

## Curriculum & Ideology

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# Motivation

- ▶ Where do our preferences, beliefs, attitudes, and norms come from?
  - ▶ Past experiences
  - ▶ Transmission of attitudes, cultures, and norms can occur in different ways — vertical, horizontal, oblique transmission
- ▶ Scholars across the social sciences have pointed to the role of schooling in shaping political attitudes
  - ▶ For example, Dewey (1916), Lipset (1959), Freire (1970), Bowles and Gintis (1976), Lott (1999), Alesina and Reich (2013)

# Motivation

- ▶ Historically, governments have tried to use schooling content to shape attitudes and beliefs:
  - ▶ “Peasants to Frenchmen”
  - ▶ Nazi education in the Third Reich
  - ▶ CCP attempts to introduce “moral and national” curriculum in Hong Kong
- ▶ It is extremely difficult to identify any *causal effect* of educational content on ideology or preferences
  - ▶ Recent related work by Friedman et al. (2011) and Clots-Figueras and Masella (2012)

# Our project

- ▶ We study the impact of China's 8th Textbook Reform: a high school curriculum reform in China that occurred between 2004 and 2010
  - ▶ New curriculum introduced in a sharp, staggered way across cohorts and provinces
  - ▶ Authoritarian regime with imperfect control over information

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- ▶ We study the impact of China's 8th Textbook Reform: a high school curriculum reform in China that occurred between 2004 and 2010
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- ▶ We formulate hypotheses about the expected impact of the reform based on:
  - ▶ Official government documents
  - ▶ Changes across textbook editions
  - ▶ Changes in the *gaokao* (high-stakes college entrance exam) framework

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  - ▶ Changes in the *gaokao* (high-stakes college entrance exam) framework
- ▶ We test for an impact of the new curriculum on political attitudes by analyzing responses to a survey we conducted with Peking University undergraduates

## Preview of results

- ▶ Using a diff-in-diff design, we find significant effects of the new curriculum on students' views of:
  - ▶ Chinese *governance*; e.g., greater trust in officials
  - ▶ China's *political institutions*; e.g., viewing China as more democratic
  - ▶ *Economic institutions*; greater skepticism toward markets
- ▶ On the other hand, no significant effects on students':
  - ▶ Ethnic or national *identity*
  - ▶ Attitudes toward the *environment*
- ▶ Effects on *behavior* mixed

# Outline

1. China's 8th curriculum reform
2. Survey of Peking University students
3. Empirical analysis
4. Discussion



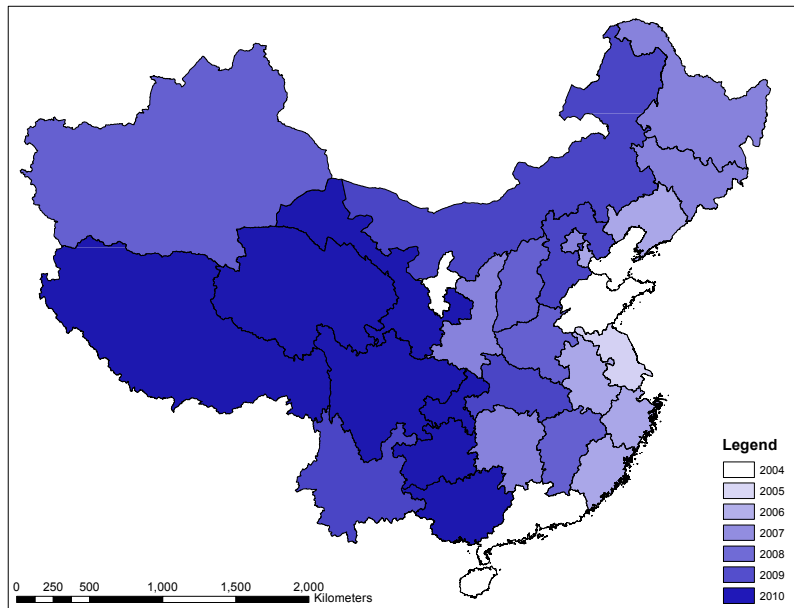
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# The Chinese secondary education system

