Curriculum and Ideology

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Abstract

We study the causal effect of school curricula on students' stated beliefs and attitudes. We exploit a major textbook reform in China that was rolled out between 2004 and 2010 with the explicit intention of shaping youths' ideology. To measure its effect, we present evidence from a novel survey we conducted among 2000 students at Peking University. The sharp, staggered introduction of the new curriculum across provinces allows us to identify the effects of the new educational content in a generalized difference in differences framework. We examine government documents articulating desired consequences of the reform, and identify changes in textbook content and college entrance exams that reflect the government's aims. These changes were often effective: study under the new curriculum is robustly associated with changed views on political participation and democracy in China, increased trust in government officials, and a more skeptical view of free markets.

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1 Introduction

Beliefs, attitudes, and ideology play a fundamental role in human societies: they shape interactions within social networks and in markets; they shape political institutions and policy choices. People's attitudes are formed by a variety of sources: they are transmitted from parents to children (vertical transmission); from peer to peer (horizontal transmission); from third parties, such as media, experts, or the state (oblique transmission); and, they arise from individual experiences.[1] The influence of education on attitudes has also been widely studied across the social sciences, but without an established body of clear, causal evidence of its effects.

In this paper, we use novel survey evidence to study the causal effect of school curricula on students' beliefs and attitudes, examining the impact of a new high school political science curriculum that was introduced by the Chinese Communist Party between 2004 and 2010 with the explicit intention of shaping students' ideology. The State Council (the highest administrative body in the Chinese government) and the Ministry of Education issued documents articulating the government's objectives for the new political science curriculum: among these were teaching students about Chinese democratic institutions; emphasizing the adherence of the Chinese government to the rule of law; expounding on the "Three Represents" ideology; cultivating in students a traditional national identity that bridged ethnic groups; teaching students about China's unique economic development path; and, promoting increased concern for the environment. We document the Chinese government's aims in undertaking the curriculum reforms and, based on a thorough reading of political science textbooks, identify a set of specific changes to the high school politics curriculum that reflect the aims of the Chinese government. We describe changes in textbook content across curricula, and changes in the high-stakes college entrance exams (*gaokao*) associated with the old and new curricula.

The curriculum reform we study offers a particularly promising setting in which to estimate the causal effect of educational content on students' beliefs and attitudes. Between 2004 and 2010, the new curriculum (the "8th Curriculum Reform") was sharply introduced to entering cohorts of high school students (but not to older students) in a staggered manner, with different provinces adopting the new curriculum in different years. We test for an impact of studying under the new curriculum by analyzing the responses to a novel survey we conducted with nearly 2,000 Peking University undergraduate students. The survey was designed to elicit students' *attitudes* rather than test their ability to memorize their high school curricula: we specifically ask students questions in a manner that does not look like a series of examination questions.[2] Our survey

[1] Vertical transmission has received considerable attention, for example Bisin and Verdier (2001). Peers' influence on beliefs has been studied by Sacerdote (2001) and Sacerdote (2011). DellaVigna and Kaplan (2007) and DellaVigna et al. (forthcoming) study the influence of the media on ideological views; Alesina and Fuchs-Schündeln (2007) study the effects of growing up in a Communist system on policy preferences later in life. Di Tella et al. (2007), Giuliano and Spilimbergo (2013), Malmendier and Nagel (2011), and Rao (2013) study the role of individuals' experiences in shaping attitudes and beliefs.

[2] We discuss the interpretation of students' responses to our survey questions in more detail below. It is also worth

allows us to measure the beliefs and attitudes of four cohorts of Chinese students, who entered high school between 2006 and 2010, drawn from 29 Chinese provinces.

We apply a generalized difference in differences framework to test whether students who studied under the new curriculum do, in fact, express different views from those who studied under the old curriculum. We find that the new curriculum was often successful in changing students' preferences and beliefs regarding important issues: controlling for province and cohort fixed effects (and, in various specifications, a range of other controls), students who were exposed to the new curriculum were more likely to view China's political system as democratic; were more likely to trust government officials; favored extending political influence to groups outside the CCP (in line with the "Three Represents"); and, were more likely to view an unconstrained market economy with skepticism. We do not find that the new curriculum changed Han Chinese students' attitudes toward minorities (though minorities view themselves as somewhat more Chinese); nor did the new curriculum cause students to favor policies protecting the environment, perhaps because these can be seen as opposed to economic growth—another high priority of the government. We find quantitatively large persuasion rates: around 20% of students who would not have held the government's desired views in the absence of exposure to the new curriculum are estimated to change their views.

These findings contribute to a vast social science literature on the ability of educational content to shape individuals' beliefs, preferences and political ideology. Prior work ranges across centuries and continents—from studies of the construction of a "national sentiment" through public schooling in 19th century Prussia and France (Weber, 1976) to studies of American schools in the 19th and 20th centuries (Dewey, 1916; Lipset, 1959; Freire, 1970; Bowles and Gintis, 1976), and Communist and Socialist education in the second half of the 20th century (Lott, Jr., 1999).[3] The idea that schooling can be used to mold (more pejoratively, "brainwash") children's views of the their social, economic, and political environment is a powerful one, which resonates across time and space.

Despite this resonance, and despite striking examples of schooling changes being associated with ideological changes (e.g., education in Nazi Germany), it is extremely difficult to determine whether schooling plays a causal role in shaping beliefs or if, instead, changes in curriculum simply coincide with other social, political, or economic changes which themselves shape preferences, perhaps differentially by age. For example, one might wish to study the effects of Nazi education on the attitudes of individuals who were school-aged during the Third Reich. However, observing different attitudes among individuals who studied in Nazi-era schools, one might question

emphasizing that patterns of student responses do not look like responses to examination questions: there is a great deal of variation in responses—students do not concentrate on a single response. For example, the variation in responses to questions about trust in government officials is actually greater within our sample of elite university students than in the more general, AsiaBarometer sample of individuals.

[3]See also Kremer and Sarychev (1998), Spilimbergo (2009), Friedman et al. (2011), Campante and Chor (2012), and Alesina and Reich (2013).

whether the schools themselves affected beliefs, or whether young people in the time of the Third Reich were differentially affected by the environment around them, their parents, the media, and what they observed in their daily lives.

Recently, scholars have begun making progress in identifying the causal effect of education on attitudes and ideology. Friedman et al. (2011) exploit experimental variation in access to additional schooling on Kenyan women's political and social views. Their work identifies an effect of schooling on attitudes, but does not identify the effects of particular *content* on attitudes. Fisman et al. (2009) do study variation in educational content, examining the effects of exposure to economics-oriented faculty at Yale Law School on students' behavior in an incentivized game. Their work exploits random assignment to Law School instructors; one drawback, though, is the small size of the sample, especially when considering the possibility of correlated errors within classes. In a fascinating study of the impact of Catalan education on political attitudes, Clots-Figueras and Masella (2013) exploit variation that is similar to ours—cohort-varying exposure to new educational content—but they lack the sharp variation in educational content across cohorts that we can exploit, and they also lack credible cross-sectional variation with which to address concerns about unobservable cross-cohort differences (their work also studies the combined effect of changes in the language of instruction with changes in content, in a context of broad political change).

By examining sharp province×cohort variation in school curricula, we can plausibly identify the causal effect of educational content on attitudes and ideology (we discuss threats to our identification strategy in detail in Section 4.1). Specifically, our identification strategy allows us to rule out as confounding factors: *(i)* province-specific differences (e.g., levels of development); *(ii)* cohort-specific differences (e.g., broad changes in attitudes across time); *(iii)* province×time varying shocks that affect adjacent cohorts similarly (e.g., natural disasters or province-level political shocks that do not differentially affect children of different ages); and *(iv)* province×time varying shocks that affect adjacent cohorts smoothly (e.g., province-specific trends in economic activity), in our specification that includes province×cohort-specific trends.

In addition to identifying the causal effect of typically endogenous curriculum change, we believe our particular setting is of great interest. The variation in educational content we observe is naturally occurring, introduced on a massive scale by an authoritarian state that explicitly aimed to shape children's views. Whether the Chinese government can shape the views of Chinese children is difficult to know *ex ante*: on the one hand, the Chinese government seems to be very effective in many domains; in addition, Chinese children spend a great deal of their time in school, absorbing information on which they will be tested. On the other hand, students know that the Communist Party disseminates information (school curricula and media) in part driven by political concerns. One might believe that students will thus view the official curriculum with skepticism. The new curriculum might also fail to persuade students because the internet allows students to easily access content that differs from official Party positions. Thus, an important

question in the internet age is whether school curricula can affect ideology even when students know that their curriculum may be shaped by political concerns, and when students have access to information that differs from the party line.

Our findings of Communist Party success in shaping students' views contributes to a growing empirical literature on "persuasion" (DellaVigna and Gentzkow, 2010), much of which has focused on the persuasive effects of media communications (DellaVigna and Kaplan, 2007; Bursztyn and Cantoni, 2012; Yanagizawa-Drott, 2012; DellaVigna et al., forthcoming). Recent work has focused on attempts by authoritarian regimes to shape the views of their citizens (Alesina and Reich, 2013), to which we contribute a study of the role of educational content in shaping ideology. Our findings suggest that alongside other mechanisms of social and political control, political elites, indeed, can shape students' attitudes by choosing the content of the education system.

The paper proceeds as follows: in Section 2, we provide an overview of China's education system, and discuss China's 8th Curriculum Reform, which is the focus of our study. In Section 3, we describe our novel survey of Peking University students, which is our primary data source; we also discuss here what can be learned from direct survey questions in this context. In Section 4, we present our empirical model, discuss the identifying assumptions, and present our main results, including a discussion of statistical inference in a setting in which multiple hypotheses are tested. In Section 5, we provide a discussion of our findings: we first present a variety of robustness and placebo tests that support a causal interpretation of our findings; next, we try to benchmark the magnitudes of our results, comparing the "persuasion rates" we find with those found by other scholars, and also presenting evidence from the AsiaBarometer survey of a significant association between reported attitudes and political behavior; we also discuss the external validity of our results. Finally, in Section 6, we place our findings within the social science literature on the effects of schooling on beliefs, and conclude.

2 China's curriculum reform

The empirical setting we propose to study is China's 8th Curriculum Reform, a nationwide education reform undertaken by the Chinese central government beginning in 2001.[4] Our focus will be the reformed textbooks of senior high school (*gaozhong xinkebiao*) students, corresponding to grades 10–12 in the Chinese educational system (see Figure A.1). For reference, in Appendix A, we briefly describe the structure of the Chinese high school curriculum.

2.1 Government aims, changes in curriculum, and changes in the *gaokao*

An explicit goal of the 8th Curriculum Reform was to shape (or reshape) students' political and social beliefs. In a 2001 document preparing the reform ("Framework for Basic Education Curricu-

[4]The previous, 7th curriculum reform was initiated in 1992.

lum Reform"), the Ministry of Education of the People's Republic of China stated that education should "form in students a correct worldview, a correct view on life, and a correct value system."[5] An author of the new Politics textbooks described the development of the new curriculum as follows:[6]

> We believe that high school students are at an age of rapid development and transformation of their own political ideology. ... 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.

While the 8th Curriculum Reform affected the content of textbooks across the high school curriculum (for example, there was an increase in the discussion of Confucianism in the reformed humanities curriculum), we focus on changes made to the Politics curriculum because it is fundamentally designed for "moral and ideological education."[7] Indeed, the State Council, China's chief administrative authority, issued a memo in 2004 titled "Suggestions on Strengthening the Ideological and Moral Construction of Our Youths," which articulated the government's aims for the reform, and guided the writing of the new Politics textbooks. The memo declared the socialization of young people to be an "important and urgent strategic task," and saw schools as "the primary channel for transmitting ideological and moral education to young people."[8] We consulted the State Council memo, several other government documents, as well as the Ministry of Education's "Curriculum Framework for the Senior High School Politics Subject" to identify important government objectives for the curriculum reform (these documents are described in Appendix B).

To identify specific changes in curriculum content pre- versus post-reform, we performed a comprehensive comparison of the old and new editions of the *Economic Life* and *Political Life* textbooks that made up half of the tenth grade Politics curriculum.[9] The Politics curriculum textbooks are common to all provinces of China, so our analysis was limited to a single set of textbooks for

[5]Translated excerpts from this and other official documents preparing the Curriculum Reform are presented in Appendix B.

[6]See Appendix C for translated excerpts from an essay written by Tian Xinming, chair of the committee in charge of rewriting the Politics textbook. The original text can be found at `http://www.pep.com.cn/sxzz/js/tbjx/kb/jsys/bx1/201008/t20100830_824446.htm`, last accessed February 9, 2014.

[7]Again, see Appendix C for translated excerpts from the essay written by the chair of the committee in charge of rewriting the Politics textbook (original text at `http://www.pep.com.cn/sxzz/js/tbjx/kb/jsys/bx1/201008/t20100830_824446.htm`, last accessed February 9, 2014). Along with changes in the content of the curriculum, there was a desire to change the exam-oriented nature of primary and secondary education through the introduction of new instructional methods. However, this aspect of the reform is acknowledged to have failed, amounting to "wearing new shoes to walk on the old path" (see, for example, Guo, 2010). We examine changes in instructional methods across curricula in further detail in Section 5.

[8]The document is available online at `http://www.people.com.cn/GB/jiaoyu/1053/2405224.html`, last accessed February 9, 2014. See Appendix B for translated excerpts.

[9]The other half of the curriculum is composed of the *Cultural Life* and *Philosophy* textbooks; we felt that these were too nebulous to systematically link to the political objectives of the Chinese government. Images of the covers of old and new Politics curriculum textbooks can be seen in Appendix C.1.

the provinces/cohorts under the new curriculum, and one set for the provinces/cohorts under the old curriculum.[10] While much of the textbooks' content is maintained across editions, some content changed considerably. We identified sections that were entirely new to the reformed textbooks; we also identified sections that were removed from the old curriculum and sections that were extensively revised.

It is important to relate the changes in textbook content to changes in the content of the high-stakes college entrance exam (*gaokao*). The content of the *gaokao* is closely tied to the curriculum students study. Students who studied under the old curriculum were examined based on a *gaokao* framework that included material that was in the old curriculum; students who studied under the new curriculum were examined based on a *gaokao* framework that incorporated the revisions, additions, and deletions of the new curriculum—we extensively cite changes in the *gaokao* framework that match changes in the textbook content, in our empirical analysis, below. The fact that the new content was tested in the *gaokao* indicates that students were highly incentivized to learn it, and teachers were incentivized to teach it. Carnoy et al. (2013, ch. 6) describe the importance of the *gaokao* and the *gaokao* framework (or "syllabi") as follows:

> [T]he college entrance exam in China is a two-day high stakes test whose score largely determines into which college and major a student will be admitted. ... Moreover, the curriculum in Chinese academic high schools is heavily structured around the college entrance exam. This is because most provinces in China release syllabi to high school teachers about what will generally be covered on each year's (provincial-level) exam.

Consistent with the textbook authors' claims that they adhered to the State Council's guidelines in producing the new Politics curriculum, it is clear from our analysis that several sets of striking curriculum changes were consistent with the objectives outlined in the government documents. For example, the government documents repeatedly emphasize teaching students about "socialist democracy." The new curriculum includes multiple new sections on political participation, which discuss how political decision making reflects the will of the people, explain the processes of democratic elections in villages and urban resident committees, and describe the channels through which people can voice their opinions.

More broadly, we find significant changes in textbook content and in the *gaokao* framework corresponding to the following goals outlined in government documents:

1. Students should learn about Chinese democracy and political participation.
2. Students should learn about the importance of the rule of law for legitimizing the Chinese government.
3. Students should study the "Three Represents" ideology expounded by Jiang Zemin.

[10] The sole exception to the rule of textbook uniformity in the Politics curriculum is Shanghai, which follows its own curriculum.

4. Students should develop an appreciation for traditional Chinese ethnic heritage.

5. Students should understand and appreciate Chinese (non-market) economic institutions.

6. Students should be conscious of environmental issues.

In Appendix D, we present an item-by-item discussion of each of these government aims: we point to their discussion in government documents; we identify changes in the Politics textbooks that match the government objectives; and, we describe changes in the *gaokao* framework that match the objectives as well. We also quote extensively from the new textbooks as we present our empirical analysis, below.[11]

2.2 The introduction of the new curriculum across space and time

The mode of introduction of the revised curriculum makes China's curriculum reform an especially promising context in which to study the causal effect of a change in curriculum. Between 2004 and 2011, different Chinese provinces, in different years, introduced entirely new high school curricula and textbooks for incoming cohorts of senior high school students.[12] Students entering high school one year would have an entirely different three-year curriculum from that of students who entered high school just the year before. Students in the older, pre-reform cohort would *not* be "partially treated" because the college entrance exam was based either on the old curriculum or on the new one.

