Beijing), and the total number of people selected along with them (Anum). Table 3 shows the concrete definitions of the variables. We use the ordinary least square (OLS) regression with clustering by the individual level and adjusting the robust standard error and controlling the fixed effects of time and province.

Table 3.   Main variable definitions.

Variable type	Variable code	Variable description
Dependent variable	Dnum	The difference between the total number of CSSCI journals published before and after the selection.
	Dtopdum	The difference in the probability of publishing a paper in China's top journals before and after the selection.
	Dtopsum	The difference between the total number of the papers published in China's top journals before and after the selection.
	Dsumfirst	The difference between the total number of first-author papers published before and after the selection.
	Dload	The difference between the total number of downloads before and after the selection.
	Dcite	The difference between the number of citations before and after the selection.
Independent variable	Selected	If a scholar is selected, the value of Selected is 1; 0 otherwise.
Control variable	Beftop	If there is at least one paper that published in China's top journals before the selection, Beftop equals to 1; 0 otherwise.
	Befproject	The logarithm of 1 plus the number of national foundations before nomination[5].
	Befmaxload	The logarithm of the sum of 1 and maximum downloads for the published papers published before nominated.
	Duty	If a talent holds an administrative position above the branch level, Duty equals to 1; 0 otherwise.
	Sex	If the gender of a talent is male, Sex equals to 1; 0 otherwise.
	Time	The gap between the year when a talent obtained a doctoral degree and the year when he or she was nominated.
	Foreign	If a talent has a experience of studying abroad, Foreign equals to 1; 0 otherwise.
	Rep	If candidate participate in twice. Rep equals to 1, 0 otherwise.
	Ecosch	If a talent comes from a financial and economics university, Ecosch equals to 1; 0 otherwise.
	Empsch	If a talent comes from a university that belongings to project 985, Empsch

			equals to 1; 0 otherwise.
Beijing	If a talent comes from a university that is located in Beijing, Beijing equals to 1; 0 otherwise.
Anum	The total number of people who entered the retest at the same class in the same session.

The data used in this paper comes primarily from the official website of the Ministry of Finance of the PRC, the official site of China's Accounting Association, the official website of Xiamen National Accounting Institute, Baidu Encyclopedia, and the schools the scholars come from. We obtained 97 initial samples from the retests and finalists of the fourth (2011) and fifth (2013) sessions of the national academic accounting leader of the Ministry of Finance. At the end we are left with 81 samples after excluding some samples with missing values.

3.2. Descriptive statistics and inter-group difference test

The main descriptive statistics of variables are shown in Table 4. The difference CSSCI journals published before and after the selection of leading talents ranged from -2.079 to 2.708, with a mean value of 0.381 greater than 0, which indicates that the significant changes CSSCI journal articles published by leading talents before and after the selection. And on average, the number of publications has increased since the selection. From the maximum, minimum, mean and standard deviation, whether it is the difference between the probability of publishing an authoritative journal (Dtopdum) and the number (Dtopsum), or the difference between the total first-author number of published articles (Dfirstsum) and the downloads (Dload) and the citation (Dcite) of the published papers are quite different in the sample interval. Overall, there was an absolute increase in results after the selection. The nominated proportion of the two leading talents was 58%, that is, 52% of the skills only entered the re-examination and were not nominated, which also provided the possibility for the problems to be studied in this paper. In addition, from the descriptive statistics, it can also get that 9.9% of the participants in the sample have two experiences, 11.1% are overseas, nearly 30% incumbent school are from Beijing, and 30.9% are from 985 universities. A third of the students are from financial institutions.

Table 4. Descriptive statistics of the main variables.