- ▶ Textbook reform affects curriculum of senior high school (grades 10–12)
- ▶ We focus on the Politics curriculum
- ▶ (Almost) every province updated from the same old version of the textbook to the same new version — no partial treatment
- ▶ All students examined on Politics material as part of the college entrance process
  - ▶ Differing stakes depending on track – science or humanities

## Staggered introduction of the new curriculum



# The political backdrop

- From the chair of the committee in charge of writing the new Politics textbook:

*The Politics textbook is the spiritual material that the country provides for the students. Writing the Politics textbook is an act at the state level, rather than an academic activity of the individual author. Although the high school Politics textbook teaches very basic knowledge, it possesses extremely strong political, policy-oriented, and scientific characteristics. With a large readership, it will influence an entire generation of young people.*

# Identifying political aims of the reform

We consulted:

- ▶ Government documents from the State Council and the Ministry of Education
- ▶ Old and new versions of *Economic Life* and *Political Life* textbooks
- ▶ Old and new *gaokao* frameworks

## Political aims of the reform

We identify the following broad goals:

1. Students should learn about the importance of the rule of law for legitimizing the Chinese government
2. Students should learn about Chinese (socialist) democracy and political participation
3. Students should understand and appreciate Chinese (non-market) economic institutions
4. Students should develop an appreciation for traditional Chinese ethnic heritage
5. Students should be conscious of environmental issues

## Qualitative evidence on changes in content: governance

From a new section titled, “Where does government’s authority come from?” (p. 49 of *Political Life*):

*Where does the Chinese government’s authority manifest itself? A government with authority must be a government under the rule of law. It guards the ultimate authority of the constitution and the legal system, and hence protects people’s fundamental rights and benefits.*

## Qualitative evidence on changes in content: economic institutions

The old curriculum (in *deleted* section titled “General characteristics of a market economy”) described markets as:

- ▶ “equal (or just)”
- ▶ “competitive”
- ▶ “open”



## Qualitative evidence on changes in content: economic institutions

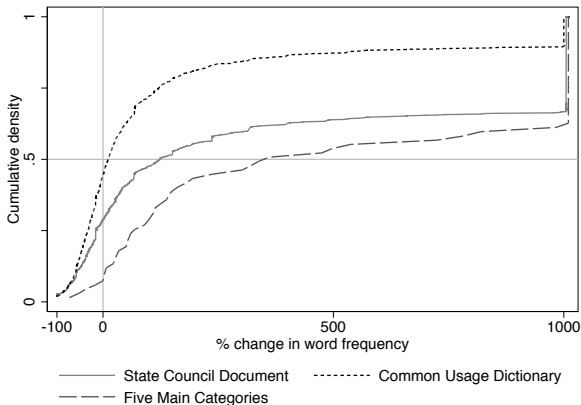
The old curriculum (in *deleted* section titled “General characteristics of a market economy”) described markets as:

- ▶ “equal (or just)”
- ▶ “competitive”
- ▶ “open”

The new curriculum states (p. 81 of *Economic Life*):

*[A]llowing markets alone to allocate resources will lead to inefficiency and waste, as well as socioeconomic instability. Market functioning alone can also result in economic fluctuations and chaos, unfair redistribution, widening income gaps, and even cause severe polarization.*

# Quantitative evidence on changes in content



Example: “election” increases in raw count from 2 to 120 across curricula

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## Survey overview

- ▶ Web survey with Peking University (Beida) undergraduate students conducted in April and May 2013
- ▶ Participants were paid an average of 58 RMB (\$9), plus sweepstakes for Apple products
- ▶ All students emailed, nearly 2,000 completed surveys, for a response rate around 19% — low, but not atypical for large, web-based surveys (Shih and Fan, 2008)
  - ▶ Crucially, *no* differential response by treatment status
- ▶ In a second wave (June–July 2014), we conducted paper and pencil surveys with in-person recruitment ( $\approx 350$  complete surveys; 78% response rate)

