Manufacturing Obedience: Entertainment Media and Authoritarian Support *

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Abstract

How does mass media manufacture political accountability in autocracies? Utilizing a nationwide television (TV) subsidy program in rural China, we find that adolescents exposed to TV later exhibit higher regime support, increased political trust, and fewer anti-authoritarian protests. These changes are primarily attributed to the *tittytainment effect*: adolescents with increased TV exposure display lower cognitive abilities and educational achievements while experiencing higher emotional satisfaction from entertainment. Consequently, their reduced ability to think critically or challenge authority leads to decreased demands for government accountability and fewer calls for democratic reforms. The *tittytainment effect* of mass media helps preserve long-term authoritarian stability with citizens unable and unwilling to rebel. Its role of fostering obedience complements tools of strategic propaganda and media manipulation in durable autocracies.

Keywords: Mass Media; Political Support; Protest; Tittytainment.

JEL Codes: L82, O10, P35, I10

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"Empty their minds, fill their bellies, dim their ambitions, and strengthen their sinews."
— Lao Tse, Ancient Chinese Philosopher.

"Bread and circuses are the two tools for the appeasement of the masses."
— Juvenal, Ancient Roman Poet.

1 Introduction

In response to the rising tide of democratization, modern autocracies have moved away from overt violent repression and begun to wear the mask of democratic systems (Guriev and Treisman, 2022). This strategic adaptation includes fostering political competition (Levitsky and Way, 2002; Levitsky, 2010), instituting elections (Svolik, 2012; Brancati, 2014), and establishing legal frameworks for political accountability (Scheppele, 2018). However, the facade of accountability can breed anti-authoritarian sentiment and fuel democratic protests, threatening authoritarian rule. Then, how do autocrats alleviate such pressures? Some studies underscore the combination of informational control and manipulation, where autocrats rely on deceptions and media bias to garner public support (Guriev and Treisman, 2022; Rosenfeld and Wallace, 2024). In this paper, we offer a novel perspective by exploring the role of mass media in shaping long-term political values and participation in authoritarian regimes. Distinguishing from existing literature, we highlight how mass media *per se* can bolster public support for authoritarian regimes through the *tittytainment effect*[1], thus dampening the public's demands for political accountability and perpetuating authoritarian durability.

Prior research has established that mass media could significantly bias viewers' political attitudes (Enikolopov et al., 2011; Zhuravskaya et al., 2020), and authoritarian regimes strategically manipulate the media to promote its political agenda, underpinning its rule.[2] We distinguish from this literature by emphasizing how TV shapes political values and behaviors through mass entertainment rather than political propaganda: entertainment-oriented TV can hinder individual's cognitive abilities and educational attainments, similar to computer use (Malamud and Pop-Eleches, 2011). Harmful as it is, TV exposure helps lower citizens' political engagement both by reducing their understanding to politics and by rising their satisfaction to the status quo. Thus, affected cohorts have lower ability and willingness to resist the state, which directly solidifies authoritarian rule. We thus explain how such authoritarian states maintain stability without constant repression or heavy propaganda, even in contexts of high inequality and low redistribution.

1. To address the extreme wealth imbalance between the elites and the marginalized masses, Brzezinski proposed the concept of "tittytainment," combining "titty" (a pacifier) and "entertainment." We demonstrate in section 5 and section 6 how both of these channels contribute to authoritarian stability by affecting individuals' willingness and ability to challenge state governance.

2. The authoritarian state have multiple ways to control the media: either through direct propaganda (Huang, 2018; Qin et al., 2018; Chen and Yang, 2019), strategic censorship (King et al., 2013, 2017; Lorentzen, 2014), selective attribution (Rozenas and Stukal, 2019), or soft-propaganda (Mattingly and Yao, 2022).

The large-scale TV coverage program in rural China provides a unique empirical setting for our study. The "Home Appliances going to the Countryside" (HAGC) program, which subsidized TV purchases for rural residents, was launched in Dec. 2007 in three pilot provinces and expanded nationwide by Feb. 2009. Rural residents, who used to face severe financial constraints, were mostly affected by the policy and incentivized to purchase TVs. We focus on HAGC for three reasons. First, the staggered roll-out of the HAGC offers significant regional variation, enabling us to exploit how TV access shapes political attitudes and behaviors over time. Second, the centrally planned nature of the program, aiming at stimulating consumption and protecting domestic industries during the 2008 financial crisis, minimizes selection bias in policy implementation. Third, the influence of TV on values varies by age group. Adolescents, with more flexible values and lower cognitive sophistication, are more susceptible to media influence (Durante, Pinotti and Tesei, 2019). This allows us to leverage cohort-level differences in policy exposure to identify the differential impact of TV on long-term political outcomes across age groups.

Using policy pilot data from China's Department of Commerce and nationally representative micro-survey datasets, we apply a generalized difference-in-differences (DID) approach to examine the long-term effects of television exposure. Our identification strategy leverages two sources of variation: first, it compares affected and unaffected counties and contrasting adolescent cohorts (aged 7-18 at policy introduction) with older cohorts (aged over 19)[3]; second, it exploits county-cohort variations in policy exposure. To establish that TV-induced support for authoritarian politics results from long-term cognitive changes rather than short-term economic benefits, we focus on outcomes eight years after the policy implementation (2016-2020 waves), ensuring that most affected individuals are adults. Data from earlier waves (2010-2014) serve as placebos, as cognitive changes are expected to be a long-term process.

In our baseline specification, we find a strong positive influence of TV on authoritarian government support in rural samples. Compared to their older counterparts who missed TV exposure in their adolescence, exposed adolescents develop higher government support after reaching adulthood, with an average increase of 0.227 (6.7% of sample mean). We then examine the heterogeneous effects by age at first exposure to the policy. The younger the individual was, the longer she was exposed to TV, and the stronger support for the government they developed. Therefore, longer exposure to TV during their value-formation age would incur more deep-seated values of government support, different from the short-term welfare effect which TV subsidy brought. Since the policy targeted only rural areas, we observe insignificant effects among urban residents. To isolate cohort-specific impacts from factors such as political trends, economic momentum, or technological progress, we also employ a triple-difference (DDD) specification comparing rural and urban individuals, with the findings consistent to the baseline.

3. The consolidated values and altitudes drives important life decisions of teenagers when their grew up as the a age-of-majority citizen, which shapes the political development of the state (Guo, Jackson and Jia, 2024; Bai, Jia and Wang, 2024).

We then examine the policy's broader impact on affected cohorts. Generally, viewers with greater TV exposure report higher satisfaction with the government on political issues, holding government actions constant within the same counties. This suggests that increased satisfaction arises from lowered subjective standards rather than actual improvements. Additionally, these viewers exhibit higher political trust without changes in general trust, indicating that our effects result from reduced standards *toward the government* rather than shifts in general values. As we turn to their actions, we find that longer exposure to TV is accompanied by fewer protests and conflicts with officials.

To further validate our findings and explore the mechanisms through which TV influenced viewers, we combine HAGC policy data with individual-level information on cognitive abilities, emotions, and welfare. We find that affected cohorts (adolescents) exhibit worse cognitive abilities compared to less-exposed cohorts. This cognitive decline leads to lower educational achievements, as viewers are less likely to be admitted to college. Since higher education is crucial for fostering civic engagement, this combination of lower education and poorer cognitive abilities results in political ignorance, with reduced expectations of the government and less dissatisfaction with authoritarian rule. We also find that viewers report higher levels of positive emotions and lower levels of depression, conditioning on similar objective environments. Lastly, we found a decrease but insignificant decline in one's social connection and socialization skills, which is essential to acquiring diversified social-political information and establishing civic social capital. These channels lead to stronger authoritarian obedience, less concern on politics, and reduced demands for redistribution and democratic reforms as teenagers mature.

We ruled out several alternative explanations. First, while the policy may have temporarily eased household burdens through government subsidies, increased entertainment options, and boosted life satisfaction, we find no evidence that this drove long-term support for or trust in the government. Second, while TV might provide more employment information, broaden viewers' knowledge, and potentially improve future job prospects, we show that the affected cohort did not have better objective living conditions or material well-being as adults, despite higher subjective life satisfaction. Third, the fact that TV can serve as a top-down propaganda tool for autocrats cannot drive our findings, as increased TV exposure primarily led people to focus more on entertainment content rather than political information. Therefore, the *tittytainment effect*, rather than political propaganda, is more likely to account for our baseline results.

Literature. Our research firstly contributes to the growing literature on the political outcomes of mass media. Existing research finds that mass media cast enduring effects on individual cognitive ability (Gentzkow and Shapiro, 2008) and psychological health (Braghieri et al., 2022). Also, mass media shapes one's social-political life by sculpting her social connectedness (Putnam, 2000; Olken, 2009), political participation (Gentzkow, 2006; Olken, 2009; Gentzkow et al., 2011), inter-

group conflict (Bursztyn et al., 2023; DellaVigna and Kaplan, 2007), and political ideology (Kim, 2023; KIM and Patterson Jr, 2024).[4] We show that mass media can significantly secure political obedience by sharping the willingness and ability of civic resilience. Previous research has shown that media bias (through information provision or content substitution) could forge state accountability [5]. Complementing this strand of literature, we highlight the long-term *tittytainment* effects characterized by loss in cognitive ability and political understanding, resulting in strengthened state support. Instead of focusing on state propaganda itself (Rosenfeld and Wallace, 2024; Bleck and Michelitch, 2017), we emphasize the lowered cognitive abilities and entertained emotions shaped by mass media. Specifically, our findings echoes with Buckley et al. (2024) that subjective feelings (instead of objective performance) channel authoritarian propaganda to state legitimacy. We find that individuals living similar lives within same locality display different government support by their early-life TV exposure, with the TV-affected cohort displaying higher subjective evaluations on the state. Hence, state propaganda is more likely to translate to decentralized legitimacy where the *tittytainment effect* of TV prevails.

Our study is closely related to the work of Durante, Pinotti and Tesei (2019), which examines how mass media shapes political attitudes in democratic settings, such as voting behavior or support for populist parties. By examining how TV affects political outcomes in an authoritarian context, we highlight the role of mass media in reshaping civic ethos in authoritarian states. This sheds light on the distinctive role of civic culture in different political institutions. Specifically, we document the lifelong consequences on micro-psychological preference of mass media exposure in childhood, rather than shorter-term impact on government support as a result of current events. Existing literature generally considers higher education to foster political participation in democracies by cultivating civil culture (Dewey, 1916; Almond and Verba, 2015).[6] Further, it is hypothesized that such “pro-democracy" civic culture might undermine the support for authoritarian government (Glaeser, Ponzetto and Shleifer, 2007), which is partly verified by lower political participation with improved education (Croke, Grossman, Larreguy and Marshall, 2016). This paper goes further by showing how authoritarian rule is maintained by lower cognition that harms civic culture. In this sense, TV exposure also gives rise to “political apathy" in autocracies, yet this consolidates its rule as authoritarian states fear political participation, while this harms democracies that require active participation.

In addition, we enrich the knowledge a growing literature on tools for authoritarian governance and government accountability in authoritarian regimes. Broadly speaking, both repression and co-optation are important tools of authoritarian control (Svolik, 2012; Frantz and Kendall-

4. See Broockman and Kalla (2024) for a recent review.

5. This holds not only to "informational autocrats" (Guriev and Treisman, 2022; Rosenfeld and Wallace, 2024), but also to democracies (Durante and Knight, 2012; Barone et al., 2015; Kim, 2023; Buckley et al., 2024).

6. The “causal" claim is still under debate, with some studies pointing to little effect after controlling for confounders like ability (Kam and Palmer, 2008; Berinsky and Lenz, 2011) while others arguing for a strong causal effect (Wantchekon et al., 2015). Nonetheless, their positive correlation is generally accepted.

Taylor, 2014; Xu, 2021; Yang, 2024). In the context of China, existing studies have provided ample evidence for how the Chinese government adopt various methods either for repression or co-optation to maintain sound governance.[7] Complementing state-propaganda from the authority, this study offers a novel perspective from the *tittytainment* effect of mass media. Similar to evidence from democracies (Kim, 2023), we also find better socio-economic perception and lower willingness to state redistribution with TV exposure. By diminishing government accountability in authoritarian regimes, authoritarian remains durable despite the growing social and economic inequalities between elites and the general population.

More broadly, we contribute to the causal effects of infrastructural programs in developing countries. Whereas past research has typically focused on its economic implications (e.g., income and assets (Asher and Novosad, 2020), education investments (Adukia, Asher and Novosad, 2020), expenditure and welfare (Burlig and Preonas, 2024), among others), recent studies highlight possible political change, like election outcomes (Akbulut-Yuksel et al., 2024), crimes (Calamunci and Lonsky, 2024), and state repression (Gonzalez et al., 2024). Mostly relevant is Olken (2009) that finds TV introduction to lower political participation and social capital, yet we distinguish from theirs by emphasizing political trust and resistance that matters more for authoritarian rule. In addition, most studies tended to find large positive impacts, yet our results indicate that infrastructure investments might be accompanied with negative socioeconomic and political outcomes.[8] Ironically, the loss in social welfare might be beneficial for the state that maintains its rule through strategic obscurantism.[9]

Our paper proceeds as the following. section 2 introduces the background of TV coverage and the HAGC policy. section 3 introduces main dataset we used. section 4 lay out the specification and justifies key identification assumptions. section 5 first introduces the effect of HAGC on government support, and the accompanied effects on political evaluation and collective actions. A battery of robustness checks are conducted, followed by heterogeneity analysis on the most effected teenagers. section 6 provides further evidence for *the tittytainment effect* and excludes alternative explanations. section 7 concludes.

7. Tools for repression vary from media censorship (King et al., 2013, 2017; Chen and Yang, 2019), digital surveillance (Xu, 2021), to AI technology (Beraja et al., 2023). Co-optation methods involve meritocratic governance (Jiang, 2018; Liu, 2023), political participation (Buntaine et al., 2024), and high responsiveness (Chen et al., 2016).

8. Jensen and Oster (2009) evaluates the effect of TV on gender equality of India; Faber (2014) shows that highway investments improved aggregate efficiency in China; Donaldson (2018) finds that railroad programs increased real incomes in India. A notable counterexample is Gonzalez et al. (2024) that sheds light on the dark side of infrastructural programs, focusing on increasing state presence though.

9. While Malamud and Pop-Eleches (2011) also find similar effects of computer use, we highlight the distinct implications in the authoritarian context, where lower education and cognitive abilities might be instrumental for authoritarian durability.

2 Background

2.1 TV Coverage in Rural China

At the time of its founding in 1949, rural China had no access to radio broadcasts, let alone television. The first television set in China was produced in 1958, which spread gradually among households. By 1978, China had a total of 105 radio stations and 37 TV stations, with the national radio coverage reaching 62% and TV coverage reaching 36% of the population.[10] The reform period since 1978 witnessed tremendous development in TV coverage. In 1998, the Chinese government implemented the "TV Broadcasting to Every Village" project to improve TV access in rural areas. The initiative had largely achieved its goal of ensuring access to TV broadcast for most administrative villages by 2000, raising the national coverage rate to 90.4%.

Nonetheless, village-level TV signal coverage does not equate to household ownership. According to the China Statistical Yearbook, by the end of 2000, 100 rural households owned an average of 48.74 TV sets, compared to 116.6 sets in urban households.[11] The low TV coverage rate can be ascribed to its relatively high price. Back to 2007, the average annual income for a rural resident is 4040.36, with wage income being only 1596.22. In sharp contrast, a single color TV costs 2000-4000, which means purchasing aTV required nearly an entire years income, excluding other living expenses.[12]

2.2 The HAGC Policy

In response to the global financial crisis and the ensuing economic slowdown in late 2007, the Chinese government introduced proactive fiscal measures, with the "Home Appliances to the Countryside" (HAGC) initiative playing a central role. Launched in December 2007, the HAGC pilot began in three provinces: Shandong, Henan, and Sichuan, lasting four years. Rural consumers in these regions received a 13% subsidy when purchasing color TVs. The policy was later expanded in two phases in 2008 and 2009 to include more counties (see Figure A1). This initiative, under rapid but staggered expansion, not only made TVs more affordable but also improved access to a wider range of channels and higher-quality audiovisual content, enhancing entertainment options for rural households.

The policy can improve the living conditions and information access of rural residents. Aside from setting a 13% subsidy on related products, the program set a price ceiling of 2,000 yuan for color TVs. Consequently, it significantly alleviated their financial burden and motivated them to

10. See Chinese State Media: Renmin Net for details.

11. Considering that some households may have multiple TV sets, the average TV ownership shown here should be an upper bar for the actual TV coverage rate.

12. We focus on LCD TV (Liquid Crystal Display TV) that took the largest share in Chinese market. Without special reference, the money unit for income/wage/price is yuan (RMB).

buy TVs. By the end of October 2008, over 3.5 million subsidized HAGC products were sold in the three provinces. Compared to the same period last year, the program led to a 30 p.p. increase in home appliance sales, totaling approximately 4 billion yuan.[13]

It's important to note that the policy did not prioritize specific socioeconomic traits, nor did it intend to enhance political control. For the pilot provinces, some are relatively developed like Shandong, while some lie in the less developed West China (Sichuan). Comparing the content of the color TV with other media (e.g., newspapers, radio broadcasts, black-and-white TVs), more entertainment programs were included, with the original propaganda programs unchanged. More importantly, its expansion was so fast as to boost TV consumption. According to the Ministry of Finance (MOF), the policy sought to foster consumption, thereby stimulating economic growth and alleviating challenges faced by the home appliance and related industries.[14] The 30 p.p. increase in TV sales just confirms the success of their original goal. Figure A2 documents rural residents purchasing TV and watching TV programs under the HAGC policy. Figure A3 traces the transformation in the main characteristics of TV sold in pre- and post-HAGC policy implementation. Specifically, it shows a marked shift in rural TV markets from bulky and cable-oriented models to more advanced, colorful, digital, flat-screen TVs. This transition reflects a broader enhancement in the availability of diverse entertainment options and improved viewer experiences in these areas.

The HAGC program offers four key advantages for our analysis. First, its large scale: covering 34 provinces and municipalities in China, it reached 600,000 administrative villages and 600 million rural residents, significantly improving the daily lives of rural households that previously lacked access to TV. Second, its staggered rollout: the program was implemented in three phases, starting with a pilot in three provinces and expanding nationwide. This variation allows us to estimate its impact more effectively. Moreover, the policys exclusive focus on rural areas allows us to use urban households as a placebo or control group, effectively addressing cohort trends through a comparative analysis. Third, the program was designed to foster TV consumption and drive economic growth, rather than favoring underdeveloped regions or areas with political significance (e.g., autonomous regions), suggesting little selection bias.[15] Finally, the program was centrally planned and uniformly executed, with subsidies primarily funded by the central government (80%) and provincial governments (20%). This centralization structure minimizes the risk of local government distortions, making the program relatively exogenous to local conditions.

13. See the official website for the central government of PRC for detailed data.

14. Zeng Xiaoan, then deputy director the MOF of China, publicly claimed "HAGC can address excess production capacity in China's domestic furniture market to help its factories survive international trade frictions.", see the official website for the central government of PRC.

15. The MOF and the Ministry of Commerce also consulted extensively on logistics and support structures to ensure the policy reached rural consumers effectively to stimulate their consumption, see Press Conference of the MOF.

3 Data

This paper uses nationally representative panel data matched with county-level HAGC implementation timelines to examine how TV coverage from the HAGC program impacts political attitudes, behavior, and authoritarian stability. We identify how individuals were affected by the HAGC policy based on their household registration (*hukou*) type and residence during the HAGC implementation period rather than that in the survey year. We focus on individuals with a rural household registration (*hukou*) as the program targeted rural areas. Urban samples are used for placebo tests and controls in the triple-difference specification.

CFPS. The China Family Panel Studies is a nationally representative survey covering 25 Chinese provinces, conducted biannually by the Institute of Social Science Survey at Peking University. We construct three groups of dependent variables from CFPS. First, CFPS collects data on respondents' satisfaction with local government performance (rated on a 5-point scale), their trust in government officials (rated on a 10-point scale), whether they had conflicts with government officials in the past year, and whether they engage in online political discussions. These variables serve as key dependent variables for the baseline. Second, we employ data on cognitive ability, depression, and educational achievement to explore the underlying mechanisms. We use verbal and mathematical reasoning tests from CFPS as indicators of cognitive ability. Tests on memory and numerical skills serve as placebo variables for our analysis. For measuring depression, we start with the CES-D indicator, a self-reported scale where a higher score indicates a greater tendency toward depression. CFPS provides measurements of individual educational levels, which we use to define educational achievement. Third, CFPS also collects a series of labor market outcomes, providing exact and solid evidence to check welfare improvement effect of HAGC policy. Table A1 summarizes the descriptive statistics for our main variables.

CSS. The Chinese Social Survey (CSS) is a nationwide, large-scale survey launched by the Chinese Academy of Social Sciences. It includes a wide range of questions about political engagement, covering both political actions, like collective actions and protests, and political attitudes. The survey asks respondents to rate the government's performance in various issues (e.g., healthcare, corruption), their trust in the government, and whether they have participated in petitions or protests. It also captures daily political participation like involvement in political discussions or reporting social issues to the media, among other behaviors.

CGSS. We use the Chinese General Social Survey (CGSS) to capture the more nuanced effects of the policy on individual political knowledge and attention, This is the earliest nationally representative survey in China, jointly launched by the Department of Sociology at Renmin University

and the Survey Research Center at Hong Kong University of Science and Technology. CGSS provides a series of variables concerning time allocation and mass media use, which helps us to check the substitution effect of TV for other activities in the short run. Also, We focus on a broad range of questions on political participation and political knowledge and include questions related to educational achievement (e.g., college entrance).

ISCIU. To capture details on media use and TV watching habits, we employ data from the Ideology Survey of Chinese Internet Users (ISCIU), obtained from Ma and Wang (2015). This survey is commonly used to study the ideological leanings of Chinese netizens. Notably, ISCIU includes questions on the frequency of TV watching and the types of programs watched, providing more detailed insights into TV usage. As supplementary evidence, we also employ indexes to measure individuals' general political knowledge, compliance with the government, willingness to appeal, and daily political participation, based on a range of behavioral questions.

4 Empirical Strategy

4.1 Baseline specification

We utilize a generalized difference-in-differences (DID) identification strategy that leverages two distinct sources of variation. First, the implementation of the HAGC policy occurred at different times across counties. Second, within each county, individuals from different birth cohorts experienced varying levels of exposure, with the adolescent cohort (aged 7-18[16] at the time of policy implementation) being particularly susceptible. We estimate the following model using rural samples:

$$Y_{igc} = \alpha_0 + \alpha_1 Exposure_{cg} + \alpha_2 X_i' + \lambda_c + \sigma_g + \mu_p + \epsilon_{igc}. \tag{1}$$

where Y_{igc} denotes outcomes for individual i born in year g at county c. We explore a series of political outcomes including support for the government, trust and satisfaction level with officials, conflict and protest, as well as preferences for redistribution. $Exposure_{cg}$ refers to whether children from cohort g lived in county c during HAGC policy (2010 proxy) were exposed to the HAGC from conception during their formative years (aged 7-18). The control group consists of individuals aged 19-27 at the time of HAGC, who had already passed the period when their values were most susceptible to media influence. The coefficient of interest is α_1, which captures the net-impact of the HAGC on the outcomes of adolescents compared with adult cohorts. All samples are derived from rural samples born between 1982 and 2002[17] where HAGC was implemented.

16. Children typically begin primary school at the age of seven in China. From this point until they reach eighteen (a twelve-year period by education), their cognitive abilities and political attitudes are systematically shaped. Also, we reduced the treatment windows (to 10-18, 13-18, and 16-18) at the panel C of Figure C1 to assess the robustness.

17. Longer cohort choices (such as 1978 to 2002) are discussed in the robustness check.

We include a comprehensive set of covariates and fixed effects (FEs) in our analysis. X_i denotes the set of individual-level controls, such as gender, marital status, paternal average age, and paternal average education level. σ_g represent cohort FEs, and λ_c and μ_p are FEs for the county during HAGC policy and the prefecture-level city of current residence, respectively, to control for migration. These FEs control for unobservable, time-invariant characteristics of both the county during HAGC policy and current residence, which may influence political institutions and culture. All the standard errors are clustered by county (during HAGC policy) level to account for correlations in outcomes between adolescents in the same county.

Concerns may arise that time-varying factors, such as in public policies, propaganda strategies, and macro-economic trends, could have driven the differences between long-term and short-term effects. Thus, we incorporate additional cross-sectional data into each specification, creating a panel dataset that controls for regional policy fluctuations. The specification is as follows:

$$Y_{igct} = \alpha_0 + \alpha_1 Exposure_{cg} + \alpha_2 X_i' + \alpha_3 X_{p,t=2007}' \times \sigma_g + \lambda_c + \sigma_g + \mu_p + \rho_{mt} + \tau_m \times T_g + \epsilon_{igct} \quad (2)$$

The key distinction from Equation 1 is the incorporation of multiple cross-sectional datasets, more stringent FEs, and more higher-level predetermined covariates. Given that government policies may influence citizens' immediate political engagement and understanding, an enlarged sample size allows us to control for the political environment and other policies in province m across various years (waves) t (ρ_{mt}). To ensure that regional trends within cohorts do not bias our findingsthat is, to avoid conclusions that merely reflect political attitude shifts among cohorts in different regions due to varying policies or political trendswe controlled for province-cohort-specific linear trends ($\tau_m \times T_g$). Additionally, we account for regional economic characteristics by controlling for a series of pre-determined prefectural characteristics including phone user ratio, internet user ratio, and percentage of secondary industry in GDP (in 2007, before HAGC) and cohort dummy to mitigate potential "bad controls" ($X_{p,t=2007}' \times \sigma_g$).

Immediate and Long-term Impact Specification To assess the long-term impact of the HAGC policy on adolescents' cognitive abilities and political ideology, we analyze cross-sectional data from the 2016-2020 waves, eight years post-policy. First, TV's cultivation effects operate through longitudinal processes, requiring sustained temporal exposure. Second, this also ensures that most affected individuals have reached adulthood, with stable cognitive systems and entrenched values. In contrast, data from the 2010-2014 waves is used to capture the immediate effects. As shown in Figure A5, while the majority of short-term treatment group is under 18, most individuals in the long-term treatment group are already adults. In both cases, the control groups consist of adults with established values.[18] Meanwhile, this distinction between immediate and long-term impact allows us to isolate two mechanisms: (1) the immediate alleviation of economic burdens

18. In addition to CFPS data, we use several other micro-level surveys.

and improvement in living standards, which likely boosts public approval, and (2) the long-term effects of TV exposure, which may reduce cognitive abilities, lower demands for government accountability, and increase support for the state and trust in officials. It also helps distinguish cohort trends and other policies from our results. If the baseline just reflects a cohort trendwhere younger individuals are more likely to support the governmentsimilar significant patterns would be observed in both the short- and long-term samples.