Variable	Mean	Sd	Min	p25	p50	p75	Max
Dnum	0.381	0.957	-2.079	-0.223	0.288	0.799	2.708
Dtopdum	0.111	0.570	-1.000	0.000	0.000	0.000	1.000
Dtopsum	0.199	0.756	-1.609	0.000	0.000	0.693	2.708
Dsumfirst	0.347	0.942	-2.079	-0.223	0.251	0.847	2.398
DMaxload	0.353	3.049	-8.008	-0.990	-0.080	0.748	9.353
DSumload	0.521	3.404	-8.617	-0.965	-0.034	0.985	10.940
DMaxcite	-0.496	2.093	-5.666	-1.766	-0.740	0.172	5.889
DSumcite	-0.446	2.437	-6.541	-1.819	-0.850	0.454	6.979
Selected	0.580	0.497	0.000	0.000	1.000	1.000	1.000
Beftop	0.556	0.500	0.000	0.000	1.000	1.000	1.000
Befpronum	0.618	0.478	0.000	0.000	0.693	1.099	1.792

Befmaxload	6.961	2.683	0.000	6.798	7.847	8.507	9.613
Duty	0.494	0.503	0.000	0.000	0.000	1.000	1.000
Sex	0.716	0.454	0.000	0.000	1.000	1.000	1.000
Time	4.049	1.809	1.000	3.000	4.000	5.000	10.000
Foreign	0.111	0.316	0.000	0.000	0.000	0.000	1.000
Rep	0.099	0.300	0.000	0.000	0.000	0.000	1.000
Ecosch	0.333	0.474	0.000	0.000	0.000	1.000	1.000
Empsch	0.309	0.465	0.000	0.000	0.000	1.000	1.000
Beijing	0.296	0.459	0.000	0.000	0.000	1.000	1.000
Anum	1.914	1.120	1.000	1.000	1.000	3.000	4.000

This paper mainly uses the idea of Difference-in-Differences (DID) model to evaluate the policy effect of talent projects, and an important assumption of DID is that the parallel trend hypothesis is met. For this reason, we define Treat that if it is nominated as 1, conversely, it is 0, and respectively test the difference between treatment group (Treat=1) and control group (Treat=0) before and after their selection. As shown in Table 5, before the selection, the only variable to differ significantly between the selected and unselected candidates is the number of top-journal articles published before the selection date. This variation is desirable as it satisfies the premise of the DID regression model. After selection these talents increased their output by significantly more than those who were not selected.

Table 5.　Difference test between the nominated or not.

Variable	Types	Before being selected（Bef）				After being selected（Aft）			
Output		Treat=0	Treat=1	Diff	Chi2	Treat =0	Treat=1	Diff	Chi2
Num	Mean	1.849	1.935	-0.086	0.058	1.746	2.023	-0.276*	2.547
	Median	1.869	1.946			1.792	2.079		
Topdum	Mean	0.618	0.809	-0.191*	0.000	0.529	0.809	-0.279***	0.000
	Median	1.000	1.000			1.000	1.000		
Topsum	Mean	0.697	1.062	-0.365**	3.562*	0.705	1.038	-0.334**	0.852
	Median	0.693	1.099			0.693	1.099		
Sumfirst	Mean	13.353	15.085	-1.732	0.479	12.412	17.936	-5.524	2.913*
	Median	7.000	8.000			6.000	12.000		
Maxload	Mean	7.061	7.347	-0.286	4.653**	6.477	6.826	-0.350**	2.913*
	Median	7.010	7.469			6.597	6.934		
Sumload	Mean	7.825	8.109	-0.284	1.579	7.170	7.761	-0.592***	9.350***
	Median	7.838	8.283			7.207	7.856		
Maxcite	Mean	4.355	4.544	-0.189	0.127	2.872	3.452	-0.580**	1.772
	Median	4.494	4.635			3.332	3.555		
Sumcite	Mean	5.083	5.372	-0.289	1.579	3.396	4.093	-0.697**	1.579
	Median	5.257	5.565			3.670	4.205		

Note: (1) *, **, *** respectively indicate the significance level of 10%, 5%, 1% (the same below); (2) mean median test using the ttable3 command, Diff value is the mean difference test result, The Chi2 value is the result of the median difference test.

4. Empirical results and regression analysis

4.1. Basic regression results

Table 6 reports on the academic achievements of selected talents before and after the selection. The results show that compared with those who weren't selected, the selected

talents significantly increase their output of papers after the selection: 12 more papers on average, more than 0.492 extra CSSCI journal publications on average, an 18.2% higher probability of publications in top journals, and 0.3 extra publications in top journals. We use Max or Sum, both downloads (Dload) and citations (Dcite), and the conclusion stands. Compared with those who were not selected, the number and quality of academic achievement of the nominated leading talents are significantly higher. This partly validates the output incentive effect of the leading talent projects.