# Data collected

We have six outcome categories of interest:

1. Governance
  - ▶ Trust in government officials; views on civic-mindedness of officials and bribery
2. Views on political institutions
  - ▶ Perceptions of Chinese democracy; views on the wisdom of the masses; characteristics of democracy
3. Views on economic institutions
4. Identity
  - ▶ Ethnic identity, and Chinese national identity
5. Attitudes toward the environment
6. Behavior
  - ▶ Political behavior, economic behavior, and cooperation with minorities

## Adjusting for multiple inference

- ▶ We adjust our inferences to take into account the risks of testing of multiple hypotheses following Anderson (2008):
  - ▶ Aggregate all single outcomes into indices for subcategories (sum of individual, standardized outcomes, weighted by the inverse of the covariance matrix)
  - ▶ Calculate p-values based on the false discovery rate (FDR) procedure
- ▶ We also show effects of the new curriculum on every single survey question in the appendix

# Interpreting the survey responses

- ▶ Do students just try to provide the “right answer”?
  - ▶ Questions not asked in a manner similar to test questions
  - ▶ No priming related to the textbooks/curriculum
  - ▶ Large amount of variation in responses
  - ▶ Movement *away from* the mode in many cases

# Interpreting the survey responses

- ▶ Do students under the new curriculum simply learn that certain views have become acceptable?
  - ▶ Questions were not asked about sensitive/taboo issues (see also King et al., 2013, on patterns Chinese government censorship online)
  - ▶ Beida students known to express opinions relatively freely
  - ▶ Risk averse respondents *do not* show different patterns
- ▶ Changed views of what is acceptable to say important in an environment in which political speech is constrained



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# Empirical specification: Regression analysis

- ▶ We estimate a standard difference in differences model with cohort and province fixed effects ( $\gamma_c$ ,  $\delta_p$ ):

$$y_{icp} = \sum_c \gamma_c + \sum_p \delta_p + \beta \text{NewCurriculum}_{cp} + \varepsilon_{icp}$$

- ▶ We make inferences using:
  - ▶ standard errors clustered by province $\times$ cohort
  - ▶ p-values from implementing wild bootstrap (Cameron et al., 2008), allowing for errors correlated within-province
- ▶ Threats to identification would have to be province $\times$ time-varying shocks *affecting cohorts differentially*

# Threats to identification

- ▶ Province-specific characteristics (openness, income levels. . . ) are absorbed by province fixed effects; cohort-specific characteristics absorbed by cohort fixed effects
- ▶ Potential time-varying, province-specific shocks, e.g.:
  - ▶ Introduction of village head elections
  - ▶ Differential rates of income growth
  - ▶ . . .are a concern only if they affect cohorts in a differential manner (e.g., the high school entry cohort of 2008 differently from the entry cohort of 2009)
- ▶ Smoothly varying province $\times$ cohort-varying shocks can be controlled for with province-specific cohort trends

## Summary statistics

- Balance, conditioning on cohort and province fixed effects:

Variable	All		Old Curr.	New Curr.	$\hat{\beta}_{\text{Newcurr}}$	p-value
	Mean	Std.Dev.	Mean	Mean		
Age	20.5	1.4	21.1	20.1	-0.1	0.228
Height	169.7	8.2	169.3	169.8	0.1	0.949
Female	0.457	0.498	0.441	0.467	-0.03	0.523
# of siblings	0.4	0.81	0.473	0.369	-0.022	0.727
Urban	0.789	0.408	0.772	0.787	0.022	0.533
Father high edu.	0.791	0.407	0.779	0.79	0.041	0.195
Mother high edu.	0.732	0.443	0.696	0.741	0.048	0.155
Parents in CCP	0.54	0.499	0.544	0.542	0	0.996
Han	0.919	0.273	0.901	0.923	0.006	0.791
New curriculum	0.683	0.465	0	1	—	—

Number of observations: 1954; 619 (old curriculum); 1335 (new curriculum).

