**Appendix 1: Supplementary Tables and Figures**

Table A1. **A Comparison of the SSG Scheme and the NCSE**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | Non-target-based SSG | Target-based SSG | NCSE |
|  |  | 2018 | 2019 | 2018 | 2019 | 2018–2019 |
| Necessary condition | Eligibility  | Fresh university graduates and personnel who have worked on some grassroots projects | Fresh graduates from elite universities | All college-educated citizens between the age of 18 and 35 |
| Other conditions | Party membership | 100% | 100% | 80% | 84.62% | Not required |
| Student cadre experience | 85.71% | 88.24% | 76% | 84.62% | Not required |
| Awards received | 57.14% | 82.35% | 60% | 84.62% | Not required |
| Standardized written test2 | 66.67% | 94.12% | 32% | 30.77% | 100% |
| Other form of test3 | 33.33% | 5.88% | 68% | 69.23% | Not required |
| Promotion incentive4 | 28.57% | 41.18% | 76% | 73.08% | Not provided |
| Material incentive | None | None | 40% | 30.77% |

*Source:* Authors’ calculation based on official provincial documents on SSG recruitment and the NCSE in 2018–2019.

*Notes:* (1) The percentage number is the share of provinces that have the corresponding requirement, examination, or incentive. (2) The standardized written test includes multiple-choice questions and essay questions. (3) This refers, for example, to the special examination paper for the SSG. (4) Promotion incentive refers to the promise of accelerated promotion in administrative rank or to a unit with higher administrative level; material incentive refers to the promise of one-off subsidies, settling-in allowances, rental allowances, and the like.

Table A2. **Definition of Variables**

|  |  |  |
| --- | --- | --- |
|  | **Variable** | **Description** |
| **Dependent variable** | Recruitment quota for target-based SSG | The number of target-based specially selected graduates for each province for each year. |
| **Independent variable** |
| **Recruitment Scope** | University requirement for target-based SSGs | 1 = open to graduates from double first-class plan universities (including 42 world first-class universities and 95 first-class academic discipline universities) or Project 985/211 universities; 2 = open only to graduates from world first-class university or Project 985 universities；3 = open only to graduates from a limited number of world first-class target universities (the list of target universities is usually given by provincial governments). |
| **Common recruitment factors** | Field of study (major) | Ordinal variable = 1 for presence of related requirements and 0 for otherwise |
| Party membership | 0 = no requirements; 1 = party membership is an optional condition; 2 = preference given to graduates who are party members；3= party membership is necessary. |
| Student cadre experience | 0 = no requirements; 1 = student cadre experience is an optional condition; 2 = preference given to graduates with cadre experience；3 = student cadre experience is necessary. |
| On-campus awards | 0 = no requirements; 1 = awards are optional condition; 2 = preference given to graduates who received awards during university; 3 = candidate must have received awards during university. |
| Military experience | 0 = no requirements; 1 = military experience is an optional condition; 2 = preference given to graduates with military experience；3 = military experience is necessary.  |
| Ethnic preference | Dummy variable = 1 for preferential treatment for ethnic minorities in recruitment and 0 for otherwise |
| Gender | Dummy variable = 1 for related requirements (including positions open only to females or males and the requirement that the ratio of men to women should be approximately 1∶1 in recruitment) and 0 for otherwise |
| **Incentives** | Incentive intensity  | Ordinal variable = 0 for no incentive strategy in the recruitment information, 1 for presence of a material incentive (including one-off subsidy，settling-in allowance and rental allowance) or promotion incentive (including promise of accelerated promotion in administrative rank or promotion to a unit at a higher administrative level), and 2 for presence of both material incentive and promotion incentive |
| **Socioeconomic controls** | GDP per capita | Provincial GDP per capita (in 10,000 yuan) |
| Population | Provincial population (in millions) |
| Fiscal pressure | The ratio of fiscal gap to fiscal revenue. The fiscal gap = budgetary fiscal expenditure – budgetary fiscal revenue. |
| Number of local colleges | Number of colleges in the province |
| Number of local graduates  | Number of local fresh university graduates in the province |

Figure A1. **Frequency Distribution (in %) of the Four Common Requirements in SSG Recruitment**



Table A3. **Regional Heterogeneity**

|  |  |
| --- | --- |
| 　 | Dependent variable: competition intensity (ratio of recruitment quota to recruitment scope) |
| 　 | (1) | (2) | (3) |
| 　 | Eastern | Central | Western |
| University  | 0.350\* | 0.900\*\*\* | 2.029\*\*\* |
|  | (1.58) | (5.26) | (5.51) |
| GDP per capita | 0.112 | -0.627 | -0.440 |
|  | (0.48) | (-0.42) | (-0.23) |
| Population | 0.1008 | 1.012 | -1.050 |
|  | (0.41) | (0.71) | (-0.98) |
| Fiscal pressure | 0.244 | 0.472 | -0.817 |
|  | (0.14) | (0.31) | (-0.57) |
| Number of colleges | -0.149\*\* | -0.0431 | 0.0642 |
|  | (-2.40) | (-0.37) | (0.62) |
| Number of graduates | 0.187 | 0.0810 | -0.0106 |
|  | (0.86) | (0.21) | (-0.03) |
| Consant | 7.140 | -51.61 | 33.62 |
|  | (0.45) | (-0.78) | (0.87) |
| R-squared/Pseudo R-squared | 0.6717 | 0.8539 | 0.8329 |
| Number of observations | 32 | 27 | 29 |
| Province fixed effects | YES | YES | YES |
| Year fixed effects | YES | YES | YES |

*Notes*: T-statistics are given in parentheses; \* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01.

Figure A2. **Number and Percentage of Target-based SSGs from Tsinghua University and Peking University Employed by Party or Government Institutions, 2017–2020**



*Source*: Report of employment quality for graduates from Peking University and Tsinghua University (2017–2020).

*Notes***:** Data on the employment of Peking University graduates in Party and government institutions in 2020 is not publicly accessible.

**Appendix 2: Data Sources and Availability**

Observations on SSG recruitment quota and conditions are collected from the provincial documents of target-based SSG recruitment. We have collected the provincial, annually issued recruitment announcements from 2017 to 2021 for 29 provinces (excluding Tibet and Shaanxi because of missing information) (source: <https://docs.google.com/spreadsheets/d/1K_Wzwmcc2mL0odPf1qT3cvNNoh2IZvsK/edit?usp=sharing&ouid=102008433346951145080&rtpof=true&sd=true>). Data for provincial socioeconomic factors are sourced from provincial statistical yearbooks (2017–2021). Any datasets generated during this study and code for processing the data are available upon request from the corresponding authors.

Our data set has two potential measurement errors. First, the between-province variation in recruitment quotas cannot explain the variation in competition intensity, which depends on both recruitment quotas and recruitment scope. As fewer competitors generally mean less competition, among provinces with similar recruitment quotas, candidates are more likely to be chosen in provinces that limit their SSG recruitment to a select few top universities. Therefore, we use an alternative measurement of competition intensity: the ratio of recruitment quota to recruitment scope. Second, the annual SSG recruitment plan is determined by the provinces, whose recruitment quotas and requirements vary depending on local factors. We therefore control for fixed effects of both province and year in case unobserved heterogeneity or some other unusual factor causes exceptionally large or small recruitment quotas in a specific province or year. Hence, all estimates in this study are the within-province quotas for SSG recruitment.