Table 6.   Successful selection and academic achievement

Output	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Dnum	Dtopdum	Dtopsum	DSumfirst	Dload		Dcite	
					Max	Sum	Max	Sum
Selected	0.492**	0.182*	0.260*	11.727**	0.384*	0.617**	0.619*	0.656*
	(2.62)	(1.76)	(1.71)	(2.03)	(1.86)	(2.16)	(1.90)	(1.81)
Befftop	-0.363	-0.985***	-1.026***	0.815	-0.069	-0.385	0.027	0.159
	(-1.35)	(-5.84)	(-5.12)	(0.11)	(-0.23)	(-0.89)	(0.05)	(0.31)
Befmaxload	-0.064	0.138***	0.136*	-2.041	-0.835***	-0.765***	-1.026***	-1.067***
	(-0.46)	(2.94)	(1.80)	(-0.75)	(-7.61)	(-3.83)	(-5.94)	(-4.96)
Befproject	-0.079	-0.022	-0.277	-8.911	0.373	0.243	0.366	0.402
	(-0.32)	(-0.21)	(-1.60)	(-1.06)	(1.53)	(0.72)	(1.31)	(1.11)
Rep	0.244	0.069	0.401	6.144	0.113	0.516	0.344	0.491
	(0.85)	(0.53)	(1.44)	(0.82)	(0.39)	(1.17)	(0.79)	(0.90)
Anum	0.103	0.087**	0.175**	2.027	0.145	0.203	0.081	0.080
	(1.10)	(2.02)	(2.10)	(0.74)	(1.36)	(1.43)	(0.56)	(0.47)
Beijing	-0.191	0.078	-0.116	-10.12	0.184	-0.023	-0.058	-0.205
	(-0.87)	(0.80)	(-0.60)	(-1.58)	(0.84)	(-0.07)	(-0.21)	(-0.54)
Sex	0.095	0.339***	0.347*	-0.222	0.698***	0.662*	0.672*	0.628
	(0.39)	(3.18)	(1.85)	(-0.04)	(3.09)	(1.84)	(1.71)	(1.34)
Duty	-0.401**	-0.241**	-0.347**	-8.584*	-0.160	-0.273	-0.036	-0.132
	(-2.41)	(-2.38)	(-2.61)	(-1.93)	(-0.75)	(-1.04)	(-0.13)	(-0.41)
Time	-0.177***	0.014	-0.029	-5.507***	-0.058	-0.161**	-0.145*	-0.196**
	(-3.35)	(0.48)	(-0.73)	(-3.65)	(-0.99)	(-2.14)	(-1.95)	(-2.18)
Foreign	0.046	0.277	0.430**	5.119	0.117	0.089	-0.441	-0.109
	(0.21)	(1.50)	(2.07)	(0.82)	(0.42)	(0.25)	(-0.96)	(-0.23)
Ecosch	0.046	0.150	0.053	6.292	-0.090	0.019	0.049	0.116
	(0.15)	(1.08)	(0.21)	(0.87)	(-0.26)	(0.04)	(0.10)	(0.20)
Empsch	-0.004	0.129	0.029	8.422	0.000	0.199	-0.016	0.170
	(-0.02)	(1.10)	(0.15)	(1.44)	(0.00)	(0.71)	(-0.05)	(0.49)
Cons	1.457	-0.977***	-0.515	36.062*	5.674***	5.643***	6.797***	7.141***
	(1.36)	(-2.81)	(-0.84)	(1.75)	(6.61)	(3.71)	(5.33)	(4.47)
N	81	81	81	81	81	81	81	81
Year/province	yes	yes	yes	yes	yes	yes	yes	yes
R^2	0.358	0.592	0.489	0.314	0.609	0.523	0.519	0.490

Note: The values in parentheses are t values, and *, **, and *** indicate the significance level of 10%, 5%, and 1%, respectively.