# Presenting results for individual survey questions

We present our results using dot plots:

- ▶ Outcomes coded so that more positive numbers indicate the Chinese government's desired attitudes
  - ▶ Outcomes also standardized for ease of presentation
- ▶ We plot the coefficient estimates on *NewCurriculum* from the baseline specification and 95% CI's based on standard errors clustered at province $\times$ cohort level
  - ▶ We show the absolute value graphically and indicate the sign in brackets (and by varying symbol)
  - ▶ p-values in parentheses based on FDR adjustment within-category
  - ▶ z-score indices also constructed within-category

# Question wording: Governance

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**Category: Governance**

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**Panel A: *Trust in government officials***

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- A.1–6 Describe your level of trust in the following institutions: (1 = complete distrust; 5 = complete trust)
- A.1 Central government
  - A.2 Provincial government
  - A.3 Local government
  - A.4 Courts
  - A.5 Armed forces
  - A.6 Police
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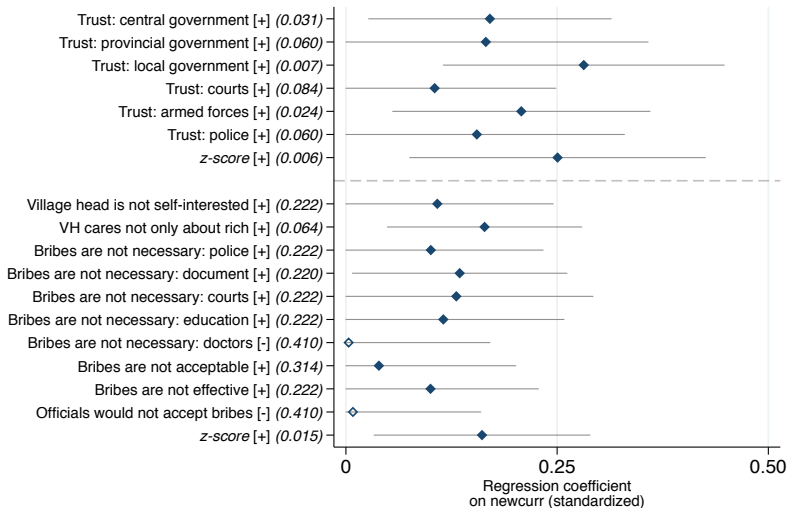
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**Panel B: *Bribery and civic-mindedness***

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- B.1 Village heads put their own interest before those of people. (1 = fully agree; 5 = fully disagree)
  - B.2 Village heads care primarily about the powerful and rich people, and neglect the interests of ordinary people. (1 = fully agree; 5 = fully disagree)
  - B.3–7 In your opinion, how often is it necessary for people like you to have to make unofficial payments/gifts in these situations: (1= always; 5=never)
    - B.3 Interacting with the traffic police?
    - B.4 Requesting official documents (such as passport or birth certificate)?
    - B.5 Interacting with the civil courts?
    - B.6 Interacting with the providers of primary or secondary education?
    - B.7 Interacting with doctors?
  - B.8 Do you think that paying a bribe is an acceptable way to accomplish something? (1 = no)
  - B.9 Do you think that paying a bribe is an effective way to accomplish something? (1 = no)
  - B.10 From the perspective of local government officials, do you think they would accept bribe when it is offered to them? (1 = no)
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# Governance



# Question wording: Political institutions

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**Category: Political Institutions**

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**Panel C: *Perception of Chinese democracy***

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- C.1 Where would you place our country under the present government? (1 = completely undemocratic; 10 = completely democratic)
- C.2 In reality, ordinary people are able to influence who becomes the village head. (1 = totally disagree; 5 = fully agree)
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**Panel D: *Wisdom of the masses***