Exposure Specification In Equation 2, we do not account for age-specific heterogeneity within the 7-18 age group. As younger individuals are exposed to TV for longer time, and are more susceptible to media influence compared to their older peers, they should exhibit greater value shifts and changes in political attitudes. Following Huang and Liu (2023), we re-define the exposure variable as a continuous measure to capture the percentage and number of policy-overlap years for each county c and cohort g within the 7-18 age range. The first is the percentage of the number of years that respondents exposed to HAGC to the total number of HAGC implementation years (4 years).[19] Another measure is the age difference between the age when the respondents first contact with HAGC and 18 years old, which measures the length of exposure to TV.[20]

Triple-difference Specification To address concerns that the core estimated coefficients in 2 might reflect inherent variations within cohorts rather than HAGC-induced effects, we estimate the following triple-interaction specification on a pooled sample of rural and urban residents. The HAGC policy affects only rural households in TV consumption, and urban citizens within the same county face similar political environments and economic conditions, so their difference largely reflect the effect of HAGC policy. Thus, the triple difference (DDD) specification is as follows:

$$\begin{aligned} Y_{igct} = \gamma_0 + \beta_1 Rural_i \times Exposure_{cg} + \beta_2 Exposure_{cg} + \beta_3 Rural_i + \beta_4 X_i' \\ + \beta_5 X_{p,t=2007}' \times \sigma_g + \lambda_c + \sigma_g + \mu_p + \rho_{mt} + \tau_m \times T_g + \epsilon_{igct} \end{aligned} \tag{3}$$

In this specification, $Rural_i$ indicates whether individual i held a rural *hukou* at the time the HAGC policy was introduced. The core coefficient of interest, β_1, differs from Equation 2 by further isolating cohort-specific impacts of other sources such as general political environment or socioeconomic trends. The DDD specification thus eliminates the cohort-specific trends, lead-

19. Policy overlap exposure 1 are quarterly values within 0-1 (i.e. 0, 0.25, 0.5, 0.75, and 1). For example, a respondent was exposed to HAGC at the age 15, then policy overlap exposure 1 is (18-15)/4=0.75, which means that he or she was exposed to HAGC for 75% of the total implementation time. If another respondent was exposed to HAGC at the age 12, then policy overlap exposure 1 is 1, which means that he or she was exposed to HAGC for all the policy time.

20. Policy overlap exposure 2 are ordered integers from 0 to 11. For example, a respondent was exposed to HAGC at the age 11, then policy overlap exposure 2 is 18-11=7, which means that 7 adolescent years overlapped with HAGC implementation or spillover. If another respondent was exposed to HAGC at the age 22, then policy overlap exposure 2 is 0 because he or she were not exposed to HAGC during adolescence.

ing to a more precise causal interpretation of the long-term political effects of the HAGC policy on the younger cohort. We also use separate time windows to differentiate the short-term (pre-adulthood) and long-term (post-adulthood) impacts of the HAGC policy.

4.2 Identification Assumption

Our generalized DID analyses rely on the assumption of parallel trends across cohorts. This identification strategy does not require HAGC counties to be exogenously or randomly assigned. Instead, it assumes that individuals in counties with and without HAGC exposure would have exhibited similar cohort trends in political outcomes before the implementation of HAGC. A potential threat to this assumption is that its roll-out sequence may be correlated with pre-policy characteristics or cohort trends in the counties. For instance, rural areas with limited media access, lower state penetration, or higher levels of social unrest may have been selected for earlier HAGC implementation. These characteristics could also influence cohort trends in political attitudes. section 2 presents evidence showing that the policy goals are unrelated to these characteristics. Further, we formally conduct a series of statistical tests in this section to address this concern.

Balance Tests First, one of the important identification assumptions is that there are no systematic differences between roll-out sequences before policy. We conduct two sets of statistical tests to examine the relationship between the timing of the HAGC policy and local characteristics prior to the HAGC policy. Figure A6 presents differences across HAGC waves in socioeconomic factors (e.g., GDP, industrial structure, population), education, social security, infrastructure, and information technology characteristics, which shows no significant correlation with any of these factors.

Next, Figure A7 uses individual-level data, with individuals exposed to the third wave of the policy serving as the control group, to examine differences in baseline outcomes among those affected by the policy in pre-policy counties. Specifically, we focus on individuals aged 18 or older at the time the policy was introduced, as they had already passed the formative age range and had more stable political attitudes. We analyze potential differences in political attitudes and behaviors across the policy waves and find no significant differences in these areas. Similarly, we observe little differences in cognitive ability, mental health, or education levels.

Furthermore, we check the wave-specific treatment effects at the panel A of Figure C1 to make sure the estimation results are not sensitive to different waves, with consistent results. All in all, these findings suggest that the timing of the HAGC policy roll-out is exogenous and have little to do with local socioeconomic factors or individual potential outcomes.

Cohort Trend across Different Waves We hope that there is no significant trend between cohorts. Otherwise, the estimation results may be driven by trends rather than policy-driven. To further assess the parallel trends assumption for each cohort, we examine county-level characteristics prior to the implementation of the HAGC policy. Using individual-level data from rural sample, we focus on individuals born between 1978 and 1989. These cohorts were adults by 2007, when HAGC began, making them unlikely to be influenced by the policy in their later outcomes. Specifically, we regress outcomes on the interactions between cohort indicators and the year of HAGC adoption. In Figure A8, we use the cohort born in 1989 as the reference group, and the plotted coefficients show whether pre-policy characteristics differ in one-year intervals relative to HAGC adoption. Our results indicate no significant evidence of differing pre-policy cohort trends in these outcomes across counties with different HAGC start years.

Event Study To formally test the parallel trends assumption, we explore an alternative specification to assess whether the impact of the HAGC policies varies with the different periods of exposure, estimating the following event-study specification:

$$Y_{igct} = \alpha_0 + \sum_{\gamma=9,\gamma\neq 19}^{28} \alpha_\gamma \boldsymbol{I}(Age=\gamma) + \alpha_2 X_i' + \alpha_3 X_{p,t=2007}' \times \sigma_g + \lambda_c + \sigma_g + \mu_{pt} + \rho_{mt} + \tau_m \times T_g + \epsilon_{igct}, \quad (4)$$

where $I(Age = \gamma)$ indicates whether cohort g lived in county c during policy aged γ when the HAGC policy was first introduced. Other variables are specified as in the baseline equation. The dynamics of coefficients α_γ capture the evolution of the difference in individuals' outcomes based on their varying to the policy, relative to the reference cohort. This approach introduces additional variation within the exposure period, allowing for a better understand of the effects across different exposure windows on various affected cohorts. We test the parallel pre-trend assumption based on the baseline specification in the rural sample, with urban samples as placebo tests.

Followed Fadlon and Nielsen (2019), we also test the parallel pre-trend assumption based on the triple-difference specification in the pooled sample:

$$\begin{aligned} Y_{igct} = \beta_0 &+ \sum_{\gamma=9,\gamma\neq 19}^{28} \beta_{\gamma_1} \boldsymbol{I}(Age=\gamma) \times Rural_i + \sum_{\gamma=9,\gamma\neq 19}^{28} \beta_{\gamma_2} \boldsymbol{I}(Age=\gamma) \\ &+ \beta_2 X_i' \times Rural_i + \beta_3 X_{p,t=2007}' \times \sigma_g \times Rural_i + \lambda_c \times Rural_i + \sigma_g \\ &\times Rural_i + \mu_{pt} \times Rural_i + \rho_{mt} \times Rural_i + \tau_m \times T_g \times Rural_i + \epsilon_{igct} \end{aligned} \quad (5)$$

where β_{γ_1} denotes the introduction-age-varying effects of HAGC on rural residents compared with urban residents, which accounts for unique cohort trends across counties while controlling for common urban-rural trends.

5 Empirical Results

In this section, we examine the long-term impact of the HAGC policy on political views and behaviors. We first present raw data plots to visualize the relationship, followed by estimation results that incorporate a full set of covariates and fixed effects. We also perform robustness checks and heterogeneity analyses to strengthen our findings.

Graphical Evidence Before presenting estimation results, we present raw data patterns. Figure 1 illustrates the long-term distribution of government support and trust across different age groups following the HAGC policy. Panel A focuses on the rural sample, showing that political support remains stable among individuals aged 18 and older, but for those under 18, who are more susceptible to value changes, a higher proportion expresses long-term support (some achievement) for the government after exposure to HAGC. This effect is more pronounced among younger age groups, whose values are more easily shaped. Panel B compares the urban sample, where the HAGC policy was not targeted. In this case, government support is similarly distributed across all age groups, with no significant changes observed. Panels C and D show similar patterns for government trust. In rural areas, political trust increases among those under 18 after the policy is introduced, while remains stable for those over 18 and for those living in urban areas. To control for potential cohort effects and county-specific factors, we then introduce strict fixed effects and control variables to further support these findings.

5.1 Baseline Results

Higher Government Support Table 1 reports the baseline results using the specification from Equation 2. Columns (1) through (4) use ordinal measures of government support (1-5, with higher values indicating stronger support) as the dependent variable. The regressions control for individual characteristics, prefectural characteristics, county FEs, cohort FEs, current prefecture FEs, province-wave FEs, and province-cohort-specific linear trends. Panel A presents long-term outcomes based on panel data from 2016 to 2018, when most of the treatment group (exposed to the HAGC policy aged 7-18) had reached adulthood. Column (1) shows that exposure to the HAGC policy during 7-18 leads to higher government support in adulthood compared to those with more established values (ages 19-31). The average increase is 0.227, which represents 6.7% (0.227/3.390) of the mean. As noted earlier, the HAGC policy primarily targets rural areas, so we expect insignificant effect on urban samples. To this end, we perform placebo tests using urban residents (categorized by urban *hukou* when policy introduction) in column (2). As expected, no significant long-term effects are observed.

To address concerns regarding cohort-specific trends in the measurement of government sup-

port, we adjust the dependent variable for birth-year-specific cohort distributions, yielding similar conclusions shown in columns (3)-(4). We further use a binary specification, defining high support ($\geq$3) as 1 and low support ($<$3) as 0. Columns (5)-(8) show similar patterns, where HAGC exposure leads to a 10% transition from low support to high support. Considering China's large rural population in 2008 (about 0.6 trillion), the policy has the potential to turn 60 million low-support rural residents to high-support, underpinning the party-state's rule in rural areas.

To elucidate the forces driving such change, we compare the short-term impact of HAGC with the long-term one. Panel B of Table 1 reports the short-term impact on youth groups using cross-sectional data from 2012 to 2014, when most participants had only been exposed to HAGC policies for 2-6 years. We find no significant short-term effects on government support, suggesting that immediate economic benefits and enjoyment from richer entertainment options can hardly drive increased support. Rather, shift in cognitive abilities is a long-term process, which is verified in the long-term effects in Panel A. Thus, we argue that decline in cognitive abilities and consequent reduced political awareness are more likely to account for our baseline findings (see section 6).

Additionally, we pool the urban and rural samples, and apply the DDD strategy from Equation 3 to account for county-specific cohort trends. Table B1 shows that rural residents exposed to HAGC policies during ages 7-18 experience higher government support in adulthood, with an average increase of 0.167, compared to the urban sample. Similar results are obtained when adjusting for birth-year-specific cohort distributions and using a binary setup. However, using the short-term waves, we do not observe a similar significant pattern. This suggests that, after accounting for fixed effects and controls, cohort trends have minimal impact on the interpretation of our coefficient. Consequently, we adopt Equation 2 as the main specification, while Equation 3 is used as supplementary evidence and placed in the appendix for subsequent analyses.

Differential Effects by Age at First Exposure In this subsection, we use an alternative specification to assess whether the impact of HAGC policies varies across the timing of exposure. This flexible framework allows us to evaluate the effects across various exposure windows and test the parallel trends assumption, specifically, whether trends in adolescent outcomes across different groups would have followed similar trajectories in the absence of the HAGC policy.

Figure 2 uses the group of individuals aged 19 when the HAGC policy was introduced as the reference group. Panels A and B focus on the rural sample. We find that, regardless of whether we measure government support using ordinal or binary variables, the younger an individual was when exposed to HAGC, thus the longer he/she was exposed during the formative years, the higher government support he/she bares after turning adults. Specifically, those under 18 when exposed to HAGC show significantly higher support for the government later on, which is not significant for individuals over 19, whose values are less prone to media influence. This further supports the parallel trends assumption. Panels C and D use urban samples as a placebo

test, showing no significant differences in government support among individuals exposed to the policy at different years. Panels E and F report the event study results under the DDD setting using Equation 3. By pooling both urban and rural samples, we plot the differences in government support between rural and urban *hukou* for each age group, with individuals aged 19 as the reference group. The results are consistent, showing that for those under 18 at the time of HAGC, the rural-urban gap in support increases, with rural residents showing higher government support while urban dwellers showing little change. For individuals over 18, the rural-urban gap remains stable. Figure B2 shows the different effects on political support by age at initial policy exposure with nonlinear methods (including both parametric and nonparametric). This analysis delineates the differential responses across age groups in both rural and urban settings, revealing a pattern consistent with that observed in Figure 2: earlier TV exposure time (below age 18) are more likely to yield increased government support, while the local estimates for those affected by TV only after 18 hold consistent.

In the baseline, we use government support as a continuous variable ranging from 1 to 5, while also reporting results based on a binary grouping (support 3 as high support). Figure B1 presents the event study results for alternative dependent variables, where the cut-off is varied. The results remain robust and show a similar pattern.

Positive Subjective Political Evaluation We further examine the long-term impact of the HAGC policy on adolescents' political values. Figure 3 shows the long-term and short-term effects of HAGC policies on government satisfaction and political trust among rural samples, using the CSS dataset. We find a significant increase in both government satisfaction and political trust in the long term, with no effects in the short term, consistent with the baseline results.

In addition, Table B2 shows that exposure to HAGC policies during adolescence predicts higher government satisfaction in a wide range of issues. This effect spans various aspects of government performance, including social security, human rights protection, anti-corruption efforts, equity promotion, and transparency. These broad subjective evaluations constitute *de jure* legitimacy of the authoritarian state. In contrast, more objective or practical aspects of government performance, such as healthcare, environment, and employment, remain unchanged with TV exposure. This suggest that our observed increase in political support is more likely a result of a decrease in individual evaluation standards, rather than an actual improvement in governance quality. A further event study approach in Figure B3 shows differential effects of first-exposure age on government satisfaction indicators. Individuals exposed to the HAGC policy after age 19 maintain stable satisfaction across all aspects of government satisfaction, while those exposed before age 18 report higher satisfaction levels. In sum, only subjective indicators are influenced by teenage TV exposure, leaving evaluation on objective welfare unchanged.

A similar effect is observed for political trust among teenagers. Figure 3 shows that affected

teenagers display greater trust in the state in adulthood compared to adults. Figure B4 conducts a placebo test for other types of trust, such as trust in parents, neighbors, Americans, or strangers, showing little differences. Additionally, no significant effects are observed within urban samples.

Lower Anti-government Protest In addition to shaping political altitudes, TV exposure has far-reaching effects in political actions. Figure 3 shows a significant decrease in perceived official malpractice or conflicts with officials for the affected teenagers. Further analysis in Figure B5 shows a placebo test, confirming that the policy's impact does not significantly affect perceptions of conflicts arising from wealth disparities, ethnic issues, religious matters, or labor disputes. Thus, the policy exclusively reduces the perception of conflict with the government, highlighting significant changes in their views towards the state.

We then explore the long-term effects of the HAGC policy on individuals' experiences with conflict and protest. Columns (1)-(2) of Table B3 indicate that affected individuals are less likely to join protests and have fewer disputes with government officials. One might be concerned that this could be due to differential treatment by government officials. Yet, Columns (3)-(6) reveal no evidence of systematic discrimination or neglect between different groups regarding unfair treatment, government negligence, unreasonable charges, and income discrimination. This suggests that, given officials treat people equally, those more influenced by HAGC are less prone to conflict or protest. Figure B6 shows the varying impacts of the age at first exposure to HAGC on anti-government actions, showing a consistent trend. Specifically, those exposed to HAGC policies before 18 have lower conflict levels and are less likely to protest, while those exposed after 19 show a more stable response.

Summary Our baseline findings highlight HAGC's long-term implications on authoritarian rule. We find that the policy has led to increased support for the authoritarian state, higher political trust, and rising satisfaction with the government across various issues. As a result, protest participation has decreased, and conflicts with authorities have diminished. Importantly, these effects are not merely the result of short-term economic benefits or temporary satisfaction. In section 6, we will explore the mechanisms underlying these long-term effects in detail.

5.2 Robustness Checks

In this section, we conduct a series of robustness checks. We present the main results below, with details illustrated in Appendix C.

We start with alternative treatment definitions. First, to address potential heterogeneous treatment effects across waves, we separate the results for each wave in Panel A of Figure C1. Second, in Panel B, we replace exposure as a continuous variable, defined as the number of overlap years

between ages 7 and 18 during which individuals were exposed to the HAGC policy. This approach uses cohort-specific variation in TV exposure and policy overlap, rather than a binary (0-1) exposure variable. The results remain robust. Third, we find that the baseline results remain consistent under different treatment criteria in Panels C and D, where we apply varying age thresholds to define the treatment and control groups. Lastly, we conduct placebo tests in Panels E and F, where the treatment is defined as exposure for individuals with entrenched values at the time of policy implementation, or where the policy year is falsely altered. The treatment effects are indifferent from zero, corroborating our baseline specification.

We then randomly assign pseudo-treatment exposure to cohorts or regions that should not have been affected by the actual policy, as shown in Figure C2. These tests suggest that our baseline results are unlikely to be driven by spurious correlations or model mis-specification.

Next, we exclude the influence of other contemporaneous policies. In Panel A of Figure C3, we consider the influence of the expansion of higher education, WTO accession, tax reforms, and the new rural pension policy. The results are highly robust, with economic significance similar to the baseline. We also consider the influence of other confounding factors, such as pre-determined socioeconomic, educational, security, and media conditions. Panel B and C show robust results. In Panel D, E, F, we further discuss issues like *hukou* change, migration, and data attrition, which shows they pose little threat to our main effects. Table C1 further demonstrates that TV exposure is unlikely to correlate with changes in *Hukou* status or internal migration.

Finally, we employ different specifications. In Figure C4 (Panel A-C), we show that our baseline results are not sensitive to different types of cross-sectional estimates, weighted regressions, or various multiple hypotheses tests. Panel D shows that the coefficients in the baseline remain stable as we progressively add control variables, and Panels E-F show that the results remain robust even when accounting for cohort- and region-specific higher-order linear trends and clustering.

5.3 Heterogeneity

As shown before, teenagers exposed to HAGC are more likely to develop pro-government values compared with cohorts who missed the policy. In Table 2, we show how HAGC contributes to government support by the moderating effects of individual-specific TV exposure. In column (1), we find that the effect is more pronounced for cohorts who watched TV for a longer time, while for those who rarely watched TV, exposing to HAGC makes little difference. This shows the crucial role of TV watching induced by HAGC. The effect on urban households is not significant in column (2), which means increased TV consumption time is only effective in rural areas, where the HAGC policy was implemented. We then analyze individuals' subjective inclination to watching TV. In columns (3)-(4), we show that rural residents who consider watching TV a profound part in their lives are influenced more by HAGC, with more positive attitudes for the government, while

such pattern does not exist for urban residents. Further, it is crucial that people receive political news from TV. Columns (5)-(6) show that rural residents who rely more on TV for news tend to show stronger support for the government. Given that media in autocratic regimes are often heavily censored, such political news are typically pro-government, which is likely to strengthen authoritarian support.

6 Mechanism Analysis and Alternative Explanations

How does increased media exposure boost authoritarian government support? In this section, we first explore the *tittytainment effect* of TV on value-forming teenagers. Exposure to entertainment TV hampers cognitive abilities and reduce educational attainment while simultaneously fostering positive emotions. Moreover, we offer suggestive evidence that TV exposure lowers one's social connectivity and social skills, which is especially important to the nurture civil capital. This combination effectively lowers public expectations, diminishes accountability demands on government work, and enhances satisfaction with the government, thereby diminishing demands for democratic reforms and reducing anti-authoritarian protests. We then rule out alternative explanations, such as short-term government support, welfare improvements, and expansion of pro-communist TV channels.

6.1 Mechanism

We first assess the effects of the HAGC policy on TV viewing patterns among young people. Figure 4 shows changes in time spent on various social activities following the introduction of the HAGC policy. It reveals a significant increase in the time youths devote to watching TV, while the engagement time with other placebo forms of media consumption remains unaffected. Additionally, there is a significant decrease in the time allocated to studying. This indicates that the HAGC policy indeed increases television consumption and usage, potentially yielding adverse effects. We next explore how this shift in time allocation impacts individuals' cognitive capabilities and future educational achievements.

Decline in Cognitive Skills TV exposure may reduce viewers' cognitive abilities in the long term, limiting their understanding of political and social issues, thus making them easier to feel satisfied and more prone to political propaganda. In Figure 5, we examine the effects of HAGC policy on the cognitive abilities of rural populations. We use verbal and mathematical reasoning tests from CFPS as proxies for cognitive ability.[21] These tests reflect habits developed over time,

21. CFPS employs four cognitive measures across different years. In 2010, respondents were assessed on vocabulary and numeracy, with the vocabulary test consisting of thirty-four Chinese characters drawn from primary school textbooks. The numeracy test included twenty-four math problems, also drawn from school textbooks. In 2012, the CFPS

which are crucial for rational thinking about social and political issues. In panels A and C, using the identification strategy in Equation 4, We find that individuals exposed to HAGC during adolescence perform significantly worse in the two tests, with lower test scores compared to those exposed during adulthood. Panels B and D report the results from specification Equation 5, comparing rural and urban cohorts within the same county. The pattern remains consistent, with a widening gap in cognitive abilities between rural residents and their urban counterparts due to TV exposure.

Table D1 examines the cognitive impact of HAGC policy across different lengths of exposure. Panel A presents the overall effect, while Panel B assesses the effects across three waves. The findings indicate that the negative impact intensifies over time, suggesting a potential "accumulative effect": for groups influenced by the policy, cognitive abilities deteriorate with prolonged exposure to TV. This gradual cognitive decline also elucidates why long-term political support increases more than short-term support. During this period, rural China underwent a consolidation of school resources. The reduction in the number of schools may adversely impact students' cognitive abilities. Simultaneously, textbook reforms aiming at enhancing political loyalty may have hindered students' critical thinking. In Panels C and D, we control for the cohort-specific impacts of these policies, with consistent findings. In Figure D1, we directly compare the cognitive effects of HAGC in the mid-term (2014 and 2016 waves) and long-term (2018 and 2020 waves), and find consistent results: cognitive decline is more pronounced in the long term than in the mid term.

We then conduct a placebo test to evaluate whether the HAGC policy impacts endowment-based cognitive abilities. If the decline in cognitive capabilities were solely attributable to watching entertainment TV, we would not expect significant differences in inherently influenced skills like memory and numerical perception across varying levels of policy exposure. Results from Table D2 confirm this, indicating minimal effects on these endowment-based skills. Consequently, TV watching mostly hampered viewers' cognitive skills acquired during teenage years, which could limit their understanding to politics and increase their compliance with authoritarian rule.

Lower Educational Achievement A direct implication of jeopardized cognitive skills is reduction in educational achievements. As teenagers are more prone to TV exposure and exhibit more reduction in cognitive ability, they may perform worse in exams, and hence become less likely to attain higher education. College education, however, is key to cultivate civic culture, where people are taught modern politics, to develop critical thinking, and to reflect independently on government's activity. Higher education, thus, might undermine the support for the authoritarian state (Glaeser, Ponzetto and Shleifer, 2007; Croke, Grossman, Larreguy and Marshall, 2016)

adopted two cognitive measures from the Health and Retirement Survey (HRS): a memory test (immediate and delayed word recall) to assess short-term and long-term memory, and a number series test to evaluate numerical reasoning. The number series test is a two-stage adaptive task, with the first stage consisting of three items of increasing difficulty, followed by a second stage with items tailored to the respondents performance in the first stage.

and its reduction may give rise to "ignorant" government support.

In Figure 6, we plot HAGC's effects on educational attainment by age at first exposure, using CFPS dataset in Panels A and B, and CGSS dataset in Panels C and D. Results across data sources show a similar pattern: exposed teenagers have lower likelihood to enter college (and above) education, and the likelihood becomes even smaller for cohorts with longer TV exposure. The impact on senior high school status is trivial, possibly due to its relative easy entry and the state's strong support.[22] More importantly, Chinese high-school education emphasize rules, discipline, and compliance over creative thinking, where students can hardly develop a civic mind.[23] Panel E and F compare the impact of HAGC on different educational levels, where we find a disproportionate effect on college entrance. Thus, the fact that TV exposure trivially affected high-school attendance but significantly reduced college entry can hinder the development of civic culture and hence bring about ignorant political support.

Table D3 reports the estimation results using Equation 2. We find that exposure to HAGC reduced the likelihood of teenagers attaining college by about 10 percentage points (ranging from 0.104 to 0.144) across different datasets (CFPS, CGSS), as indicated in column (4) with the same control variables as the baseline, and in column (5) which includes additional controls for cohort-specific exposure to rural school consolidations and textbook reforms. Given the intense competition of the Chinese *gaokao*, this decline is considerable and could significantly impact the students' future labor-market outcomes.

When deeply effected by mass media, teenagers are not only unable to achieve higher education but may also be less willing to do so. We examine HAGC's impact on non-academic education that is voluntarily chosen by individuals. We find significant reduction in non-academic educational attainments in Figure D2: Affected teenagers participate less in skill, vocational, or for-interest training. Thus, the reduction in cognitive abilities cannot solely account for our findings. Rather, the results imply that TV exposure may have reshaped viewers' innate values and beliefs, making them less empowered to make changes.

Less Emotional Aggrievement Another source of government support is the relief of individual aggrievement (Passarelli and Tabellini, 2017). In section 5, we show that TV exposure entertains teenagers, equips them with happier emotions, and leads to less political responsiveness. In this section, we use two types of variables to measure individuals' emotions. The first is the standardized depression scale provided in CFPS from 2018 onward. The second is the measure of individuals' positive emotions, also available in the CFPS data.

22. High-school education is the next step of the 9-year compulsory education in China, and local governments usually exert effort to ensure high-school enrollment. Some regions even include high school into compulsory education.

23. While all education levels include communist ideology, college education (and universities) is more open, diverse, and inclusive than the highly standardized, ideologically driven *gaokao* system. Missing this experience may reduce political knowledge, lower accountability, and increase compliance with authoritarian rule.

We start with CES-D indicator, a self-reported scale with higher score reflecting higher tendency of depression.[24] Using the identification strategy in Equation 4, Panels A and C of Figure 7 show that exposed teenagers are generally less prone to depression, with longer exposure reducing the tendency to be depressed. Panels B and D further exclude cohort trends by triple-difference estimation. In the long term, exposure to HAGC decreases CES-D Score-1 and CES-D Score-2 by 7.49% (2.454/32.742) and 9.30% (1.241/13.339), as in column (1) and (4) of Table D5.[25]

The reduced tendency of depression is associated with higher levels of self-reported emotions of easiness. In Table D6 and Figure D3, we show that longer TV exposure has led to higher level of self-reported emotions, such as cheerfulness, happiness, being supported, and feeling satisfied. Similar pattern holds when pooling all the positive emotions, suggesting TV-exposure could reduce one's aggrievement by boosting positive emotions, as shown in panel E of Figure 7. In sum, TV exposure brings better subjective feelings to viewers without improving their objective lives, which captures the nature of "tittytainment", combining "titty" (a pacifier) with "entertainment".