The first entering cohorts to study under the new curriculum were students entering high school in 2004 (graduating in 2007) in the provinces of Shandong, Ningxia, Hainan, and Guangdong. Over the next six years, every other province except Shanghai saw the introduction of the new textbooks, with Guangxi, Sichuan, Guizhou, Qinghai, and Tibet finally introducing the new curriculum to entering high school students in 2010 (graduating in 2013). The introduction dates by province are presented in Table 1 and Figure 1.

It is worth stressing that the introduction date of the new curriculum was not randomly assigned across provinces. Provinces introduced the new curriculum when they had successfully trained teachers and developed supplemental materials based on the new textbooks. We discuss how non-random introduction of the new curriculum across provinces affects our identification of the causal effects of the curriculum, below.

[11] In addition to the changes that matched the goals articulated in the government documents that shaped the reforms, we identified other changes in content across textbooks that did not receive discussion in the government documents. For example, a section was added to the *Economic Life* textbook on financial markets and financial instruments. While we included survey questions relating to these changes that were not clearly tied to the objectives of the central government, they are not our focus here.

[12] The gradual introduction of reforms is typical of Chinese government policy; see, for example, Martinez-Bravo et al. (2011) on the introduction of village elections in rural China.

3 Survey of Peking University students

We measure students' beliefs using a a web-based survey we conducted with Peking University undergraduate students in April and May 2013. We sent an email invitation to participate in the survey to the complete email list of undergraduate students at Peking University. Students were offered payment for their participation, and were included in a raffle for a number of desirable Apple-brand electronics. We received nearly 2,000 completed surveys, for a response rate of around 18.6% of the undergraduate population of Peking University. Participants were paid an average of 58 RMB ($9.50), and were awarded 12 iPads and 10 iPods.[13]

3.1 Survey response rate

The response rate we achieved is very much in line with other online surveys that rely on impersonal, email recruitment.[14] Because the response rate is lower than that seen in surveys using alternative methods, it is important to discuss a range of questions about the inferences one can make from our sample. The first question that arises is one of power: even if selection into our survey were random, a low response rate can limit our ability to precisely estimate treatment effects. However, because our response rate was in line with our expectations from the literature on online surveys, our sample size is large enough to identify statistically significant effects of the new curriculum.

A second question is of greater concern for making causal claims: if selection into the sample were non-random, this may bias our estimated treatment effects. It is important to emphasize that for non-random selection into our sample to threaten the internal validity of our estimated effects, the selection would need to be *differential* across curricula. We can test for differential selection into the survey by curriculum in two ways. First, using information on the total number of students enrolled in Peking University by province and cohort, we can estimate the difference in response rates by curriculum, conditional on province and cohort fixed effects. In fact, we find that the (conditional) response rate differs across curricula by only around 0.1 percentage points; this suggests that there is essentially *no differential selection* into the survey according to the high school curriculum studied.

As we discuss below (and can be seen Table 2, columns 7 and 8), we also find that our sample is balanced between curricula across a range of observable covariates, another indication that any selection into the survey was *not* correlated with a student's curriculum. We also find evidence that risk preferences are similar among new and old curriculum students in our sample. Thus, we

[13]The recruitment email (in Chinese and in English translation) can be seen in Appendix E.1. An image of an iPad winner is provided in Appendix E.4.

[14]For example, in meta-analyses, Shih and Fan (2008) and Manfreda et al. (2008) find that around one-third of online surveys examined have a response rate below 20% and over half have a response rate below 30%; see also Kaplowitz et al. (2004).

believe that our survey sample allows us to estimate an internally valid causal effect of the new curriculum, conditional on being in our sample.[15]

3.2 Survey topics

The survey included sections on a broad range of topics. Here we provide a comprehensive description of the survey; we provide additional detail in Appendix E.2. Thus, although we did not register a pre-analysis plan as part of our study, this discussion allows the reader to observe the range of hypotheses that might be tested using our survey, and to interpret our results accordingly.

We focus on the following subset of the survey questions in the main text of the paper: we examine a set of questions on students' personal backgrounds, which we use to test for balance across curricula, and as controls in in our robustness analysis. We also examine a set of attitudes that were clear priorities of the Chinese government and were linked to changes in the curriculum content. First, students' attitudes toward political participation and democracy. Second, questions gauging students' trust in governmental officials; we complement these questions with an analysis of questions asking about students' general levels of trust. Third, we asked students a question about which segments of society should play a role in influencing government policy—we treat this as a rough test of students' internalization of the Three Represents ideology. Fourth, we ask students about their views of minorities vis à vis the majority Han Chinese. Fifth, we examine students' views on free market economic institutions. Sixth, we examine students' views on environmental policy. In addition to these outcomes, we study whether students' perceptions of teaching practices changed along with the curriculum's content as a result of the reforms.

A second set of survey questions is of interest to us, because the questions touch on important political attitudes; however, these questions are not our focus in the main text because they are not discussed in the government documents outlining the curriculum reform, are not associated with changes in the textbooks' content, or because there is some ambiguity in the government's desired attitudes. The following sections are briefly examined in Appendix F. First, we examine students' attitudes toward the "wisdom of the masses"; in addition, we study students' views on political disobedience. We present results on students' reported political actions (though these are naturally limited given students' ages and time constraints). We also examine students' attitudes toward bribery and unofficial payments; finally, we study students' views on efficiency versus equity tradeoffs.

Finally, several sections of the survey are not relevant outcomes in our current analysis of the impact of the new curriculum on students' political attitudes: we asked students about their career preferences; their risk preferences; their approach to investing; their views on the determinants of

[15] A final question regards the external validity of our internally-valid estimate. If the new curriculum has heterogeneous treatment effects, then the causal effect we estimate may be local to those individuals who selected into our survey. However, it is not obvious why selection into a survey would be a function not just of attitudes, but of *susceptibility to attitude change*. We thus believe that our results may be quite externally valid, at least within the population of Peking University students (external validity beyond this setting is discussed further below).

success in contemporary China; their beliefs about the economic returns to schooling; a Big Five traits survey; a question about students' values; and an incentivized risk preference elicitation.

3.3 Interpreting the survey responses

Many of our outcome variables are self-reported responses to direct survey questions. It is natural to wonder what exactly is captured by variation in these responses. Here we discuss several concerns with using students' responses to direct survey questions to evaluate the impact of the new curriculum.

Do students try to respond "correctly" to exam-style questions? An important concern is that students who study under different curricula may all have the same private attitudes, but they simply wish to provide "correct" answers to questions that are similar in structure or content to exam questions. If the correct answer differed across curricula, then responses to exam-style questions might differ even if attitudes do not. To address this concern, we took care to ask our questions of interest in a manner that did not look like the questions students would have seen in the *gaokao* or any other exam. Indeed, in addition to asking some factual questions related to the new curriculum, the majority of questions explicitly asked about students' *own opinions*; we also included questions that were important extensions of the classroom material (e.g., from classroom discussions of the rule of law to greater trust in government officials).

One can see evidence in students' responses that our attempts to write questions that were explicitly about students' opinions were successful. Responses were not concentrated around a single "correct" answer. When we ask about views on Chinese democracy, we find a standard deviation of over 1.5 on a 1 to 10 scale, with a mean close to 5; when we ask about trust in various government institutions, the standard deviation is over 0.75, on a 1 to 5 scale, with means between 3 and 4; when we ask about students' views on the market economy, the standard deviation is over 0.45, for a dummy variable outcome (all of these statements are true whether examining all students, or examining only responses among students who studied under the new curriculum). We also compare responses in our survey regarding trust in government officials to responses to the same questions in the AsiaBarometer survey, from a broader sample of Chinese adults. We find that if anything, students in our survey are *less* likely to respond in a manner that corresponds to the government's desired views, suggesting that these views were not internalized as a "correct" answer even among our sample of elite university students.

Do students try to express socially-acceptable or politically correct views? A second concern is that students who study under the new curriculum may not have their attitudes changed, but respond to survey questions differently after learning about a different set of constraints on the views that they ought to express. While there is always a concern that students will be afraid to

reveal stigmatized or politically incorrect beliefs, there are several reasons to take students' responses in our survey at face value.[16] First, none of our questions touched on topics that are taboo in China, such as multi-party elections, views of the Communist Party *per se*, or direct criticism of the leadership of China. All of the questions asked, indeed, were based on topics that were discussed in Chinese high school curricula, and all of our questions were vetted by our mainland Chinese co-author (Chen); by a variety of China scholars; and, by high school teachers with whom we spoke.

Second, the survey was conducted privately, online, so there would have been no direct social stigma attached to particular responses. We also emphasized the confidentiality of students' responses in the online consent forms read prior to the survey (approved by the UC Berkeley Institutional Review Board). In addition, we find that the more risk averse respondents in the study *do not* show significantly different effects of the new curriculum.

Third, as noted above, it is clear from the range of responses received in the survey that responses were not concentrated around a single "acceptable" response. Our questions regarding trust in various government officials and government bodies are perhaps the most politically-sensitive of our survey questions. We asked students to indicate their level of trust in various government institutions, on a 1–5 scale, with 1 indicating complete distrust, and 5 indicating complete trust. Interestingly, we find that 20% of individuals rate the central government at a 3 or below; for the provincial and local governments, this number is 38% and 65%, respectively; for courts, the army, and police, we see responses of 3 or below from 37%, 31%, and 47% of students. Clearly, some students were willing to give less than stellar marks to a range of government institutions.

Indeed, the fact that our study was run in Peking University makes it less likely that students would self-censor their beliefs out of fear of government (or peer) reprisals for expressing critical attitudes.[17] Peking University is known to be a setting in which liberal views can expressed, even contrary to government aims. Indeed, the University posted an article from the *Atlantic* magazine on its website stating the following:

> Peking University is known for its politically liberal professors. It was there that many of the student leaders in the 1989 Tiananmen Square democracy protests originated, and it's an open secret that teachers at the school and neighboring Tsinghua University often broach topics critical of the government in the classroom. Earlier this year, a leaked Communist Party memo warned universities that seven topics, including freedom of press and universal values, were banned from class discussions. But even still, the students currently at Peking University said these directives appear to have had little actual effect in the classroom.[18]

[16] The state's ability to shape what individuals see as acceptable expression by changing the curriculum may itself be of interest, and may have important consequences for political debate, coordination, and thus political behavior.

[17] Peking University students are not representative of the Chinese high school graduates. We discuss the virtues and drawbacks of our subject pool, and the external validity of our results, in Section 5.3, below.

[18] The article can be found at `http://english.pku.edu.cn/News_Events/News/Outlook/10590.htm`, last accessed on January 26, 2014.

A student quoted in the article stated, "We Peking University students are very open; some of the most outstanding students in the country. Most of us are very liberal minded, so it's ok to talk about sensitive political things." Thus, especially given the care we took to ensure that students could complete the survey privately, and the emphasis we placed on protecting the confidentiality of students' responses, we do not believe they would have been afraid to respond honestly.

Stated preferences versus revealed preferences As a final check that the survey responses were meaningful, we can compare students' responses to direct questions about risk preferences to their choices in an incentivized game eliciting risk preferences, which took place after the survey. While questions about risk preferences are not likely to be associated with stigmatized attitudes, this remains a useful check that responses to direct questions correspond to respondents' revealed preferences.

We asked students directly about their risk preferences on a 0 (risk averse) to 10 (risk seeking) scale, and also elicited students' risk preferences using an incentivized game, which allowed us calculate their certainty equivalents based on a series of gambles. We find a highly statistically significant relationship between self-reported risk and the certainty equivalents from the incentivized game ($p<0.001$), which reinforces our expectations that students' responses to our survey questions are consistent with their revealed preferences.

4 Empirical analysis

4.1 Empirical model

Using our survey data, we estimate a generalized difference in differences model, which controls for cohort and province fixed effects, and examines the effects of exposure to the new curriculum. Our baseline specification is the following:

$$y_{icp} = \sum_{c} \gamma_c + \sum_{p} \delta_p + \beta \, NewCurriculum_{cp} + \varepsilon_{icp}, \tag{1}$$

where y_{icp} is an outcome measure from our survey instrument (i indexes the individual, c the high school graduation cohort, and p the province of high school attendance); γ_c and δ_p are full sets of cohort and province fixed effects; and β is the coefficient of interest, capturing the effect of the new curriculum, conditional on fixed differences across cohorts and fixed differences across provinces. In our main estimates, we allow idiosyncratic differences, ε_{icp}, to be correlated across individuals within a province$\times$cohort (the level at which the curriculum varies).[19] In addition to this baseline specification, we will estimate additional specifications below that include individual-level con-

[19]We will also show standard errors clustered at the province level, and two-way clustered standard errors (by province and by cohort) below, and our inferences are very similar.

trols, province×cohort-level controls, and a full set of province-specific, cross-cohort trends (in addition to the province and cohort fixed effects).

Our baseline model allows us to address a variety of concerns about our ability to identify the causal effect of the new curriculum. First, one may be concerned that province-level differences in openness, income levels, and policies may be correlated with attitudes; because the introduction of the new curriculum was not randomized across provinces (coastal provinces introduced the curriculum earlier, for example), exposure to the new curriculum is correlated with province characteristics that may shape attitudes. However, fixed differences across provinces cannot drive our estimated effects of the new curriculum, because we control for province fixed effects and exploit cross-cohort variation *within* provinces to identify the effects of the new curriculum. Similarly, one might worry about the evolution of attitudes across cohorts even in the absence of a change in the curriculum; by including cohort fixed effects, we are able to difference out cross-cohort changes that occur even in the absence of a change in the curriculum.

One might still be concerned about time-varying factors that affect different provinces in different years. For example, one may worry about differences in economic growth rates across provinces or about shocks, such as the Sichuan earthquake of 2008, which might differentially affect different provinces. It is important to emphasize, however, that province×*time* varying shocks are not necessarily province×*cohort* varying shocks: a confounding factor would need to differentially affect different high school graduation cohorts within a province to threaten our identification strategy. While some province×time varying shocks certainly may affect different cohorts differently, it is worth emphasizing that the cross-cohort variation we exploit is extremely *sharp*: individuals entering high school just one year apart studied entirely different curricula around the introduction of the new curriculum. This method of introducing the new curriculum considerably reduces concerns about omitted variables, as many time-varying, province-specific shocks seem unlikely to have very different effects across *adjacent* cohorts of students, and so will be absorbed by the province fixed effects.[20] Economic growth rates may differ between two provinces, but the impact of different growth rates on cohorts entering high school just a year apart (or even two or three) are likely to be quite similar; the Sichuan earthquake may have had differential effects across age groups, but it seems likely that 14-, 15-, and 16-year olds would have been very similarly affected.

Finally, even unobserved factors that *do* vary at the province×cohort level will often affect adjacent cohorts within the same province smoothly, rather than sharply. Our specification that includes controls for province-specific, cross-cohort trends is able to capture smooth, province-

[20]It is worth mentioning that while students in different school cohorts may interact, in Chinese high schools, the vast majority of a student's time is spent with other students in the same cohort; thus, there is somewhat less potential for "contamination" of the old curriculum students by those treated by the new curriculum. This suggests that there may, indeed, be observable treatment effects despite the fact that such contamination (both in high school and later in college) would tend to bias estimated effects toward zero. To the extent that students in college sort into social networks according to the curriculum under which they studied, and so reinforce their attitudes, this may generate persistence of any change in beliefs caused by the new curriculum. We leave the study of mechanisms of persistence to other work.

specific changes in attitudes across cohorts. This specification is especially demanding (and indeed may be "over-controlling"), as it attributes to the new curriculum only the "jump" in attitudes relative to the cross-cohort trend—in fact, because we only study four cohorts of students, the "trend" estimate may capture the effects of the curriculum change (we thus view this estimate as a robustness specification, rather than use it as our baseline model). Thus, although the introduction of the new curriculum was not random across time and space, many differences across provinces and across cohorts—other than the curriculum change—are likely to be absorbed by our control variables, leaving us more confident that we are able to identify the causal effect of the new curriculum.

4.2 Balance of student characteristics

We limit our sample to completed surveys from individuals who entered high school between 2006 and 2009, and are current undergraduate students at Peking University.[21] We present summary statistics describing the demographic characteristics of the students who completed the survey in Table 2, columns 1–2, and show the mean characteristics of students by curriculum (old, then new) in columns 3–4.

We next check for balance of observable characteristics among survey respondents across new and old curricula. As discussed above, lack of balance could arise from differential selection into the survey sample; for example, because the new curriculum has an effect on attitudes (e.g., towards foreigners, towards opinion surveys, etc.). In addition, a lack of balance might arise from shifts in matriculation into Peking University as a result of the curriculum change (or some other province$\times$cohort-specific shock).

In Table 2, columns 5 and 6, we present the raw differences, and the p-values testing for the statistical significance of these differences in characteristics of students who studied under the old and new curricula in our sample. One can see in the table that there are significant differences across the two groups. However, it is worth emphasizing: this *unconditional* imbalance is to be expected. Students who studied under the new curriculum on average are younger (the new curriculum was introduced later in time), and come from provinces where the curriculum was introduced earlier—and there was no random assignment of introduction years across provinces, so differences across students from different provinces appear as well (for example in the fraction of Han Chinese).