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- D.1 Ordinary people can judge who would make a better village head. (1 = fully agree; 5 = fully disagree)
- D.2 Theoretically speaking, ordinary people should be able to influence the decision of who becomes the village head. (1 = fully agree; 5 = fully disagree)
- D.3 Ordinary people know clearly which leader is doing a better job. (1 = fully agree; 5 = fully disagree)
- D.4 Democracy (choose one): (a) Democracy is preferable to any other form of political system; (b) Under some circumstances, an authoritarian government may be preferable to a democratic one; (c) For people like me, it does not matter whether a government is democratic or authoritarian. (1 = chooses (b) or (c); 0 = otherwise)
- D.5 Here is a similar scale of 1 to 10 measuring the extent to which people think democracy is suitable for our country. If "10" means that democracy is completely unsuitable for China today and "1" means that it is completely suitable, where would you place our country today?
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**Panel E: *Characteristics of democracy***

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- E.1 Which of the following do you think are characteristics of a democracy? (1 = "People's participation in the political process" listed first; 0 = otherwise)
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# Question wording: Economic institutions

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**Category: Economic Institutions**

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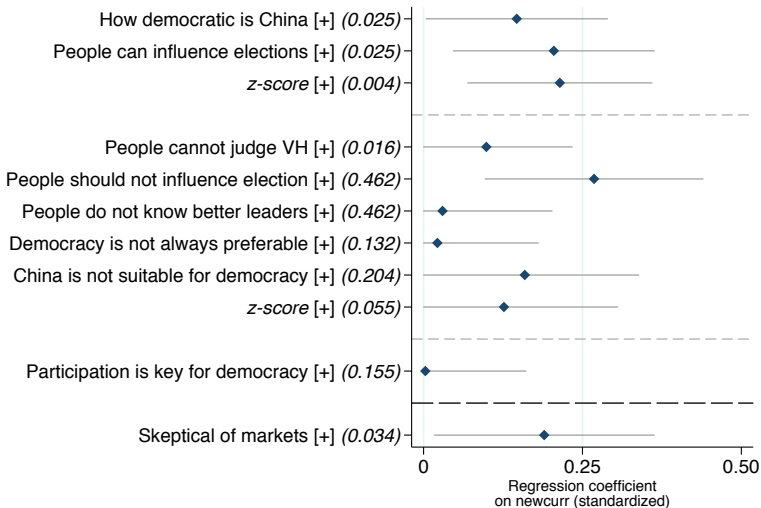
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**Panel F: *Skeptical of markets***

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- From the following statements on a market economy, choose one that you agree with the most: (a) A market economy is preferable to any other form of economic system; (b) For people like me, it does not matter whether the economic system is organized as a market economy or as a planned economy; (c) Under some circumstances, a planned economy may be preferable to a market economy. (1=chooses (b) or (c); 0=otherwise)
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# Political and economic institutions



# Question wording: Identity

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**Category: Identity**

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**Panel G: *Ethnic identity***

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- G.1 Generally speaking, would you say that people in minority groups can be trusted, or that you cannot be too careful in dealing with them? (1 = cannot be too careful; 5 = completely trustworthy)
- G.2 China is a country made up of multiple ethnic groups. Which one of the following statements regarding ethnic minority groups do you agree with more? (a) Compared to Han Chinese, ethnic minority groups are relatively independent groups. (coded as 0) (b) Ethnic minority groups are the same as Han Chinese, and they are all Chinese people. (coded as 1)
- G.3 China is a country made up of multiple ethnic groups. Which one of the following statements regarding ethnic minority groups do you agree with more? (a) Ethnic minority groups share the same historic heritage and cultural traditions as the Han Chinese. (coded as 1) (b) Ethnic minority groups have different historic heritage and cultural traditions from the Han Chinese. (coded as 0)
- G.4 Can you imagine yourself marrying a member of a different ethnic group in the future? (1 = yes)
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**Panel H: *National identity***