Worse Social Network Social connectedness is one of the most important elements of forging social capital and the civic culture of democracy (Keele, 2007; Nannicini et al., 2013). On one hand, increased exposure to TV may isolate teenagers from each other, reducing their social interaction and social skills, making them less able to account for social-political issues and yield changes to status quo. On the other hand, unitary information source may make individuals more susceptible to state propaganda. We offer suggestive evidence that TV exposure jeopardizes teenagers' long-term social connection and social skills in Table D8. Columns (1)-(4) demonstrate individuals with more teenage TV exposure have lower interaction with family members, relatives, and friends. Moreover, columns (5)-(8) show TV-effected teenagers have lower social skills: they tend to be more isolated and self-centered when grow up.

Tittytainment, Political Apathy, and Lower Accountability While media penetration hindered cognitive skills and educational achievement, it could also alleviate viewers from the burden of thinking critically by fulfilling them with easy pleasure (entertainment), signified by better emotions. Then, how does such *tittytainment effect* affects politics, and specifically how does it consolidate authoritarian rule? We argue the *tittytainment effect* consolidate authoritarianism in two ways. On one hand, lowered educational performance and cognitive skills can jeopardize her *ability* in political participation, and on the other hand, one's perceived cheerfulness from entertainment reduces her *willingness* in doing so.

24. CFPS adopts the depression scale measure from Center for Epidemiologic Studies Depression Scale (CES-D), see (Radloff, 1977a). We adopt 2 CES-D measurements, containing 8 or 20 questions indicating tendency to depression, respectively.

25. Data on depression is only available in CFPS from 2018 onward, so we focus on outcomes in 2018-2020. For emotional indicators, data from CFPS 2016 can be used, so we use data on postive emotions from 2016 to 2020 in Figure 7 and Table D5.

First, we find that the HAGC policy led to long-term compliance with the authoritarian government. Using the ISCIU dataset, Column (1) of Table 3 shows that HAGC policy increased compliance with authoritarian rule by 0.8 standard deviations for the affected groups. Placebo tests using compliance with parents, teachers, and employers in columns (2)-(4) show little effects, highlighting its unique role in cultivating political compliance.

Next, we explore how entertainment TV affects political accountability by analyzing viewers' demands on government. The CSS dataset asks whether respondents value government transfers to low-income groups, taxes on the rich, social equality, and reforms. We use the first two variables to measure preferences for redistribution and the last two to capture demands for change (democratic reforms). Columns (5)-(8) of Table 3 show that those exposed to the policy reduced their demands for redistribution and demands for democratic reforms. This not only explains our baseline findings that affected teenagers support the state more and protest less, but highlights an important channel that TV influences government accountability: despite growing economic inequality in China, affected individuals still prefer to uphold authoritarian rule as they've already satisfied with the current condition. This helps explain why authoritarianism in China persists despite rising economic inequality and limited demand for democratic reform.

Third, we investigate how the HAGC policy has shaped long-term engagement with political issues. Panel A of Table 4 shows its impact on political attention, including the likelihood of searching online for political information, reading political books, and watching political TV programs. These variables, ranging from 1 to 5, reflect varying levels of political engagement. Our findings indicate that HAGC has led to a significant decline in political attention over time. In Panels B and C of Table 4, we extend the analysis to explore its implications on political involvement. The results reveal a similar pattern: compared to those less affected by the policy, the exposed teenagers are less likely to discuss politics in their daily lives and show a diminished interest in voting. As supplementary evidence, we use the ISCIU dataset to examine its influence on political knowledge, proxied by respondents' accuracy in answering a series of political questions. Table D7 shows that the policy has reduced political knowledge among youth with higher policy exposure. Combined together, abundant evidence has shown that the HAGC policy not only reduces political awareness but also weakens political engagement, fostering a climate more conducive to authoritarian control.

In summary, both reduced ability (more political ignorance, hindered cognitive skills) and lower willingness (higher positive emotions, lower political interest) contribute to our findings, and lead to the durable authoritarian rule in China. By diminishing cognitive abilities, education levels, and fostering a sense of contentment, the policy reduces political knowledge and participation, while increasing compliance with authoritarian rule and lowering demands for government accountability and democratic reforms. Under these conditions, authoritarian regimes can strategically exploit this ignorance to maintain stable rule (see e.g., Egorov and Sonin (2024)), knowing

that citizens lack the structured knowledge to resist government expropriation, including large-scale corruption and malpractice, as we demonstrated earlier.

6.2 Alternative Explanations

Short-term Government Support One may concern that the increase in trust, support, and decline in protests against authoritarian regimes maybe driven by the short-term economic benefits it provides. By subsidizing the cost of TVs, the policy reduces household expenditures and enables individuals to purchase higher-quality sets, enhancing the audio-visual experience and, in turn, improving their sense of well-being.

However, we argue that the improvement in short-term material benefits is unlikely to have lasting effects. While these benefits are substantial in the short term, they offer little to households' long-term welfare. Our analysis in Figure 3 shows that the short-term effects are not statistically significant. Hence, short-term welfare improvement is not likely to drive our results. The long-term impact, therefore, is unlikely to be fully driven by short-term material benefits. Panels E-F, which examine conflicts with government officials as the dependent variable, show near-zero coefficients in the short term, and the long-term reduction in conflicts appears to be unaffected by the short-term benefits.

Welfare Improvement Effect TV, as a key source of information, can reduce labor market information asymmetry, broaden individuals' horizons, and facilitate skill acquisition. While this information is less relevant for those not yet in the labor market, it becomes valuable once they enter, helping them secure better jobs and higher incomes. This may explain the baseline observation of a non-significant short-term effect but a significant long-term impact of the HAGC policy on public support and political trust.

However, in China, labor market information and job opportunities are seldom conveyed through TV. To test this formally, Panel A in Table D10 shows no significant impact of HAGC policy on labor force participation, wages, or entrepreneurship. Additionally, using the International Socio-Economic Index (ISEI) and the Standard International Occupational Prestige Scale (SIOPS) as proxies for social status, we find that individuals affected by the policy have lower social status. Though not statistically significant, they are also less likely to occupy managerial positions or hold higher job ranks. This suggests that the policy's long-term political effects are not driven by material gains in the labor market.

In contrast, Panel B reveals that those with greater exposure to the HAGC policy report higher satisfaction with work, income, and social status, despite actual declines in their objective economic standing. This suggests that the entertainment content of TV has long-term effects on life satisfaction and political engagement. Although material benefits are limited, individuals report

greater contentment, higher government support, and increased political trust. As a result, they are less likely to protest, which reinforces the stability of authoritarian rule.

Expansion of Political TV Channels The media plays a crucial role for authoritarian regimes in disseminating propaganda information. For example, Ou and Xiong (2021) highlights that the expansion of radio stations facilitated the spread of Cultural Revolution propaganda. Thus, one may be concerned that the positive impact of HAGC policy on political support may not be ascribed to the tittytainment effect (higher sensitivity to propaganda) but due to more positive political information (more propaganda) on Chinese TV channels. To alleviate such concern, we obtain data on individual-level preferences for different TV programs from *China TV Rating Yearbook* (2003-2017) and analyze its relation with HAGC exposure. In columns (1)-(3) of Table D11, we find that the expanded TV coverage resulting from the policy has primarily increased people's inclination to watch entertainment programs. Meanwhile, the policy has even reduced their preferences for political news or current affairs, as shown in columns (4)-(5). The results imply that HAGC did not lead to more propaganda information on TV, but exposed individuals to more entertainment, thus reducing their cognitive skills and making propaganda more effective. By shifting their focus from political affairs entertainment, the policy has led to political apathy, which can also benefit authoritarian rule.

7 Conclusion and Discussion

This paper examines how authoritarian states utilize media to resist pressures for political accountability. Moving away from previous studies that focus on the manipulation of media information and political propaganda by autocracies, we highlight how mass media *per se* can bolster public support for authoritarian regimes through the *tittytainment effect*. This effect dampens the publics demands for political accountability and perpetuates authoritarian durability.

Empirically, we study the impact of one of the largest TV subsidy program in China. Utilizing cohort-location difference in policy exposure, we find teenagers who were more likely to be exposed to TV demonstrate a significant increase in government support when turned adult. Compared with their older cohorts who just missed the policy, TV-affected teenagers also demonstrate higher trust on state apparatus, lower inclination to participate in collective actions, and less demand for state redistribution. Such increase in regime support does not lie in the immediate welfare effect of government subsidy, as shown in the insignificant short-run effects. Rather, we emphasize TV's *tittytainment effect*: exposure to entertainment TV hampers cognitive abilities and reduce educational attainment while simultaneously fostering positive emotions. This combination effectively lowers public expectations, diminishes accountability demands on government work, and enhances satisfaction with the government, thereby diminishing demands for demo-

cratic reforms and reducing anti-authoritarian protests

Contrasting support-side analysis on authoritarian stability (e.g., technological advancement in surveillance and AI-based Internet censorship), we focus on the demand-side for stability: the stagnation of civil society by the *tittytainment effect* of media on the younger generation. While detrimental to cognitive abilities, education, and civic culture, such tittytainment tools could reduce citizens' demand of democratization, solidifying authoritarian rule in a less noticeable but possibly more effective way. Therefore, such *tittytainment effect* of mass media expands the repression-reaction frontier of authoritarian control, complementing the commonly emphasized strategies of repression and co-optation. By showing that the autocrat could utilize the media to maintain governance without resorting to censorship, propaganda, or cheating, this paper also extends recent discussion on informational autocrats (Guriev and Treisman, 2022), opening future avenue for this strand of literature.

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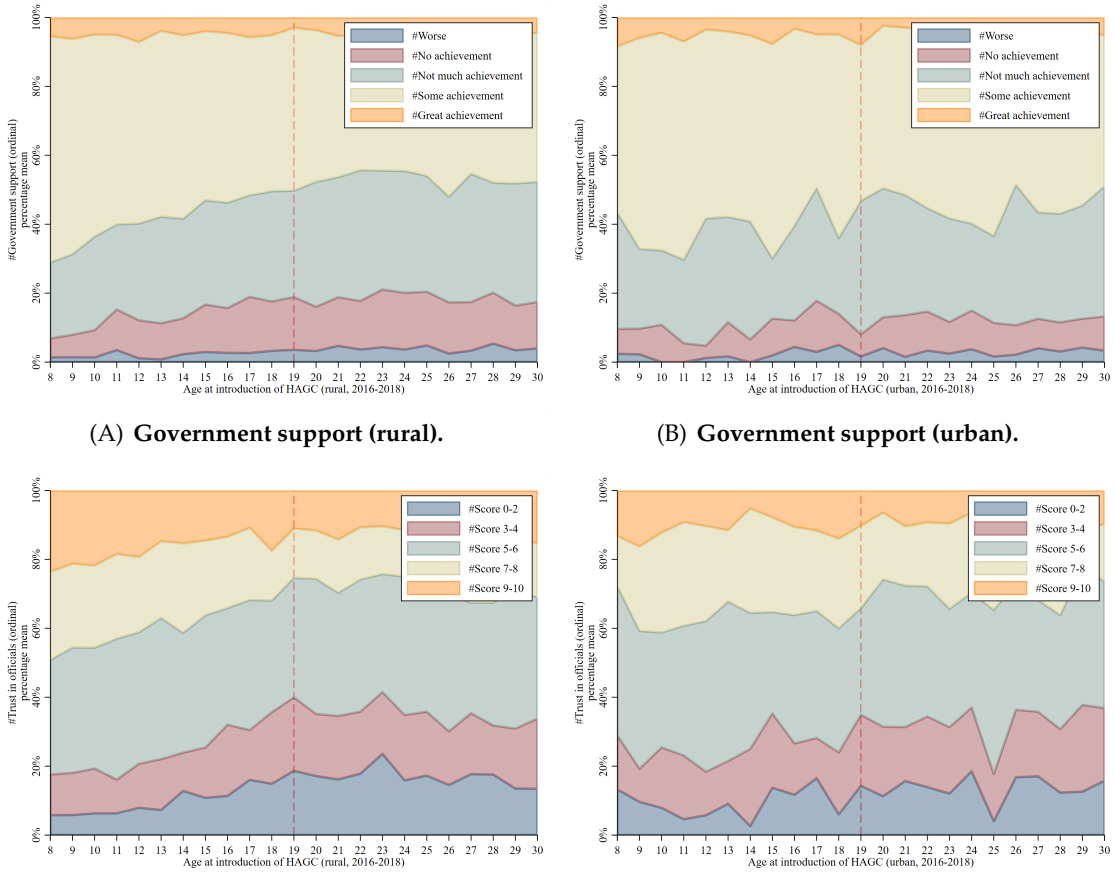
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8 Figures



(A) **Government support (rural).**

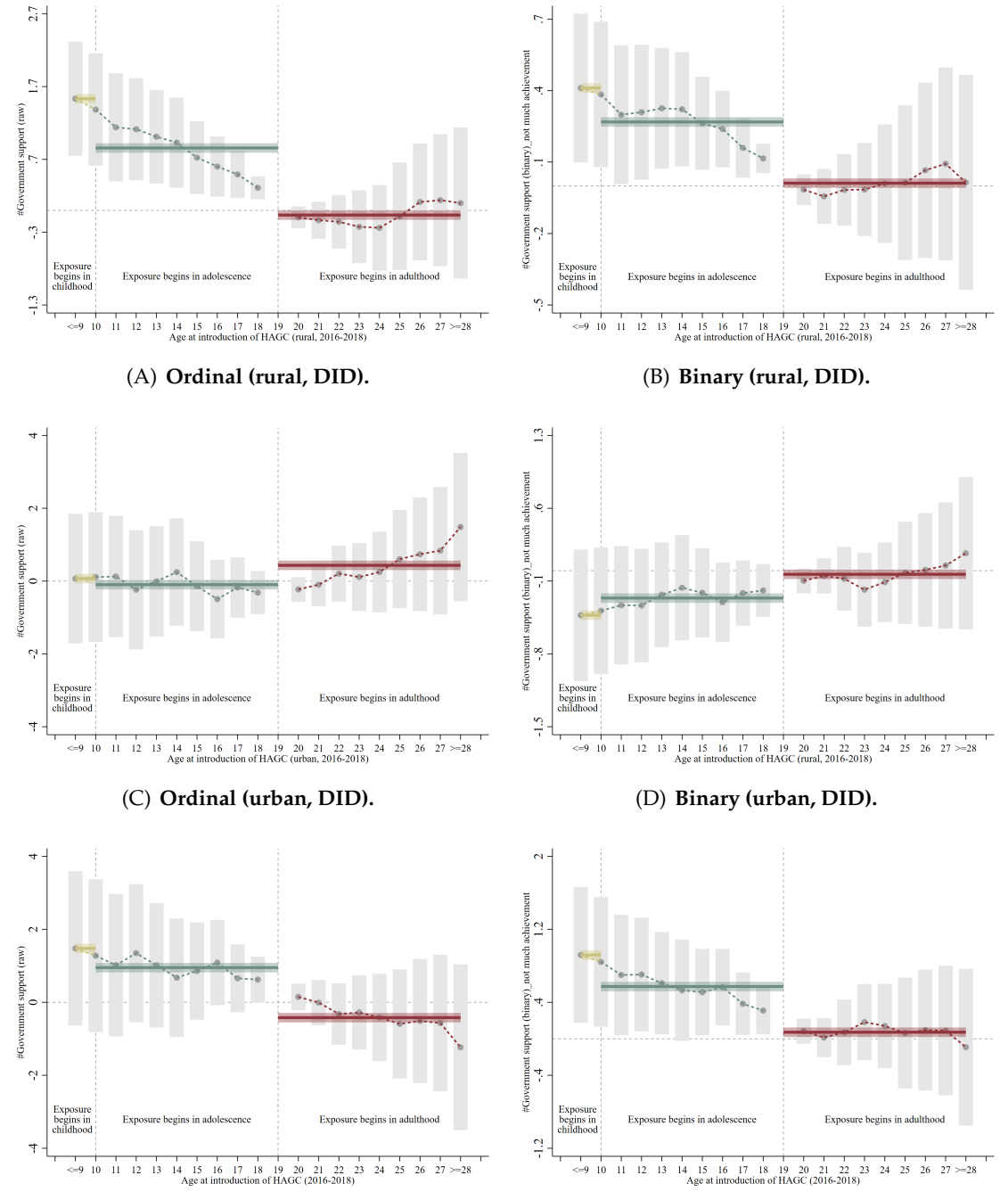
(B) **Government support (urban).**

(C) **Trust in officials (rural).**

(D) **Trust in officials (urban).**

FIGURE 1 Distribution of Political Attitudes across Cohorts (Age Groups).

Notes: Figure 1 describes the raw data of political attitudes (government support and trust in officials). The data is derived from CFPS from 2016 to 2018. Panel A and B describes the distribution of government support by respondents' ages at the introduction of HAGC in rural and urban areas, respectively. Panel C and D describes trust in government officials by respondents' ages. Different colors represent varying levels of support/trust, with the top yellow areas representing the highest level and the bottom blue areas representing the lowest level.



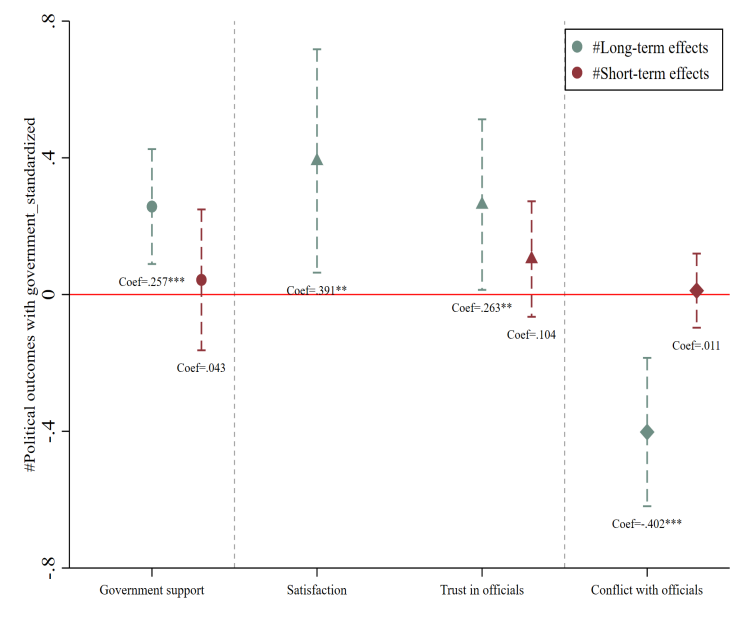
(A) **Ordinal (rural, DID).** (B) **Binary (rural, DID).**

(C) **Ordinal (urban, DID).** (D) **Binary (urban, DID).**

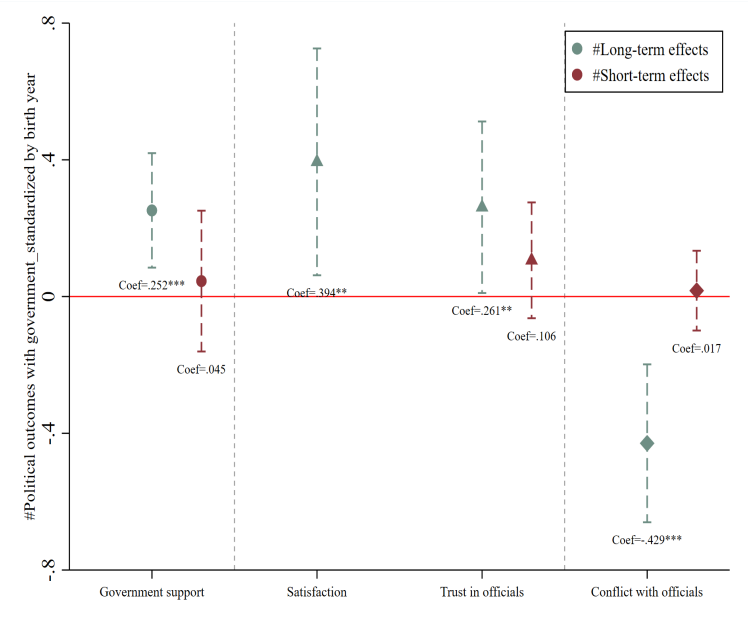
(E) **Ordinal (all, DDD).** (F) **Binary (all, DDD).**

FIGURE 2 Baseline: Long-term Effects of HAGC on Government Support by Age Groups.

Notes: Figure 2 presents the event study results of exposure to HAGC on long-term government by different ages. Panels A and B present rural samples with DID specification in Equation 4, while Panels C and D present urban samples. Panels E and F use all samples with DDD specification in Equation 5. The dependent variable is government support. Panels A, C, and E use raw scores from 1 to 5. Panels B, D, and F use binary evaluation with score 3-5 (positive evaluation) recorded as 1, otherwise 0. The control variables, fixed effects, and province-specific linear trends are the same as in Table 1. Robust standard error is clustered at the county level. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$. The gray shaded area represents the 90% confidence interval.



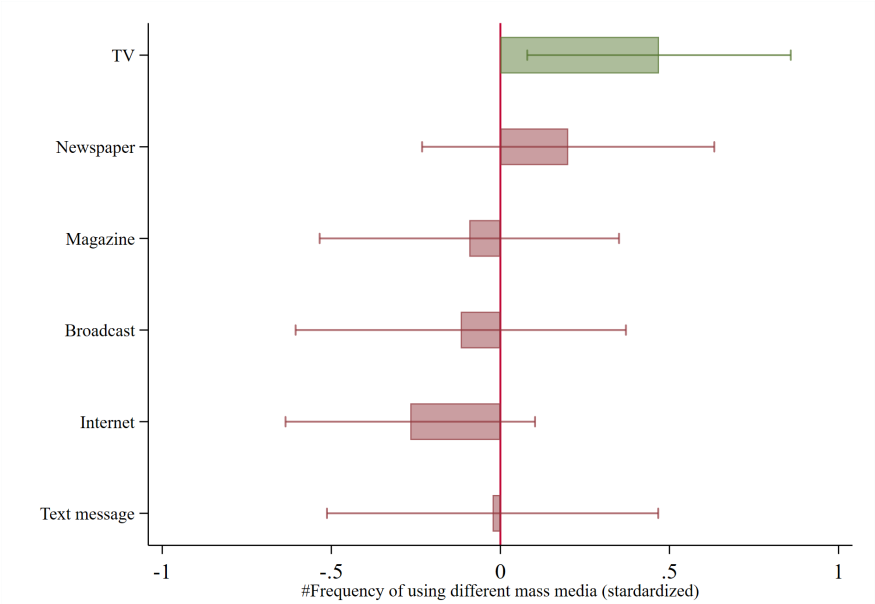
(A) **Standardized.**



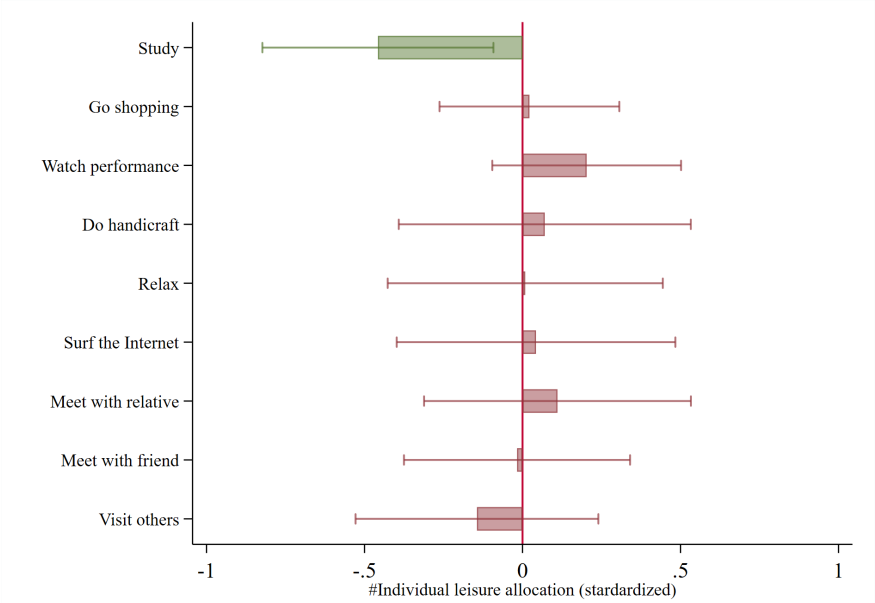
(B) **Standardized by birth year.**

FIGURE 3 Baseline: Comparing Short-term and Long-term Effects of HAGC.

Notes: Figure 3 presents the effects of HAGC on short- and long-term political outcomes, with the data drawn from the CFPS and CSS dataset. The sample consists of respondents with rural *hukou* during HAGC policy. All the regressions use DID specification in Equation 2. The dependent variables include government support, satisfaction, trust in officials, and conflict with officials. Panel A standardizes independent variables in whole sample. Panel B standardizes results by each birth year. The control variables, fixed effects, and province-specific linear trends are the same as in Table 1. Robust standard error is clustered at the county level. The point estimates represent the DID specification results in Equation 2, while the dashed line represents the 95% confidence interval.



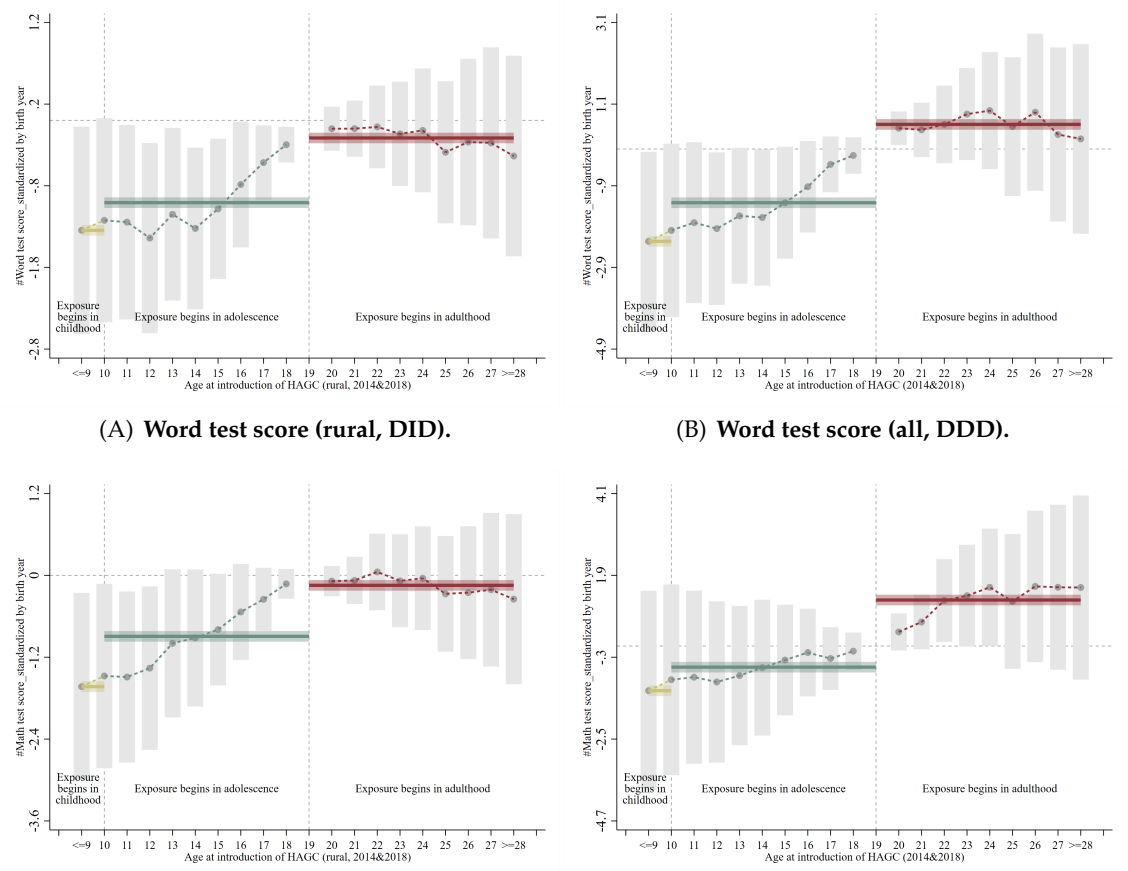
(A) **Frequency of using different mass media.**



(B) **Individual leisure allocation.**

FIGURE 4 Mechanism: Effects of HAGC on Media Usage and Leisure Allocation.