In Table 2, columns 7 and 8, we show differences between students in the new and old curricula, conditional on province and cohort fixed effects, and the p-values testing for the statistical significance of these *conditional* differences. One can see that accounting for average characteristics in the province of origin, and accounting for average characteristics of a cohort, those individuals in our sample who studied under the new curriculum look nearly identical on observable

[21] Including incomplete surveys or individuals who did not follow the standard, direct route from high school to college does not change our results (available from the authors upon request).

characteristics to those who studied under the old curriculum. This suggests that our difference in differences design, by exploiting the variation in curriculum conditional on province and cohort fixed effects, will compare outcomes across individuals whose observable characteristics look identical.[22]

4.3 Baseline results

Here we present baseline estimates of the effects of the new curriculum on our full set of outcomes. We estimate equation 1 and present standard errors clustered at the province×cohort level. In section 5.1, we show a broad range of additional specifications.

We present results for five categories of outcomes: *(i)* views on political participation and democracy; *(ii)* trust in government officials; *(iii)* views on who should influence policy ("Three Represents"); *(iv)* views of minorities; *(v)* views on unconstrained markets; and *(vi)* views on the environment. The shaping of each category of attitudes was explicitly mentioned in government documents describing the objectives of the reform (for a detailed discussion of each category, see Appendix D). It is worth noting again that this is not an exhaustive examination of our survey outcomes, nor is it an exhaustive analysis of the changes in the textbooks. Rather, it is a comprehensive analysis of changes in students' attitudes in response to curriculum changes that matched the political aims of the government in designing the reformed curriculum.

For each category, we present our findings one outcome (that is, one survey question) at a time. We also construct an index of the various outcomes within a category following Anderson (2008), which both captures broad attitude changes that are only imperfectly captured by any single outcome and also helps address concerns about multiple hypothesis testing by reducing the number of hypotheses we test (this is especially important given the range of robustness specifications we examine, below). Because our analysis involves testing multiple hypotheses, an important question is how to make appropriate statistical inferences in face of the greater likelihood of Type I error. In addition to examining the effects of the new curriculum on broad indices, we present for each of our individual outcomes p-values which are adjusted using the false discovery rate (FDR) procedure (Benjamini et al., 2006; Anderson, 2008), in addition to standard p-values calculated using clustered standard errors.[23]

4.3.1 Outcome category 1: Views on political participation and democracy

The first set of attitudes we examine is views on political participation and democracy, the shaping of which was a high priority for the Chinese government. Reflecting this, the new *Political Life*

[22] Because these variables are nearly all pre-determined, one can think of Table 2, columns 7 and 8, as providing a set of falsification tests for our difference in differences design, all of which are passed.

[23] There are still other, even more conservative, methods (e.g., the Bonferroni correction) that could be used to adjust our statistical inference. Given the size of our sample and the estimated treatment effect sizes, we believe that our approach appropriately balances concerns about Type I and Type II errors.

textbook includes entirely new sections on political participation and electoral institutions. Importantly, the new curriculum did not simply advocate unfettered political expression and action—it highlights the institutions allowing for political participation in China, while drawing a clear distinction between orderly and disorderly civil participation. The new *Political Life* textbook specifically discusses civic participation at the local and township levels, discussing local elections, and the supervision of the local government. For example, the *Political Life* textbook, pp. 17–18, includes a new section titled, "Cherish your voting rights," which states:

> Voters' attitudes and abilities with respect to elections are the key factors that influence the impact of elections. Citizens have to continue improving themselves in participating in democratic elections, so that they can exercise their voting rights well. Only then can citizens be able to better manage China's national and social affairs, as well as its economic and cultural matters. [...] Whether one actively participates in elections is a critical measurement of a citizen's sense of participation and responsibility.

The new sections in the textbook are reflected in the *gaokao* framework for the new curriculum, as well. The framework includes the following new modules in the *Political Life* component: "Channels for Chinese citizens' participation in political life"; "Multiple ways for citizens to participate in democratic decision-making"; "The meaning and significance of China's villages and urban dwellers governing themselves"; and, "Citizens needs to realize their democratic supervising rights responsibly".

Based on the curriculum changes, we asked students a broad range of survey questions related to democracy and political participation to determine whether their knowledge of, and views on, Chinese political institutions were affected. Some of these were explicitly factual in nature, to allow us to observe whether details of China's political system were differentially *known* by individuals who studied under the new curriculum (questions 3.1 and 3.2). We also asked students for their *own opinions* about Chinese political institutions (questions 3.3 and 3.4). We next asked about students' views on the meaning of "democracy": did more students believe that the concept implied the people's participation in the political process (question 3.5)? Finally, we asked students about their own anticipated political actions (question 3.6). Note that, throughout the paper, we code all variables such that the expected effect of the new curriculum is positive.

3.1 Were you aware that the village head is elected by ordinary people through voting (one-man one-vote)?

3.2 Were you aware that one can participate in the voting for local (county or district) People's Congress representatives?

3.3 In reality, ordinary people are able to influence who becomes the village head. (1= totally disagree; 5=fully agree)

3.4 Where would you place our country under the present government? (1 = completely undemocratic; 10 = completely democratic)

3.5 Which of the following do you think are characteristics of a democracy? (1 = "People's participation in the political process" listed first; 0 = otherwise)

3.6 I plan to vote for local (county or district) People's Congress representatives.

Results As discussed above, we begin by presenting our findings one outcome at a time; then, because we are testing multiple hypotheses throughout our work, we also collapse the various groups of questions into an index for that group, and test for the curriculum's effect on the index. In Table 3, columns 1 and 2, we examine the impact of the new curriculum on *factual* knowledge regarding Chinese political institutions. We expect, given the additional content on elections in the new curriculum, that students who studied under the new curriculum would be more likely to report being aware of village level and People's Congress representatives' elections. Indeed, one can see that for both of these outcomes, study under the new curriculum is associated with greater reported knowledge of Chinese elections. Note that for each outcome, in addition to showing the coefficient estimate and clustered standard error, we also show the p-value associated with our estimate *and* the adjusted p-value that takes into account the multiple hypotheses being tested in a particular category of outcomes, following Anderson (2008).

In columns 3 and 4, one can see that studying under the new curriculum leaves students more likely to believe that ordinary people have influence over who become village heads, and that China is more democratic (both results are statistically significant at 5% or less using standard p-values, and at 10% using the FDR-adjusted p-value). In Table 3, column 5, one can see that students who studied under the new curriculum more commonly choose "People's participation in the political process" as the defining characteristic of a democracy, though this shift is not statistically significant. In Table 3, column 6, we turn to students' planned political actions, and find very little effect.

In Table 3, column 7, we present the results using an index constructed from the six outcomes related to students' views on political participation and democracy.[24] To construct the index, we standardize each component and sum individuals' standardized outcomes, weighting each outcome by the inverse of the covariance matrix of the standardized outcomes, following Anderson (2008).[25] The rationale for this procedure is twofold. First, one avoids the pitfalls of "overtesting" that occur when many single hypothesis tests are conducted. Second, the index provides a test of whether the new curriculum has an effect on a set of related outcomes, which might all be caused by one underlying latent variable.[26] The results from a regression using this z-score index point to a strong and highly significant effect of the curriculum in the expected direction, resulting in a

[24]To focus only on changes in beliefs and planned actions, rather than changes in factual knowledge, one can also construct an index using only the non-factual questions (those presented in columns 3–6). This index yields nearly identical results (available from the authors upon request).

[25]We also standardize the z-score to allow for easier interpretation. Other methods used to construct a single variable that summarizes a set of related outcomes, for example, an equally-weighted average of the standardized outcomes, or the first principal component of the set of outcome variables, generate very similar results (we present a broad set of results using first principal components in Appendix F).

[26]Such index variables have been used elsewhere to evaluate the effectiveness of policy interventions on a set of related outcomes; see, for example, Kling et al. (2007).

change in the dependent variable of about one quarter of a standard deviation.[27]

Relative to students' observable characteristics, the new curriculum has a large effect: when we add a set of individual controls to our baseline model, we find that having parents in the CCP moves beliefs in the desired direction by 10% of a standard deviation; membership in the Communist Youth shifts beliefs in the desired direction by 4% of a standard deviation; strikingly, studying under the new curriculum moves beliefs in the desired direction by over 25% of a standard deviation. We discuss the magnitudes of our estimated effects in terms of persuasion rates in Section 5.2.

4.3.2 Outcome category 2: Trust in government bodies

It is clear from the government documents on curriculum reform that a high priority was to teach students about institutions that legitimated the Chinese government and its officials, especially adherence to rule of law. The new curriculum's *Political Life* textbook includes a new section titled, "Where does government's authority come from?" which states (p. 49):

> 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.

The new curriculum's *gaokao* framework reflects the changes to the textbook, with added sections in the *Political Life* module on the functions and duty of Chinese government, the principles of the Chinese government, and the significance and necessity of rule of law. Thus, the second set of attitudes we examine is trust in government officials and in a range of government bodies—a natural outcome of viewing government institutions as more legitimate. To gauge students' trust in a range of government bodies, we asked students:

4.1–6	Describe your level of trust in the following institutions: *(1)* Central government; *(2)* Provincial government; *(3)* Local government; *(4)* Courts; *(5)* Armed forces; *(6)* Police. (1=complete distrust; 5=complete trust)
4.7	Village heads put their own interest before those of people. (1= totally agree; 5=fully disagree)
4.8	Village heads care primarily about the powerful and rich people, and neglect the interests of ordinary people. (1= totally agree; 5=fully disagree)

[27] We do not find significant effects of the new curriculum on students' reported voting or protesting behavior (see Appendix F). This is perhaps not surprising given that Chinese students have very little time or opportunity to engage in such political acts. We do find positive effects that are statistically significant ($p<0.10$) on joining non-CCP political organizations, and we discuss the relationship between stated attitudes and political behavior in more detail below.

Results We will again present our results for one survey outcome at a time, then show results for a weighted index of the standardized outcomes. One can see in Table 4, columns 1–6, that each category of government official or institution is more trusted by students exposed to the new curriculum. In addition, in Table 4, columns 7–8, one sees that students who studied under the new curriculum view village heads as less driven by their own interests or by the interests of the rich and powerful. When we estimate the effect of the new curriculum on an index variable constructed from the eight individual components, we find a positive, highly significant effect as well, amounting to about one fourth of a standard deviation of the outcome.[28]

These results suggest a causal effect of the new curriculum on how students view government officials and government bodies. A natural question that arises in interpreting the results on trust in government officials, and putting them in context, is whether the new curriculum also changed trust more broadly, beyond government officials. We thus asked students about their trust in a variety of non-governmental entities (NGOs, banks, foreign investors) and about their trust in people in general. An aggregate index of trust in these non-governmental entities and individuals is *not* affected by the introduction of the new curriculum (the point estimate close to zero and not significant—see Table 4, column 10), reinforcing our prior that the new textbooks would only increase trust in government officials and their authority.

4.3.3 Outcome category 3: The "Three Represents"

An important development in Chinese Communist Party doctrine since the year 2000 was the "Three Represents" ideology expounded by former President Jiang Zemin. According to this ideology, political influence in China should be extended to individuals who were *de facto* important to China's socioeconomic success, but who were traditionally excluded from power in Communist China—for example, managers and employees working for private businesses. In outlining the aims of the curriculum reform, the State Council explicitly wrote that "youths' moral construction should be guided by the 'Three Represents' principles."

The new *Political Life* textbook incorporates this new component of official Chinese Communist ideology into its subsection titled, "Theoretical framework of socialism with Chinese characteristics." Again, the *gaokao* framework reflects the additions to the textbook, with a change in the section titled "The characteristics, core, and guiding principles of the CCP"; under the old curriculum, this section included only Marxism, Leninism, Maoism, and Deng Xiaoping Theory. Under the new curriculum's *gaokao* framework, Jiang's Three Represents is added to this list.

To determine whether the new curriculum affected students' views on who should play a role in shaping Chinese government policy, we directly asked students about various potential

[28] We also asked students about their views on the prevalence and efficacy of unofficial payments; these attitudes are extremely important in the Chinese context. As we discuss in Appendix F, we find that students view unofficial payments as less effective and less prevalent if they studied under the new curriculum, consistent with the goals of the curriculum change.

segments of society. Specifically, we asked the following survey question:

5.1	Which of the following groups and their interests should influence government policy? (Please rank the top three)

We gave students a broad range of choices (fifteen in total), including "Farmers and peasants," "Intellectuals," "CCP members," and "Employees at foreign firms." We construct a dummy variable that equals 1 if students did not select "CCP members" among their top three groups. This variable roughly captures an attitude in favor of broadening political representation.

Results In Table 5, one can see that studying under the new curriculum is associated with significantly more students including segments of society other than CCP members in their list of the top three groups who should influence policy (an examination of items one-by-one indicates that students under the new curriculum are significantly more likely to include intellectuals and employees at foreign firms in their "top 3" lists). This is consistent with the teaching of the Three Represents ideology broadening students' views of who should contribute to the shaping of government policy.

4.3.4 Outcome category 4: Views on minorities (Han students/Minority students)

The Chinese government made it a high priority to cultivate a traditional national spirit; the government's aim was to teach (majority) Han Chinese students that minority groups within China share with them a Chinese ethnic heritage, and to increase minorities' identification with being "Chinese." Our fourth set of outcomes examines the effects of the new curriculum on Han students' views on minorities, as well as minorities' views on their own identity. The new *Political Life* textbook adds (p. 72) an entire section titled "Principles of dealing with relationships among ethnic groups: equality, unity, all prosperous together." The new *Cultural Life* textbook adds two sections (pp. 71–81) titled: "The Eternal Chinese Ethnic Spirit" and "Promoting the Chinese Ethnic Spirit." The main argument in these sections is that multi-ethnic unity is the core of Chinese culture. The emphasis on ethnic and national "unity" in the new curriculum is striking: the new curriculum's *Political Life* textbook (p. 75) states:

> It is every Chinese citizen's responsibility to abide by the Constitutional duty that one has to guard national and ethnic unity and harmony. As a youth in China today, we need to put our responsibility to develop Socialist multi-ethnic harmony into action.

The new curriculum's *gaokao* framework also added new sections regarding Chinese ethnic unity: "promote Chinese ethnic spirit" and, "the core of Chinese ethnic spirit." We evaluate the impact of the new curriculum on both Han Chinese students' views on minorities, and also on

the views of minority students toward their own identities. We asked students the following questions[29]:

6.1	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)
6.2/6	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)* Comparing to Han Chinese, ethnic minority groups are relatively independent groups (0) *(b)* Ethnic minority groups are the same as Han Chinese, and they are all Chinese people (1).
6.3/7	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 (1). *(b)* Ethnic minority groups have different historic heritage and cultural traditions from the Han Chinese (0).
6.4/8	Can you imagine yourself marrying a member of a different ethnic group in the future?
6.9	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)?

Results We begin by studying the new curriculum's effects on Han Chinese students. We consider Han students' trust in minority individuals; Han students' views on whether minorities are similar to and share their ethnic heritage with the majority; and Han students' willingness to marry someone from a different ethnic group. In Table 6, column 1, one can see that Han Chinese who studied under the new curriculum are slightly less likely to declare that they trust individuals from minority groups. With regard to their view of minorities' identity relative to the dominant Han ethnicity, columns 2 and 3 show that the new curriculum induces Han students to think of minorities as more similar (also in terms of heritage) to Han Chinese (though effects are not statistically significant). Finally, Han students exposed to the new curriculum are significantly more likely to declare that they would conceivably marry someone from a different ethnic group (column 4). The index combining these four individual outcomes shows no significant overall effect of the new curriculum in the intended direction (Table 6, column 5).

We next examine the new curriculum's effects on minority Chinese students. We consider minority students' views on whether minorities share the same identity and ethnic heritage with the majority Han (columns 6 and 7); the new curriculum does not appear to have had a clear effect on these outcomes, nor on the willingness to marry outside their ethnic group (column 8). However, the new curriculum did substantially and significantly strengthen minority students' sense

[29] Table 6 is divided into Han Chinese responses (columns 1–4) and minority responses (columns 5–8); some questions appear in both sections of the table.

of Chinese identity, relative to having an international identity (column 9).[30] Overall, the index combining these four individual outcomes shows an increase as well, although not statistically significant at conventional levels (Table 6, column 10).

4.3.5 Outcome category 5: Views on markets

Government documents shaping the new curriculum emphasized the importance of the "socialist market economy" for economic and social development. We next consider the impact of the new curriculum on students' views on the free-market economic system. In the new *Economic Life* textbook, many sections emphasize the "socialist market economy," in which markets are complemented or corrected by state or socialist institutions. For example, the important role of state-owned enterprises is made clear in the new curriculum's *Economic Life* textbook (p. 31):

> Just like the pillars that support skyscrapers, state-owned-enterprises (SOEs) are the backbone of China's domestic economy. They control the life vessels of the economic system, and play a vital and leading role in the system. To develop, expand and strengthen the SOEs is of critical importance, to demonstrate the superiority of socialist system, to strengthen China's economic power, national defense power, as well as ethnic unity. They can also elevate the international position of China.