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- H.1 Where would you place your identity on a spectrum, with being Chinese on one end (5) and being a world citizen on the other end (1)
-

# Question wording: Environment

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**Category: Environment**

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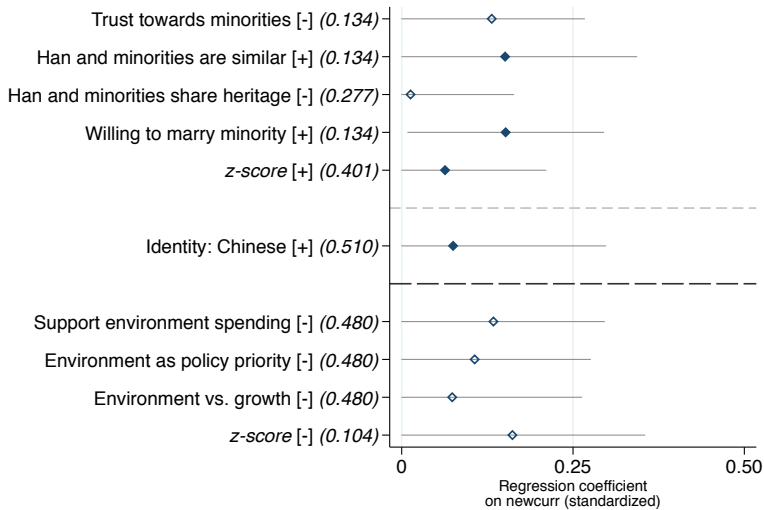
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*Panel I: Attitudes about environment*

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- I.1 Would you be willing to give part of your income or pay more taxes, if you were sure that the extra money was used to protect the environment? (1 = yes)  
People often talk about what the goals of this country should be for the next ten years. Listed below are some common goals for a nation. Please pick the one that you consider as primary for a nation. (a) a high level of economic growth; (b) maintaining economic stability; (c) maintaining order in the nation; (d) giving people more say in important government decisions; (e) protecting the environment. (1=chooses (e); 0=otherwise)
- I.2 Here are two statements people sometimes make when discussing the environment and economic growth. Which of them comes closer to your own point of view? (a) Protecting the environment should be given priority, even if it causes slower economic growth and some loss of jobs. (b) Economic growth and creating jobs should be the top priority, even if the environment suffers to some extent. (1=chooses (a); 0=otherwise)
- I.3
-

# Identity and environment



# Question wording: Behavior

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**Category: Behavior**

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**Panel J: *Political behavior***

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- J.1 I have voted for local (county or district) People's Congress representatives before. (1 = yes)
  - J.2 I plan to vote for local (county or district) People's Congress representatives. (1 = yes)
  - J.3 Are you a CCP member, or reserved member of the CCP? (1 = yes)
  - J.4 Have you ever participated in political groups other than CCP and Communist Party Youth Organization? (1 = yes)
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**Panel K: *Avoiding risky investment***

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- K.1–2 Have you had the following investment experiences before? (Choose all that apply)
  - K.1 Stocks. (1 = no)
  - K.2 Bonds. (1 = no)
- 

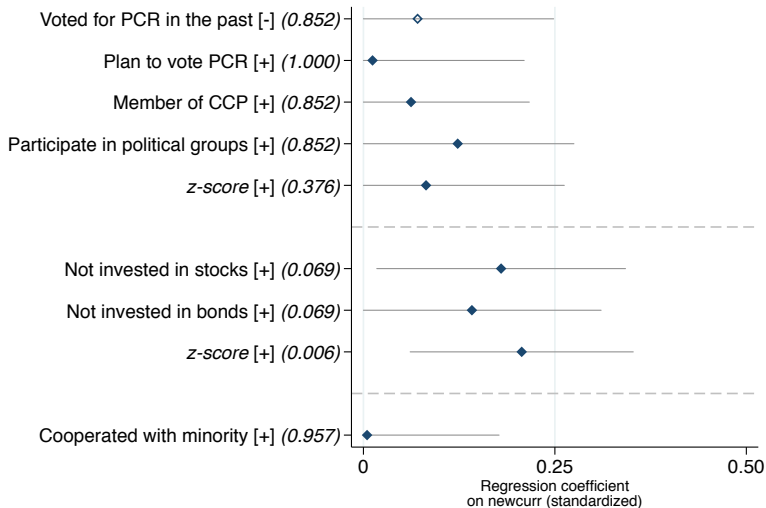
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**Panel L: *Cooperation with minority***