Notes: Figure 4 presents the effect of HAGC on individuals' usage of different mass media and their leisure allocation. The data is derived from the CFPS and CGSS dataset, focusing on respondents with rural *hukou* during HAGC policy. All the regressions use DID specification in Equation 2. The dependent variables in panel A are the frequency of watching TV, reading newspapers, reading magazines, listening to broadcasts, surfing the Internet, and reading text messages, respectively, while those in panel B are the time spent in studying, going shopping, watching performances, doing handicrafts, relaxing, surfing the Internet, meeting with relatives, meeting with friends, and visiting others. Both Panels standardize dependent variables in the whole sample to compare each other. The control variables, fixed effects, and province-specific linear trends are the same as in Table 1. Robust standard error is clustered at the county level. The solid line represents the 95% confidence interval.



(A) **Word test score (rural, DID).**

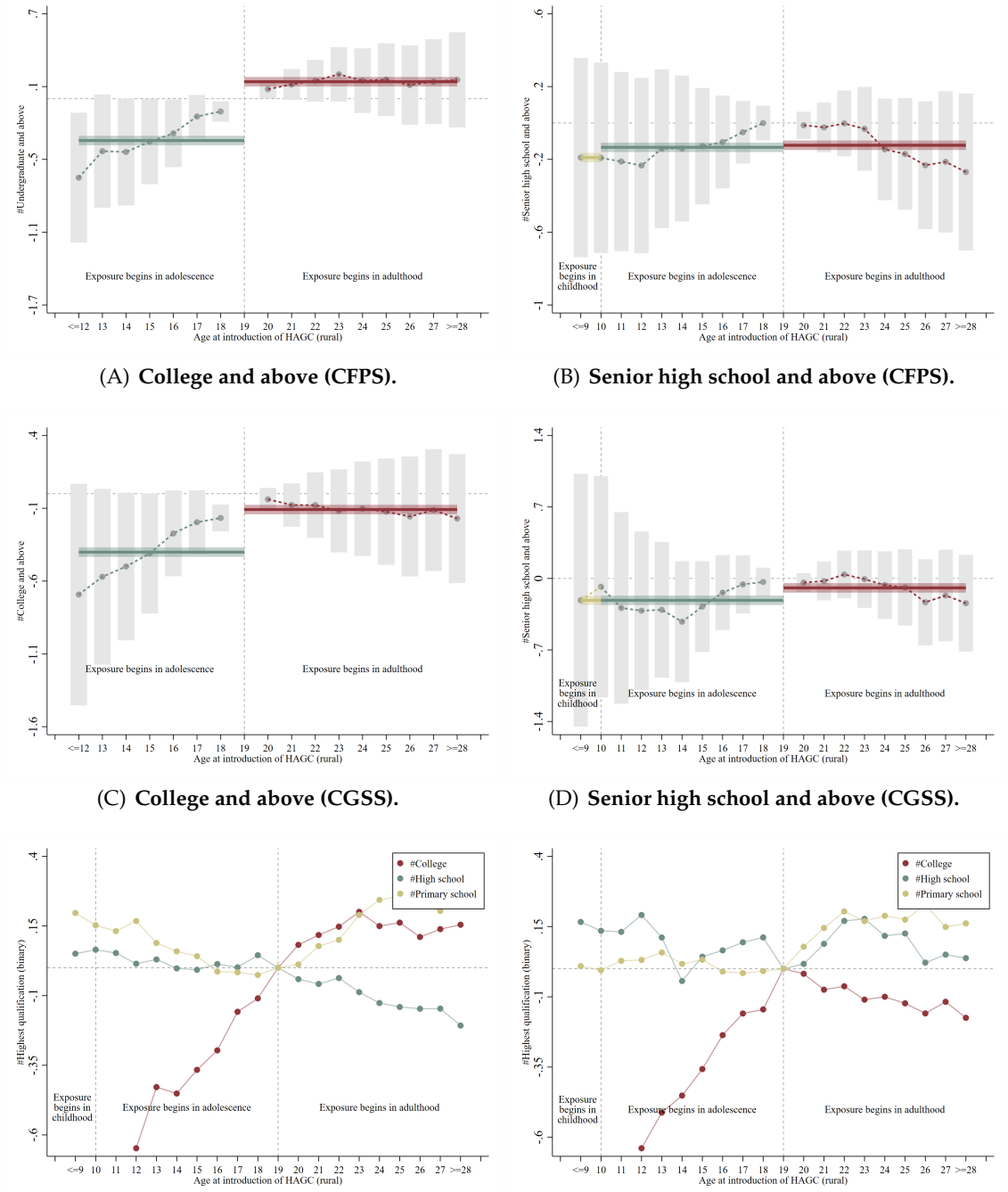
(B) **Word test score (all, DDD).**

(C) **Math test score (rural, DID).**

(D) **Math test score (all, DDD).**

FIGURE 5 Mechanism: Long-term Effects of HAGC on Acquired Cognitive Outcomes by Age at First Exposure.

Notes: Figure 5 presents the event study results of cohort-level differential exposure to HAGC on long-term acquired cognitive outcomes. Panels A and C present rural samples with DID specification in Equation 4, while panel B and D use all samples with DDD specification in Equation 5. The dependent variable is word test score in the first two panels, and math test score in the last two panels. Both Panels standardize dependent variables by birth year. The control variables, fixed effects, and province-specific linear trends are the same as in Table 1. Robust standard error is clustered at the county level. The gray shaded area represents the 90% confidence interval.



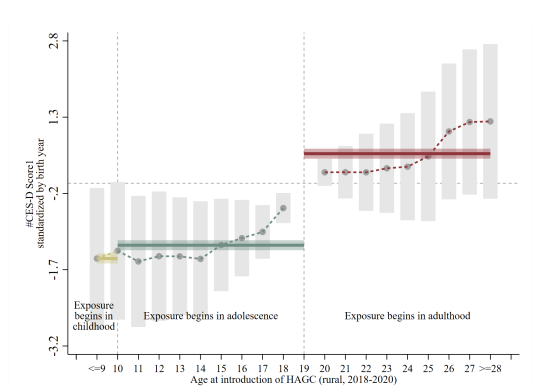
(A) **College and above (CFPS).** (B) **Senior high school and above (CFPS).**

(C) **College and above (CGSS).** (D) **Senior high school and above (CGSS).**

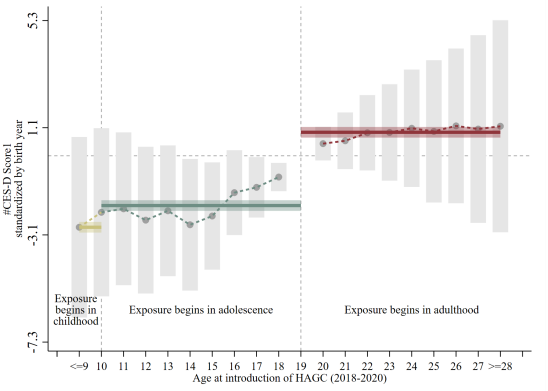
(E) **Three levels in one graph (CFPS).** (F) **Three levels in one graph (CGSS).**

FIGURE 6 Mechanism: Effects of HAGC on Education by Age at First Exposure.

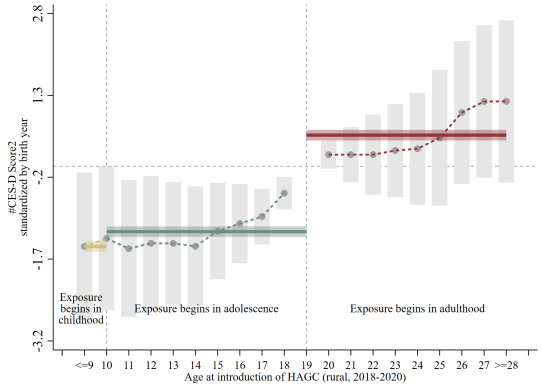
Notes: Figure 6 demonstrates the event study estimates of cohort-level differential exposure to HAGC on educational achievement. The data is derived from the CFPS and CGSS dataset. The sample consists of respondents with rural *hukou* during HAGC policy. All the panels present rural samples with DID specification in Equation 4. The dependent variable in Panels A and C in whether one gets college education (and above), while that in Panels B and D is whether one gets senior high school education (and above). Panel E and F plot college, senior high school, and primary school education in one graph. The control variables, fixed effects, and province-specific linear trends are the same as in Table 1. Robust standard error is clustered at the county level. Bin shows the 90% confidence interval.



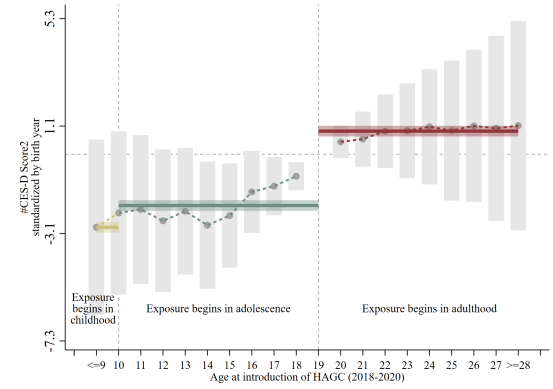
(A) **CES-D score1 (rural, DID).**



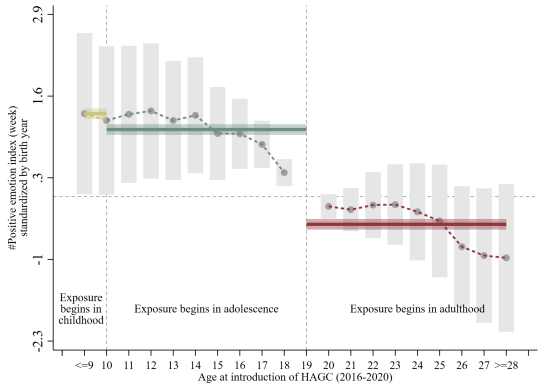
(B) **CES-D score1 (all, DDD).**



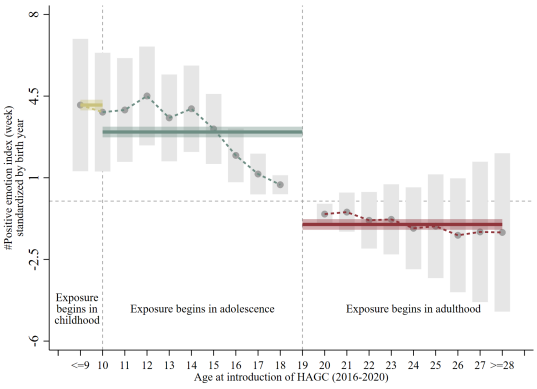
(C) **CES-D score2 (rural, DID).**



(D) **CES-D score2 (all, DDD).**



(E) **Emotion index (rural, DID).**



(F) **Emotion index (all, DDD).**

FIGURE 7 Mechanism: Effects of HAGC on General Emotion by Age at First Exposure.

Notes: Figure 7 demonstrates the event study estimates of cohort-level differential exposure to HAGC on various emotion indicators. Panels A, C, and E present rural samples with DID specification in Equation 4, while panel B, D, and F use all samples with DDD specification in Equation 5. From panel A to F, the dependent variables are CES-D score1 (20-question, 80-sacle), CES-D score2 (8-question, 32-sacle), and positive emotion index (weekly), respectively. All the dependent variables are standardized by birth year. The control variables, fixed effects, and province-specific linear trends are the same as in Table 1. Robust standard error is clustered at the county level. Robust standard error is clustered at the county level. Bin shows the 90% confidence interval.

9 Tables

TABLE 1 Baseline: Government Support

Dependent variable:	Government support							
	Ordinal setting				Binary setting			
	Raw		Sd. by birth year		Raw		Sd. by birth year	
Sample:	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A. *Long-term (2016-2018)*								
Exposure to HAGC	0.227***	-0.363	0.252***	-0.412	0.100***	-0.208	0.265***	-0.574
	(0.075)	(0.319)	(0.085)	(0.363)	(0.030)	(0.157)	(0.082)	(0.420)
Dependent-variable mean	3.405	3.506	-0.040	0.081	0.845	0.886	-0.031	0.085
Observations	8,930	2,389	8,917	2,389	8,930	2,389	8,917	2,389
Panel B. *Short-term (2012-2014)*								
Exposure to HAGC	0.038	0.284	0.045	0.319	0.047	0.106	0.130	0.288
	(0.092)	(0.178)	(0.104)	(0.201)	(0.031)	(0.082)	(0.085)	(0.219)
Dependent-variable mean	3.375	3.393	-0.025	0.008	0.840	0.854	-0.013	0.034
Observations	8,647	2,608	8,647	2,608	8,647	2,608	8,647	2,608
Control	✓	✓	✓	✓	✓	✓	✓	✓
2007 Predetermined # cohort	✓	✓	✓	✓	✓	✓	✓	✓
County FE	✓	✓	✓	✓	✓	✓	✓	✓
Cohort FE	✓	✓	✓	✓	✓	✓	✓	✓
Prefecture (now) FE	✓	✓	✓	✓	✓	✓	✓	✓
Province-wave (now) FE	✓	✓	✓	✓	✓	✓	✓	✓
Province-cohort trend	✓	✓	✓	✓	✓	✓	✓	✓

Notes: Table 1 reports the effect of cohort-level differential exposure to HAGC on long-term government support. The data is derived from the CFPS dataset. The sample consists of respondents with rural *hukou* during HAGC policy. All the regressions use DID specification in Equation 4. The dependent variable is government support. Columns (1)-(4) use raw score from 1-5. Column (5)-(8) use binary evaluation with score 3-5 (positive evaluation) recorded as 1, otherwise 0. All regressions include individual-level controls (gender, marital status, parental age and education, age squared), predetermined prefectural-level characteristics (phone user ratio, internet user ratio, and percentage of secondary industry in GDP at 2007) interacted with cohort, county FE, cohort FE, prefecture (now) FE, province (now)-wave FE, and province-cohort-specific linear trend. Robust standard error is clustered at the county level. ***$p < 0.01$, **$p < 0.05$, *$p < 0.1$.

TABLE 2 Heterogeneity

Dependent variable:	Government support					
	X					
	TV time		Importance of TV		Get political news from TV	
Sample:	Rural	Urban	Rural	Urban	Rural	Urban
	(1)	(2)	(3)	(4)	(5)	(6)
Exposure to HAGC	0.141	-0.420	0.116	-0.447	0.188**	-0.385
	(0.091)	(0.333)	(0.085)	(0.321)	(0.075)	(0.327)
Exposure to HAGC $\times X$	0.015**	0.009	0.038***	0.034	0.019***	0.017
	(0.006)	(0.018)	(0.012)	(0.025)	(0.006)	(0.011)
Control	✓	✓	✓	✓	✓	✓
2007 Predetermined # cohort	✓	✓	✓	✓	✓	✓
FEs	✓	✓	✓	✓	✓	✓
Province-cohort trend	✓	✓	✓	✓	✓	✓
Dependent-variable mean	3.404	3.507	3.405	3.506	3.405	3.507
Observations	8,906	2,386	8,909	2,388	8,914	2,388

Notes: Table 2 reports the heterogeneous treatment effect of cohort-level differential exposure to HAGC on long-term government support. The data is drawn from CFPS. The sample consists of respondents with rural *hukou* during HAGC policy. All the regressions use DID specification in Equation 2. The dependent variable is government support. TV Time is the logarithm of minutes watching TV per week, importance of TV is to what extent individual believe in the importance of TV in acquiring information, ranked with scores 1-5, get political news from TV asks the extent of whether one obtain political news from TV, ranked with scores 0-7. The control variables, fixed effects, and province-specific linear trends are the same as in Table 1. Robust standard error is clustered at the county level. ***$p < 0.01$, **$p < 0.05$, *$p < 0.1$.

TABLE 3 Mechanism: Authoritarian Personality and Government Accountability

Dependent variables:	Authoritarian personality				Government accountability			
	State authority	Other authority			Demand for redistribution		Demand for democratic reform	
	Government's authority	Parents' authority	Teachers' authority	Bosses' authority	Increase protection for the underclass	Tax the rich more	Change the unreasonable social structure	Social democratic reform
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Exposure to HAGC	0.806***	-0.046	-0.108	-0.843	-0.782***	-0.062	-0.158**	-0.193*
	(0.223)	(0.614)	(0.585)	(0.560)	(0.221)	(0.170)	(0.071)	(0.107)
Controls	✓	✓	✓	✓	✓	✓	✓	✓
2007 Predetermined # cohort	✓	✓	✓	✓	✓	✓	✓	✓
FEs	✓	✓	✓	✓	✓	✓	✓	✓
Province-cohort trend	✓	✓	✓	✓	✓	✓	✓	✓
Dependent-variable mean	0.028	0.003	0.002	0.010	0.803	0.583	0.140	0.549
Observations	1,696	1,764	1,764	1,764	2,277	6,137	6,137	6,137

Notes: Table 3 reports the results of cohort-level differential exposure to HAGC on authoritarian personality and government accountability willingness. Data is derived from the ISCIU and CSS dataset. The sample consists of respondents with rural *hukou* during HAGC policy. All the regressions use DID specification in Equation 2. The dependent variables from columm (1) to (4) are the standardized degree of respect for the authority of different objects. The dependent variables from column (5) to (8) are dummy variables of supporting for a series of redistribution and social reforms issues. The control variables, fixed effects, and province-specific linear trends are the same as in Table 1. Robust standard error is clustered at the county level. ***$p < 0.01$, **$p < 0.05$, *$p < 0.1$.

TABLE 4 Mechanism: Political Attention and Involvement

Dependent variable:	Political attention and involvement				
	(1)	(2)	(3)	(4)	(5)
Panel A. *Political attention*	Political attention index	Focus on political issues	Go online for political information	Read political books	Watch political programs
Exposure to HAGC	-1.080***	-0.204***	-1.647**	-1.363***	-1.292**
	(0.189)	(0.063)	(0.640)	(0.515)	(0.635)
Dependent-variable mean	3.261	3.138	3.752	3.546	2.531
Observations	2,277	4,062	2,277	2,277	2,277
Panel B. *Political involvement*	Political involvement index	Discuss political issues	Report social issues to the media	Voice over government policy	Attend government hearings
Exposure to HAGC	-0.108**	-0.088	-0.026	-0.020	-0.018
	(0.050)	(0.064)	(0.017)	(0.025)	(0.022)
Dependent-variable mean	0.493	0.224	0.348	0.024	0.018
Observations	5,150	3,463	5,150	1,760	1,760
Panel C. *Vote and election*	Vote & election index	Focus on election	Vote for grassroots election	Vote for officials election	Willingness of keep voting
Exposure to HAGC	-0.117*	-0.105*	-0.098	0.025	-0.272***
	(0.061)	(0.061)	(0.070)	(0.076)	(0.102)
Dependent-variable mean	0.861	0.919	0.309	0.071	0.565
Observations	5,220	3,401	4,884	2,938	3,316
Controls	✓	✓	✓	✓	✓
2007 Predetermined # cohort	✓	✓	✓	✓	✓
FEs	✓	✓	✓	✓	✓
Province-cohort trend	✓	✓	✓	✓	✓

Notes: Table 4 reports the results of cohort-level differential exposure to HAGC on individual political attention and involvement. Data is derived from the ISCIU and CSS dataset (respectively for panel A and panel B, C). The sample consists of respondents with rural *hukou* during HAGC policy. All the regressions use DID specification in Equation 2. The dependent variables in panel A are a series of ordinal variables ranked with scores 1-5 that indicate political attention. The dependent variables in panel B and C are a series of dummies measuring respondents' political participation. The "political attention index" is the average of four related political concerns, and the "political involvement index" and "vote and election index" are binary variables indicating the respondent participation in at least one of the four related activities last year. The control variables, fixed effects, and province-specific linear trends are the same as in Table 1. Robust standard error is clustered at the county level. ***$p < 0.01$, **$p < 0.05$, *$p < 0.1$.

Online Appendix for "Manufacturing Obedience: Entertainment Media and Authoritarian Support"*

Haotian Bai Siyuan Fan Wenyi Lu Shangkun Xie

Appendix A More on Data and Background **A2**

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Appendix A More on Data and Background

A.1 Background Information

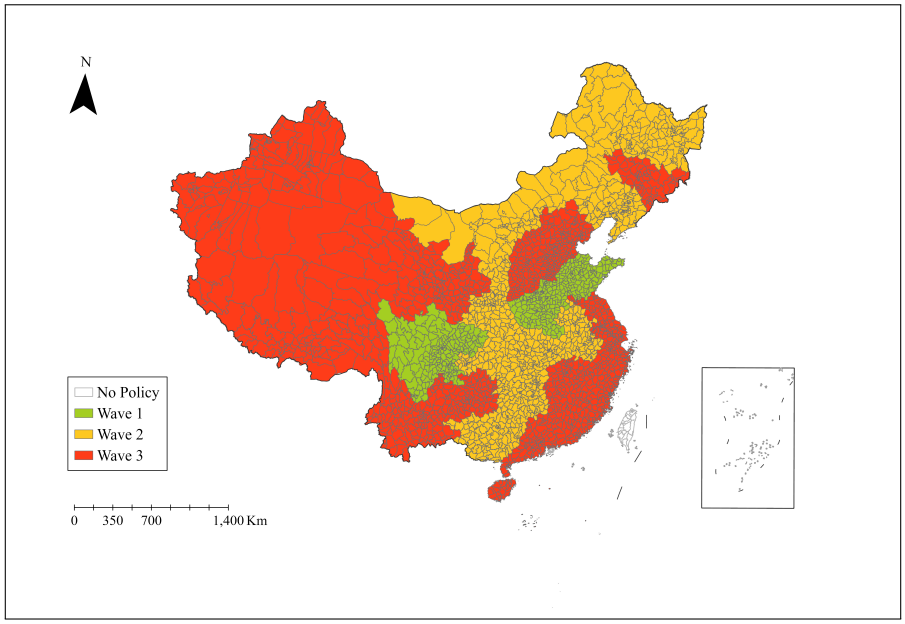


FIGURE A1 The Staggered Implementation of HAGC Policy.

Notes: Figure A1 maps the implementation process of the "Home Appliances going to the Countryside" (HAGC) policy. The three waves were implemented in Dec 2007, Dec 2008, and Feb 2009 respectively.



(A) **HAGC Example.**



(B) **TV Viewers.**

FIGURE A2 Photos of the HAGC Policy in Rural Areas.

Notes: Panel A shows how firms promoted TVs among rural residents, with the red slogan saying "expanding demand, promoting economic development, keeping economic growth, through Home Appliances Going to Countryside". See CCTV for reports. Panel B is a photo showing Chinese rural residents watching Olympic games. They usually gathered together watching TV programs, as many of them do not possess a colored TV at home. See The New York Times for reports.



(A) **TVs before HAGC Policy in Rural Areas.**



(B) **TVs after HAGC Policy in Rural Areas.**

FIGURE A3 Photos of TVs before and after HAGC Policy in Rural Areas.

Notes: Panel A illustrates the televisions in Chinese rural areas prior to the implementation of HAGC, characterized by bulky designs, cable features. Panel B presents the situation after the HAGC policy, with a prominent display of contemporary flat-screen TVs in a well-stocked entertainment appliance store. The promotional banners promote the HAGC policy and the store itself, calling for rural consumers to purchase colored TVs. This juxtaposition highlights the transformative impact of the HAGC policy in facilitating access to colored TV in rural China.

A.2 Detailed Data Description

A.2.1 Detailed Variable Information: CFPS Cognitive Tests

The cognitive battery in CFPS comprises two sets of questionnaires, encompassing four distinct types of tasks: word tests (or verbal tests), mathematics tests, memory tests, and numerical tests. The word and mathematics assessments primarily evaluate respondents' educational achievements (acquired skills), while the memory and numerical tests are designed to capture individuals' innate cognitive abilities. Overall, rural samples perform worse than urban samples. Panel A to D of Figure A4 show the detailed distributions of different tests.

Word and Mathematics Tests The word and mathematics assessments are structured based on the Guttman Scale, where items are arranged in increasing order of difficulty, such that a correct response to a particular item implies the ability to answer all easier items correctly. Conversely, an incorrect response indicates the inability to solve that item and all subsequent challenging items. Specifically, in the word (mathematics) test, respondents are required to recognize 34 Chinese characters (24 mathematics problems) presented in ascending order of difficulty. The test is terminated if a respondent consecutively answers three items incorrectly. The score is determined by the position of the most difficult character (mathematics problem) answered correctly. To minimize interference and practice effects within households, different respondents within the same household answer different sets of questions in a single survey wave, and the same respondent is assigned different sets of questions in follow-up surveys.

Memory and Numerical Tests The memory test is adopted from the Health and Retirement Study (HRS). During the test, interviewers read aloud ten commonly encountered words (e.g., mountain, rice, river) to the respondents, and then respondents are asked to recall as many words as possible, with the number of correctly recalled words constituting the immediate memory score. Five minutes later, respondents are again prompted to recall the same ten words, and the number of correctly recalled words constitutes the delayed memory score. The test does not require respondents to recall the words in the order presented. The numerical test is conducted in two stages. In the first stage, respondents answer three sequence problems, resulting in a score ranging from 0 to 3 based on the number of correct answers. In the second stage, individuals with more correct answers in the first stage will receive more challenging tests. CFPS provides sequence test scores calculated using the

Rasch model based on Item Response Theory. These scores are independent of the specific items answered and effectively reflect the respondents' true cognitive abilities.

A.2.2 Detailed Variable Information: CFPS CES-D Tests

The Center for Epidemiological Studies Depression (CES-D), developed by Radloff (1977b), is one of the most widely utilized instruments for assessing depressive symptoms. In CFPS, respondents are required to self-evaluate the frequency of depressive symptoms experienced over the past week. The response options are as follows: "rarely or none (less than one day)" (scored as 1 point), "sometimes (1-2 days)" (scored as 2 points), "often (3-4 days)" (scored as 3 points), and "most or all of the time (5-7 days)" (scored as 4 points). The total CES-D score is calculated by summing the scores of all items, with higher score indicating more severe depression. CFPS employs two scoring methodologies: an 8-item short form with scores ranging from 8 to 32, and a 20-item full form with scores ranging from 20 to 80. The specific items are categorized as follows:

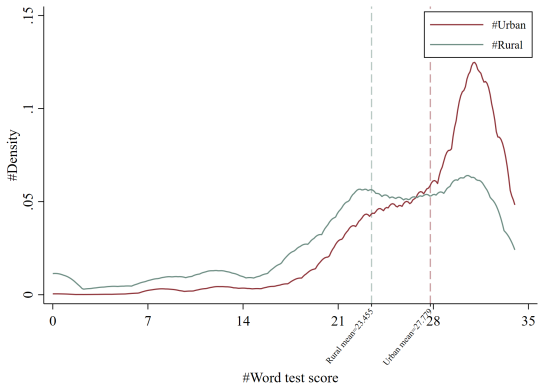
1. Physical symptoms: bothered; poor appetite; inability to concentrate; difficulty doing things; poor sleep; less talking; inability to continue living.