Social inequality—a major threat to Chinese political and social stability—is explicitly linked to market institutions. The new *Economic Life* textbook (p. 81) states:

> [A]llowing market 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.

In addition, the new curriculum cut out an entire section on the market economy that emphasized its virtues. The *old* curriculum's section titled "General characteristics of a market economy" described markets as "equal (or just)," "competitive," "under rule of law," and "open." This material was removed from the new curriculum. Many changes in the *gaokao* framework also emphasize the important role of the state in the economic system. In the *Economic Life* section of the framework, new sections include "sustainable and balanced economic development;" "public-ownership structure should play a major role;" and, "multiple ownership structures develop simultaneously."

To test whether exposure to the new curriculum shaped students' views on economic institutions, we asked the following survey question:

[30] Note that we do not include in Table 6 the estimated effect of the new curriculum on Han Chinese students' degree of Chinese identity, as we did not expect this to be affected by the new curriculum.

7.1 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.

We convert students' responses into a dummy variable indicating skepticism of the market economy, equal to 1 if individuals *did not* select the "market economy preferable" response.[31]

Results In Table 7, we show the estimated effect of the new curriculum on students' skepticism of the market economy. One can see that significantly more students who study under the new curriculum reject the view that a market economy is preferable to any other economic system (statistically significant at 5%).

4.3.6 Outcome category 6: Views on the environment

Government documents structuring the curriculum reform mention consciousness of the environment as a value that ought to be instilled in Chinese students. While not a prominent element of these documents, environmental issues were highlighted by former President Hu Jintao; also, attitudes toward the environment will shape public policy on a critical domestic and global issue, so in designing our survey, we felt that they were of special interest. The new curriculum, indeed, includes additional content discussing environmental issues, in the *Economic Life* textbook (pp. 87–90). The new curriculum's *gaokao* framework includes new sections in the *Economic Life* module titled "scientific outlook on development" and "sustainable and balanced economic development", which include discussions of environmental issues.

To gauge how students prioritize environmental concerns, we included the following survey items:

8.1 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?

8.2 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.

[31] Coding the survey responses in other ways—for example, a dummy variable indicating support for a planned economy or running a multinomial logit—yields very similar results (available from the authors upon request).

8.3 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.

Results In Table 8, columns 1–3, we show the estimated effect of the new curriculum on the survey questions. As dependent variables, we use a dummy indicating whether the response was "yes" in the first question; a dummy indicating whether option (e) was chosen in the second question; and, a dummy indicating whether option (a) was chosen in the third question. In no case do we find a significant effect—if anything, preferences are slightly less "pro-environment" among students who studied under the new curriculum across all three questions. The aggregate z-score index (column 4) shows a negative, marginally insignificant effect of about one sixth of a standard deviation.

5 Discussion

5.1 Robustness checks and ruling out alternative hypotheses

We next explore the robustness of the results seen above for all six of the categories examined (note that one category—views on minorities—has two components: Han students' views and minority students' views), and also try to rule out alternatives to our interpretation of our estimates as the *causal* effects of the curriculum change. Rather than present every robustness specification for each individual outcome in all categories, we show robustness specifications only for the z-score indices constructed to summarize each category's outcomes.[32]

Clustering of standard errors We first consider alternative standard error calculations. In our baseline estimates (reproduced in Table 9, Panel A), we chose to cluster our standard error estimates at the province×cohort level both because the variation in the explanatory variable of interest—the curriculum—occurs at this level, and because we have a relatively small number of provinces (only 29). A concern with our baseline analysis is that while we allow error terms to be correlated across individuals belonging to the same province *and* the same high school cohort, one might believe that error terms might be correlated across individuals from the same province, but belonging to different cohorts. We thus estimate standard errors clustered at the province level; we find that our statistical inferences are not greatly affected by this change (see Table 9, Panel

[32]For the single outcome relating to the "Three Represents" ideology, and the single outcome relating to views on the market economy, we use the question asked (rather than an index) for all the robustness specifications. Results from estimating robustness specifications for each individual outcome variable for other categories are available from the authors upon request.

B). We also estimate standard errors allowing for two-way clustering by province and by cohort; again, our inferences are not much affected (see Table 9, Panel C).

Including control variables We next include student-level controls for the individual characteristics reported in Table 2. In Table 9, Panel D, one can see that including these individual-level controls does not qualitatively affect our findings. We are also able to control for provincial spending on secondary education at the province×cohort level (we use a province's average level of spending during the three years of senior high school for each cohort).[33] Adding controls for these time-varying and cohort-varying province characteristics to equation 1 generally does not greatly affect the point estimates, as seen in Table 9, Panel E.

Including province-specific cross-cohort trends One important concern when interpreting our results is that differences across curricula, within provinces, may arise from different trends in attitudes across cohorts in different provinces. For example, it may be the case that views on markets follow different trends in different provinces, and that these trends show up as effects of the new curriculum. To address concerns about differences in cross-cohort trends in attitudes driving our results, we estimate equation 1, but include a full set of province fixed effects interacted with cohort-level trends. That is, we allow each province to have its own (linear) trend in attitudes across cohorts, and we identify the effect of the new curriculum as a *deviation from the trend*.[34]

In Table 9, Panel F, one can see that controlling for province-specific cross-cohort trends does not qualitatively affect any of our estimates of the effects of the new curriculum; and, we continue to see that the new curriculum is associated with statistically significantly different levels of trust in government officials, different attitudes toward the broadening of political influence, and toward markets.

Estimation using a "short panel" One might also be concerned about the effects of our sample's composition on the estimated treatment effects. Specifically, one might not want to include students who studied under the old curriculum in provinces from which we have no students in our sample who studied under the new curriculum; similarly, one might not want to include new curriculum students from provinces from which we observe no students who studied under the old curriculum. We thus estimate the effect of the new curriculum using a "short panel" that includes only students from the last cohort under the old curriculum and the first cohort of the new curriculum, from the 13 provinces for which we observe students from *both* of these cohorts in our sample. We present the results in Table 10: one can see that using this alternative dataset,

[33] Data are taken from the *China Educational Finance Statistical Yearbook*, published by the Finance Department, Ministry of Education of the People's Republic of China (2004–2012).

[34] Note that this may be "over-controlling", given that we only have 4 cohorts per province, and limited variation in the timing of the new curriculum's introduction across provinces. It is likely that the province-specific trend will pick up some part of the variation actually due to the (sharp) introduction of the curriculum.

our results are very similar to using the entire set of province×cohort cells.

Testing for pre-treatment trends in outcomes We find that our sample of students is balanced (conditional on province and cohort fixed effects) across curricula, and that our results are quite robust to the inclusion of province-specific cross-cohort trends. Still, one might be concerned about pre-curriculum changes in trends affecting our results. Thus, we estimate the model in equation 1, but rather than pool the students who studied under the old curriculum into a single category, we allow students to have different views depending on the distance between their cohort and the first cohort that studies under the new curriculum in their province to try to tease out any evidence of a pre-treatment change in outcomes. We treat the last cohort studying under the old curriculum in a particular province as the omitted category, and estimate the new curriculum's effect relative to that omitted group. At the same time, we estimate the (placebo) treatment effect of being two cohorts ahead of the introduction of the new curriculum, and of being 3 or more cohorts ahead.

We present the results in Table 11, columns 1–7. One can see that across categories, there are very few significant estimates of placebo treatment effects for cohorts earlier than the first treated cohort (one coefficient significant at 10% and one at 5%). The estimates of pre-treatment coefficients are nearly always much smaller than the actual effect of the new curriculum, especially for those outcomes for which we observe a significant treatment effect. Using this empirical specification, our results are qualitatively similar to those in our baseline, and we continue to find significant treatment effects for several of our outcomes of interest for the new curriculum cohorts, whether compared to the last cohort under the old curriculum, or to the earlier cohorts.

Falsification exercises using placebo treatments We next make our statistical inferences in an alternative manner, by comparing the treatment effect we estimate for each index outcome to the distribution of placebo treatment effects we estimate when *randomly* assigning new curriculum introduction dates to provinces. To be precise, we randomly assign new curriculum introduction dates to provinces, with the dates drawn from the *actual* set of introduction dates of the new curriculum, without replacement (so in a given year, the same number of provinces have the placebo new curriculum introduced as had the actual new curriculum introduced, but the placebo assignment will be to a random selection of provinces). We randomly draw 10,000 sets of placebo treatment assignments, and estimate equation 1, with the seven summary measures as the outcomes.

We plot the distribution of t-statistics from the 10,000 estimated placebo treatment effects for each outcome, in Figure 2, and mark in the figure the location of the t-statistic of the *actual* treatment effect within the placebo treatment effect distribution. We also report the share of the placebo t-statistics that is larger than the actual statistic, in absolute value. One can view this measure as analogous to a p-value in this placebo exercise. Across the seven outcomes considered, one can

see that the inferences drawn are similar to the standard regressions: under the null of no effect of the curriculum change, random variation in attitudes across provinces and cohorts would very rarely produce t-statistics as large as the ones we find resulting from the actual curriculum change.

The impact of changes in instructional methods In addition to changing the content of textbooks, the curriculum reform intended to shift teaching *practice*: for example, class discussions were to be encouraged, and there was to be a reduced emphasis on the rote memorization of material by students. One might be concerned that shifts in teaching practice may have directly affected students' attitudes, or affected students' willingness to think independently or to express certain opinions, thus affecting responses to our survey (see, e.g., Algan et al., 2013, on the importance of teaching practices in shaping students beliefs and attitudes). However, as noted above, there is a widespread perception that teaching practices did *not* change as a result of the reform: teachers' and students' incentives were still strongly directed toward the memorization of textbook content in order to succeed in the *gaokao* college entrance exam.

To determine whether students' perceptions of their teachers' methods differed across curricula, we asked several survey questions relating to teaching practices that the reforms may have changed: we asked whether teachers encouraged class participation; whether students explored answers on their own (as opposed to being told correct answers up front); and, whether memorizing material was important to doing well in school. From these individual questions, we constructed an index of standardized outcomes that captures changes in students' perceptions of teaching practices (the components of the index were all coded such that a positive change in the index indicated change in the direction desired by reformers). In addition to this index, we also directly asked students, "how much do you think class/lecture or teaching activity is centered on *gaokao* preparation?" In Table 12, we present the estimated effects of the new curriculum on the teaching practices index (column 1), and on students' perceptions of the focus of teaching on *gaokao* preparation (column 2). One can see that the new curriculum had no effect on the teaching methods index or on students' perceptions of teachers' focus on *gaokao* preparation.[35] Thus, we do not believe that changed teaching practices concurrent with the textbook reform explain our findings.

5.2 Benchmarking the effect sizes

Persuasion rates In order to quantify the magnitude of the effect of the new curriculum, we compute persuasion rates (DellaVigna and Gentzkow, 2010): the estimated percentage of individuals who did not initially hold the view that the new curriculum aimed to instill (the "desired belief"), but who did hold the belief if they were exposed to the new curriculum. We calculate it

[35]The teaching methods index shows an increase in reported exploration for answers, but an increase in reported memorization as well; the net effect on the index is almost no difference across curricula.

as the estimated treatment effect of the new curriculum divided by the share of students who do not hold the desired belief in the entire sample; we call this the "unconditional" persuasion rate.[36]

A more correct definition of the persuasion rate would require us to divide the effect by the share of students without the desired belief among individuals who studied under the *old curriculum*; however, the compositional differences (by province and cohort) in the sample between old and new curriculum students would bias the results. As an alternative, we estimate the fraction of individuals who would hold the desired belief in the absence of the new curriculum. To do so, we predict students' beliefs using our baseline regression model, but for students who studied under the new curriculum, we subtract the treatment effect of the new curriculum. We then average the predicted outcomes for those who studied under the new curriculum and the old curriculum, and use this to calculate the fraction of the sample who would not hold the desired view in the absence of the new curriculum. We then use this share to compute the "conditional" persuasion rate.

Throughout the regression results in Tables 3–7, we present estimates of the implied unconditional and conditional persuasion rates. The persuasion rates we estimate are substantial: across all outcomes (including those for which the effects did not go in the desired direction), the median unconditional persuasion rate was 22.8% and the median conditional persuasion rate was 19.7%. These numbers are high relative to estimates of persuasion rates found for various media in prior work; for example, DellaVigna and Kaplan (2007) find a persuasion rate from Fox News of approximately 3–8%, and DellaVigna et al. (forthcoming) find a persuasion rate of 4–5% for Serbian radio in Croatia. Our estimated persuasion rates are novel in that they come from a type of oblique belief transmission different from mass media. It is plausible that persuasion rates for educational content are considerably larger than those for media—owing, for example, to the intensity of exposure, and perhaps to the greater pliability of youths' views.[37]

Stated preferences and behavior Many of the views elicited in our survey are on topics that are of great political, economic, and social importance, and understanding how educational content shapes these views is of interest *per se*. It is also interesting to consider how differences in political attitudes correspond to differences in political behavior. While the students in our Peking University survey have had little opportunity to engage in many political activities of interest—because of their status as Peking University students, because of their workloads, because of their ages, and because they live far from home—we can examine the association between political attitudes and reported political behavior using data from the AsiaBarometer social survey.

The AsiaBarometer survey asks respondents about their trust in various government offi-

[36] For a binary outcome variable, this is straightforward; for questions that do not have a binary outcome we calculate the persuasion rate based on a transformed dependent variable, which equals one if the outcome is greater or equal to the median answer. In our tables, we always present the the main regression results, i.e., the estimate of the treatment effect of the new curriculum, based on the original data (for example, on a scale from 1 to 10), while the persuasion rates reported at the bottom of the table are calculated with the binary analog.

[37] See Gentzkow and Shapiro (2004) for a discussion of the influence of media and education on ideology.

cials—central government, local government, courts, armed forces, and police—just as we asked the students in our sample. Based on this, we can construct an index of trust in government officials, analogous our analysis above. We then examine the association between reported levels of trust in government officials and reported political actions. Levels of trust are now our explanatory variable of interest, rather than an outcome, and we examine whether reported levels of trust are significantly associated with reported political activities. Specifically, the AsiaBarometer survey asks respondents in China whether they have attended a a demonstration or protest march at least once during the past three years, or whether they have refused to pay taxes or fees to the government during the same time period.

Our regressions indicate that increasing the summary trust index by one standard deviation makes an individual in the AsiaBarometer survey 13.5 percentage points less likely to attend a demonstration, or 5 percentage points less likely to refuse to pay taxes or fees.[38] The effect of the new curriculum in our sample, as estimated in Table 4, column 7, is to increase the summary trust index by around one quarter of a standard deviation. Under the assumption that the relationship between an individual's trust in officials and their political action is similar for students in our survey to that for the broader set of individuals in the AsiaBarometer sample, we estimate that the new curriculum made students around 3 percentage points less likely to attend a demonstration, and around 1 percentage point less likely to refuse to pay taxes and fees.

5.3 External validity

As with any study that relies on quasi-experimental variation, our estimated effects are "local" to our particular context. We believe this context is of special interest: not only do we study a naturally-occurring policy change, but we also study a group of students whose views are most likely to shape Chinese political discourse—China's educated elite. In addition, we study the impact of a change in educational content during students' critical years (Krosnick and Alwin, 1989; Giuliano and Spilimbergo, 2013), with a lag of several years. This is of some interest—beliefs shaped by the curriculum would need to be persistent in order to be observed in our survey, and beliefs formed in students' late teens and early twenties may be most likely to persist into adulthood. Of course, one should use caution when considering whether our results are representative of the effect of the curriculum change on other Chinese students exposed to it, the effects of educational content on the beliefs of students in other societies, the effects of curriculum changes at other stages of life, or effects observed after more time has elapsed.

Peking University students uniformly excelled in their high school studies, and so are more likely than other students to have *learned* the material in the high school curriculum. This might lead our estimated effects to be larger than for other samples of Chinese high school graduates (let alone for non-graduates). However, it is worth emphasizing, as discussed above, that our survey

[38] The full set of results can be found in Appendix F, Table A.3.

questions did not look like exam questions, but rather gauged students' opinions. Moreover, there is good reason to think that our estimates may actually be *lower* bounds of the curriculum change's effects on other Chinese students: students who choose to enter Peking University are seen as China's most liberal, and critical of government.[39]

6 Conclusion

The Chinese government laid out a set of ambitious goals for curriculum reform in the early 2000s: the government wanted to shape students' views on political participation and democracy in China; the legitimacy of the Chinese government; the segments of society that should influence policy; and, the role of the state in the economy. In all of these aims, we find evidence that the government successfully changed students' views of fundamental aspects of the society in which they lived. The magnitudes of the effects were both statistically significant and quite large: persuasion rates for a variety of important political and economic issues are estimated to be larger than those estimated in other settings, from other sources of information, such as television. The government also indicated a desire to shape students' identities, uniting the Han majority and minorities within a traditional Chinese ethnic spirit. In this they were less successful. They also did not succeed in making students more environmentally conscious, perhaps because of a perceived policy tradeoff between priorities of economic development and environmental protection. These results are robust to a variety of specification checks and corrections for testing multiple hypotheses, and are striking compared to distributions of "placebo" treatment effects.