4.2.   Robustness test

In this section we test the robustness of the regression results and conclusions.

4.2.1. Redefining the time interval

We redefine the dependent variable in the main test to allow for shorter windows around the time of selection—three years in Panel A, and five years in Panel B. The regression results are shown in Table 7. The variables Dload and Dcite are still significant but less so, possibly because publication takes a long time to disseminate. The above results still support the main research conclusions broadly.

Table7.　The result of resetting time interval

Panel A: Output three years changes before and after the selection.

Output	(1)	(2)	(3)	(4)	(5) Dload3	(6)	(7) Dcite3	(8)
	Dnum3	Dtopdum3	Dtopsum3	DSumfirst3	Max	Sum	Max	Sum
Selected	0.400^{*}	0.309^{**}	0.235	0.518^{**}	0.897	1.010	0.471	0.567
	(1.92)	(2.12)	(1.22)	(2.25)	(1.38)	(1.44)	(1.25)	(1.29)
Control	yes	yes	yes	yes	yes	yes	yes	yes
N	81	81	81	81	81	81	81	81
Year/province	yes	yes	yes	yes	yes	yes	yes	yes
R^2	0.490	0.479	0.306	0.386	0.647	0.658	0.688	0.679

Panel B: Output five years changes before and after the selection

Output	(1)	(2)	(3)	(4)	(5) Dload5	(6)	(7) Dcite5	(8)
	Dnum5	Dtopdum5	Dtopsum5	DSumfirst5	Max	Sum	Max	Sum
Selected	0.351^{*}	0.284^{**}	0.298	0.508^{**}	0.558	0.667	0.341	0.411
	(1.69)	(2.17)	(1.52)	(2.19)	(1.11)	(1.20)	(0.84)	(0.87)
Control	yes	yes	yes	yes	yes	yes	yes	yes
N	81	81	81	81	81	81	81	81
Year/province	yes	yes	yes	yes	yes	yes	yes	yes
R^2	0.528	0.470	0.326	0.392	0.728	0.731	0.619	0.626

4.2.2. Alternative measures of scholarly achievement

In the theoretical analysis to adapt to the current demands of economic and social development, an essential goal of the accounting talent project mentioned is to train a group of high-level accounting talents with international vision, rich practical experience, outstanding ability to innovate, high professional ethics. In view of this broad goal of the project, we explore additional measures of scholars' achievements, not just the number of papers. By reviewing one by one the resumes of scholars who entered the re-examination list, we count the change in the following variables before and after the talent selection process—the probability of obtaining either the Relevant Paper Award of the Ministry of Finance or the Provincial Philosophy Social Science Award (Dawadum), the total number of honors obtained (Dawasum), the probability of publishing in a foreign SSCI journal (Dengdum), the number of publications (Dengsum), the number of projects received from the Ministry of Finance or a company (DProject), and the probability of becoming an independent director of a listed company (Didum).

The basic regression results are shown in Table 8. Relative to those not selected ones, those selected have a higher probability of winning the honorary title of high-level accounting talents—column 1 (Selected) has a coefficient of 7.727 and is significant at 1%

level; the number of honors also increases significantly as seen from the coefficient of 2.309 in column 2 (Selected), which is significant at 1% level. It lends support to the theory that the output of selected talents receives recognition from peer experts. After the selection, the probability of publishing in foreign journals also increases (column 3 (Selected) has a coefficient of 1.378, significant at 5% level), and the number of published foreign journals also rises significantly (in column 4 (Selected) the coefficient 1.234 is significant at 1% level). The projects handed to the scholars, either by the Ministry of Finance or a company, also have increased after the selection of leading talents (column 5 has coefficient is 0.449, which is not significant), and a higher possibility of becoming an independent director of listed companies (column 6 has coefficient 4.176, significant at the 1% level). The above results support the main conclusions through different measures.

Table 8.　Different measures of scholarly achievement.