2. Depressive emotions: frustrated; down; defeated; scared; lonely; want to cry; sad.

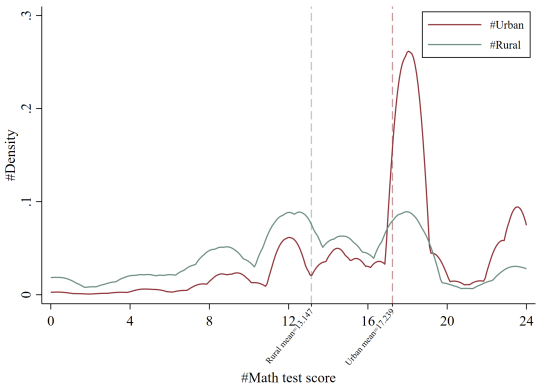
3. Positive emotions: not worse than others; hopeful; happy; pleased.

4. Interpersonal relationships: people are unfriendly; people dont like me.

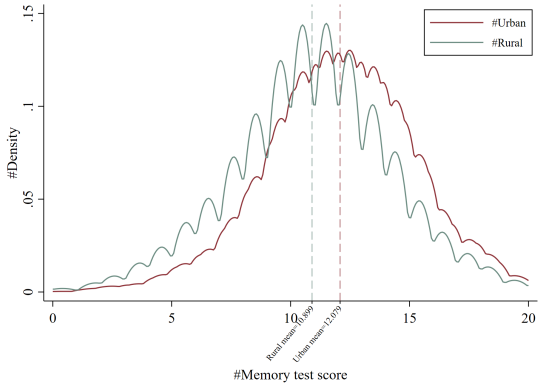
Notably, the items pertaining to positive emotions are reverse-coded to corrcetly reflect depressive symptomatology. Panel E and F of Figure A4 show the distributions of CES-D scores with different scales.



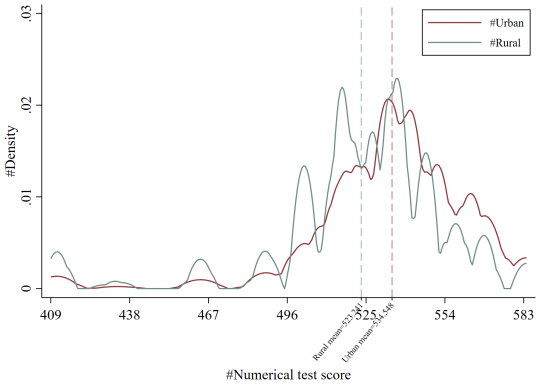
(A) **Word test score.**



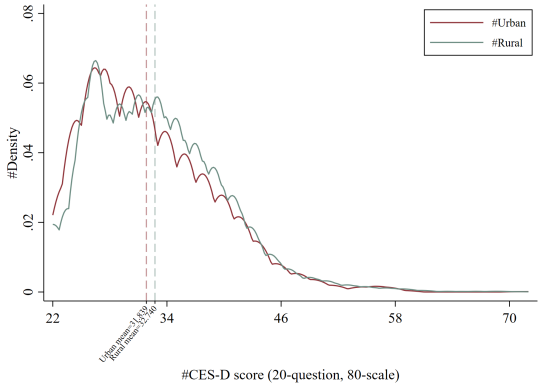
(B) **Math test score.**



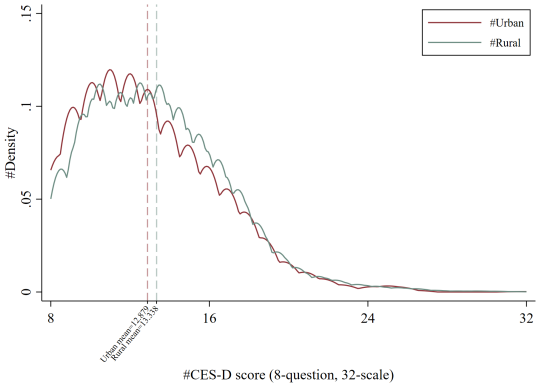
(C) **Memory test score.**



(D) **Numerical test score.**



(E) **CES-D score1 (20-question, 80-scale).**



(F) **CES-D score2 (8-question, 32-scale).**

FIGURE A4 Distribution of Cognitive Test Scores and CES-D Scores.

Notes: Figure A4 shows the distributions of cognitive test scores and CES-D scores for the rural and urban samples. All the data is derived from CFPS.

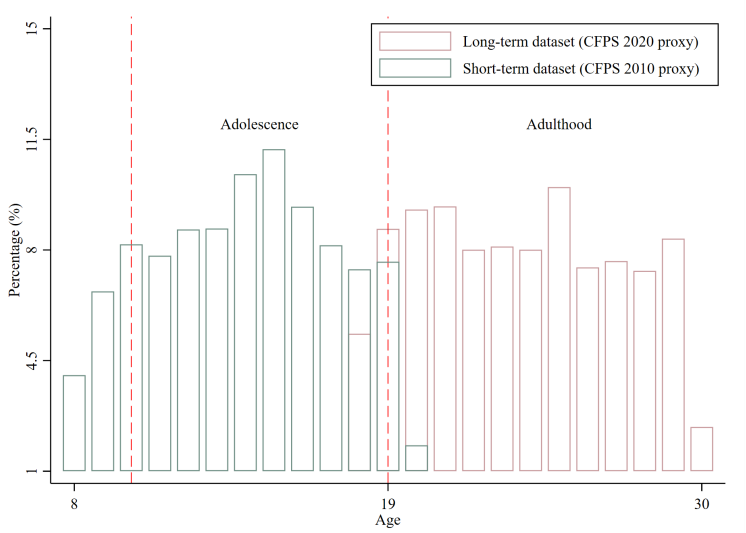
A.2.3 Summary Statistics

TABLE A1 Summary Statistics

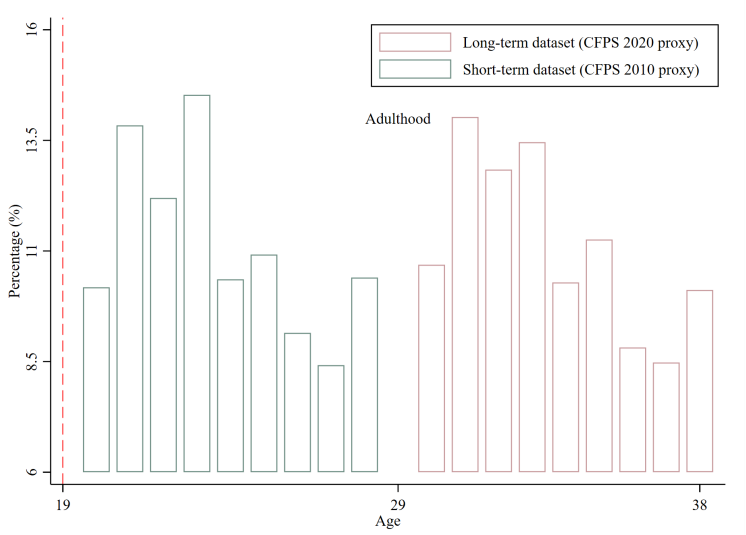
	HAGC before aged 18			No HAGC before aged 18			Total				
	Mean	Std.Dev.	N	Mean	Std.Dev.	N	Mean	Std.Dev.	Max	Min	Waves
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Political outcomes											
Government support	3.490	0.829	8,696	3.293	0.913	8,886	3.391	0.879	1	5	2,3,4,5
Trust in cadres	5.154	2.384	8,825	4.447	2.561	8,999	4.802	2.500	0	10	2,3,4,5
Conflict with cadres	0.015	0.123	6,559	0.037	0.188	7,073	0.026	0.161	0	1	2,3,4
Cognitive outcomes											
Word test score	24.305	7.721	8,068	22.295	8.446	5,838	23.455	8.076	0	34	1,3,5
Math test score	13.731	5.726	8,068	12.367	5.667	5,838	13.147	5.731	0	24	1,3,5
Memory test score	11.338	3.325	5,726	10.319	3.287	4,403	10.899	3.352	0	20	2,4,6
Numerical test score	527.281	30.872	5,044	517.691	33.717	3,658	523.241	32.376	409	584	2,4,6
Emotional outcomes											
CES-D score 1 (20-question, 80-scale)	32.159	6.718	4,091	33.407	7.190	3,592	32.740	6.962	22	72	5,6
CES-D score 2 (8-question, 32-scale)	13.047	3.390	4,089	13.671	3.631	3,589	13.338	3.514	8	32	5,6
Emotion index (weekly)	17.796	2.141	8,640	17.664	2.305	8,540	17.727	2.226	5	20	2,4,5,6
Emotion index (monthly)	22.288	2.776	3,439	22.420	2.863	4,444	22.363	2.826	5	25	1,3
Educational outcomes											
Education level	3.580	1.105	2,540	3.162	1.222	2,096	3.377	1.168	1	7	5
Education year	10.500	3.365	2,540	9.132	3.878	2,096	9.846	3.636	0	18	5
College and above qualification	0.164	0.371	2,540	0.137	0.344	2,096	0.148	0.355	0	1	5

Notes: Table A1 reports the summary of statistics of the main outcome variables. The data is drawn from CFPS. The sample consists of respondents born in 1982-2002 with rural hukou during HAGC policy. Survey wave 1-6 respectively represent 2010, 2012, 2014, 2016, 2018, 2020. For time-invariant variables (such as educational outcome), we use single wave after imputation to avoid double counting.

A.3 Identification Assumptions



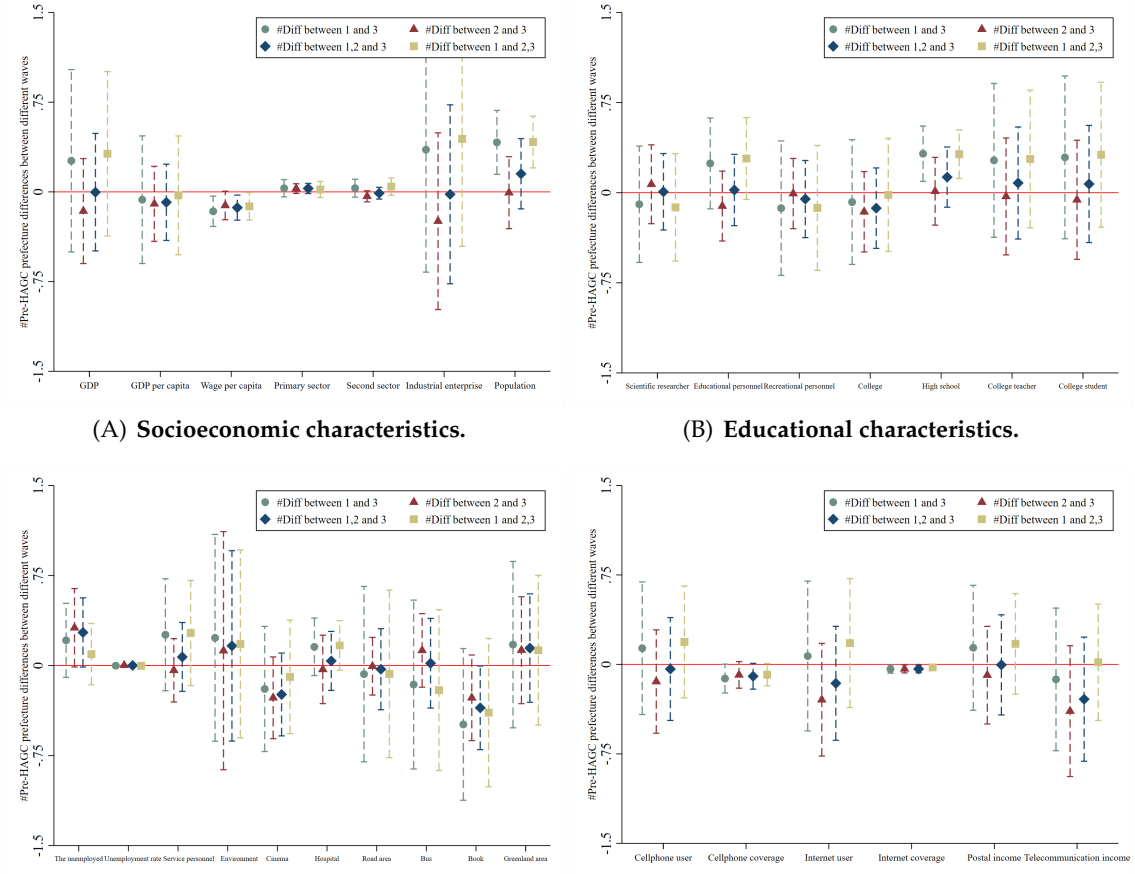
(A) **Treated group.**



(B) **Control group.**

FIGURE A5 Distribution of Respondents' Ages in Short- and Long-term Datasets.

Notes: Figure A5 shows the age distributions in short-term (2010 proxy) and long-term (2020 proxy) datasets in CFPS, respectively. The sample consists of respondents with rural *hukou* during HAGC policy. Panel A shows the treated group distribution while panel B shows that in control group.



(A) **Socioeconomic characteristics.**

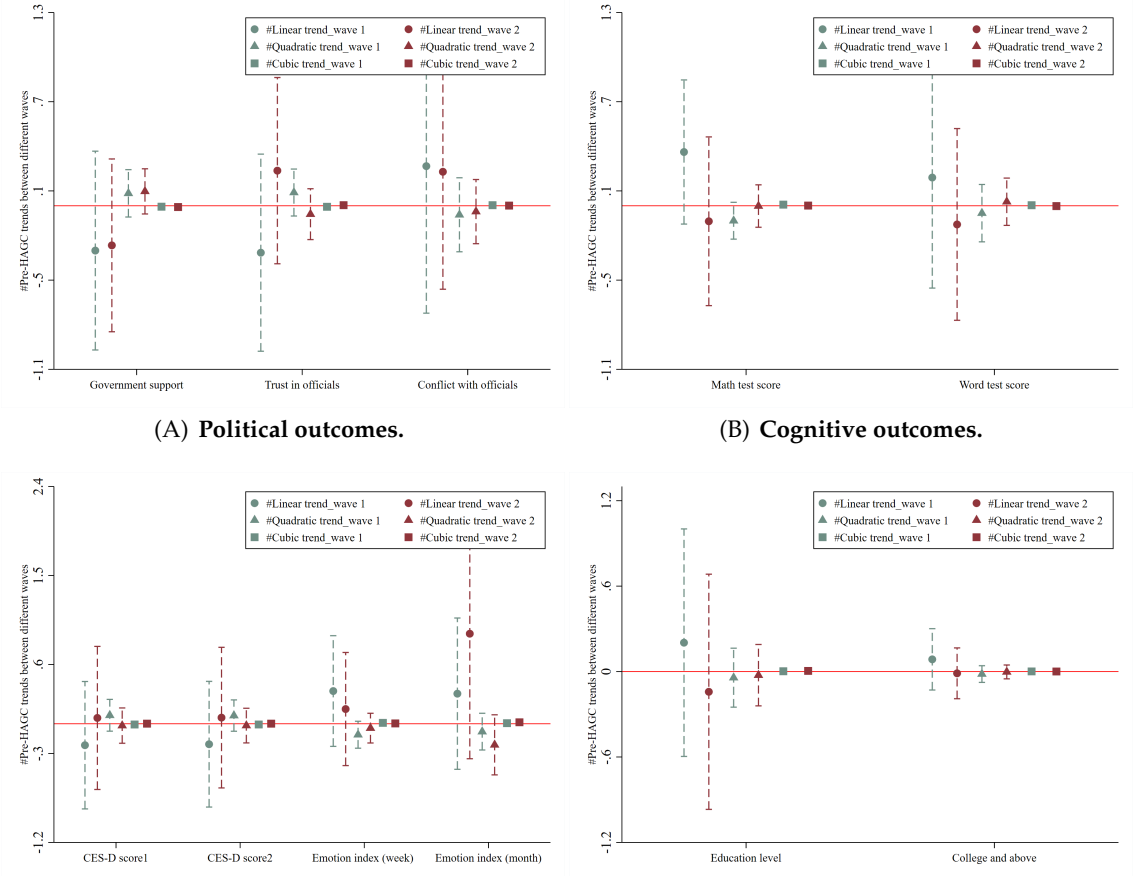
(B) **Educational characteristics.**

(C) **Social security and infrastructure characteristics.**

(D) **Information Technology characteristics.**

FIGURE A6 Pre-HAGC Prefecture Differences between Different Waves.

Notes: Figure A6 shows the pre-HAGC (2007 proxy) prefectural characteristic differences between different HAGC-waves. The data is derived from China Prefecture Statistical Yearbook (2007). The circles, triangles, diamonds, and squares in each panel respectively show the differences of wave 1 and 3, wave 2 and 3, wave 1&2 and 3, wave 1 and 2&3. The dependent variables from panel A to D are socioeconomic factors (GDP, per capita GDP, per capita wage, primary and second sector outputs, industrial enterprise number, population size), educational factors (scientific and educational personnel, entertainment personnel, number of colleges, senior high schools, college teachers, college students), social security and infrastructure factors (unemployment figures, social service personnel, environmental investments, cinemas, hospitals, road area, bus availability, library collections, green areas), and information technology conditions (number/coverage of mobile/Internet users, postal and telecommunication incomes), respectively, all logged where applicable. Robust standard error is clustered at province level. The dashed line represents the 95% confidence interval.

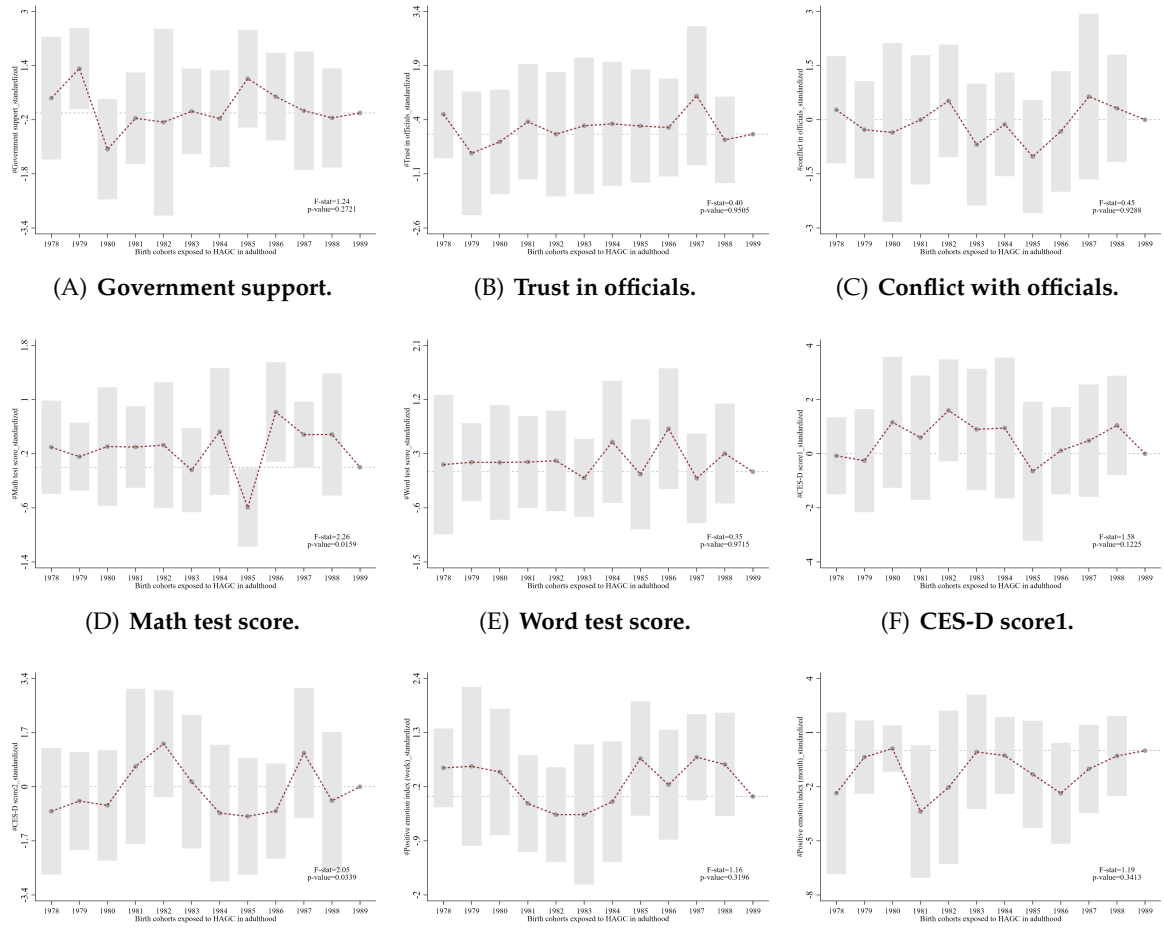


(A) **Political outcomes.** (B) **Cognitive outcomes.**

(C) **Emotion outcomes.** (D) **Educational outcomes.**

FIGURE A7 Pre-HAGC Characteristic Trends between Different Waves.

Notes: Figure A7 shows the pre-HAGC trends between different HAGC-waves. The data is drawn from CFPS. The sample consists of respondents born in 1982-1989 with rural *hukou* during HAGC policy to make sure that nobody was exposed to HAGC policy during adolescence. Every regression includes a series of interaction terms (cohort linear tread with treated wave dummies (wave 3 omitted), cohort quadratic tread with treated wave dummies(wave 3 omitted), cohort cubic tread with treated wave dummies(wave 3 omitted)). The circles, triangles, and squares in each panel respectively show the linear/quadratic/cubic trend differences between different treated waves (teal for wave 1 and marron for wave 2) and wave 3 (as baseline group). The dependent variables from panel A to D are respectively government support, trust in officials, conflict with officials, math test score, word test score, CES-D scores (simple & full versions), emotion index (weekly & monthly), education level, and college and above qualification. All the dependent variables are standardized. Control variables and fixed effects are the same as in Table 1. Robust standard error is clustered at the county level. The dashed line represents the 95% confidence interval.



(A) **Government support.** (B) **Trust in officials.** (C) **Conflict with officials.**

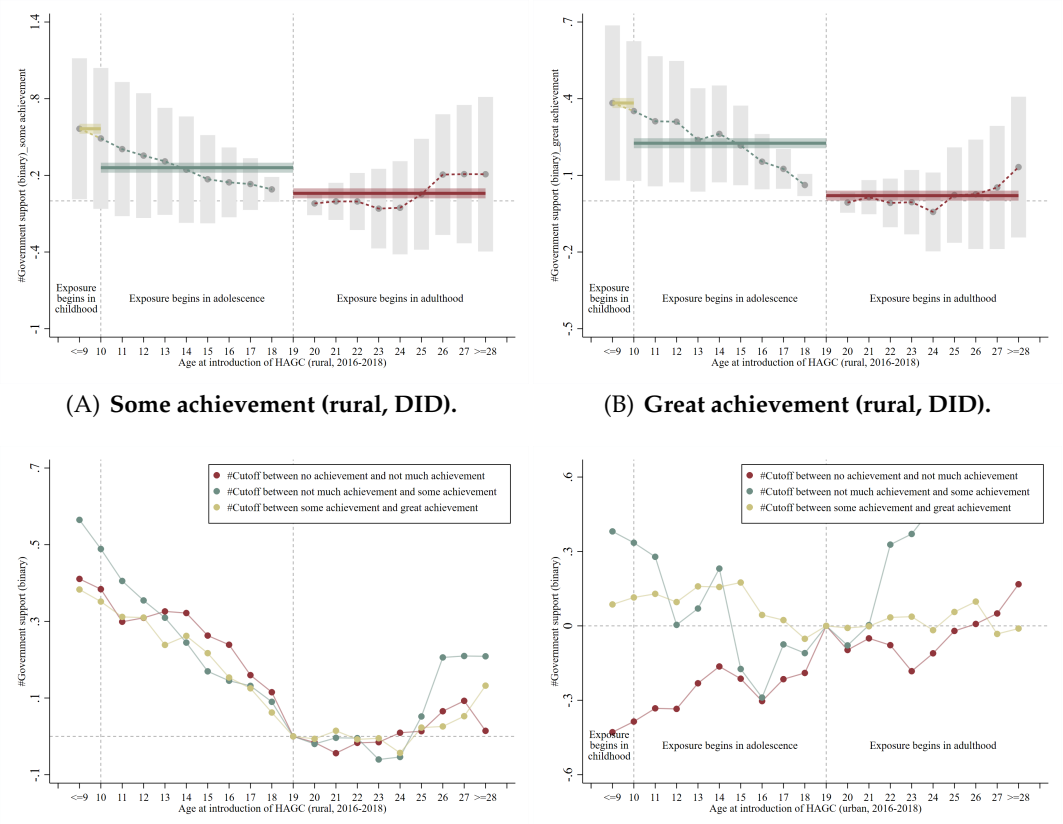
(D) **Math test score.** (E) **Word test score.** (F) **CES-D score1.**

(G) **CES-D score2.** (H) **emotion index (weekly).** (I) **emotion index (monthly).**

FIGURE A8 Pre-HAGC Trends Examination in Counties with Different Timing of HAGC Adoption.

Notes: Figure A8 demonstrates the cohort trends in counties with different adoption of HAGC. The sample comes from CFPS dataset and includes the 1978-1989 birth cohorts with rural *hukou* status. Each figure plots the coefficients and the 95% confidence interval on the interactions between indicator variables for cohort groups and the year of HAGC adoption from a separate regression. The analysis is at the county-birth level. The control variables, fixed effects, and province-specific linear trends are the same as in Table 1. Robust standard error is clustered at the county level. The 1989 cohorts are the omitted group so that plotted coefficients demonstrate whether pre-reform characteristics by every period differ by the year of HAGC adoption.

Appendix B More on Baseline

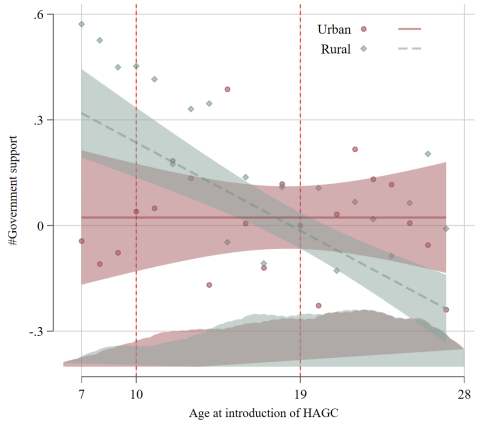


(A) **Some achievement (rural, DID).** (B) **Great achievement (rural, DID).**

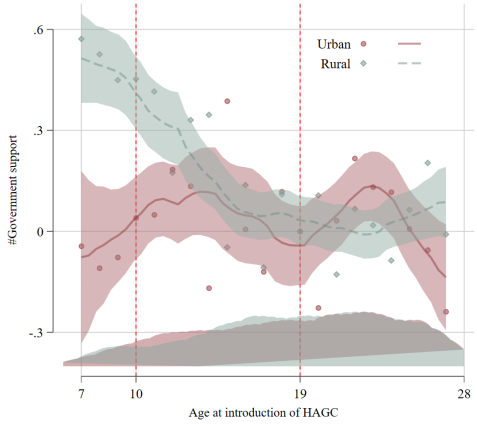
(C) **Alternative Cut-off (rural, DID).** (D) **Alternative Cut-off (urban, DID).**

FIGURE B1 More on Baseline: Long-term Effects of HAGC on Government Support.