Our findings provide support for three broad theories of the roles played by school curricula in shaping political attitudes. First, and most broadly, they suggest that the state can effectively indoctrinate students. Chinese students who studied under the new curriculum viewed Chinese political institutions as more democratic; trusted a broad range of government officials more; believed in extending influence over government policy to a broader group of (educated) people; and, were more skeptical of free markets. These are precisely the sorts of outcomes that scholars suspicious of elite control of educational institutions would fear (for example, Freire, 1970; Bowles and Gintis, 1976; Lott, Jr., 1999).

But there is also a brighter side to our findings: scholars who have argued that education can be crucial to the development of a functional democracy (e.g. Dewey, 1916; Lipset, 1959; Glaeser et al., 2007) also find support in our results, which suggest that educational content can shape students' views of political institutions. Finally, our results provide weaker support a range of historical work arguing that education can play a crucial role in forming national identities (Weber, 1976; Clots-Figueras and Masella, 2013; Alesina and Reich, 2013): the new curriculum strengthened minority students' views of themselves as "Chinese" (though not always statistically

[39] An *Atlantic* article posted on the Peking University website (quoted above) makes this point very explicitly (`http://english.pku.edu.cn/News_Events/News/Outlook/10590.htm`).

significantly so).

While we find causal effects of school curricula on students' ideology, the social welfare consequences of these effects depend on the political economy of curriculum choice: to the extent that educational content is selected to shape ideology, rather than to produce human capital, there is obviously a cost of using the education system to indoctrinate—certainly to students being educated, and perhaps to elites as well, if they benefit from more productive workers. On the other hand, the beliefs shaped by the schooling system might be extremely beneficial, as they may reduce social friction, improve coordination in a variety of settings, and establish socially-valuable norms. Of course, the norms instilled in school may be disproportionately beneficial to the seated elite, who have the ability to shape what is taught.

These results thus suggest an analysis of the political economy nexus when thinking about the government's incentives to provide education. Cantoni and Yuchtman (2013) examine elites' choices of whether to introduce particular educational content in important historical settings, but political choices are made regarding educational content around the world shaping political outcomes as well as human capital accumulation. We believe that the choices that elites make regarding educational content deserve further study.

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Figures and Tables

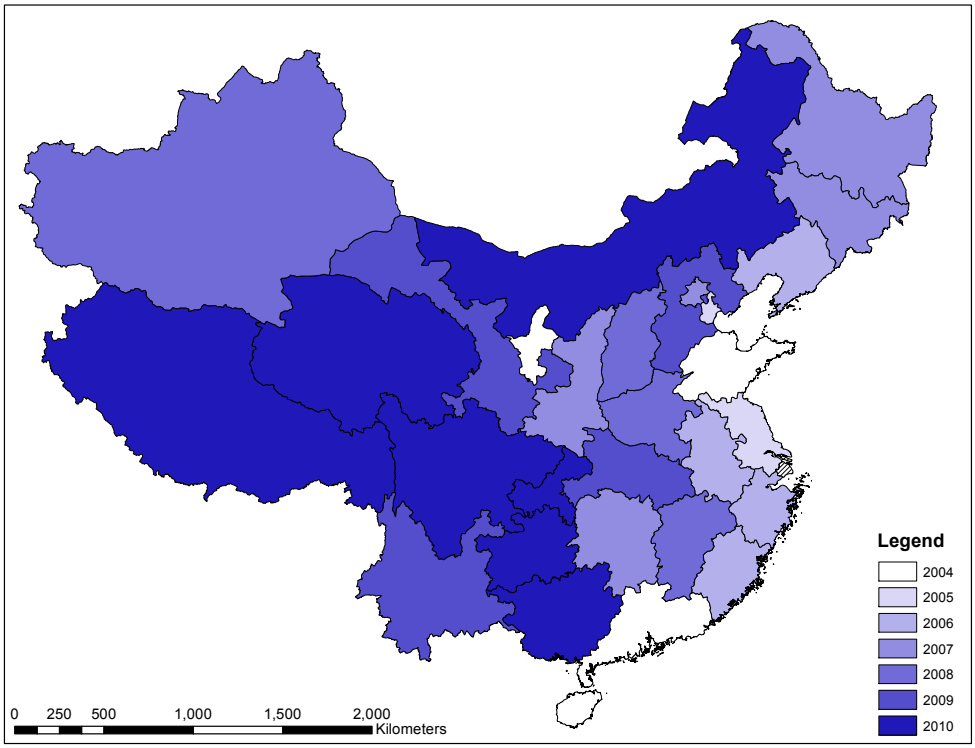


Figure 1: Years of introduction of the new curriculum textbooks

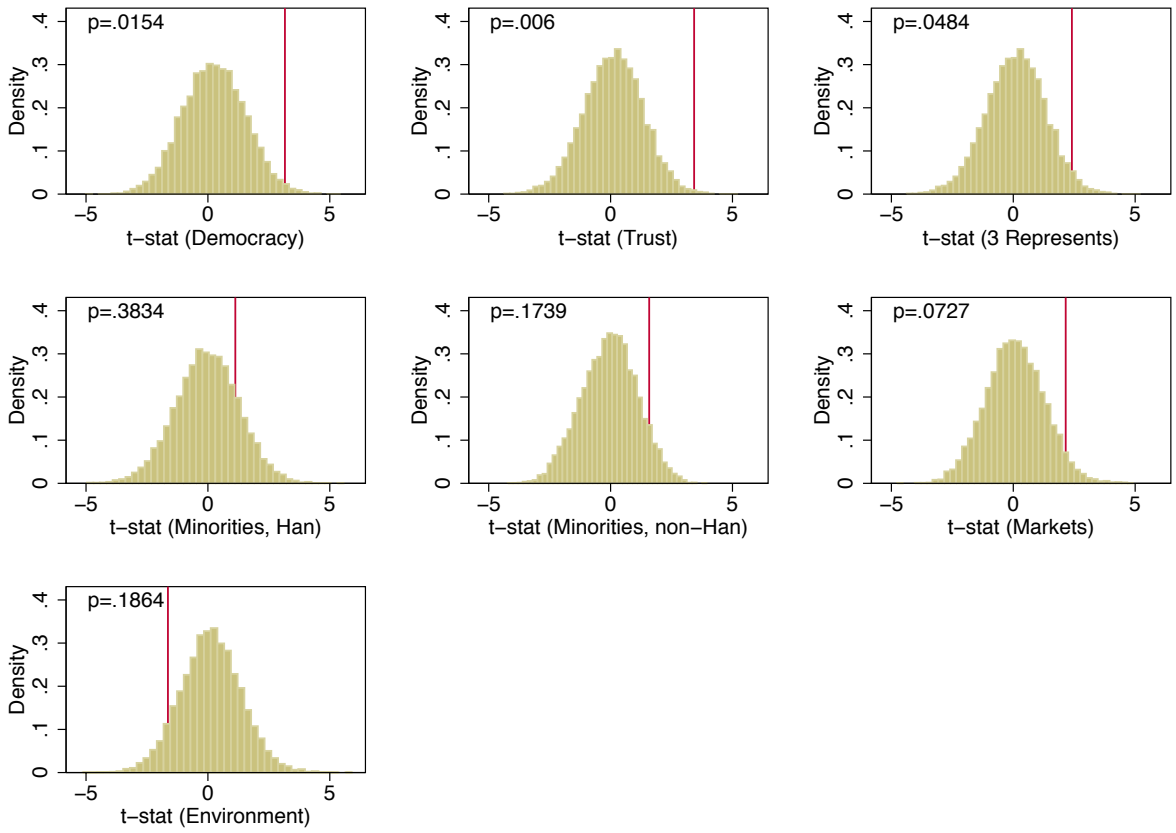


Figure 2: Distribution of t-statistics resulting from 10,000 random assignments of provinces to treatment status (see text for details)

Table 1: Timeline – China's 8th Textbook Reform

Date of introduction	Provinces
2004 (class of 2007):	Shandong, Ningxia, Hainan, Guangdong
2005 (class of 2008):	Jiangsu
2006 (class of 2009):	Anhui, Tianjin, Zhejiang, Fujian, Liaoning
2007 (class of 2010):	Beijing, Hunan, Heilongjiang, Jilin, Shaanxi
2008 (class of 2011):	Henan, Xinjiang, Jiangxi, Shanxi
2009 (class of 2012):	Hubei, Yunnan, Inner Mongolia, Hebei
2010 (class of 2013):	Guangxi, Sichuan, Guizhou, Qinghai, Tibet, Gansu, Chongqing

Table 2: Summary statistics

	All		Old Curr.	New Curr.	Unconditional		Conditional	
	Mean	Std.Dev.	Mean	Mean	Diff.	p-value	Diff.	p-value
Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Age	20.5	1.4	21.1	20.1	-1.0	0.000	-0.1	0.228
Height	169.6	8.2	169.3	169.8	0.5	0.172	0.1	0.949
Female	0.459	0.498	0.441	0.467	0.026	0.277	-0.030	0.523
# of siblings	0.402	0.812	0.473	0.369	-0.105	0.008	-0.022	0.727
Urban	0.782	0.413	0.772	0.787	0.015	0.453	0.022	0.533
Father high edu.	0.787	0.410	0.779	0.790	0.012	0.561	0.041	0.195
Mother high edu.	0.727	0.446	0.696	0.741	0.045	0.040	0.048	0.155
Parents in CCP	0.543	0.498	0.544	0.542	-0.002	0.931	0.000	0.996
Han	0.916	0.277	0.901	0.923	0.021	0.113	0.006	0.791
HS science track	0.697	0.460	0.691	0.700	0.009	0.718	0.011	0.768
HS humanities track	0.308	0.462	0.314	0.304	-0.010	0.680	-0.020	0.583
New curriculum	0.683	0.465	0	1	1	—	—	—

Columns 5 and 6 report raw (unconditional) differences in means across curricula, and the p-value for a t-test of differences in means. Columns 7 and 8 report differences conditional on cohort and province fixed effects. "Father high edu." and "Mother high edu." are dummy variables equal to 1 if fathers or mothers, respectively, completed high school or above. Number of observations: 1954 (619 old curriculum, 1335 new curriculum).

Table 3: Democracy and political participation

Dependent variable:	Aware VH elected	Aware that able to vote local PCR	People influence VH in reality	Chinese democracy in reality	People's participation characteristic of democracy	Plan to vote for local representatives	z-score index (Democracy)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
New Curriculum	0.079**	0.038	0.199**	0.246**	0.048	0.006	0.253***
	[0.034]	[0.028]	[0.078]	[0.122]	[0.034]	[0.051]	[0.080]
p-value	(0.022)	(0.183)	(0.012)	(0.047)	(0.155)	(0.906)	(0.002)
adj. p-value	*(0.071)*	*(0.124)*	*(0.071)*	*(0.071)*	*(0.124)*	*(0.282)*	·
Observations	1754	1755	1753	1724	1724	1755	1724
Mean DV	0.765	0.871	3.202	5.180	0.392	0.489	0
Std.Dev. DV	0.424	0.335	0.976	1.686	0.488	0.500	1
Persuasion rate (uncond.)	0.345	0.291	0.345	0.199	0.080	0.012	·
Persuasion rate (cond.)	0.279	0.243	0.279	0.175	0.076	0.012	·

*: Significant at 10%; **: 5%; ***: 1%. All regressions include a full set of province and cohort fixed effects (not reported). Robust standard errors in brackets, clustered at the province×cohort level. The z-score index in column 7 (weighting by the inverse covariance of the standardizes outcomes) and the adjusted p-values are computed following Anderson (2008). The persuasion rates computed for columns 3 and 4 are based on the binary analogue of the dependent variable (a dummy taking the value 1 for outcomes above the median value). Number of clusters: 116.

Table 4: Trust in government institutions

Dependent variable:	Trust central government	Trust provincial government	Trust local government	Trust courts	Trust armed forces	Trust police	VH self-interested (disagree)	VH serves rich (disagree)	z-score index (Trust in gov.)	Placebo: z-score index (General trust)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
New Curriculum	0.127**	0.126*	0.229***	0.078	0.172***	0.122*	0.095	0.147***	0.253***	-0.001
	[0.054]	[0.075]	[0.069]	[0.055]	[0.064]	[0.070]	[0.061]	[0.053]	[0.074]	[0.093]
p-value	(0.022)	(0.093)	(0.001)	(0.154)	(0.009)	(0.085)	(0.125)	(0.006)	(0.001)	(0.992)
adj. p-value	*(0.029)*	*(0.066)*	*(0.009)*	*(0.084)*	*(0.022)*	*(0.067)*	*(0.077)*	*(0.022)*	·	·
Observations	1,767	1,766	1,766	1,767	1,766	1,767	1,753	1,755	1,753	1,767
Mean DV	3.981	3.619	3.169	3.630	3.816	3.486	3.112	3.457	0	0
Std.Dev. DV	0.748	0.770	0.819	0.755	0.838	0.799	0.875	0.900	1	1
Persuasion rate (uncond.)	0.520	0.228	0.683	0.145	0.241	0.107	0.114	0.384	·	·
Persuasion rate (cond.)	0.384	0.197	0.466	0.132	0.207	0.0994	0.106	0.304	·	·

*: Significant at 10%; **: 5%; ***: 1%. All regressions include a full set of province and cohort fixed effects (not reported). Robust standard errors in brackets, clustered at the province×cohort level. The z-score index in columns 9 and 10 (weighting by the inverse covariance of the standardizes outcomes) and the adjusted p-values are computed following Anderson (2008). Persuasion rates are based on the binary analogue of the dependent variable (a dummy taking the value 1 for outcomes above the median value). Number of clusters: 116.

Table 5: Three Represents

Dependent variable:	Expand policy influence beyond CCP members
	(1)
New Curriculum	0.077**
	[0.032]
p-value	(0.018)
Observations	1,715
Mean DV	0.838
Std.Dev. DV	0.369
Persuasion rate (uncond.)	0.476
Persuasion rate (cond.)	0.359

**: Significant at 5%. Regression includes a full set of province and cohort fixed effects (not reported). Robust standard errors in brackets, clustered at the province$\times$cohort level. Number of clusters: 116.

Table 6: Minorities

	Views from Han Chinese					Views from minorities				
Dependent variable:	Minorities can be trusted	Minorities same as Han Chinese	Minorities share heritage with Han	Willing to marry other ethnic group	z-score index (Minorities, Han)	Minorities same as Han Chinese	Minorities share heritage with Han	Willing to marry other ethnic group	Feel Chinese	z-score index (Minorities, non-Han)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
New Curriculum	-0.090	0.058	0.007	0.064**	0.089	0.064	-0.010	-0.046	0.554**	0.493
	[0.055]	[0.042]	[0.031]	[0.028]	[0.079]	[0.106]	[0.146]	[0.065]	[0.267]	[0.311]
p-value	(0.107)	(0.172)	(0.816)	(0.022)	(0.263)	(0.549)	(0.945)	(0.484)	(0.042)	(0.118)
adj. p-value	*(0.192)*	*(0.208)*	*(0.298)*	*(0.097)*	·	*(1.000)*	*(1.000)*	*(1.000)*	*(0.202)*	·
Observations	1,654	1,654	1,654	1,654	1,654	149	149	149	141	141
Mean DV	3.553	0.780	0.177	0.840	0	0.826	0.262	0.926	3.546	0
Std.Dev. DV	0.737	0.414	0.382	0.367	1	0.381	0.441	0.262	0.760	1
Persuasion rate (uncond.)	n/a	0.268	0.009	0.405	·	0.366	n/a	n/a	0.339	·
Persuasion rate (cond.)	n/a	0.226	0.009	0.317	·	0.298	n/a	n/a	0.280	·

*: Significant at 10%; **: 5%; ***: 1%. All regressions include a full set of province and cohort fixed effects (not reported). Robust standard errors in brackets, clustered at the province×cohort level. The z-score indices in columns 5 and 10 (weighting by the inverse covariance of the standardizes outcomes) and the adjusted p-values are computed following Anderson (2008). The persuasion rate computed for column 9 is based on the binary analogue of the dependent variable (a dummy taking the value 1 for outcomes above the median value). No persuasion rates are computed where the point estimates indicate an effect opposite to the one intended by the curriculum reform. Number of clusters: 115 (cols. 1–5), 64 (cols. 6–10).