	(1)	(2)	(3)	(4)	(5)	(6)
	Probit	Tobit	Probit	Tobit	Tobit	Probit
	Dawadum	Dawasum	Dengdum	Dengsum	Project	Didum
Selected	7.727***	2.309***	1.378**	1.234***	0.449	4.176***
	(3.01)	(4.82)	(2.14)	(2.89)	(1.38)	(3.32)
Control	yes	yes	yes	yes	yes	yes
N	69	79	70	81	81	81
Year/province	yes	yes	yes	yes	yes	yes
Pseudo R^2	0.581		0.464			0.74
P值		0.000		0.000	0.000	

Note: Partial regression shows some differences from the full sample due to the loss of sample size when using probability estimation.

4.2.3 Deleting consecutive samples

Eight participants in the sample participated twice. In order to avoid these twice-repeated participations from interfering in the study, we report regression results after excluding these repeated participations. We find support for our main findings.

Table 9.　Eliminate repeated participations

Output	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
					Dload		Dcite	
	Dnum	Dtopdum	Dtopsum	DSumfirst	Max	Sum	Max	Sum
Nominated	0.512**	0.189*	0.256	11.925**	0.263	0.536*	0.664*	0.679*
	(2.48)	(1.74)	(1.51)	(2.02)	(1.11)	(1.69)	(1.92)	(1.73)
Control	yes	yes	yes	yes	yes	yes	yes	yes
N	73	73	73	73	73	73	73	73
Year/province	yes	yes	yes	yes	yes	yes	yes	yes
R^2	0.193	0.469	0.328	0.145	0.520	0.419	0.403	0.374

5.　Additional tests

The main conclusion is that the state-led accounting talent project promotes output and

cultivates talent. But are the results driven by the government selecting candidates with better potential (ability hypothesis) or by the training and platform received by those selected (cultivation hypothesis)? To answer this, the paper carries out further analysis based on the characteristics of the candidates' previous research, the graduate schools that awarded these scholars their PhD degrees, and the platform construction of the project.

5.1. Heterogeneous influence of candidates' characteristics

In order to test the impact channels, we characterize the comprehensive ability and research potential of scholars by using two measures—the number of top journals published before the scholars were nominated (Befftopsum), and whether their doctoral degrees were awarded by "985 universities" (Docsch). If the ability hypothesis holds, it is expected that the selected talents will do better if they have more early publications in top journals or a doctoral degree from a "985 university". On the contrary, if the cultivation hypothesis holds, we do not expect to see this. The regression results are shown in Tables 10 and Tables 11. The results show that while selection is followed by higher output (the coefficient of Selected is significantly positive), the effect is weaker for scholars who published more top-journal articles before selection (the coefficient of Selected×Befftopsum in Table 10 is significantly negative).

Table 10.   Research capability before the selection, selection, and output change

Output	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
					Dload		Dcite	
	Dnum	Dtopdum	Dtopsum	DSumfirst	Max	Sum	Max	Sum
Selected	0.721^{***}	0.182	0.464^{***}	17.261^{**}	0.518^{**}	0.971^{***}	0.945^{**}	1.116^{***}
	(3.32)	(1.46)	(2.74)	(2.58)	(2.21)	(3.05)	(2.63)	(2.81)
Befftopsum	-0.344	-0.985^{***}	-1.009^{***}	1.291	-0.058	-0.354	0.055	0.199
	(-1.22)	(-5.80)	(-4.79)	(0.16)	(-0.19)	(-0.80)	(0.11)	(0.38)
Selected ×Befftopsum	-0.123^{***}	0.000	-0.109^{***}	-2.964^{*}	-0.072	-0.190^{***}	-0.175^{**}	-0.246^{**}
	(-2.84)	(0.01)	(-2.74)	(-1.69)	(-1.36)	(-2.83)	(-2.32)	(-2.63)
Control	yes	yes	yes	yes	yes	yes	yes	yes
N	81	81	81	81	81	81	81	81
Year/province	yes	yes	yes	yes	yes	yes	yes	yes
R^2	0.267	0.498	0.423	0.201	0.528	0.459	0.444	0.428

In addition, if the scholar graduated from a "985 university", we expect that the coefficient of Selected × Befftopsum in Table 11 to be significantly negative, as is indeed the case. The possible reason is that these scholars have had better training, opportunities, and platforms; so the incremental influence of the leading talents' promotion effects is relatively weakened. There is a stronger impact on "non-985 university" doctorates, who lack some resources and access to certain platforms. The above results reveal that compared with those scholars who have strong scientific foundation and high comprehensive ability, the incremental output promotion effect of leading talent projects has a greater impact on scholars with relatively weaker foundation and lower comprehensive ability. This verifies that talent projects have an important role in human capital cultivation and accumulation.