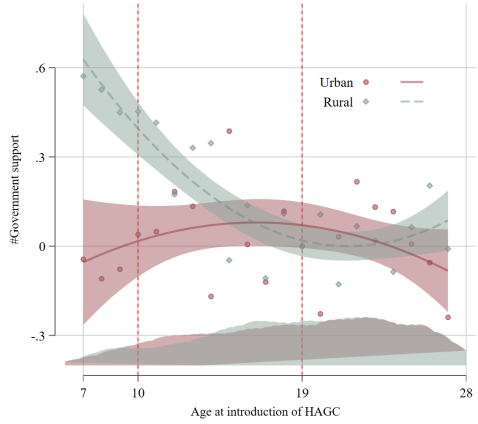
Notes: Figure B1 presents the event study results of cohort-level differential exposure to HAGC on long-term government support with binary setting using different thresholds. The data is drawn from CFPS. All the regressions use event study specification in Equation 4. The dependent variable is government support. Panels A and B use binary evaluation with scores 4-5, and 5 as 1, respectively. Panels C and D summarize the results for the rural and urban samples under three different cutoff settings of the dependent variable. The control variables, fixed effects, and province-specific linear trends are the same as in Table 1. Robust standard error is clustered at the county level. The gray shaded area represents the 90% confidence interval.



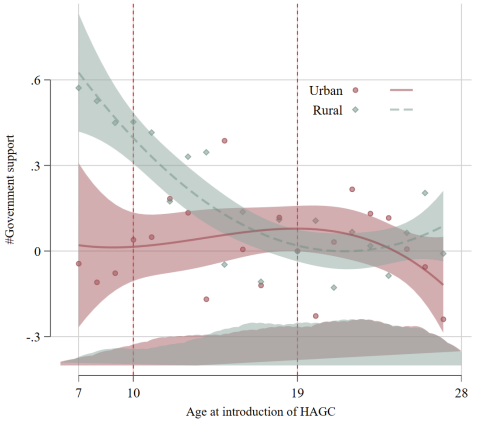
(A) **Quantile estimation.**



(B) **Local polynomial estimation.**



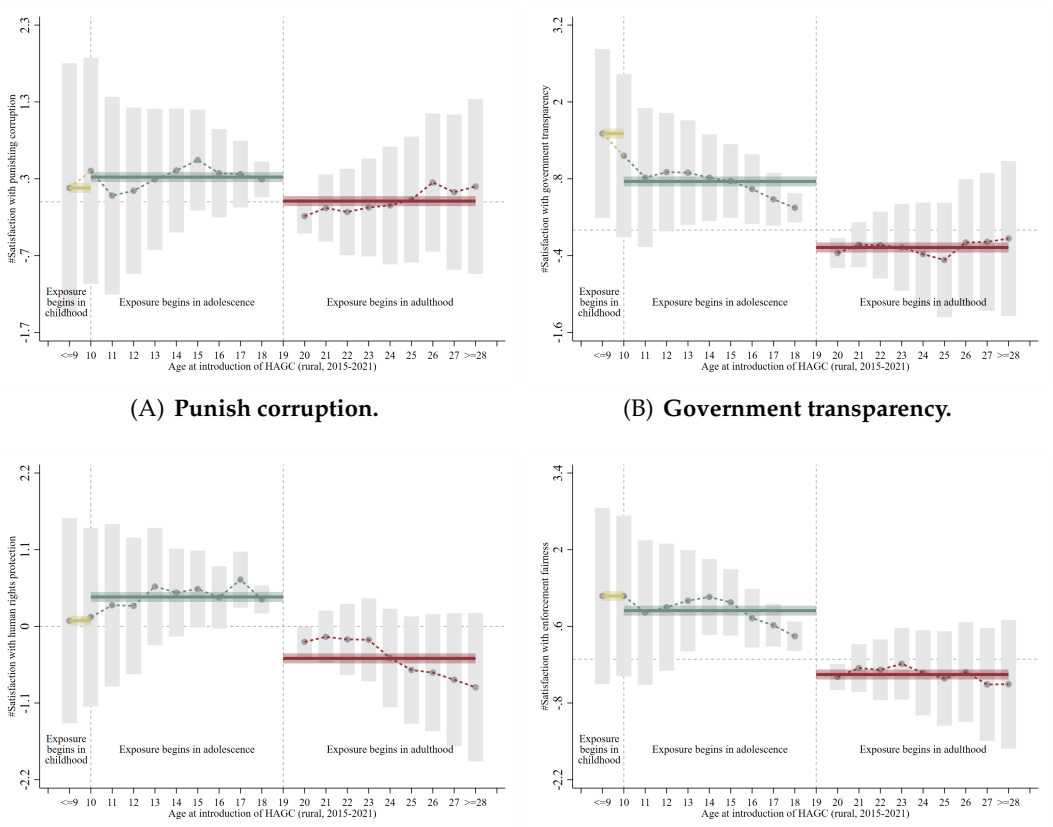
(C) **Quadratic polynomial estimation.**



(D) **Cubic polynomial estimation.**

FIGURE B2 Baseline: Relationship between HGAC and Long-term Government Support by Age Groups.

Notes: Figure B2 presents the relationship between HAGC policy and long-term government support by different ages. The data is derived from the CFPS dataset. Panels A to D respectively use quantile estimation (40% as the cutoff), local polynomial estimation, quadratic polynomial estimation, and cubic polynomial estimation. The analysis is at the county-exposure-age level. The shaded area represents the 90% confidence interval.

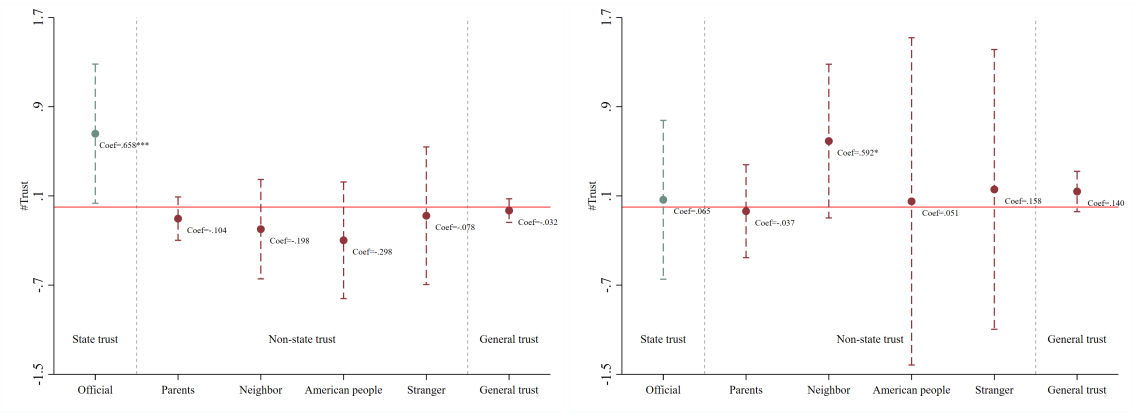


(A) **Punish corruption.** (B) **Government transparency.**

(C) **Human rights protection.** (D) **Enforcement fairness.**

FIGURE B3 More on Baseline: Long-term Effects of HAGC on Satisfaction with Government.

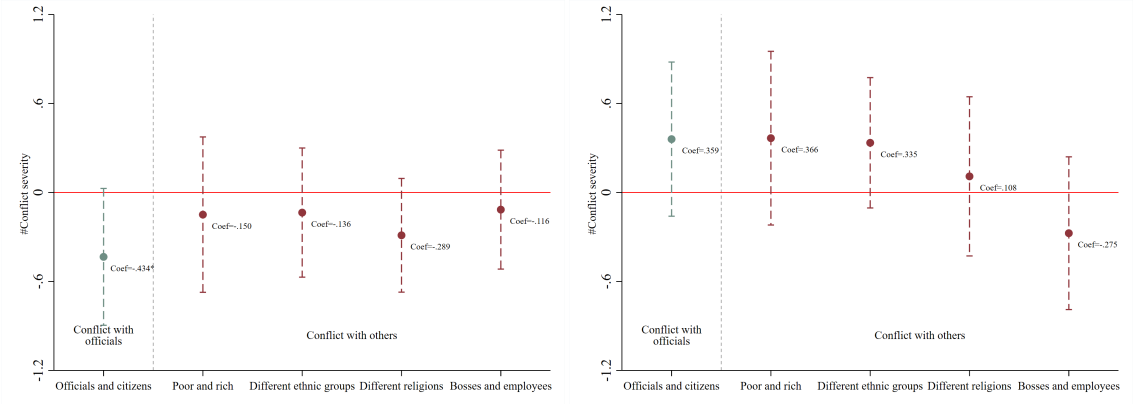
Notes: Figure B3 presents the event study results of cohort-level differential exposure to HAGC on government support evaluated in long-term. The data is derived from CSS, consisting of respondents with rural *hukou* during HAGC policy. All the regressions use event study specification in Equation 4. The dependent variables are the satisfaction with different government work, including anti-corruption, government transparency, human rights protection, and enforcement fairness, ranked scores 1-4. The control variables, fixed effects, and province-specific linear trends are the same as in Table 1. Robust standard error is clustered at the county level. The gray shaded area represents the 90% confidence interval.



(A) **Rural.** (B) **Urban.**

FIGURE B4 More on Baseline: Long-term Effects of HAGC on Trust.

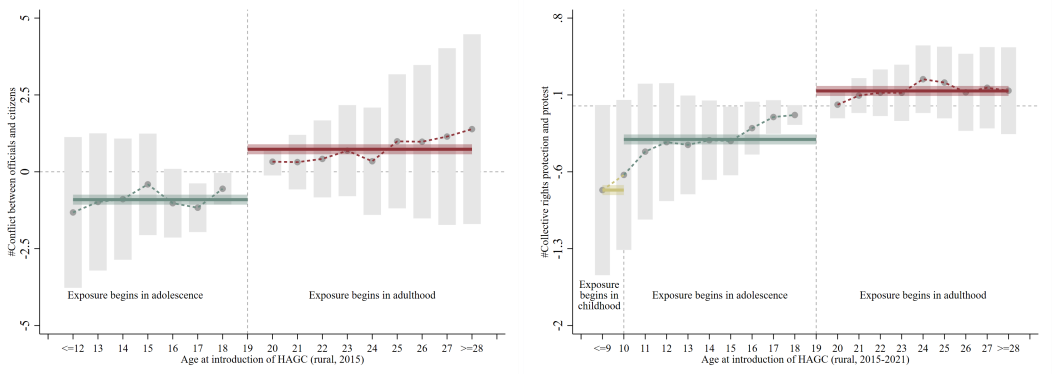
Notes: Figure B4 presents the effect of cohort-level differential exposure to HAGC on trust evaluated in long-term. The The data is drawn from CFPS. All the regressions use DID specification in Equation 2. The dependent variables are trust with officials, parents, neighbors, American people, strangers, and general trust respectively. The specific trusts are ranked scores 0-10 while the general trust is a binary variable. The control variables, fixed effects, and province-specific linear trends are the same as in Table 1. Robust standard error is clustered at the county level. The dashed line represents the 95% confidence interval.



(A) **Rural.** (B) **Urban.**

FIGURE B5 More on Baseline: Long-term Effects of HAGC on Perceived Conflict.

Notes: Figure B5 presents the effect of cohort-level differential exposure to HAGC on respondents' perceived conflict severity in long-term. The data is derived from CSS dataset. All the regressions use DID specification in Equation 2. The dependent variables are the self-reported conflict severity between officials and citizens, poor and rich, different ethnic groups, different religious groups, and bosses and employees respectively. All the conflict severity are ranked scores 1-4. The control variables, fixed effects, and province-specific linear trends are the same as in Table 1. Robust standard error is clustered at the county level. The dashed line represents the 95% confidence interval.



(A) **Perceived Conflict Severity with Officials.** (B) **Collective Protest.**

FIGURE B6 More on Baseline: Long-term Effects of HAGC on Conflict and Protest.

Notes: Figure B6 presents the event study results of cohort-level differential exposure to HAGC on the perceived conflict severity with officials and collective protest. The data is derived from the CSS dataset. The sample consists of respondents with rural *hukou* during HAGC policy. All the regressions use event study specification in Equation 4. The dependent variables in panel A and B are respectively self-reported conflict severity between officials and citizens ranked scores 1-4 and whether respondent participated in collective protest last year. The control variables, fixed effects, and province-specific linear trends are the same as in Table 1. Robust standard error is clustered at the county level. The gray shaded area represents the 90% confidence interval.

TABLE B1 More on Baseline: Triple Difference Specification

Dependent variable:	Government support			
	Ordinal setting		Binary setting	
	Raw	Sd. by birth year	Raw	Sd. by birth year
	(1)	(2)	(3)	(4)
Panel A. *Long-term (2016-2018)*				
Exposure to HAGC ×rural	0.167***	0.185***	0.069***	0.190***
	(0.048)	(0.057)	(0.018)	(0.054)
Exposure to HAGC	0.022	0.025	0.010	0.017
	(0.081)	(0.094)	(0.033)	(0.094)
Rural	0.022	0.025	0.010	0.017
	(0.081)	(0.094)	(0.033)	(0.094)
Dependent-variable mean	3.426	-0.015	0.854	-0.007
Observations	11,334	11,334	11,334	11,334
Panel B. *Short-term (2012-2014)*				
Exposure to HAGC ×rural	0.017	0.014	-0.006	-0.022
	(0.047)	(0.054)	(0.018)	(0.052)
Exposure to HAGC	0.068	0.084	0.066**	0.186**
	(0.098)	(0.111)	(0.032)	(0.089)
Rural	-0.086***	-0.095***	-0.010	-0.028
	(0.032)	(0.036)	(0.012)	(0.033)
Dependent-variable mean	3.381	-0.016	0.843	-0.001
Observations	11,274	11,274	11,274	11,274
Control	✓	✓	✓	✓
2007 Predetermined # cohort	✓	✓	✓	✓
FEs	✓	✓	✓	✓
Province-cohort trend	✓	✓	✓	✓

Notes: Table B1 reports the effect of cohort-level differential exposure to HAGC on long-term government support. The data is drawn from CFPS. The sample consists of respondents with rural *hukou* during HAGC policy. All the regressions use DDD specification at Equation 3. The dependent variable is government support. Columns (1)-(2) use raw score from 1-5. Column (3)-(4) use binary evaluation with score 3-5 (positive evaluation) recorded as 1, otherwise 0.. The control variables, fixed effects, and province-specific linear trends are the same as in Table 1. Robust standard error is clustered at the county level. ***$p < 0.01$, **$p < 0.05$, *$p < 0.1$.

TABLE B2 More on Baseline: Satisfaction with Government Work

Dependent variable:	Satisfaction with government work							
	Abstract criteria for regime legitimacy				Specific criteria for individual welfare			
	Anti-corruption	Government transparency	Human rights protection	Enforcement fairness	Economic growth	Increase employment	Health care	Environment governance
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Exposure to HAGC	0.299**	0.287**	0.350***	0.360**	-0.053	0.117	0.121	0.101
	(0.124)	(0.134)	(0.118)	(0.143)	(0.118)	(0.114)	(0.111)	(0.105)
Controls	✓	✓	✓	✓	✓	✓	✓	✓
2007 Predetermined # cohort	✓	✓	✓	✓	✓	✓	✓	✓
FEs	✓	✓	✓	✓	✓	✓	✓	✓
Province-cohort trend	✓	✓	✓	✓	✓	✓	✓	✓
Dependent-variable mean	2.450	2.436	2.494	2.476	2.488	2.474	2.540	2.438
Observations	4,879	4,817	4,937	4,955	5,053	4,983	5,116	5,184

Notes: Table B2 reports the effect of HAGC on long-term satisfaction with government across different issues. The data is derived from CSS. The sample consists of respondents with rural *hukou* during HAGC policy. All the regressions use DID specification in Equation 2. The dependent variables are a series of satisfaction with government work in different aspects, ranked with scores 1-4. The control variables, fixed effects, and province-specific linear trends are the same as in Table 1. Robust standard error is clustered at the county level. ***$p < 0.01$, **$p < 0.05$, *$p < 0.1$.

TABLE B3 More on Baseline: Conflict, Protest and Governing Ability

Dependent variable:	Anti-government		Governing ability			
	Collective Protest	Conflict with officials	Unfair treatment	Shirk responsi-bility	Unreasonable charge	Income discrimina-tion
	(1)	(2)	(3)	(4)	(5)	(6)
Exposure to HAGC	-0.043**	-0.068***	-0.040	-0.071	-0.041	-0.071
	(0.022)	(0.019)	(0.033)	(0.049)	(0.035)	(0.047)
Controls	✓	✓	✓	✓	✓	✓
2007 Predetermined # cohort	✓	✓	✓	✓	✓	✓
FEs	✓	✓	✓	✓	✓	✓
Province-cohort trend	✓	✓	✓	✓	✓	✓
Dependent-variable mean	0.028	0.029	0.073	0.135	0.058	0.114
Observations	5,228	4,801	4,796	4,798	4,794	4,792

Notes: Table B3 reports the results of cohort-level differential exposure to HAGC on anti government protests, conflict with officials, and governing ability in long-term. CSS dataset is used in columns (1) and CFPS dataset is used in column (2) to (6). The sample consists of respondents with rural *hukou* during HAGC policy. All the regressions use DID specification in Equation 2. The dependent variables are a series of dummy variables indicating whether respondents participated in or experienced those activities or treatments lase year. The control variables, fixed effects, and province-specific linear trends are the same as in Table 1. Robust standard error is clustered at the county level. ***$p < 0.01$, **$p < 0.05$, *$p < 0.1$.

Appendix C More on Robustness Checks

Heterogeneity Treatment Effects and Alternative Setting In Figure C1, we demonstrate that our baseline findings are robust under alternative specifications.

First, we address potential heterogeneous treatment effects across different policy waves. In Panel A, we replace the baseline policy exposure variable with three dummy variables, each representing whether an individual was aged 7-18 during a particular policy wave. The effects on government support, political trust, and conflict with officials are all consistent with our baseline findings.

Second, our baseline specification does not account for age-specific differences of policy exposure. Following Huang and Liu (2023), we redefine the exposure variable as a continuous measure, capturing the number of years each cohort g in county c overlaps with the policy during the ages of 7-18. We first assign exposure values on a quarterly scale from 0 to 1, reflecting the overlap between an individuals age (7-18) and the four-year TV subsidy policy duration. Alternatively, as TV's effect might persist beyond the policy implementation periods, we measure individual's exposure as the time between the policy's starting year and the year when he/she reaches age 18. As shown in Panel B, these adjustments do not alter our conclusions.

Third, we redefine the age windows for the treatment and control groups. In Panel C, we let the treatment windows to start at the age of 7, 10, 13, and 16 (and end at 18). In Panel D, we shorten the control windows to end at ages 22, 25, 28, and 31. The results remain robust, with all results similar to the baseline.

Placebo Tests In this subsection, we perform a series of placebo tests.

First, Panel E in Figure C1 reports the estimated effects of HAGC when using ages over 18, such as 19-21, as the treated windows. As expected, changes in values for this age range are insignificant. In Panel F, we estimate the pseudo effect when shifting the HAGC policy forward by 1-9 years, which again produce insignificant results. These findings suggest that our results are robust against omitted variables.

Secondly, In Figure C2, we randomly assign HAGC policy start years and conduct permutation tests, repeated by 1,000 times. Our baseline point estimates are shown with dotted blue lines, permutation outcomes with red dots, and the placebo trial averages with solid blue lines. These results confirm that our baseline findings are not driven by other random factors or omitted variables.

Possible Confounders In this subsection, we address potential confounding factors that could threaten the validity of our baseline estimates, with results presented in Figure C3.

In Panel A, we account for several contemporaneous policies in China that may also influence public support and political trust. These policies include the expansion of college enrollment (from 1999), China's accession to the World Trade Organization (WTO, from 2001), agricultural tax reform (from 2003), and the New Rural Pension Scheme (NRPS, from 2003). To control for the impact of college enrollment expansion, we introduce a variable capturing the logarithm of the number of individuals holding a university or vocational college degree at the prefectural level. This is interacted with an exposure dummy, which equals 1 if an individual was under 18 at the time the policy was implemented, reflecting the cohort most likely affected by the policy. Similarly, we account for China's accession to the WTO by including prefectural-level net exports, which proxy for the economic changes driven by increasing trade integration. As for the agricultural tax reform, we use the county-level agricultural tax amount, capturing the tax burden on farmers. Finally, we control for the NRPS by incorporating data on rural pension coverage at the county level, which indicates the extent to which individuals benefited from the scheme. Each of these variables is also interacted with the exposure dummy to reflect the differential impact on individuals of varying ages during the HAGC policy. Our findings remain highly robust, which means that these concurrent policies could hardly drive our baseline findings.

In Panel B, we exclude the influence of China's infrastructure development since 2000. The simultaneous expansion of infrastructural programs might confound with the implementation of HAGC. We first control for adolescence exposure to electricity, cable radio, television, postal services, telephone, mobile phone signal, roads, railways, water, and gas in the respondents' village, using dummy variables for each infrastructure type based on their availability during adolescence (<18 age). Second, to alleviate the interference from infrastructure construction with the HAGC policy, we add a series of interaction terms between villages' availability to infrastructure above during HAGC policy (2010 proxy) with cohort dummy. We find similar results after these additional controls, which means the effect of HAGC is not driven by infrastructural improvement.

In Panel C, we consider the influence of local conditions by controlling for the interaction terms between the predetermined (2007) variables and the birth cohort. These variables include socioeconomic factors (per capita GDP, per capita wage, industry outputs, population size, technical and educational personnel, entertainment personnel), educational factors (number of colleges, senior high schools, college teachers, college students), infrastructure factors (unemployment figures, environmental investments, cinemas, hospitals, road area,

bus availability, library collections, green areas), mass media and information technology conditions (number of mobile/Internet users, and telecommunication incomes), all logged where applicable. This comprehensive control strategy helps ensure that our findings are not driven by path-dependence effect, highlighting the unique role of HAGC policy.

In Panels D and E, we deal with the migration issue by excluding samples that involve changes in *hukou* status or migration. We define "migrants" as respondents who migrated from age 3 to 2010, from age 12 to 2010, from 2010 to the survey year, and the union of the above three. The obtained effects are highly robust. Additionally, in Table C1, we directly examine the relationship between HAGC exposure and *hukou* changes or migration. The results demonstrate that HAGC exposure cannot drive migration or changes in *hukou* status, which reinforces the robustness of our findings.

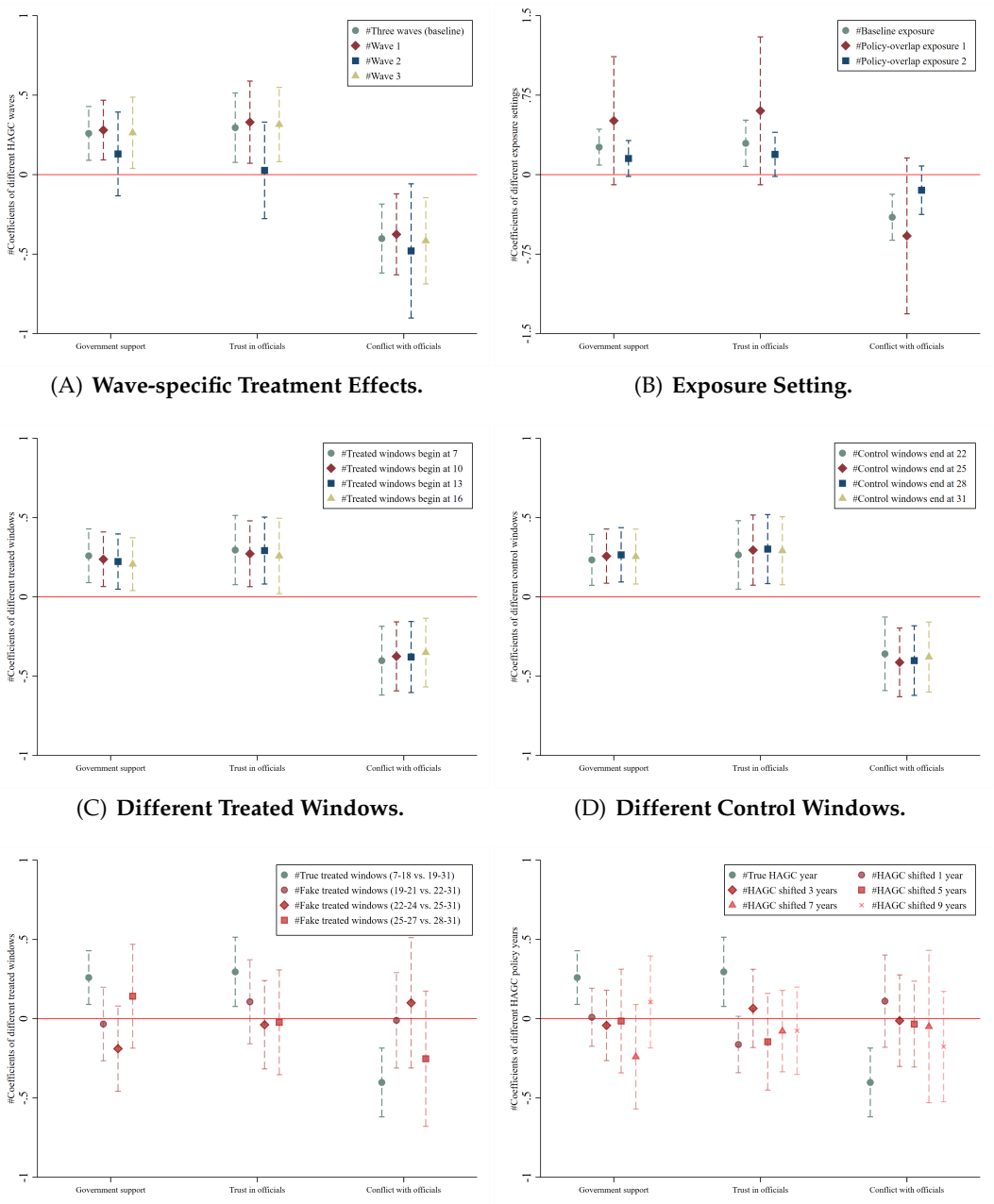
Finally, to account for potential attrition problem in longitudinal surveys, we re-estimate the results using the cross-sectional dataset (CFPS 2016) and restrict our analysis to samples that participated in at least five survey waves. Results in Panel F confirm that neither attrition nor sample selection threatens the integrity of the baseline results.

Other Robustness Checks In Figure C4, we conduct a series of technical analyses.

In Panel A, we use cross-sectional datasets (CFPS 2016 and 2018) to re-estimate our results. To address potential sampling bias, we perform a series of weighted regressions in Panel B. These regressions utilize the inverse of survey participation frequency, cross-sectional sampling weights, and panel sampling weights. The effects are similar to the baseline, showing that our findings are not sensitive to bias in surveys.