Table 7: Markets

Dependent variable:	Skeptical of market economy
	(1)
New Curriculum	0.087**
	[0.041]
p-value	0.034
Observations	1,625
Mean DV	0.698
Std.Dev. DV	0.459
Persuasion rate (uncond.)	0.288
Persuasion rate (cond.)	0.240

**: Significant at 5%. Regression includes a full set of province and cohort fixed effects (not reported). Robust standard errors in brackets, clustered at the province×cohort level. Number of clusters: 116.

Table 8: Environment

Dependent variable:	Willing to pay to protect environment	Environment primary goal	Environment over economic growth	z-score index (Environment)
	(1)	(2)	(3)	(4)
New Curriculum	-0.033	-0.034	-0.034	-0.162
	[0.021]	[0.028]	[0.044]	[0.099]
p-value	(0.108)	(0.219)	(0.446)	(0.104)
adj. p-value	*(0.480)*	*(0.480)*	*(0.480)*	·
Observations	1,791	1,708	1,708	1,708
Mean DV	0.933	0.113	0.694	1
Std.Dev. DV	0.250	0.317	0.461	1

*: Significant at 10%; **: 5%; ***: 1%. All regressions include a full set of province and cohort fixed effects (not reported). Robust standard errors in brackets, clustered at the province×cohort level. No persuasion rates are computed because the point estimates indicate effects opposite to those intended by the curriculum reform. Number of clusters: 116.

Table 9: Robustness

Dependent variable:	z-score index (Democracy)	z-score index (Trust in gov.)	Expand policy influence beyond CCP members	z-score index (Minorities, Han)	z-score index (Minorities, non-Han)	Skeptical of market economy	z-score index (Environment)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Panel A: Baseline							
New Curriculum	0.253***	0.253***	0.077**	0.089	0.493	0.087**	-0.162
	[0.080]	[0.074]	[0.032]	[0.079]	[0.311]	[0.041]	[0.099]
Panel B: Province-level clustering							
New Curriculum	0.253**	0.253**	0.077**	0.089	0.493	0.087*	-0.162
	[0.098]	[0.103]	[0.034]	[0.109]	[0.377]	[0.049]	[0.114]
Panel C: Two-way clustering (province and cohort)							
New Curriculum	0.253**	0.253***	0.077	0.089	0.493	0.087**	-0.162
	[0.101]	[0.088]	[0.054]	[0.097]	[0.490]	[0.034]	[0.116]
Panel D: With individual-level controls							
New Curriculum	0.345***	0.321***	0.064*	0.125	0.450	0.051	-0.057
	[0.082]	[0.078]	[0.034]	[0.094]	[0.287]	[0.044]	[0.098]
Panel E: With province×cohort-level controls							
New Curriculum	0.251***	0.255***	0.079**	0.087	0.518	0.085**	-0.160
	[0.081]	[0.073]	[0.031]	[0.079]	[0.328]	[0.039]	[0.098]
Panel F: Province-specific cohort trends							
New Curriculum	0.134	0.148*	0.100***	0.049	0.416	0.090*	-0.114
	[0.084]	[0.077]	[0.038]	[0.091]	[0.473]	[0.050]	[0.115]
Observations	1,724	1,753	1,715	1,654	141	1,625	1,708
Mean DV	0	0	0.838	0	0	0.698	0
Std.Dev. DV	1	1	0.369	1	1	0.459	1

*: Significant at 10%; **: 5%; ***: 1%. All regressions include a full set of province and cohort fixed effects (not reported). Robust standard errors in brackets, clustered at the province×cohort level (Panel B: province level). Number of clusters: 116; 64 (column 5); 29 (Panel B); 26 (Panel B, column 5); 29×4 (Panel C); 26×4 (Panel B, column 5).

Table 10: Short Panel

Dependent variable:	z-score index (Democracy)	z-score index (Trust in gov.)	Expand policy influence beyond CCP members	z-score index (Minorities, Han)	z-score index (Minorities, non-Han)	Skeptical of market economy	z-score index (Environment)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
New Curriculum	0.181***	0.291***	0.089***	0.102	0.149	0.069*	-0.009
	[0.057]	[0.066]	[0.027]	[0.075]	[0.246]	[0.034]	[0.081]
Observations	440	447	435	415	40	414	430
Mean DV	0	0	0.838	0	0	0.698	0
Std.Dev. DV	1	1	0.369	1	1	0.459	1

*: Significant at 10%; **: 5%; ***: 1%. All regressions include a full set of province and cohort fixed effects (not reported). Robust standard errors in brackets, clustered at the province×cohort level. Number of clusters: 26; 17 (column 5).

Table 11: Pretrends

Dependent variable:	z-score index (Democracy)	z-score index (Trust in gov.)	Expand policy influence beyond CCP members	z-score index (Minorities, Han)	z-score index (Minorities, non-Han)	Skeptical of market economy	z-score index (Environment)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
≥3 years before introduction	-0.032	-0.088	0.031	0.255**	0.205	0.030	-0.113
	[0.103]	[0.107]	[0.040]	[0.116]	[0.331]	[0.054]	[0.157]
2 years before introduction	-0.099	-0.141*	0.048	-0.140	0.171	0.066	-0.121
	[0.080]	[0.080]	[0.031]	[0.091]	[0.225]	[0.047]	[0.119]
New Curriculum	0.229***	0.226***	0.086**	0.013	0.506	0.102**	-0.181*
	[0.081]	[0.072]	[0.034]	[0.075]	[0.332]	[0.040]	[0.103]
Observations	1,724	1,753	1,715	1,654	141	1,625	1,708
Mean DV	0	0	0.838	0	0	0.698	0
Std.Dev. DV	1	1	0.369	1	1	0.459	1

*: Significant at 10%; **: 5%; ***: 1%. All regressions include a full set of province and cohort fixed effects (not reported). Robust standard errors in brackets, clustered at the province×cohort level. Number of clusters: 116; 64 (column 5). Reported coefficients are estimated relative to the final cohort studying under the old curriculum (1 year before introduction).

Table 12: Teaching style

Dependent variable:	z-score index (Teaching style)	Teaching focused on *gaokao*
	(1)	(2)
New Curriculum	-0.005	-0.108
	[0.058]	[0.069]
p-value	(0.931)	(0.122)
Observations	1,691	1,691
Mean DV	0.000	4.043
Std.Dev. DV	0.694	0.882

*: Significant at 10%; **: 5%; ***: 1%. All regressions include a full set of province and cohort fixed effects (not reported). Robust standard errors in brackets, clustered at the province×cohort level. Number of clusters: 116.

Appendix A The Chinese high school curriculum

All students in the first year of senior high school take the same courses in languages (Chinese and English), math, science, and social studies (Politics, History, and Geography). Students then choose to specialize in either the science track or the humanities track. The choice of track determines both students' coursework in the last two years of senior high school, and the content on which they will be tested in the high-stakes National Higher Education Entrance Examination, known as the *gaokao* (as seen in Figure A.1). In our empirical analysis below, we focus on changes to the tenth grade Politics textbooks for senior high school students, before the track split. Importantly, all students face a high-stakes test on the Politics curriculum: students in the science track are examined on the content of the first year Politics textbook in the so-called "little *gaokao*" during eleventh grade, while students in the humanities track are examined on this material in the *gaokao* exam at the end of senior high school; both exams factor into a student's college admissions prospects.

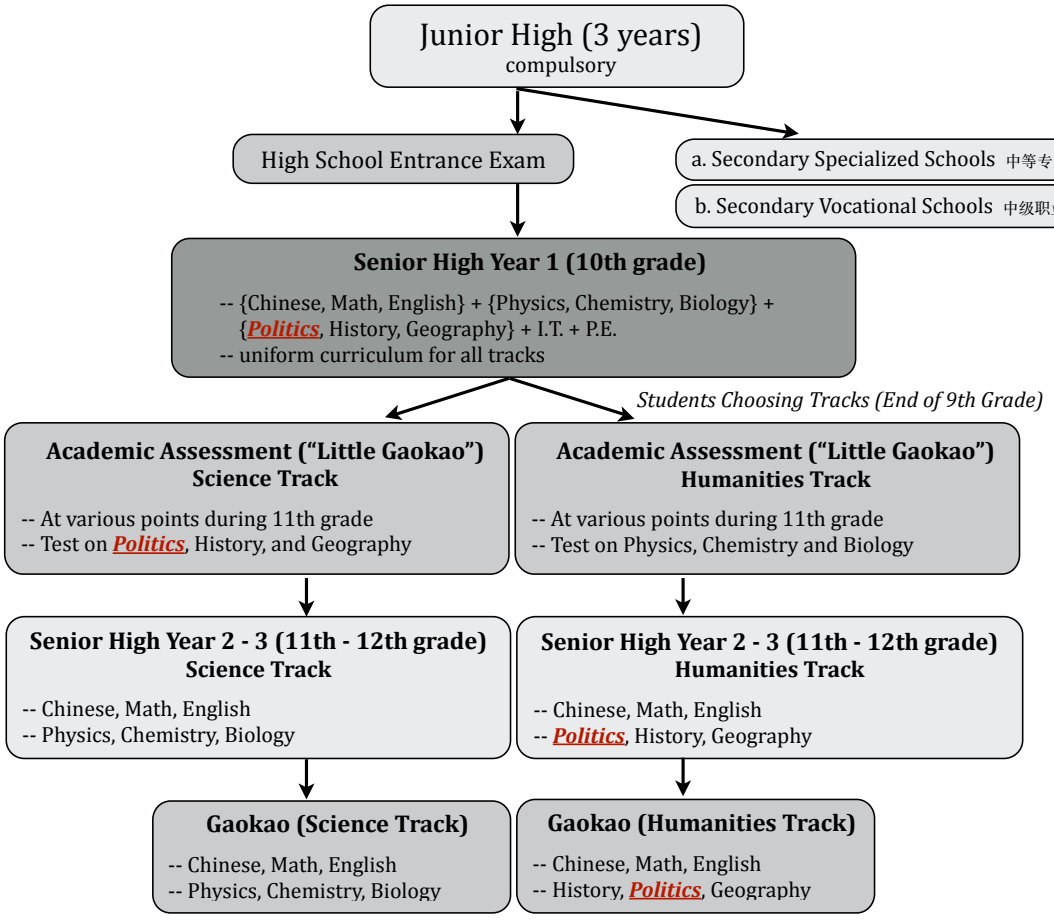


Figure A.1: The Chinese secondary education system

Appendix B Government Documents

B.1 Summary of government documents consulted

1. "Decision on Deepening the Education Reform, and Comprehensively Promoting the 'Quality-oriented Education'"[1]

Issued by the State Council of the People's Republic of China, in June 1999. This document marks the beginning of the planning phase of the 8th Curriculum Reform. It emphasizes that education is essential to China's continuous growth during 21st century, and that its education policy needs substantial reform. In particular, the document calls for a reform of the curriculum structure and content.

2. "Framework for Basic Education Reform" [2]

Issued by the Ministry of Education of the People's Republic of China, in June 2001. In this document, the Ministry delineates the motivation and objectives for the coming curriculum reform. This document also specifies that the corresponding "curriculum framework" would be set up to support the implementation of these new educational objectives.

3. "Strengthening the Ideological and Moral Construction of the Youth" [3]

Issued by the State Council of the People's Republic of China, in February 2004. The memo specifies the particular political and moral education objectives that should be achieved through the high school "Politics" curriculum. Note that while the Ministry of Education's "curriculum framework" guided writing of the high school textbooks for all subjects, the "Politics" subject is unique in the sense that it is guided by this additional memo issued by the State Council.

4. "Curriculum Framework for the Senior High School Politics Subject" [4]

Issued by the Ministry of Education of the People's Republic of China, in March 2004. This document describes the specific goals of the curriculum, as well as the key items that the curriculum would cover. The document serves as the guiding framework for textbook authors, high school teachers, exam preparation book publishers, as well as students.

B.2 Translated excerpts of relevant government documents

1. State Council's "Decision on Deepening the Education Reform, and Comprehensively Promoting the 'Quality-oriented Education'" (1999)

> Education is at the fundamental position of a nation's power accumulation process. Whether a nation is powerful or not increasingly depends on its labor force's human capital – the number and quality of various types of labor forces. This poses a more urgent demand for China to

[1] The original document can be found at `http://www.moe.gov.cn/publicfiles/business/htmlfiles/moe/moe_177/200407/2478.html`.

[2] The original document can be found at `http://www.gov.cn/gongbao/content/2002/content_61386.htm`.

[3] The original document can be found at `http://www.people.com.cn/GB/jiaoyu/1053/2405224.html`.

[4] The original document can be found at `http://www.moe.gov.cn/publicfiles/business/htmlfiles/moe/moe_711/201001/78375.html`.

> grow and train a new generation suitable for the 21st century. ... During the 50 years since the founding of the PRC, especially since the "Reform and Opening-up" in 1978, China's education reform and development have witnessed outstanding achievements. However, in this new era, due to various reasons, we are falling behind in terms of our education philosophy, education system and institutions, students' training models, education content, and education methods. This negatively affects the overall development of youths, and is not suitable for the needs of enhancing our citizens' characters and qualities.

2. Ministry of Education's "Framework for Basic Education Reform" (2001)

In this document, the ministry delineates the motivation and the objectives for the future curricular reforms. *The previous basic educational curriculum*, it is said, *cannot satisfy the needs of development in this new age.* Thus, a new curriculum should meet the following objectives (in the order of appearance in the original document): it should *reflect the times*, and *make students patriotic, communitarian, [and] love socialism*. Students *should inherit and carry forward the great traditions of the Chinese nation and its revolution*; and be equipped with *an awareness of the legal system under a socialist democracy.* The new curriculum should *promote compliance with national laws and with societal ethics,* and *gradually form in students a correct worldview, a correct view of life, and a correct value system.*

A "National Curriculum Framework" was set up in order to support the implementation of the new educational objectives. The June, 2001, document describes the Framework as *the guideline for the drafting of textbooks, for the development of learning activities, and for assessment and examinations.* It is *the basis for centralized curriculum management and evaluation.* Some of the objectives of the education reforms are reaffirmed when describing the Framework; the document indicates that

> the development of the curriculum framework should, according to the specific content of each subject area, strengthen ideological education with respect to its relevance, effectiveness, and ability to motivate; it should educate students in patriotism, communitarianism, and socialism; it should increase education in the great traditions of the Chinese nation; it should increase revolutionary and national defense education; it should strengthen thought quality and moral education; it should guide students to establish a correct worldview, a correct view on life, and a correct value system; it should advocate a scientific spirit and attitude, and the scientific method, guiding students toward innovation and practice.

3. State Council's memo of "Strengthening the Ideological and Moral Construction of the Youth" (2004)

> The main tasks and goals of the ideological and moral construction of our youths are:
>
> 1. Beginning with strengthening the love of country, promote and foster patriotism as the core of our great national character. Thoroughly carry out the education of the fine traditions of the Chinese nation, the Chinese revolutionary traditions, and Chinese history, especially modern history. Guide the vast numbers of youths to recognize the history and traditions of the Chinese nation and to understand the grave national disasters and the heroic struggles of the Chinese people in modern times. Establish from a young age a sense of national self-esteem, confidence and pride.
> 2. Beginning with the setting of broad aspirations for the youths, foster and cultivate in them correct ideals and beliefs. Carry out education on the history of China's revolution, nation building, and "The Reform and Opening-up." Guide the vast numbers of youths

to correctly recognize the patterns of social development, to correctly recognize the nation's future and destiny; integrating individual growth with the great cause of socialism with Chinese characteristics, and with the prosperity and power of the homeland. Prepare the youths for taking on the honorable mission of building China and revitalizing China.

3. Beginning with the regulation of youths' behavior and habits, develop in them good moral character and civil conduct. Intensely promote basic codes of ethics: "patriotism and respect for the law; civility and honesty; unity and friendship; diligence, frugality and self-reliance; and professional dedication." Promote communitarianism and socialist humanitarianism. Guide the vast numbers of youths to firmly establish a place in their heart for the homeland, for the community, and for other people; to understand the basic principles of conduct; and to be equipped with the basic upbringing necessary for living a civilized life. Teach the youths how to handle interpersonal relationships, the relationship between the individual and society, and the relationship between the individual and the natural world.
4. Beginning with improvements in the development of character, promote the overall development of young people. Strive to cultivate in youths a work ethic, creativity, efficiency, and environmental awareness; an enterprising spirit, a scientific mind, and an awareness of democracy and the rule of law. Enhance the development of young people's practical skills, autonomy, and the ability to protect themselves; guide them so that they maintain their vitality, their exuberance, their high-spirited yearning for self-betterment; encourage them to study diligently, to implement boldly, and to dare to create; comprehensively improve their ideological and moral character, their scientific and cultural literacy, and their physical health.