Table 11. PhD graduate school, selection, and output change

Output	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Dnum	Dtopdum	Dtopsum	DSumfirst	Dload		Dcite	
					Max	Sum	Max	Sum
Selected	0.913***	0.358***	0.567**	15.403**	0.680*	1.216**	0.739	1.154*
	(3.32)	(2.70)	(2.64)	(2.33)	(1.80)	(2.56)	(1.39)	(1.99)
Docsch	-0.012	0.126	0.023	8.352	-0.006	0.188	-0.018	0.160
	(-0.06)	(1.10)	(0.12)	(1.41)	(-0.03)	(0.70)	(-0.06)	(0.47)
Selected×Docsch	-0.619**	-0.259*	-0.452**	-5.414	-0.436	-0.882*	-0.177	-0.733
	(-2.13)	(-1.86)	(-2.06)	(-0.79)	(-1.06)	(-1.72)	(-0.30)	(-1.13)
Control	yes	yes	yes	yes	yes	yes	yes	yes
N	81	81	81	81	81	81	81	81
Year/province	yes	yes	yes	yes	yes	yes	yes	yes
R^2	0.259	0.520	0.402	0.161	0.531	0.447	0.410	0.390

5.2. Policy support and platform construction

Domestic talent projects are often accompanied by provision of resources and construction of platforms. There are two possible mechanisms in this paper. On the one hand the Ministry of Finance will invite senior experts from different disciplines (both academics and practitioners) to deliver seminars. These special lectures facilitating continuous innovation[6] by not only broadening the horizons of selected talents, but also encouraging scholars to focus on classical theoretical controversies, current research frontiers, and realistic problems. For example, the project explicitly says, "The forms of the training project include special lectures, seminars, forums, etc. It can help the selected talents to consolidate basic theories, upgrade knowledge structure, and expand management horizon by learning and communicating in the National Accounting Institute. It can also help the selected talents to determine the direction of the scholars' learning and the specific tasks involved in scientific research and practice by this training and comprehensive test. In addition, after the leading talents are selected, the Ministry of Finance will also give special supporting funds to the talents, such as the National Accounting Leadership (Backup) Talents Academic (fifth) Training Project."

On the other hand, a more important mechanism may come from the opportunity and platform that talents have for communication and cooperation, such as the series of special trainings organized by the Ministry of Finance, or irregular academic forums[7] hosted by scholars themselves.

The two variables Dconsum and Dcondum measure the change in, respectively, the collaboration probability and the number of collaborative papers (Dconsum) among all participants in the re-examination list. Regression results reported in Table 12 shows that both variables increased more compared to scholars who were not allowed to participate in the re-examination. The above results consistently show that the leading talent project provides an excellent communication platform, and has contributed to collaborative output

Table 12. Changes in cooperation papers after being nominated among the candidates

Cooperation	(1)	(2)	(3)	(4)	(5)	(6)
	Logit	Probit	Nbreg	Poisson	Tobit	

	Dcondum	Dcondum	Dcosum	Dcosum	Dcosum	LnDcosum
Selected	5.070***	2.955***	2.436***	2.436***	3.461***	1.715***
	(2.74)	(3.24)	(2.80)	(2.80)	(3.66)	(3.55)
Control	yes	yes	yes	yes	yes	yes
N	60	60	81	81	81	81
Year/province	yes	yes	yes	yes	yes	yes
PseudoR^2	0.366	0.367	0.325		0.300	0.361
P				0.000		

Notes: There is a loss of sample when using Logit and Probi, which is a certain difference from other sample.