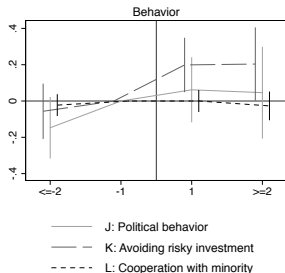
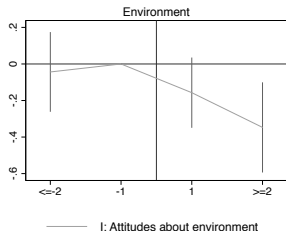
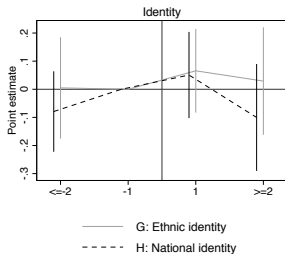
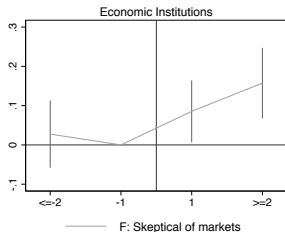
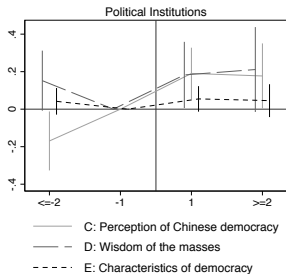
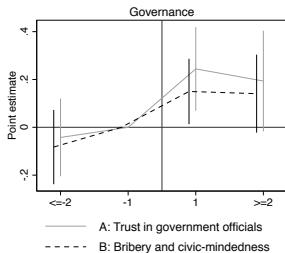
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- L.1 Have you worked with minority group students at school before (in study groups or class projects)? (1 = yes)
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# Behavior



# Cohort-by-cohort effects





# Robustness checks

Different econometric specifications and controls; among others:

- ▶ Allowing error terms to be correlated at the province level
- ▶ Including province $\times$ cohort-varying controls for province income, educational spending, and political transitions
- ▶ Including province-specific, cross-cohort trends
- ▶ Estimating a balanced “short panel”: cohorts just before and just after curriculum change

## Concerns about selection

Was there selection into the survey that might bias our results?

- ▶ Observables balanced across curricula (conditional on province and cohort  $fe$ 's)
- ▶ No differential response rates by province $\times$ cohort cell (an insignificant 2% difference)
- ▶ Results from follow-up survey quite similar to main survey

Was there differential selection into Beida associated with the new curriculum?

- ▶ We examine science-track HS students:
  - ▶ Admission to Beida less dependent on concordance of political attitudes and curriculum studied
  - ▶ We find very similar effects to the overall sample

## Effects on actual behavior

What to make of mixed evidence on behavioral outcomes?

Certainly, Beida students' political behavior constrained

- ▶ Evidence from Asian Barometer survey in China can help predict the magnitude of behavioral changes
- ▶ Out of sample prediction: curriculum change could make students 15–20% less likely to attend a demonstration or refuse to pay taxes

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# Implications

- ▶ Evidence of a state *causing* attitude change via school curriculum
  - ▶ Despite incomplete control over information
  - ▶ Despite Chinese (especially Beida) students' understanding of the incentives shaping educational content
- ▶ Indicates one mechanism of attitude change (and potentially a mechanism for persistence)
- ▶ Suggests that the provision of schooling be considered with political economy of educational content in mind