In Panel C, we tackle concerns regarding multiple testing by applying the false discovery rate (FDR) correction methods proposed by Benjamini and Hochberg (1995), Benjamini and Yekutieli (2001), and Benjamini et al. (2006), as well as the family-wise error rate (FWER) correction methods proposed by Holm (1979) and Šidák (1967). We then adjust our confidence intervals based on these FDR-adjusted p-values, with robust findings.

Panels D, E, and F assess how sensitive our baseline results are to various specification changes, including different controls, trends, and clustering levels. Panel D incrementally adds control variables, confirming the stability of our baseline estimates. Panel E introduces trends at multiple levels, from province-cohort linear and quadratic trends to cubic trends, and prefecture-cohort linear trends. In Panel F, we adjust the clustering of standard errors from the county level to include county-year, prefecture-year, province-year, prefecture, and province levels. Across all these changes, our results remain consistently robust.



(A) **Wave-specific Treatment Effects.**

(B) **Exposure Setting.**

(C) **Different Treated Windows.**

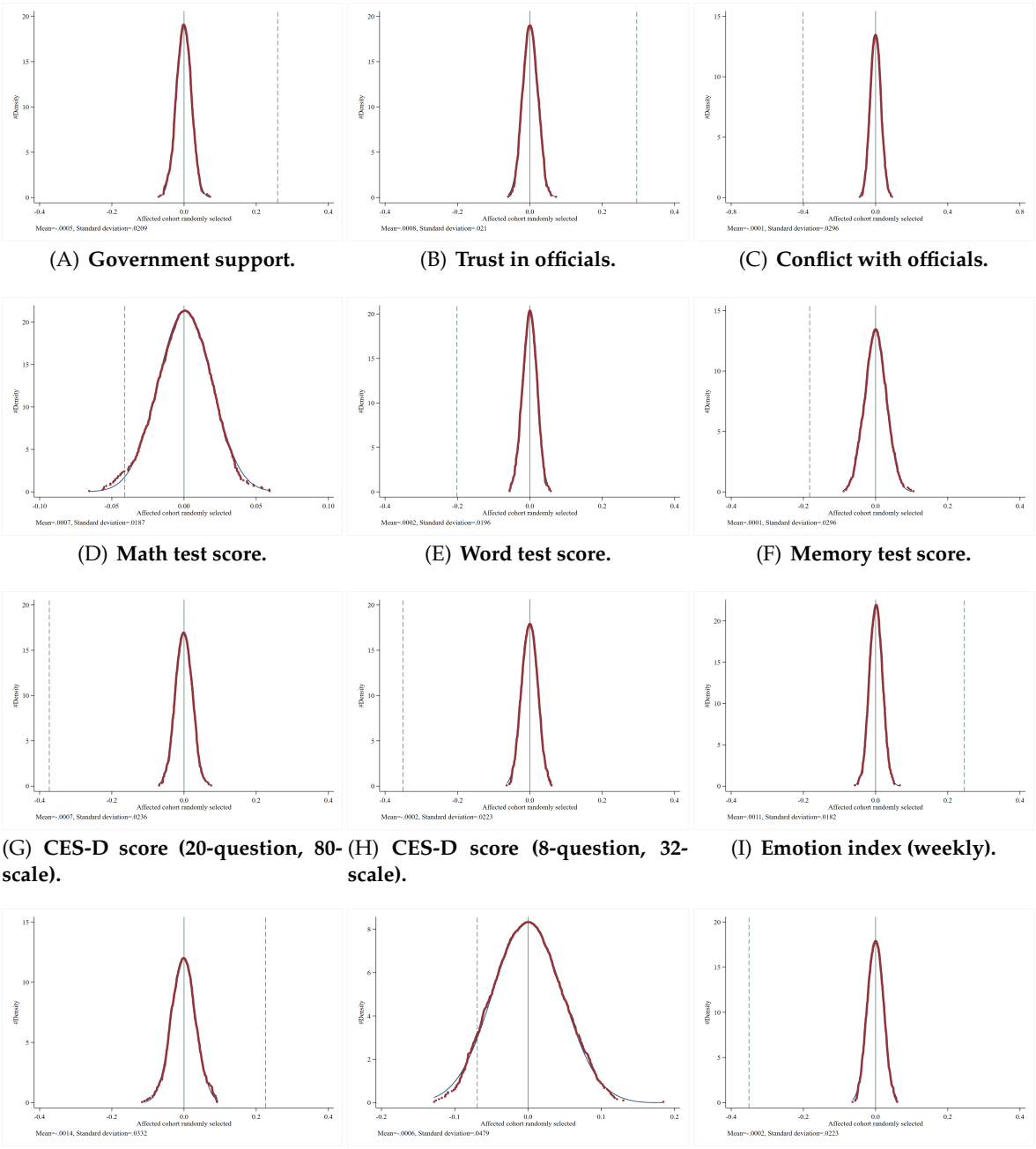
(D) **Different Control Windows.**

(E) **Fake Treated Windows.**

(F) **Fake Policy Years.**

FIGURE C1 More on Robustness: Heterogeneous Treatment Effects and Alternative Settings.

Notes: Figure C1 shows that our baseline findings are robust to heterogeneous treatment effects and different settings. The data is drawn from CFPS. The sample consists of respondents with rural *hukou* during HAGC policy. All the regressions use DID specification in Equation 2. The control variables, fixed effects, and province-specific linear trends are the same as in Table 1. The dashed line represents the 95% confidence interval. For more details see Appendix C.



(A) **Government support.** (B) **Trust in officials.** (C) **Conflict with officials.**

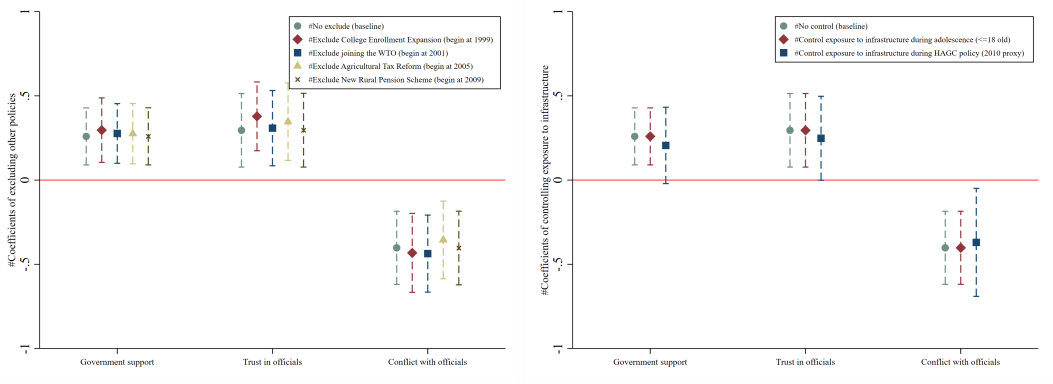
(D) **Math test score.** (E) **Word test score.** (F) **Memory test score.**

(G) **CES-D score (20-question, 80-scale).** (H) **CES-D score (8-question, 32-scale).** (I) **Emotion index (weekly).**

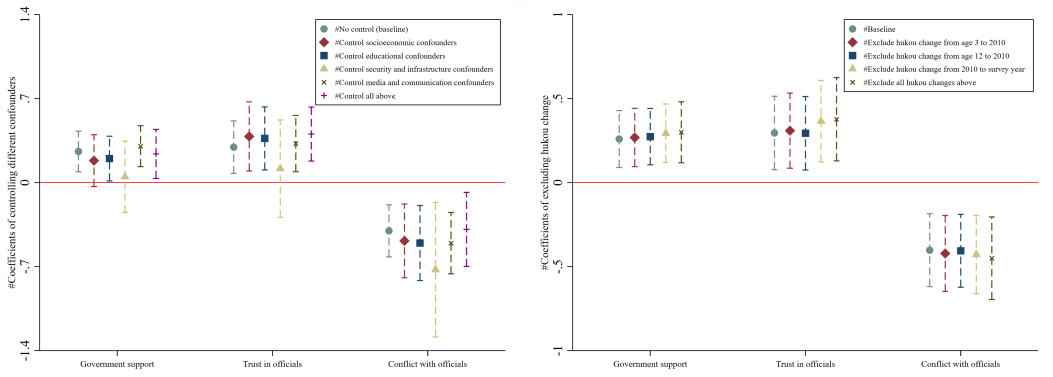
(J) **Emotion index (monthly).** (K) **Education level.** (L) **College and above.**

FIGURE C2 More on Robustness: Permutation-test Coefficients for "pseudo HAGC".

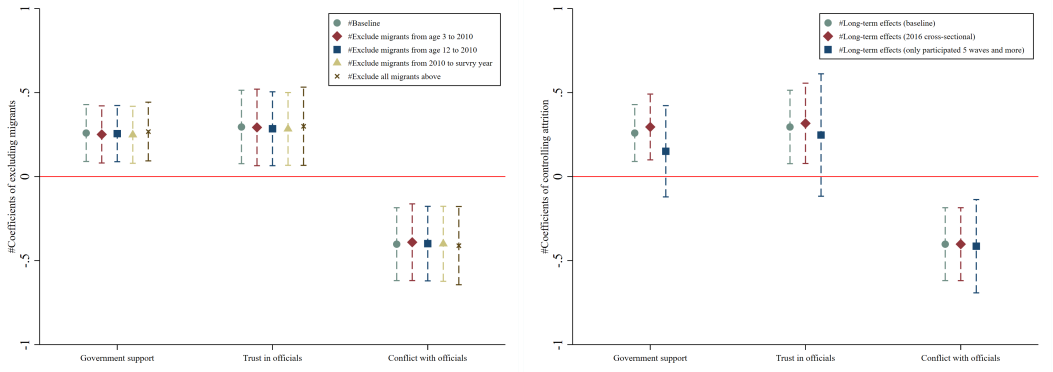
Notes: Figure C2 demonstrates the estimates for the pseudo policy results. The data is drawn from CFPS. The sample consists of respondents with rural *hukou* during HAGC policy. All the regressions use DID specification in Equation 2. The control variables, fixed effects, and province-specific linear trends are the same as in Table 1. Robust standard error is clustered at the county level. The dashed line represents the ture coefficient. For more details see Appendix C.



(A) **Interference Policy.** (B) **Exposure to Other Improving Infrastructure.**



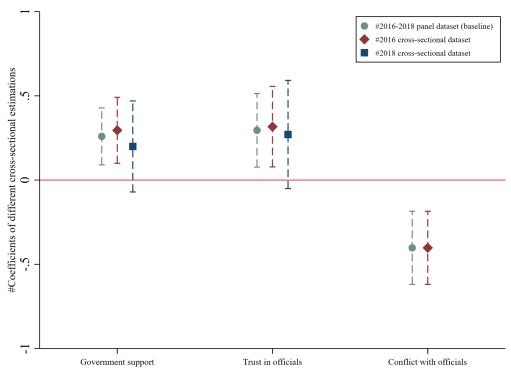
(C) **Predetermined Confounders.** (D) ***Hukou* Change.**



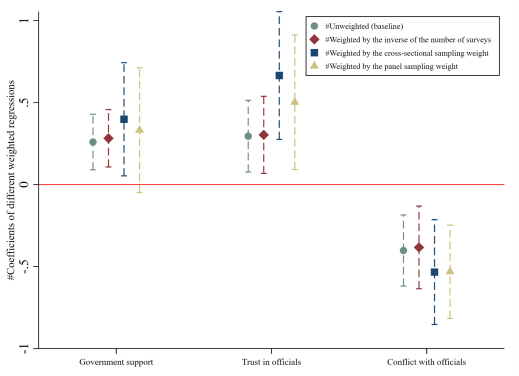
(E) **Migration.** (F) **Attrition.**

FIGURE C3 More on Robustness: Potential Confounders.

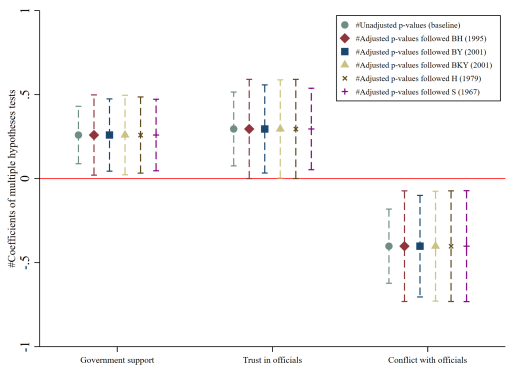
Notes: Figure C3 shows that our baseline findings are robust to a battery of potential confounders. The data is drawn from CFPS. The sample consists of respondents with rural *hukou* during HAGC policy. All the regressions use DID specification in Equation 2. The control variables, fixed effects, and province-specific linear trends are the same as in Table 1. The dashed line represents the 95% confidence interval. For more details see Appendix C.



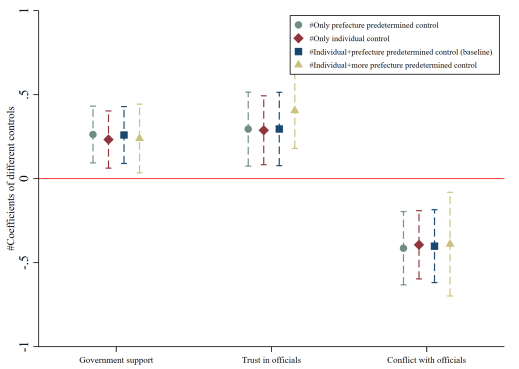
(A) **Different Cross-Sectional Estimations.**



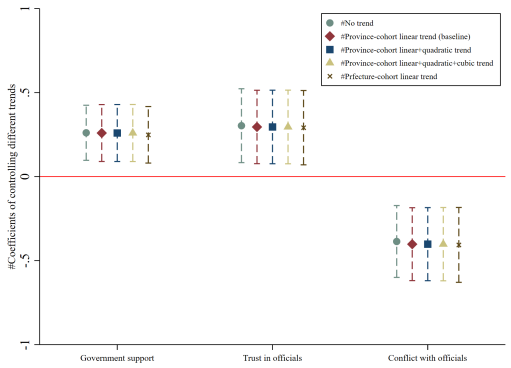
(B) **Different Weighted Regressions.**



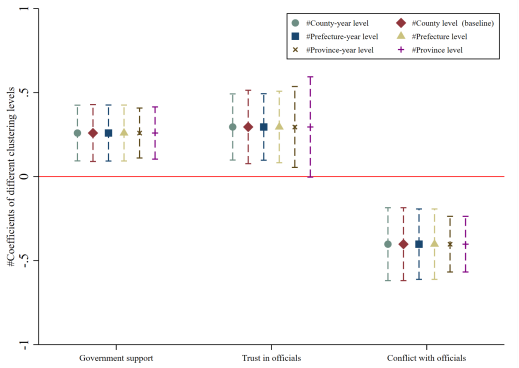
(C) **Different Multiple Hypotheses Tests.**



(D) **Different Controls.**



(E) **Different Trends.**



(F) **Different Cluster Levels.**

FIGURE C4 More on Robustness: Others.

Notes: Figure C4 shows that our baseline results are robust under cross-sectional settings, weighted regressions, adjusted p-values under different testing schemes, different levels of controls, different trends, and different cluster levels. The data is drawn from CFPS. The sample consists of respondents with rural *hukou* during HAGC policy. All the regressions use DID specification in Equation 2. The control variables, fixed effects, and province-specific linear trends are the same as in Table 1. The dashed line represents the 95% confidence interval. For more details see Appendix C.

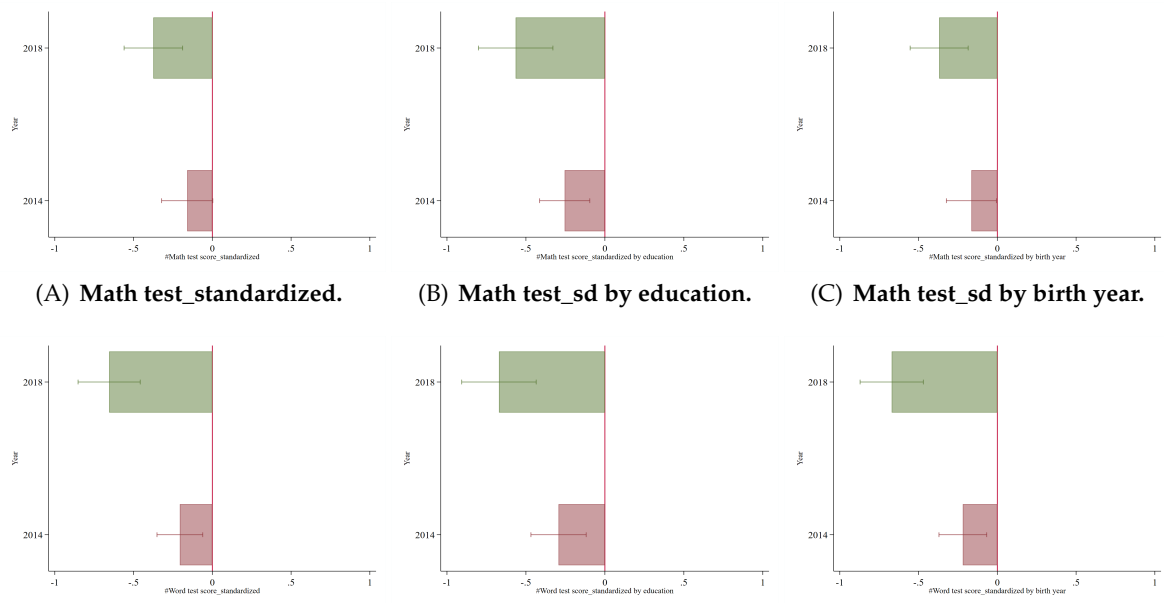
TABLE C1 More on Robustness Check: *Hukou* Change and Migration

Dependent variable:	Change between aged 3 and 2010	Change between aged 12 and 2010	Change between 2010 and now	Change all above
	(1)	(2)	(3)	(4)
Panel A. *Hukou change*				
Exposure to HAGC	-0.018	0.006	-0.009	0.004
	(0.025)	(0.007)	(0.017)	(0.005)
Dependent-variable mean	0.063	0.007	0.076	0.003
Panel B. *Migration (county level)*				
Exposure to HAGC	-0.001	0.017	0.015*	0.005
	(0.026)	(0.012)	(0.009)	(0.006)
Dependent-variable mean	0.373	0.338	0.335	0.326
Controls	✓	✓	✓	✓
2007 Predetermined # cohort	✓	✓	✓	✓
FEs	✓	✓	✓	✓
Province-cohort trend	✓	✓	✓	✓
Observations	33,786	33,786	33,786	33,786

Notes: Table C1 reports the results of cohort-level differential exposure to HAGC on *hukou* status change and county-level migration. The data is drawn from CFPS. The sample consists of respondents with rural *hukou* during HAGC policy. All the regressions use DID specification in Equation 4. The dependent variables are dummy variables indicating whether respondents' *hukou* status or county change between aged 3 and policy year (2010 proxy), between aged 12 and policy year, between policy year and survey year, and all mentioned above. The control variables, fixed effects, and province-specific linear trends are the same as in Table 1. Robust standard error is clustered at the county level. ***$p < 0.01$, **$p < 0.05$, *$p < 0.1$.

Appendix D More on Mechanism

D.1 Decline in Cognitive Skills



(A) **Math test_standardized.** (B) **Math test_sd by education.** (C) **Math test_sd by birth year.**

(D) **Word test_standardized.** (E) **Word test_sd by education.** (F) **Word test_sd by birth year.**

FIGURE D1 More on Mechanism: Mid-term and Long-term Effects of HAGC on Cognitive Outcomes.

Notes: Figure D1 demonstrates the mid-term (2014 or 2016), and long-term (2018 or 2020) effects of HAGC exposure on cognitive outcomes. The data is drawn from CFPS. The sample consists of respondents with rural *hukou* during HAGC policy. All the regressions include two interaction terms between survey time dummies and HAGC exposure (interaction terms between short-term dummy (2010/2012) and HAGC exposure are omitted). Dependent variables in Panels A-C, D-F, are math and word test scores with different standardizationrespectively. The control variables, fixed effects, and province-specific linear trends are the same as in Table 1. Robust standard error is clustered at the county level. Binned bar shows a 95% confidence interval.

TABLE D1 More on Mechanism: Education-based (Acquired) Cognitive Outcomes

Dependent variable:	Educational-based cognitive outcomes							
	Math test				Word test			
Standardized by:	No	All	Education	Cohort	No	All	Education	Cohort
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A. *With baseline controls*								
Exposure to HAGC	-0.500	-0.087	-0.102	-0.083	-1.602***	-0.200***	-0.251***	-0.207***
	(0.449)	(0.078)	(0.079)	(0.076)	(0.590)	(0.074)	(0.088)	(0.077)
Panel B. *With baseline controls*								
Exposure to HAGC	0.810*	0.141*	0.300***	0.153*	0.417	0.052	0.019	0.056
# short-term (2010)	(0.489)	(0.085)	(0.087)	(0.083)	(0.662)	(0.083)	(0.090)	(0.086)
Exposure to HAGC	-0.918*	-0.160*	-0.255***	-0.164**	-1.652***	-0.206***	-0.293***	-0.219***
# mid-term (2014)	(0.473)	(0.082)	(0.080)	(0.080)	(0.588)	(0.073)	(0.089)	(0.077)
Exposure to HAGC	-2.156***	-0.375***	-0.565***	-0.369***	-5.247***	-0.655***	-0.671***	-0.670***
# long-term (2018)	(0.541)	(0.094)	(0.119)	(0.093)	(0.800)	(0.100)	(0.119)	(0.102)
Panel C. *Control interference policies*								
Exposure to HAGC	-0.506	-0.088	-0.096	-0.084	-1.590***	-0.199***	-0.244***	-0.208***
	(0.464)	(0.081)	(0.080)	(0.078)	(0.589)	(0.074)	(0.089)	(0.077)
Panel D. *Control interference policies*								
Exposure to HAGC	0.797	0.138	0.302***	0.150*	0.415	0.052	0.022	0.053
# short-term (2010)	(0.498)	(0.087)	(0.087)	(0.085)	(0.658)	(0.082)	(0.090)	(0.086)
Exposure to HAGC	-0.943*	-0.164*	-0.254***	-0.169**	-1.664***	-0.208***	-0.290***	-0.224***
# mid-term (2014)	(0.489)	(0.085)	(0.082)	(0.083)	(0.592)	(0.074)	(0.090)	(0.078)
Exposure to HAGC	-2.182***	-0.379***	-0.561***	-0.374***	-5.267***	-0.658***	-0.667***	-0.676***
# long-term (2018)	(0.554)	(0.096)	(0.120)	(0.095)	(0.802)	(0.100)	(0.120)	(0.102)
Controls	✓	✓	✓	✓	✓	✓	✓	✓
2007 Predetermined # cohort	✓	✓	✓	✓	✓	✓	✓	✓
FEs	✓	✓	✓	✓	✓	✓	✓	✓
Province-cohort trend	✓	✓	✓	✓	✓	✓	✓	✓
Dependent-variable mean	13.157	-0.074	-0.007	-0.154	23.460	-0.045	-0.001	-0.118
Observations	13,899	13,899	13,899	13,899	13,899	13,899	13,899	13,899

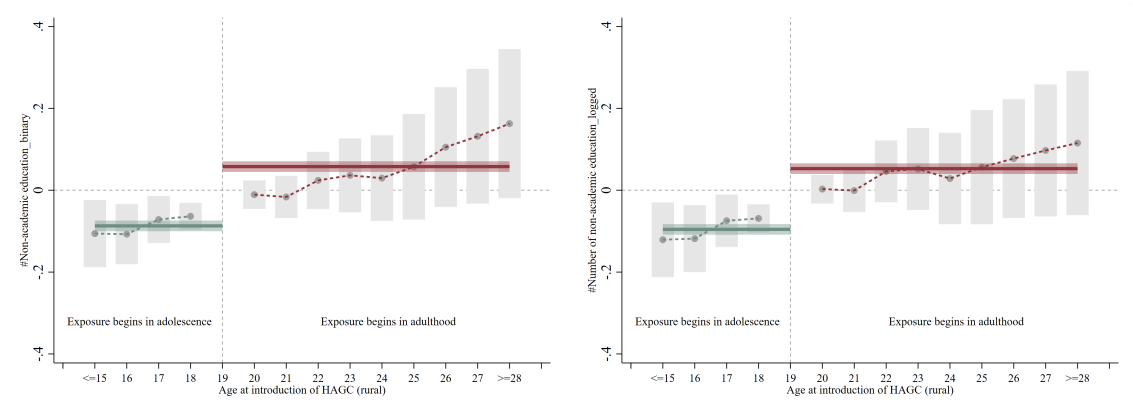
Notes: Table D1 reports the results of cohort-level differential exposure to HAGC on acquired cognitive outcomes in long-term. The data is drawn from CFPS. The sample consists of respondents with rural *hukou* during HAGC policy. Panel A and C use DID specification in Equation 2 while panel B and D use the interaction terms between exposure and wave dummy to estimate. Panel A and C pool test results from different terms. Panel B and D evaluate dynamic treatment effects of HAGC by short term (2010), middle-term (2014), and long-term (2018) (no constant). The dependent variables are test scores with different standardization. Math test score is evaluated in columns (1)-(4), and word test score is evaluated in columns (5)-(8). For more about the cognitive tests, see subsubsection A.2.1. The control variables, fixed effects, and province-specific linear trends are the same as in Table 1. Robust standard error is clustered at the county level. ***$p < 0.01$, **$p < 0.05$, *$p < 0.1$.

TABLE D2 More on Mechanism: Endowment-based (Innate) Cognitive Outcomes

Dependent variable:	Endowment-based cognitive outcomes							
	Memory test				Numerical test			
Standardized by:	No	All	Education	Cohort	No	All	Education	Cohort
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A. *With baseline controls*								
Exposure to HAGC	-0.046	-0.014	-0.009	-0.016	-0.029	-0.011	-0.025	-0.014
	(0.341)	(0.101)	(0.107)	(0.103)	(0.277)	(0.108)	(0.104)	(0.114)
Panel B. *With baseline controls*								
Exposure to HAGC	0.117	0.035	0.073	0.033	0.005	0.002	0.024	0.013
# short-term (2012)	(0.355)	(0.105)	(0.110)	(0.108)	(0.288)	(0.113)	(0.110)	(0.119)
Exposure to HAGC	-0.287	-0.085	-0.123	-0.089	-0.022	-0.009	-0.053	-0.023
# mid-term (2016)	(0.361)	(0.107)	(0.119)	(0.110)	(0.282)	(0.110)	(0.105)	(0.116)
Exposure to HAGC	-0.445	-0.131	-0.267	-0.138	-0.406	-0.159	-0.282	-0.197
# long-term (2020)	(0.539)	(0.159)	(0.188)	(0.163)	(0.569)	(0.222)	(0.207)	(0.220)
Panel C.*Control interference policies*								
Exposure to HAGC	-0.043	-0.013	-0.008	-0.015	-0.103	-0.040	-0.053	-0.043
	(0.347)	(0.103)	(0.110)	(0.105)	(0.285)	(0.111)	(0.108)	(0.117)
Panel D.*Control interference policies*								
Exposure to HAGC	0.121	0.036	0.075	0.034	-0.053	-0.021	0.003	-0.010
# short-term (2012)	(0.359)	(0.106)	(0.111)	(0.109)	(0.295)	(0.115)	(0.114)	(0.122)
Exposure to HAGC	-0.282	-0.083	-0.121	-0.087	-0.117	-0.046	-0.090	-0.061
# mid-term (2016)	(0.371)	(0.109)	(0.122)	(0.112)	(0.287)	(0.112)	(0.107)	(0.118)
Exposure to HAGC	-0.526	-0.155	-0.301	-0.162	-0.471	-0.184	-0.299	-0.221
# long-term (2020)	(0.567)	(0.167)	(0.198)	(0.172)	(0.576)	(0.225)	(0.212)	(0.223)
Controls	✓	✓	✓	✓	✓	✓	✓	✓
2007 Predetermined # cohort	✓	✓	✓	✓	✓	✓	✓	✓
FEs	✓	✓	✓	✓	✓	✓	✓	✓
Province-cohort trend	✓	✓	✓	✓	✓	✓	✓	✓
Dependent-variable mean	0.206	0.206	0.172	0.179	0.094	0.094	0.071	0.091
Observations	10,124	10,124	10,124	10,124	8,695	8,695	8,695	8,695

Notes: Table D2 reports the results of cohort-level differential exposure to HAGC on endowment-based cognitive outcomes in long-term. The data is drawn from CFPS. The sample consists of respondents with rural *hukou* during HAGC policy. Panel A and C use DID specification in Equation 2 while Panel B and D use the interaction terms between exposure and wave dummy to estimate. Panel A and C pool test results from different terms. Panel B and D evaluate dynamic treatment effects of HAGC by short term (2012), middle-term (2016), and long-term (2020) (no constant). The dependent variables are test scores with different standardization. Memory test score is evaluated in columns (1)-(4), and numerical test score is evaluated in columns (5)-(8). For more about the cognitive tests, see subsubsection A.2.1. The control variables, fixed effects, and province-specific linear trends are the same as in Table 1. Robust standard error is clustered at the county level. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$.