   School is the primary channel for transmitting ideological and moral education to young people. We must follow the party's education policy, and prioritize ideological and moral education among all general education goals, and throughout all aspects of education and teaching activities. We should place extremely high importance on the cultivation of a national spirit, incorporating this throughout the primary and secondary education experience.

4. Ministry of Education's "Curriculum Framework for Senior High School Politics Subject" (2004)

The goals of the Politics subject:

1. Knowledge:
   - Know that the Chinese Communist Party has always represented the development trend of China's advanced productive forces, the orientation of China's advanced culture, and the fundamental interests of the overwhelming majority of the Chinese people.
   - Understand the meaning of developing socialist market economy, the socialist democracy, and the socialist advanced culture.
   - Know the principles and the basic methodology of materialism and historical materialism.
   - Understand contemporary China's basic needs for moral construction among its citizens, as well as the establishment of China's rule of law.
   - Obtain the relevant knowledge in order to make the correct decisions regarding career development.
2. Abilities:

- Enhance the ability to use Marxist principles and methodology to solve real issues. Be able to make the correct value judgment and behavior choices.
- Enhance the ability to actively participate in economic, political, and cultural activities.
- Enhance the ability to correctly handle the relationship between competition and cooperation in the society.
- Foster the ability to individually and voluntarily study, choose, and discover.
- Enhance the ability to do everything in accordance to the law: constrain self conducts according to the law, and use law to protect own rights and interests.
- Develop the ability to collect and filter societal information using multiple methods, especially the modern information technology.

3. Sentiments, Attitudes, and Values:
   - Love the Chinese Communist Party. Be persistent in the belief in the socialist development path with Chinese characteristics.
   - Love the nation, love its people. Pay close attention to the destiny of the nation. Enhance the self-esteem, self-confidence, and pride of the Chinese nation. Be willing to promote the Chinese ethnic spirit. Establish the ambition to strive for the revival of the Chinese nation.
   - Pay close attention to social development. Take initiative in participating in social activities. Be honest, faithful, and trustworthy. Enhance social responsibilities. Continue to establish perspectives and concepts of democracy and the rule of law. Foster the idea of citizenship.
   - Love the community. Be devoted to the society. Care for others, and be willing to help others. Foster the spirits of cooperation and friendliness.
   - Love to study. Respect science. Chase after truth. Obtain the scientific attitudes and innovation spirits.
   - Love life. Take initiative to engage in healthy cultural activities. Maintain an upbeat spirit, and aim for higher moral goals.
   - Love peace. Respect for the diverse ethnic culture around the globe. Pay close attention to the common interests of all mankind. Foster a global perspective.

Appendix C Textbooks

C.1 Textbook Covers

1. Old politics textbook

"Senior High School Politics (Module A)", *People's Education Press*.



2. New politics textbook

"Senior High School New Curriculum Standard Politics (Module 1): Economic Life", *People's Education Press*.



C.2 A Few Words on the New Senior High School Politics Textbook, from the Textbook Author (2009)

In July 2009, the chair of the committee in charge of rewriting the Politics textbook, Tian Xinming, who was appointed by the Ministry of Education, published an essay on his thoughts on the new textbook.[5] To our knowledge, this is the only example of the author of a Chinese textbook reflecting on how he wrote the textbook. The following are translated excerpts:

> The new textbook features two prominent characteristics: First, it unequivocally upholds the correct political and ideological point of view, as well as Marxist education. Second, it reflects the basic concepts of the curriculum reform, focusing on guiding the learning process.
>
> ...
>
> We believe that high school students are at an age of rapid development and transformation of their own political ideology. Since the founding of the [People's Republic of China], many years of experience has shown that the high school Politics curriculum may have a profound impact on the students' entire lives. 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.
>
> ...
>
> The Education Ministry has explicitly indicated to us that the fundamental goal for the Politics curriculum is to educate students in morality and ideology. Similar to other subjects, it also teaches students knowledge and equips students with skills. However, its fundamental characteristic is that it is a curriculum designed for moral and ideological education. This is the major difference between the Politics curriculum and other subjects. Whether it is writing the textbook or teaching the material at school, we must tightly uphold this curriculum's basic feature and fundamental goal. Otherwise, we will go in the wrong direction.
>
> ...
>
> [Regarding new material that needed to be covered in the textbook.] The CCP's basic guiding principles, which are explicitly summarized and stated in the Party's 15th congress: namely, the basic goals and policies of the construction of the Socialist economy, politics, and culture with Chinese characteristics. This is the expansion of the CCP's basic roadmap, and the curriculum needs to accurately reflect this. After the Party's 16th congress, the CCP introduced the strategic ideology of a harmonious society. These ideas must also be promptly reflected in the new curriculum, and become a part of the moral and ideological educational content.
>
> ...
>
> In order to write the textbook well, we must maintain a correct and clear understanding of the current ideological and political situation. The overall situation of China's ideological theory field is good. The mainstream is positive and healthy. However, the ideological field is not peaceful. There exist noises: ideological struggles and competition; foreign hostile forces' attempts to westernize or separate China. This would be reflected in the textbook writing process.

[5] The original text in its entirety can be found at
`http://www.pep.com.cn/sxzz/js/tbjx/kb/jsys/bx1/201008/t20100830_824446.htm`.

Appendix D Government's Aims, Changes in the Curriculum, and Changes in the *Gaokao* framework

D.1 Democracy and political participation

- State Council (1999): mentions "(socialist) democracy" as a goal of moral education at school.
- Ministry of Education (2001): Specifies that to equip students with the ideas of "socialist democracy" is one of the main objectives of the new curriculum.
- State Council (2004): To establish the consciousness of "(socialist) democracy" is one of the main objectives of moral construction.
- Ministry of Education (2004): a main goal of the curriculum is to make students understand the meaning of "socialist democracy." Also, the curriculum is to "enhance students' ability to actively participate in political life." The framework also adds related sections such as "citizens' participation in political life," "rights and duty of political participation", etc.
- Added sections in the new curriculum:
  - "Main components of political life"
  - "How to participate in political life"
  - "The choice of election methods and its basis"
  - "Various ways of participating in democratic decision-making"
  - "The importance of citizens' direct participation in democratic decision-making"
  - "The most comprehensive democratic practices in China"
  - "End-of-chapter research topic: ordered and disordered political participation"
- Added items in the new *Gaokao* framework:
  - Basic principles and content of Chinese citizens participating in political life
  - Channels for Chinese citizens to participate in political life
  - China's election system and method
  - Various ways for citizens to participate in democratic decision-making
  - The significance of citizens to directly participate in democratic decision-making
  - The meaning and significance of Chinese villages and urban dwellers to govern themselves

D.2 Rule of law, supervision of government, and trust in government

- State Council (1999): mentions "the rule of law" as main goals of moral education at school.
- Ministry of Education (2001): the new curriculum should make students understand the principle of "the rule of law."

- State Council (2004): emphasizes that "the rule of law" should be integrated into the school curriculum.
- Ministry of Education (2004): one of the main objectives of the curriculum is to make students understand the "basic requirement of legal system construction in contemporary China." Also, the new curriculum shall establish students' sentiment of "loving CCP and the nation." The framework adds several sections related to the rule of law. For example, "government should exercise its power and duties according to law," "government's power shall be supervised, and government should not abuse its power." The framework also adds sections related to supervision of the government, such as "citizens' responsibility to participate in government supervision," "government's power shall be supervised, and government should not abuse its power."
- Added sections in the new curriculum:
  - "Various methods of democratic supervision"
  - "Responsible exercise of the supervision right"
  - "A government that benefits its people"
  - "Ways to seek help; legal channels to voice complaints"
  - "The specific requirements for government to adhere to the rule of law"
  - "The significance of restricting and supervising government's power"
  - "Cheers for the 'Sunshine Project' (local government operational transparency project)"
  - "End-of-chapter research topic: where does the government's authority come from?"
- Added items in the new *Gaokao* framework:
  - Chinese citizens' rights of democratic supervision
  - The legal channels to conduct democratic supervision
  - Citizens need to exercise the right of democratic supervision in a responsible manner
  - The duties of the Chinese government
  - The fundamental guidelines of the Chinese government; the basic principles of government operations
  - The significance and requirement of the rule of law
  - To improve the government's ability to adhere to the rule of law
  - The significance of restricting and supervising government's power
  - China's administrative supervision system
  - The origin and establishment of the Chinese government's authority

D.3 The "Three Represents"

- State Council (1999): "The Three Represents" is not mentioned. (Note: the concept of "The Three Represents" wasn't officially introduced as a CCP guiding principle until 2001.)

- Ministry of Education (2001): emphasizes that "the primary education reform should be centered on the principles of Deng Xiaoping's 'Three Faces' and Jiang Zemin's 'Three Represents.' "
- State Council (2004): "The Three Represents" is emphasized multiple times. For example, the document opens with a statement that "youths' moral construction should be guided by the 'Three Represents' principle."
- Ministry of Education (2004): emphasizes multiple times that one of the guiding principles of the new curriculum is "The Three Represents." The document also emphasizes multiple times that one of the primary goals of the curriculum is to make students understand the concept and application of "The Three Represents." The framework also adds sections that introduce the concept and application of "The Three Represents" into the textbook.
- Added or modified sections in the new curriculum:
  - "Core of political civilization"
  - "Theoretical frameworks of socialism with Chinese characteristics"
  - "End-of-chapter research topic: the characteristics of socialistic political civilization"
- Added and modified items in the new *Gaokao* framework:
  - How to select representatives of the people
  - The basic characteristics, guiding principles and doctrines of the CCP
  - Continuous improvement and perfection of the manner in which the CCP rules and governs
  - Political party system with Chinese characteristics
  - The theoretical framework of socialism with Chinese characteristics

D.4 Attitudes toward ethnic minorities

- State Council (1999): specifies that the education of "multi-ethnic harmony" is a goal of moral education at school.
- Ministry of Education (2001): the document mentions that one of the main objectives of the new curriculum is to make students become proud of their Chinese cultural heritage.
- State Council (2004): the document mentions several times the importance of educating youth regarding Chinese cultural and ethnic heritage. It also states that moral education needs to establish the sentiment of Chinese ethnic pride among the youth.
- Ministry of Education (2004): specifies Chinese ethnic pride as one of the main objectives of the new curriculum.
- Added and modified sections in the new curriculum:
  - "Principles of dealing with relationships among ethnic groups: equality, unity, and all prosperous together"

  - "The eternal Chinese ethnic spirit"
  - "Promoting the Chinese ethnic spirit"

- Added and modified items in the new *Gaokao* framework:
  - The basic principles of dealing with multi-ethnic relationships in China
  - The inclusiveness of the Chinese culture
  - Each ethnic group contributes to the Chinese culture
  - The core of the Chinese ethnic spirit
  - The contemporary characteristics of the Chinese ethnic spirit

D.5 State intervention in markets

- State Council (1999): not mentioned.
- Ministry of Education (2001): not mentioned.
- State Council (2004): the document states that "the moral education of the youth should correspond to the reality of the socialist market economy."
- Ministry of Education (2004): the document specifies that one of main goals of the curriculum is to make students understand the meaning of "socialist market economy." The framework also adds sections such as "the role government plays in market activities," "one cannot construct socialist market economy without the state's macro-adjustment and intervention."
- Added and modified sections in the new curriculum:
  - "Limitations of market allocation of resources"
  - "Basic characteristics of the socialist market economy"
  - "Strengthening the state's macroeconomic regulations and controls"
  - "Functions of fiscal policies"
  - "How to correctly utilize fiscal policies"
  - "The concept of public goods"
- Added and modified items in the new *Gaokao* framework:
  - Market adjustment and its limitations
  - Market allocation of resources
  - Basic characteristics of the socialist market economy
  - Public finance and infrastructure construction
  - Public finance and macroeconomic regulations and controls
  - Public finance and the guarantee of people's living standard

D.6 Attitudes toward the environment

- State Council (1999): not mentioned.
- Ministry of Education (2001): specifies that equipping students with "basic consciousness of the environment" is one of the objectives of the new curriculum.
- State Council (2004): one of the main goals of youths' moral construction is to establish their "consciousness of the environment," as well as "the basic ability to handle the relationship between men and nature."
- Ministry of Education (2004): the document does not explicitly mention environment in its main objectives section. However, the framework adds sections on topics such as "sustainable development path" into the new curriculum.
- Added sections in the new curriculum:
  - "New demands of economic development"
  - "Scientific outlook on development"
  - "Sustainable and balanced economic development"
- Added items in the new *Gaokao* framework:
  - Scientific outlook on development
  - Sustainable and balanced economic development

Appendix E Survey

E.1 Recruitment Email for Peking University Online Survey (2013)

In English:

Dear Students,

Greetings! This is a research study about young people in China, consisting of online survey questions and some simple online economic games. It is distributed to all undergraduate students at Peking University. This survey is organized by University of California at Berkeley, Hong Kong University of Science and Technology, and Guanghua School of Management at Peking University. We welcome your participation.

Our survey aims to understand Chinese young people's opinions on political institutions, social issues, economic activities, and so on. The information we collect will only be used for academic research. There is no right or wrong answer to these questions. Your honesty and patience in answering these questions will be extremely helpful to our academic study, which will foster the creation of human knowledge.

The entire study (online survey & online economic games) will take about 30 minutes to complete. Each student can only complete one survey. With your student ID, you will be rewarded with at least RMB 40 for your participation. Depending on your responses, you can also earn up to RMB 110 in the economic games. Furthermore, you will be entered into a drawing that gives out 1 iPad with Retina Display, 5 iPad Minis, and 10 iPod Shuffles.

Please note that you have to be at least 18 years old to be able to participate in this survey.

If you are interested in participating in this study, please click on the link below: `<link>`

Peking University, Guanghua School of Management
May 6th, 2013

In Chinese:

亲爱的同学:

见解独到的你，是否对中国的政治和社会有自己的见解？天资聪颖的你，是否想体验一下"高智商"的经济学游戏？现在，我们提供了一个机会让如此优秀的你发表独到见解、并且赢取高端大气上档次的iPad 4 和iPad Mini 幸运大奖！

这是一份针对中国年轻人"社会观念和风险态度"的问卷调查和在线经济学小游戏，由美国加州大学伯克利分校（UC Berkeley）、斯坦福大学（Stanford）、香港科技大

学（HKUST)和北京大学光华管理学院（PKU GSM）联合组织。本次调查针对北京大学本科生（年满18周岁）。我们的研究主要为了了解中国年轻人的社会观念、价值偏好和风险规避行为等，我们搜集到的所有信息将只用于学术研究。你的回答将直接有利于学术研究，推动人类知识的开拓。每一个北大学生的参与都对研究的结果至关重要！

整个在线调查只需花费你30分钟时间，但报酬非常丰厚！完成整个问卷你即可凭借学号获得至少40元，至多110元的现金奖励！参加此次研究，你更有机会抽奖获得1台iPad with Retina Display, 5台iPad Mini和10台iPod Shuffle！

开始行动起来吧！马上点击以下链接：`<link>`

请注意本调查只持续两周，即2013年5月6日（周一）至5月19日（周日），过时不候哦　上个月第一轮问卷抽奖的幸运儿照片如下。好运齐分享！邀请你的北大本科朋友一起来参加很攒人品哦！

北京大学光华管理学院
2013年5月6日

E.2 Detailed description of survey sections

A first set of questions is our focus in the main text of the paper:

- **Personal background.** We asked about students' backgrounds and demographic characteristics, including questions about students' parents' Communist Party membership, parents' professions and residential status (*hukou*), students' sources of news, and students' majors, among others. These variables are never examined as outcomes (though we test for balance across curricula, which functions as a sort of placebo test).

- **Attitudes toward political participation.** We asked students a range of questions related to political participation and democracy. We asked factual questions to determine whether students were aware of certain electoral institutions; we asked students for their opinions of how democratic China is; we asked about students' plans to vote; and, we asked students about their views on the defining characteristics of a democracy. These variables are considered as outcomes in our analysis of the effects of the new curriculum's sharp increase in content focused on Chinese democratic institutions.

- **Trust in government officials.** We asked students about their trust in the central, provincial, and local governments; in courts; in the armed forces; and, in the police. We also asked students whether government officials were self-serving or served the interests of the rich and powerful. These variables are all outcomes when we evaluate whether new discussions of the rule of law, citizen oversight, and constitutional sources of the government's authority resulted in greater trust in government officials.

- **General questions about trust.** We asked students about their trust in people generally; and, we asked about trust in various non-governmental institutions: NGO's, banks and the financial system, and foreign investors. These variables are "placebo" outcomes when we evaluate whether changes in trust in government officials are simply a result of greater trust across institutions or groups of people.

- **The "Three Represents".** We asked students which segments of society should play a role in shaping government policy. We use the responses as an outcome in our analysis of whether the teaching of the Three Represents broadened students' views of groups that should influence policy.