6. Conclusions and policy implications

Nowadays, with the rapid development of science and technology, the emergence of a knowledge economy and increasingly fierce competition for talents, the retention of talents has become the key to sustainable competitiveness of countries and regions. Efficient allocation of accounting talents, a key high-level human capital, plays an important role in sustaining stable growth and development of the field of accounting and economics. In addition, the selection and training process of talent projects leads to the production and inheritance of knowledge, which is the only source increasing returns to scale in the economy. Therefore, the efficiency of knowledge production and human capital allocation is not only related to the professional development of talents themselves, but also directly affects the strength and the development of a nation. Therefore, exploring the effectiveness of talent selection projects is of great theoretical value and practical significance.

Based on the difference between the two periodicals of the Ministry of Finance's re-examination list and the final selection list, we use the basic idea of Difference-in-Difference (DID) model to test this. We find that Chinese government selection projects have significantly positive effect on promoting output and cultivating talent. Specifically, compared with the talents who are not selected in the project, (1) the selected talents publish more papers after being selected, (2) among these papers published in Chinese core journals, the selected talents publish more papers as the first author, (3) the probability that these papers are published in Chinese top journals by the selected scholars is 18.2% higher, and (4) these articles have larger incremental downloads and citation rates. Furthermore, we also find that the talent project is more pronounced for scholars who published fewer papers in top Chinese journals in the past and for scholars who were awarded doctoral degrees by "non-985" universities. In addition, the number of papers on which the talents collaborated also increased.

The possible policy prescription of this paper is that, although the national selection project has a specific role in talent cultivation as a whole, it needs to pay special attention to the openness, fairness, and reasonableness of the selection process. By improving the selection process, problems arising from diverse sources such as information asymmetry, moral hazard, and personal characteristics can help select the very best. On this basis, we can devise further policies to support the selected scholars, especially those scholars

who start with a disadvantage and consequently offer high returns to human capital investment.

Our paper tries to figure out the reason for the increasing output of the leadership talent project —"the project screened better persons" versus "the project enriched talents". However, in the absence of detailed data on total scores of re-examinees, we compare the differences before selection between selected and unselected scholars following previous literature. This leaves room for the possibility that the project selected those with stronger scientific research potential. It means that further research should consider more detailed re-test scores or ranking data to open the black box about the mechanism of talents projects, and separate the two possible explanations.

Acknowledgments

Notes

1. For example, in May 1985, Deng Xiaoping emphasized at the National Education Work Conference that "national strength and the economic development are increasingly dependent on the quality of workers and on the quantity and quality of intellectuals. "Subsequently, the CPC Central Committee and the State Council promulgated the document "Decision of the Central Committee of the Communist Party of China on the Reform of the Education System" aimed at guiding "more talents and better talents".

2. Following the first talent policies introduced by Guangdong province, other places (such as Beijing, Shanghai, Zhejiang, Jiangsu, Xi'an, Chengdu, Chongqing, and Guizhou) issued preferential policies (involving settlement, child education, and remuneration packages) to attract talents.

3. We thank two anonymous reviewers for encouraging us to introduce more institutional background and details of the selection process.

4. The top journals mainly consist of Chinese Social Science, Economic Research, Economics (Quarterly), World Economy, Management World, Financial Research, Accounting Research, and Audit Research. The regression results of only China Social Science, Economic Research, and Management World as top journals are consistent with the main conclusions.

5. This comprises the National Natural Science Foundation of China and the National Social Science Foundation.

6. For example, the 12th joint training of the national accounting leading talent training project (at Xiamen University in October 2017) invited Ba Shu-Song (the chief economist of China Banking Association), Professor Lu Hong-De (Chung Yuan Christian University of Taiwan), Mr. Tian Feng (Alibaba), Ma Bin (Tencent Company), Professor Zhang Wei-Guo (Shanghai University of Finance and Economics), Professor Huang Shi-Zhong (Xiamen National Accounting Institute), Shi Yao-Bin (Ministry of Finance), Wu Xiao-Qing (Central Committee of the Democratic National Construction Association).

7. For example, take the National Accounting Leading Talents Lecture Series at Shihezi University

http://sem.shzu.edu.cn/2016/0918/c975a83481/page.htm

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