D.2 Lower Educational Achievement



(A) **Binary.** (B) **Logged.**

FIGURE D2 More on Mechanism: Long-term Effects of HAGC on Non-academic Education by Age at First Exposure.

Notes: Figure D2 demonstrates the event study results of HAGC on long-term non-academic education. The data is drawn from CFPS. The sample consists of respondents aged 18 and above, with rural *hukou* during HAGC policy. All the regressions use event study specification in Equation 4. Dependent variable is whether one has been taking non-academic education and the logarithm of its number. The control variables, fixed effects, and province-specific linear trends are the same as in Table 1. Robust standard error is clustered at the county level. Bin shows the 90% confidence interval.

TABLE D3 More on Mechanism: Educational Achievements

Dependent variables:	General level	Highest qualification			
	Education year (logged)	Junior high school and above	Senior high school and above	College and above	
				No control	Control policies
	(1)	(2)	(3)	(4)	(5)
Panel A. *CGSS dataset*					
Exposure to HAGC	-0.028	-0.008	-0.025	-0.144***	-0.144***
	(0.074)	(0.035)	(0.066)	(0.038)	(0.038)
Dependent-variable mean	2.371	0.879	0.478	0.224	0.224
Observations	5,302	6,630	6,630	6,622	6,622
Panel B. *CFPS dataset*					
Exposure to HAGC	-0.033	-0.012	0.088	-0.104*	-0.110*
	(0.062)	(0.051)	(0.060)	(0.062)	(0.063)
Dependent-variable mean	2.215	0.819	0.438	0.193	0.194
Observations	2,752	4,628	4,257	3,417	3,402
Controls	✓	✓	✓	✓	✓
2007 Predetermined # cohort	✓	✓	✓	✓	✓
FEs	✓	✓	✓	✓	✓
Province-cohort trend	✓	✓	✓	✓	✓

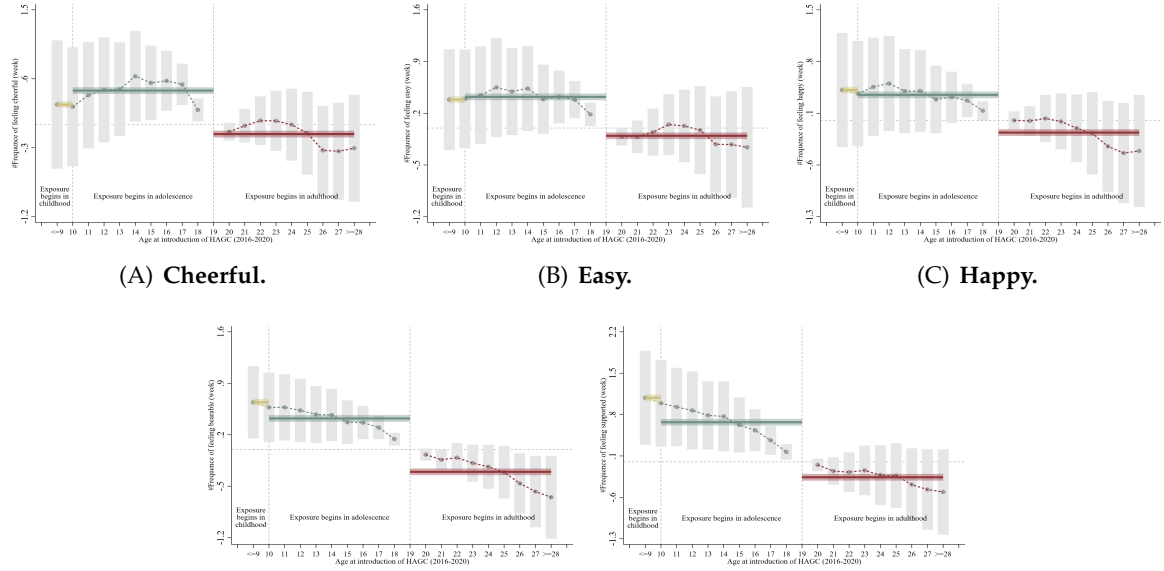
Notes: Table D3 demonstrates the results of cohort-level differential exposure to HAGC on educational achievement. Panels A, B, and C uses data from CGSS and CFPS. The sample consists of respondents with rural *hukou* during HAGC policy. All the regressions use DID specification in Equation 2. The dependent variables from column (1) to (4) are education year (logged) and different qualification dummy variables. The column (5) additionally controls the density of prefectural primary school density when the respondent entered primary school and the dummy variable of whether the respondent was affected by the Curriculum Reform to eliminate interference. In Panel A, samples are restricted to respondents aged not less than 22/12/15/18 years old respectively to ensure that they had gone through the initial stage of relevant academic qualifications (respondents answer the highest degree they have completed), while in Panel B and C, samples are restricted to respondents aged not less than 25/15/18/22 years old respectively to ensure that they had gone through the completion stage of relevant academic qualifications (respondents answer the highest degree they have studies). All regressions include individual-level controls, predetermined prefectural-level characteristics interacted with cohort FE, same FEs as Table 1, and province-cohort-specific linear trend. Robust standard error is clustered at the county level. ***$p < 0.01$, **$p < 0.05$, *$p < 0.1$.

TABLE D4 More on Mechanism: Relationship between Cognitive Outcomes and College (or above) Qualification

Dependent variable:	College (or above) qualification							
	Math test		Word test		Memory test		Numerical test	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A. *Raw data*								
Test scores (raw)	0.01128***	0.00811***	0.00582***	0.00358***	0.00784***	0.00499***	0.00104***	0.00083***
	(0.00118)	(0.00093)	(0.00077)	(0.00053)	(0.00160)	(0.00111)	(0.00016)	(0.00014)
Independent-variable mean	13.220	13.219	23.585	23.583	10.981	10.975	521.540	521.531
Independent-variable std	5.671	5.671	7.919	7.920	3.317	3.316	33.718	33.693
Panel B. *Standardized data*								
Test scores (standardized)	0.065***	0.047***	0.047***	0.029***	0.027***	0.017***	0.034***	0.027***
	(0.007)	(0.005)	(0.006)	(0.004)	(0.005)	(0.004)	(0.005)	(0.005)
Controls		✓		✓		✓		✓
2007 Predetermined # cohort		✓		✓		✓		✓
FEs		✓		✓		✓		✓
Province-cohort trend		✓		✓		✓		✓
Dependent-variable mean	0.061	0.061	0.061	0.061	0.074	0.074	0.082	0.081
Observations	14,010	14,003	14,010	14,003	6,951	6,937	6,302	6,287

Notes: Table D4 reports the relationships between cognitive test scores and college (or above) qualification. The data is drawn from CFPS. The sample consists of respondents with rural *hukou* during HAGC policy. The dependent variable is college (or above) qualification dummy. The independent variables from column (1) to column (8) are math, word, memory, and numerical test, respectively. The control variables, fixed effects, and province-specific linear trends are the same as in Table 1. Robust standard error is clustered at the county level. ***$p < 0.01$, **$p < 0.05$, *$p < 0.1$.

D.3 Less Emotional Aggrievement



(A) **Cheerful.** (B) **Easy.** (C) **Happy.**

(D) **Resilient.** (E) **Supported.**

FIGURE D3 More on Mechanism: Long-term Effects of HAGC on Specific Emotions by Age at First Exposure.

Notes: Figure D3 reports the event-study coefficients of HAGC on long-term specific emotional indicators. The data is drawn from CFPS. The sample consists of respondents with rural *hukou* during HAGC policy. All the regressions use event study specification in Equation 4. The dependent variable is the frequency of feeling this emotion weekly, respectively ranked as 1-4 and standardized by birth year. The control variables, fixed effects, and province-specific linear trends are the same as in Table 1. Robust standard error is clustered at the county level. Bin shows the 90% confidence interval.

TABLE D5 More on Mechanism: Effects of HAGC on General Emotion Indicators

Dependent variable:	CES-D score and positive emotion index					
Standardized by:	No	All	Cohort	No	All	Cohort
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A. *CES-D score*						
	8-question, 32-scale			20-question, 80-scale		
Exposure to HAGC	-2.454***	-0.356***	-0.356***	-1.241***	-0.351***	-0.367***
	(0.865)	(0.126)	(0.125)	(0.438)	(0.124)	(0.128)
Dependent-variable mean	32.742	0.081	0.089	13.339	0.020	0.022
Observations	7,671	7,671	7,671	7,666	7,666	7,666
Panel B. *Positive emotion index*						
	Weekly			Monthly		
Exposure to HAGC	0.543***	0.246***	0.251***	0.643**	0.226**	0.246**
	(0.203)	(0.092)	(0.093)	(0.259)	(0.091)	(0.096)
Dependent-variable mean	17.602	-0.077	-0.079	22.306	-0.029	-0.013
Observations	12,485	12,485	12,485	4,125	4,125	4,125
Controls	✓	✓	✓	✓	✓	✓
2007 Predetermined # cohort	✓	✓	✓	✓	✓	✓
FEs	✓	✓	✓	✓	✓	✓
Province-cohort trend	✓	✓	✓	✓	✓	✓

Notes: Table D5 illustrates the long-term effect of HAGC exposure on general emotions. The data is drawn from CFPS. The sample consists of respondents with rural *hukou* during HAGC policy. All the regressions use DID specification in Equation 2. The dependent variables in panel A and B are CES-D scores and positive emotion indices with different standardization, respectively. For more about the measurement and construction of CES-D scores, see subsubsection A.2.2. The positive emotion index is derived by summing the frequency (weekly or monthly) of a series of positive emotions. The control variables, fixed effects, and province-specific linear trends are the same as in Table 1. Robust standard error is clustered at the county level. ***$p < 0.01$, **$p < 0.05$, *$p < 0.1$.

TABLE D6 More on Mechanism: Effects of HAGC on Specific Emotions

Dependent variables:	Frequency of feeling specific emotions				
	(1)	(2)	(3)	(4)	(5)
Panel A. *Weekly*					
	Cheerful	Easy	Happy	Resilient	Supported
Exposure to HAGC	0.147**	0.142**	0.092*	0.076**	0.083
	(0.073)	(0.065)	(0.055)	(0.034)	(0.067)
Dependent-variable mean	3.307	3.417	3.479	3.850	3.549
Observations	12,492	12,493	12,492	12,490	12,493
Panel B. *Monthly*					
	Cheerful	Calm	Easy	Attentive	Hopeful
Exposure to HAGC	0.172**	0.225**	0.089	0.071	0.075
	(0.084)	(0.099)	(0.080)	(0.088)	(0.063)
Dependent-variable mean	4.206	4.380	4.493	4.513	4.712
Observations	4,128	4,129	4,128	4,129	4,127
Controls	✓	✓	✓	✓	✓
2007 Predetermined # cohort	✓	✓	✓	✓	✓
FEs	✓	✓	✓	✓	✓
Province-cohort trend	✓	✓	✓	✓	✓

Notes: Table D6 reports the long-term effects of HAGC exposure on specific emotions. The data is drawn from CFPS. The sample consists of respondents with rural *hukou* during HAGC policy. All the regressions use DID specification in Equation 2. The dependent variables are the frequency of feeling different specific emotions (weekly and monthly, ranked with scores 1-4 and 1-5, respectively). The control variables, fixed effects, and province-specific linear trends are the same as in Table 1. Robust standard error is clustered at the county level. ***$p < 0.01$, **$p < 0.05$, *$p < 0.1$.

D.4 Tittytainment, Political Apathy, and Authoritarian Stability

TABLE D7 More on Mechanism: Effects of HAGC on Political Knowledge

Dependent variables:	Political knowledge					
	Index	Question 1	Question 2	Question 3	Question 4	Question 5
	(1)	(2)	(3)	(4)	(5)	(6)
Exposure to HAGC	-0.551***	-0.721***	-0.325*	-0.756**	-0.438**	-0.515**
	(0.155)	(0.272)	(0.168)	(0.292)	(0.211)	(0.242)
Controls	✓	✓	✓	✓	✓	✓
2007 Predetermined # cohort	✓	✓	✓	✓	✓	✓
FEs	✓	✓	✓	✓	✓	✓
Province-cohort trend	✓	✓	✓	✓	✓	✓
Dependent-variable mean	0.381	0.452	0.222	0.394	0.396	0.438
Observations	2,277	2,277	2,277	2,277	2,277	2,277

Notes: Table D7 reports the long-term effects of HAGC on individual political knowledge. The Data is drawn from ISCIU. The sample consists of respondents with rural *hukou* during HAGC policy. All the regressions use DID specification in Equation 2. Questions 1-5 are different questions to access one's level of political knowledge. The dependent variables are a series of binary variables indicating whether respondents answer the question correctly. Question 1 is "How many members are there currently on the Standing Committee of the Political Bureau of the CPC Central Committee?"; Question 2 is "In which year did China officially announce the implementation of the socialist market economic system?"; Question 3 is "In what year was the 18th National Congress of the Communist Party of China held?"; Question 4 is "Who is the current British Prime Minister?"; Question 5 is "China's agricultural tax was abolished during which prime minister's term?"; Index is the average scores of 5 questions. The control variables, fixed effects, and province-specific linear trends are the same as in Table 1. Robust standard error is clustered at the county level. ***$p < 0.01$, **$p < 0.05$, *$p < 0.1$.

TABLE D8 More on Mechanism: Effects of HAGC on Social Network

Dependent variables:	Social network							
	Contact activity				Social quality: agreeability and openness			
	Family		Relative	Friend				
	Have dinner together	Do housework	Contact with relatives	Contact with friends	No distance from others	Tolerate others	Cheerful and sociable	Consider others
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Exposure to HAGC	-0.073	-0.017	-0.210**	-0.017	-0.108	-0.104	-0.095	-0.157
	(0.069)	(0.065)	(0.101)	(0.180)	(0.147)	(0.188)	(0.177)	(0.184)
Controls	✓	✓	✓	✓	✓	✓	✓	✓
2007 Predetermined # cohort	✓	✓	✓	✓	✓	✓	✓	✓
FEs	✓	✓	✓	✓	✓	✓	✓	✓
Province-cohort trend	✓	✓	✓	✓	✓	✓	✓	✓
Observations	16,899	16,384	6,476	2,285	4,203	4,200	4,200	4,199

Notes: Table D7 reports the effects of HAGC on contact. The Data is drawn from CFPS and CGSS (CGSS for column (4) and CFPS for others). The sample consists of respondents with rural *hukou* during HAGC policy. All the regressions use DID specification in Equation 2. The dependent variables at colunm (1), (2) and (4) are the frequencies of having dinner with family members , doing housework, and meeting with friends. The dependent variable in the column (3) is an index composed of the average frequency of four contact behaviors including entertaining, giving gifts, providing help, and chatting with relatives. The dependent variables from colunm (5) to (8) are a series of self-reported personality concerning social contact: feel no distance from others, love to tolerate others, feel cheerful and sociable, and love to consider others. All dependent variables are standardized. The control variables, fixed effects, and province-specific linear trends are the same as in Table 1. Robust standard error is clustered at the county level. ***$p < 0.01$, **$p < 0.05$, *$p < 0.1$.

D.5 More on Alternative Explanations

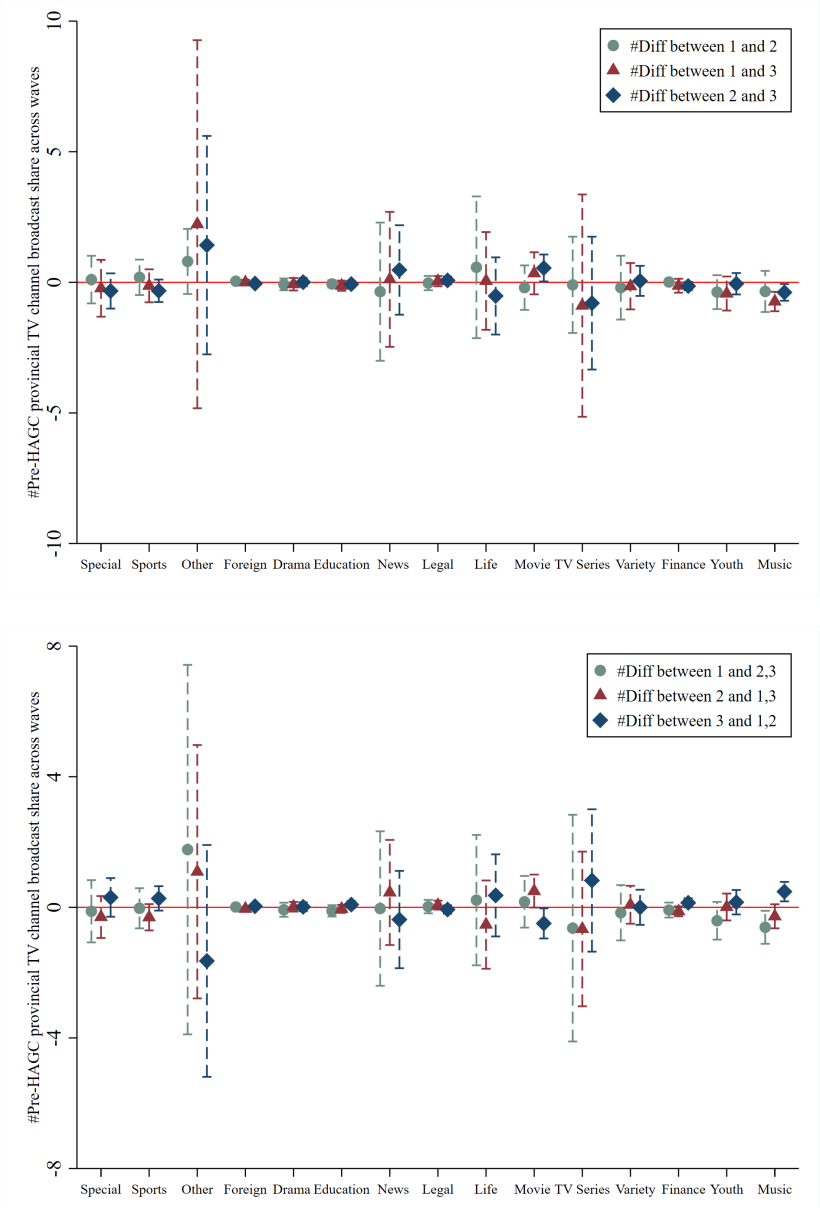


FIGURE D4 Pre-HAGC Provincial TV Broadcast Shares Across Waves.

Notes: Figure D4 shows the pre-HAGC (2007 proxy) prefectural characteristic differences between different HAGC-waves. The data is derived from China Prefecture Statistical Yearbook (2007). The circles, triangles, diamonds, and squares in each panel respectively show the differences of wave 1 and 3, wave 2 and 3, wave 1&2 and 3, wave 1 and 2&3. The dependent variables from panel A to D are socioeconomic factors (GDP, per capita GDP, per capita wage, primary and second sector outputs, industrial enterprise number, population size), educational factors (scientific and educational personnel, entertainment personnel, number of colleges, senior high schools, college teachers, college students), social security and infrastructure factors (unemployment figures, social service personnel, environmental investments, cinemas, hospitals, road area, bus availability, library collections, green areas), and information technology conditions (number/coverage of mobile/Internet users, postal and telecommunication incomes), respectively, all logged where applicable. Robust standard error is clustered at province level. The dashed line represents the 95% confidence interval.

TABLE D9 More on Alternative Explanations: TV Program Broadcast Shares

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Special	Sports	Foreign	Drama	Education	News	Legal
Post HAGC	-0.179	-0.345	0.061	0.008	0.017	0.374	0.211
	(0.373)	(0.341)	(0.071)	(0.040)	(0.069)	(0.825)	(0.123)
Dependent-variable mean	12.029	2.690	0.105	1.019	0.394	13.475	1.086
Observations	367	367	367	367	367	367	367
	Life	Movie	TV Series	Variety	Finance	Youth	Music
Post HAGC	1.154*	-0.110	0.288	0.188	0.357**	-0.050	-0.446
	(0.436)	(0.710)	(1.746)	(0.790)	(0.069)	(0.287)	(0.590)
Dependent-variable mean	8.612	4.000	23.195	8.519	1.871	6.284	2.211
Observations	367	367	367	367	367	367	367
2007 Predetermined # Year	✓	✓	✓	✓	✓	✓	✓
Region-year FE	✓	✓	✓	✓	✓	✓	✓
Province FE	✓	✓	✓	✓	✓	✓	✓

Notes: Table D9 reports the long-term effects of HAGC exposure on individual labor-market performance. The data is drawn from CFPS. The sample consists of respondents with rural *hukou* during HAGC policy and remain in the labor market now. All the regressions use DID specification in Equation 4. The dependent variables in panel A include a labor force participation dummy, wage (logged), an entrepreneurship dummy, International Socio-Economic Index (ISEI) score, Standard International Occupational Prestige Scale (SIOPS) score, a dummy for having subordinates (*Leader*), a dummy for being in a management position(*Management*), and the management level of the current job(*Management Hierarchy*) (with higher values indicating higher positions). The dependent variables in panel B consist of self-reported job satisfaction measures, including general satisfaction, income satisfaction, environment satisfaction, promotion satisfaction, safety satisfaction, and work-time satisfaction, with higher values indicating greater satisfaction. Columns (7) and (8) in panel B focus on self-reported income status and social status, respectively. Control variables, fixed effects, and province-specific linear trends are consistent with those in Table 1. Robust standard errors are clustered at the county level. ***$p < 0.01$, **$p < 0.05$, *$p < 0.1$.

TABLE D10 More on Alternative Explanations: Labor Market Performance

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A. *Objective performance*	Labor force	Earnings	Employment status	Occupation prestige		Job Tier		
	participation	Wage	Entrepreneurship	ISEI score	SIOPS score	Leader	Management	Hierarchy
Exposure to HAGC	-0.008	-0.025	-0.019	-2.368*	-2.305*	-0.032	-0.034	-0.048
	(0.031)	(0.110)	(0.033)	(1.305)	(1.238)	(0.042)	(0.037)	(0.045)
Dependent-variable mean	0.841	7.927	0.128	37.525	39.056	0.132	0.101	0.108
Observations	10,444	4,574	9,582	8,998	8,998	5,770	4,840	4,811
Panel B. *Subjective performance*	Job satisfaction						Self-reported status	
	General	Income	Environment	Promotion	Safety	Work time	Income status	Social status
Exposure to HAGC	0.237***	0.354***	0.242***	0.257*	0.146	0.164	0.276***	0.240**
	(0.081)	(0.103)	(0.092)	(0.144)	(0.109)	(0.112)	(0.088)	(0.112)
Dependent-variable mean	3.392	3.217	3.461	3.159	3.654	3.396	2.699	2.779
Observations	9,149	9,146	9,146	5,902	9,145	9,146	9,667	9,950
Controls	✓	✓	✓	✓	✓	✓	✓	✓
2007 Predetermined # cohort	✓	✓	✓	✓	✓	✓	✓	✓
FEs	✓	✓	✓	✓	✓	✓	✓	✓
Province-cohort trend	✓	✓	✓	✓	✓	✓	✓	✓

Notes: Table D10 reports the long-term effects of HAGC exposure on individual labor-market performance. The data is drawn from CFPS. The sample consists of respondents with rural *hukou* during HAGC policy and remain in the labor market now. All the regressions use DID specification in Equation 4. The dependent variables in panel A include a labor force participation dummy, wage (logged), an entrepreneurship dummy, International Socio-Economic Index (ISEI) score, Standard International Occupational Prestige Scale (SIOPS) score, a dummy for having subordinates (*Leader*), a dummy for being in a management position(*Management*), and the management level of the current job(*Management Hierarchy*) (with higher values indicating higher positions). The dependent variables in panel B consist of self-reported job satisfaction measures, including general satisfaction, income satisfaction, environment satisfaction, promotion satisfaction, safety satisfaction, and work-time satisfaction, with higher values indicating greater satisfaction. Columns (7) and (8) in panel B focus on self-reported income status and social status, respectively. Control variables, fixed effects, and province-specific linear trends are consistent with those in Table 1. Robust standard errors are clustered at the county level. ***$p < 0.01$, **$p < 0.05$, *$p < 0.1$.

TABLE D11 More on Alternative Explanations: Preferences for TV Programs

Dependent variable:	The level of Preferences for TV programs				
	(1)	(2)	(3)	(4)	(5)
Panel A.					
	Entertainment	Soap opera	Historical drama	Theater and opera	Action, horror etc. movie
Exposure to HAGC	1.232***	1.773***	2.082***	0.686	0.695
	(0.464)	(0.573)	(0.649)	(0.825)	(0.537)
Dependent-variable mean	3.451	3.375	3.499	3.559	2.939
Observations	2,277	2,277	2,277	2,277	2,277
Panel B.					
	Science and education	Documentary	Sport	Political and social news	Current affair commentary
Exposure to HAGC	-0.086	-0.867	-0.933*	-1.292**	-0.934*
	(0.652)	(0.545)	(0.490)	(0.635)	(0.488)
Dependent-variable mean	3.255	2.949	3.167	2.531	2.533
Observations	2,277	2,277	2,277	2,277	2,277
Controls	✓	✓	✓	✓	✓
2007 Predetermined # cohort	✓	✓	✓	✓	✓
FEs	✓	✓	✓	✓	✓
Province-cohort trend	✓	✓	✓	✓	✓

Notes: Table D11 reports the long-term effects of HAGC exposure on one's choice of viewing different kinds of TV programs. The Data is drawn from ISCIU. The sample consists of respondents with rural *hukou* during HAGC policy. All the regressions use DID specification in Equation 2. The dependent variables are preferences for different TV programs (scores 1-4). The control variables, fixed effects, and province-specific linear trends are the same as in Table 1. Robust standard error is clustered at the county level. ***$p < 0.01$, **$p < 0.05$, *$p < 0.1$.