- **Views on minorities.** We asked about students' trust of minorities; we asked whether students viewed Han Chinese and minorities as sharing a common ethnic heritage; and, we asked whether students would consider marrying someone from a different ethnic group.[6] We also asked whether students' identities were "Chinese"—a question we examine when studying the responses of minority students. These variables are examined as outcomes when evaluating whether the new curriculum was successful in crafting a common ethnic identity among all Chinese, whether Han or minorities.

[6] We had hoped to conduct an Implicit Association Test to complement direct questions about minorities, but implementing the IAT proved logistically difficult. In addition, it was theoretically unclear whether even a persuasive curriculum change should change *implicit* attitudes. Still, we hope to use other attitude elicitation mechanisms in future work.

- **Views on markets.** We asked students whether a market economy is preferable to other economic systems. This is an outcome variable we consider when evaluating whether the new curriculum's emphasis on the need for government intervention in markets affected students' views on the economic system.
- **Views on the environment.** We asked students several questions about willingness to trade-off economic growth for environmental protection. We examine these questions as outcomes potentially affected by the new curriculum's new discussion of environmental issues.
- **Teaching methods.** We asked students about several aspects of their classroom experience (e.g., encouragement of student participation or the importance of memorization); we also asked about teachers' focus on the *gaokao*. We examine these variables as outcomes to determine whether changed teaching practices were associated with the change in educational content.

A second set of questions is of interest to us, because the questions touch on important political attitudes; however, these questions are not our focus here because they are not discussed in the government documents outlining the curriculum reform, are not associated with changes in the textbooks' content, or because there is some ambiguity in the government's desired attitudes. The following sections are briefly examined in Appendix Table A.1:

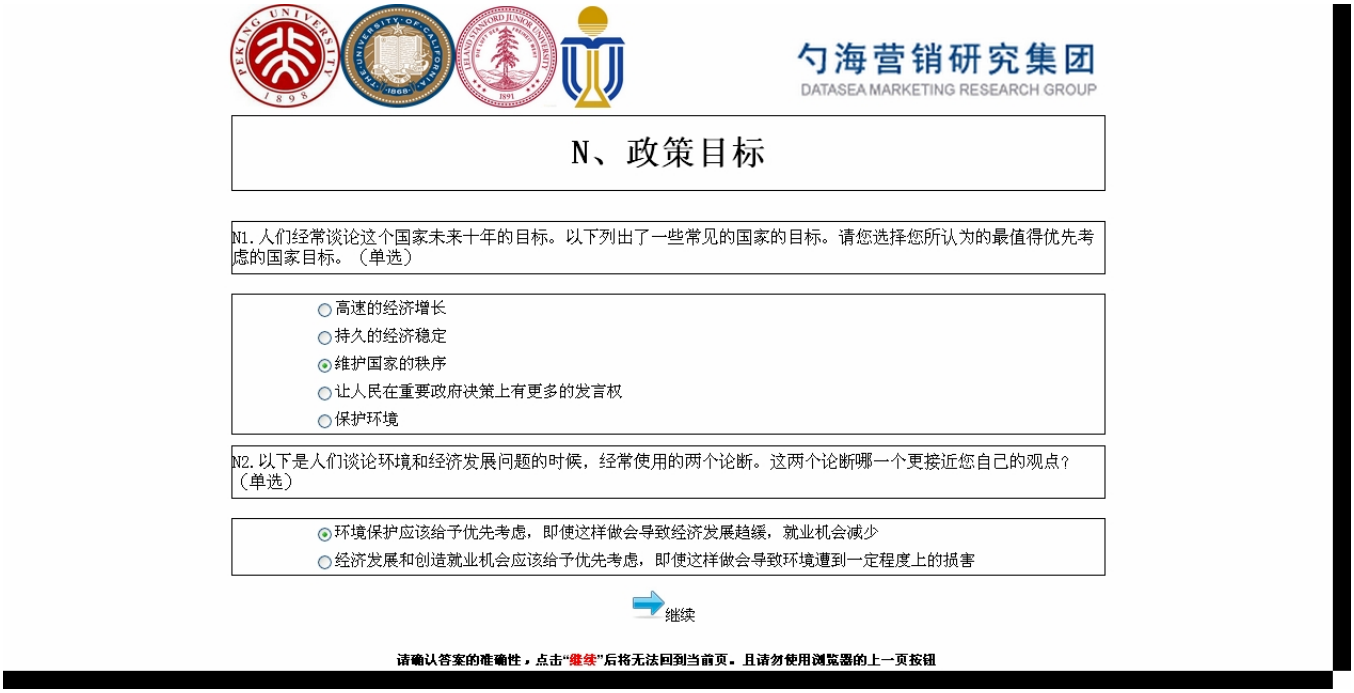
- **The wisdom of the masses.** We asked students several questions regarding whether "the people" do a good job selecting leaders; whether "the people" know whether village heads are doing a good job; etc. As we discuss below, we view this issue as an ambiguous one, as the government emphasizes that political participation is important, but also that political participation is a *responsibility*.
- **Disobedience.** We asked students whether they would disobey or stand up to the government if an official does not adhere to the rule of law. Again, this is an ambiguous set of attitudes: the government certainly emphasizes officials' adherence to the rule of law, and also discusses the importance of citizen monitoring; however, the government does not want to promote excessive disobedience or uncontrolled protests.
- **Political action.** We asked students whether they had reported government misconduct; whether they had participated in protests; whether they had voted; and, whether they had joined various political organizations. We do not focus on these outcomes because college students in China do not have many opportunities to engage in political action. Instead, we study political action by studying a broader sample of individuals (see Section 5.2 in the main text and Table A.3).
- **Bribery.** We asked students about the necessity of making unofficial payments in a variety of settings; we also asked about the efficacy of paying bribes and about students' views on the morality of paying bribes. These variables are outcomes closely related to the new curriculum's discussion of the importance of rule of law; however, there is less direct discussion of bribery or corruption in the government documents structuring the curriculum reform.
- **Equity/Efficiency tradeoffs.** We asked students whether they would be willing to trade-off lower growth rates or lower incomes in return for greater equity. We do not focus on these questions in the paper because the government's aims here are competing: growth is a high

priority, as is equity (perhaps with efficiency taking precedence). We also asked students to play an incentivized game revealing their preferences regarding equity/efficiency tradeoffs.

Finally, several sections of the survey were not intended to be outcomes in our current analysis of the impact of the new curriculum on students' political attitudes:

- **Career preferences.** We asked students about the types of organizations and locations in which they would prefer to work.
- **Risk preferences.** We asked students about their taste for risk generally, in a hypothetical investment decision, and regarding career choices.
- **Investments.** The new curriculum included a discussion of modern financial markets and assets that was not part of the old curriculum. We asked students about their taste for investing in risky assets, and about their experience investing in different assets.
- **Students' views on the determinants of success and the returns to schooling.** We asked students for their opinions on the determinants of success in Chinese society (hard work, connections, etc.); we also asked them a set of questions eliciting their beliefs about the returns to schooling.
- **Personality.** We asked students questions from a standard "Big 5" personality traits survey.
- **Values.** We asked about the values students considered important (e.g., independence, imagination, religious faith, obedience, etc.).
- **Incentivized risk preference game.** We asked students to play an incentivized game to evaluate their risk preferences. We do not examine this as an outcome, but we do use it to "validate" students' stated preference responses to a direct question about their preferences.

E.3 Screenshot of online survey



E.4 Photo of student respondent (raffle winner)



Appendix F Additional outcomes

In addition to the main outcomes of interest that we study in the main text, a second set of questions is of interest to us, because the questions touch on important political attitudes; however, these questions are not our focus here because they are not discussed in the government documents outlining the curriculum reform, are not associated with changes in the textbooks' content, or because there is some ambiguity in the government's desired attitudes.

Views on the wisdom of the masses The emphasis on Chinese democratic institutions in government documents outlining the reforms, and in the new curriculum, raises an interesting question: do students who studied under the new curriculum trust in the wisdom of the people more than students who studied under the old curriculum? This is ambiguous from the discussion of democracy in Chinese government documents and in the new textbooks: while a great deal of attention is devoted to discussing political participation, there is also an emphasis on voting and political participation as a *responsibility*. The new curriculum (quoted in the main text) states, "Citizens have to continue improving themselves in participating in democratic elections, so that they can exercise their voting rights well." We asked students several questions in the survey to study students' views on "the people's" competence in choosing good officials; we construct our standard index based on these questions, with variables coded such that more positive beliefs about the wisdom of the masses would lead to a positive change in the index.

In Table A.1, column 1, we present the estimated effect of the new curriculum on students' views of the wisdom of the masses in selecting leaders. We find that, if anything, students under the new curriculum are more *skeptical* about the wisdom of the masses than are students under the old curriculum. This is consistent with the emphasis in the new curriculum on the responsibilities of citizens under a democracy, and with some skepticism among students regarding the preparation of the majority of the Chinese population for those responsibilities.

Political disobedience Along with discussions of rule of law and democracy (emphasized above), there is a significant discussion in the new curriculum of the importance of citizen monitoring of government officials. Active citizen monitoring of government is another ambiguous issue among Chinese officials (see, e.g., Lorentzen, 2013): on the one hand, monitoring of local officials is seen as crucial for the maintenance of social order and for limiting corruption. On the other hand, monitoring—often made effective in the form of protests—can be destabilizing (and the new curriculum certainly does not promote protesting or disobeying the law). To determine whether the increased emphasis on monitoring officials affected students' views on disobeying the government or engaging in protests, we included several questions about attitudes toward "disobedience." We again construct an index based on these questions, coded such that a positive change in the index indicates more positive views toward protest and disobedience.

In Table A.1, column 2, we present the estimated effect of the new curriculum on students' views on political disobedience. We again find no statistically significant effect of the new curriculum, and if anything students view disobedience more *negatively* if they studied under the new curriculum.

Political actions Next, we examine students' reported political *actions*, rather than attitudes. These reported actions are not our focus: Chinese college students typically have very little time

or opportunity to engage in political acts such as protesting government policies; voting opportunities may vary depending on students' hometowns, ages, and the timing of elections. Still, we asked students about these activities. We also asked them whether they participated in political organizations. We construct an index of students' reported political activities, and find no effect of the new curriculum on this index (Table A.1, column 3). We do find positive effects that are statistically significant ($p < 0.10$) on joining non-CCP political organizations (detailed results available from the authors upon request). We discuss the relationship between stated attitudes and political behavior using a broader sample of Chinese individuals in the main text, Section 5.2 and present empirical results in Table A.3.

Views on unofficial payments Although the Chinese government does not specifically discuss bribery or corruption in its documents shaping the curriculum reform, the emphasis on government legitimacy arising from adherence to the rule of law throughout the government documents, and throughout the new curriculum, suggests that students' views on the role of bribery in Chinese society might also be affected by studying under the new curriculum. To examine whether this was the case, we asked students a range of questions about the prevalence and efficacy of bribery in different settings. We construct our standard index using these questions, with components coded such that the index is more positive when students view bribes as less necessary, less prevalent, and less effective.

In Table A.1, column 4, we present the estimated effect of the new curriculum on students' views on unofficial payments and find that these move in the direction one would expect: students under the new curriculum generally see bribery as less necessary in various settings—for example, interacting with traffic police or requesting official documents—and also view bribes as less effective (these results are statistically significant at the 10% level).

Views on efficiency/equity tradeoffs Finally, we examine whether students' views on tradeoffs between efficiency and equity have changed as a result of studying under the new curriculum. The curriculum and government documents are somewhat ambiguous on this point: while there is certainly discussion of concerns about equity and social inequality, economic development and efficiency often seem to take precedence over concerns regarding equity. Because social inequality is such a pressing issue in contemporary China, we included questions (and an incentivized game) to gauge students' preferences with respect to equity/efficiency tradeoffs. We construct an index based on several survey questions and the incentivized game, with more positive values of the index indicating preferences for greater efficiency (which seems to be emphasized under the new curriculum).

In Table A.1, column 4, we present the estimated effect of the new curriculum on students' preferences with respect to equity/efficiency tradeoffs. We find that studying under the new curriculum, indeed, has a significant effect of moving students toward favoring efficiency over equity.

Principal component analysis As another check of the robustness of our results, we present results estimating the effects of the new curriculum on our various indices, but rather than using a weighted sum of standardized outcomes within a category, we examine the first principal component of the outcomes within a category. In Table A.2, we show our baseline regressions for the outcomes for which we previously used z-score indices (compare to Table 9, Panel A). One can see that our results are very similar constructing our indices in this alternative manner.

Attitudes and behavior In section 5.2, we relate our finding of increased trust in government officials among students exposed to the new curriculum to behavioral outcomes, as observed in the AsiaBarometer survey. This survey asks respondents about their trust in various government officials—central government, local government, courts, armed forces, and police. The only differences between our survey questions and the AsiaBarometer questions are, first, that AsiaBarometer respondents indicate their level of trust on a 1–4 scale, rather than a 1–5 scale; and, second, that we specifically ask about trust in both local and provincial governments, while AsiaBarometer asks only about trust in local government. Based on the questions in the AsiaBarometer survey, we can also construct a z-score index of trust in government officials, just as in the main analysis of this paper. To ensure comparability with our survey sample, we limit our analysis to Chinese respondents with at least 12 years of schooling.

The AsiaBarometer survey also asks the following two questions about political action:

> Here is a list of actions that people sometimes take as citizens. For each of these, please tell me whether you, personally, have never, once, or more than once done any of these things during the past three years:
>
> 1. Attended a demonstration or protest march.
> 2. Refused to pay taxes or fees to the government.

We regress reported political actions on reported levels of trust in government officials, controlling for respondents' age (and age squared) and gender.[7] Across trust measures, we find that greater trust in government officials is associated with significantly less frequent participation in demonstrations and protests; we also find that across our measures of trust in government officials, greater self-reported trust is associated with significantly less self-reported refusal to pay taxes and fees (results are presented in Table A.3). Looking at the summary trust index, we find that increasing the index by one standard deviation makes an individual 13.5 percentage points less likely to attend a demonstration, or 5 percentage points less likely to refuse to pay taxes or fees. In section 5.2 above, we then put these findings in relation to the changes in trust induced by the new curriculum.

[7] Excluding these controls does not affect our results.

Table A.1: Other outcomes

Dependent variable:	z-score index (Mass democracy)	z-score index (Disobedience)	z-score index (Political action)	z-score index (Bribes)	z-score index (Equity/efficiency)
	(1)	(2)	(3)	(4)	(5)
New Curriculum	-0.134	-0.040	-0.025	0.124*	0.131*
	[0.092]	[0.076]	[0.083]	[0.072]	[0.078]
p-value	(0.146)	(0.601)	(0.761)	(0.086)	(0.098)
Observations	1,529	1,755	1,698	1,733	1,610
Mean DV	0	0	0	0	0
Std.Dev. DV	1	1	1	1	1

*: Significant at 10%; **: 5%; ***: 1%. All regressions include a full set of province and cohort fixed effects (not reported). Robust standard errors in brackets, clustered at the province×cohort level. Number of clusters: 116.

Table A.2: First principal components

Dependent variable:	First p.c. (Democracy)	First p.c. (Trust in gov.)	First p.c. (Minorities, Han)	First p.c. (Minorities, non-Han)	First p.c. (Environment)
	(1)	(2)	(3)	(4)	(5)
New Curriculum	0.303***	0.495***	0.105	0.230	-0.173
	[0.104]	[0.167]	[0.094]	[0.355]	[0.113]
Observations	1,724	1,753	1654	141	1,708
Mean DV	0	0	0	0	0
Std.Dev. DV	1.234	1.981	1.204	1.118	1.141

*: Significant at 10%; **: 5%; ***: 1%. All regressions include a full set of province and cohort fixed effects (not reported). Robust standard errors in brackets, clustered at the province×cohort level. Number of clusters: 116; 64 (column 5).

Table A.3: Outcomes from AsiaBarometer

Dependent variable:	Attended a demonstration or protest march						Refused to pay taxes or fees to the government					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Trust central government	-0.017*						0.002					
	[0.010]						[0.011]					
Trust local government		-0.020**						-0.023***				
		[0.009]						[0.008]				
Trust courts			-0.021**						-0.018*			
			[0.009]						[0.010]			
Trust armed forces				-0.005						-0.016		
				[0.007]						[0.013]		
Trust police					-0.020**						-0.015*	
					[0.009]						[0.008]	
z-score Index						-0.022**						-0.011
						[0.009]						[0.009]
Observations	956	958	953	953	955	875	956	958	953	953	955	875
Mean DV	0.0166	0.0166	0.0166	0.0166	0.0166	0.0166	0.0313	0.0313	0.0313	0.0313	0.0313	0.0313
Std.Dev. DV	0.160	0.160	0.160	0.160	0.160	0.160	0.208	0.208	0.208	0.208	0.208	0.208

*: Significant at 10%; **: 5%; ***: 1%. All regressions control for gender, age, and age^2. Samples restricted to individuals completed at least high school education. The z-score index in column 6 and 12 (weighting by the inverse covariance of the standardizes outcomes) is computed following Anderson (2008).