

# Curriculum and Ideology

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## Abstract

We study the causal effect of school curricula on students' political attitudes, exploiting a major textbook reform in China between 2004 and 2010. The sharp, staggered introduction of the new curriculum across provinces allows us to identify its causal effects. We examine government documents articulating desired consequences of the reform, and identify changes in textbooks reflecting these aims. A survey we conducted reveals that the reform was often successful in shaping attitudes, while evidence on behavior is mixed. Studying the new curriculum led to more positive views of China's governance, changed views on democracy, and increased skepticism toward 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 underlie political institutions and policy choices. People’s attitudes are formed by a variety of sources: they are transmitted from parents to children; from peer to peer; from third parties, such as media, experts, or the state; and, they arise from individual experiences.<sup>1</sup> 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 evidence from a survey we conducted with nearly 2,000 Peking University undergraduate students to study the causal effect of school curricula on students’ political attitudes and beliefs, examining the impact of a new high school Politics 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 curriculum: among these were emphasizing the adherence of the Chinese government to the rule of law; teaching students about Chinese socialist democratic institutions; teaching students about China’s unique economic institutions and development path; cultivating in students a traditional national identity that bridged ethnic groups; and, promoting increased concern for the environment.

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. Using our survey, we confirm that students studied the intended textbooks: nearly 95% of students identify the textbook cover we predict given their home province and high school entry date. In addition, we find that the changes in the textbooks’ content are reflected in students’ factual knowledge.

The primary purpose of our survey was to elicit students’ political attitudes and beliefs. We specifically asked students questions in a manner that did not look like a series of examination questions, and the pattern of responses does not look like what one would expect if students’ responses simply reflected what they believed to be “correct” answers. Our survey allows us to measure the political attitudes and beliefs of four cohorts of Chinese students, who entered high

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<sup>1</sup>Parent-child transmission has received considerable attention, for example Bisin and Verdier (2001). Peers’ influence on beliefs has been studied by Sacerdote (2001) and Sacerdote (2011), among others. Strömberg (2004), DellaVigna and Kaplan (2007), DellaVigna et al. (2014), and Shapiro (2014) study the influence of the media on political views; Alesina and Fuchs-Schündeln (2007) study the effects of growing up in a Communist system on policy preferences later in life. Di Tella, Galiani, and Schargrodsky (2007), Giuliano and Spilimbergo (2013), Malmendier and Nagel (2011), and Rao (2013) study the role of individuals’ experiences in shaping attitudes and beliefs.

school between 2006 and 2009, drawn from 29 Chinese provinces.

We apply a generalized difference in differences framework to test whether students who studied under the new curriculum express different political attitudes from those who studied under the old curriculum. To derive hypotheses, we carefully examine government documents detailing the goals of the reform, and we compare the old and new versions of the textbooks, both qualitatively and quantitatively (through word frequencies). We identify five broad categories of attitudes the government wished to affect: (i) views on *governance*; (ii) views on Chinese *political institutions*; (iii) views on *economic institutions*; (iv) students' views on Chinese *identity*; and, (v) attitudes toward the *environment*. In addition to studying the effect of the new curriculum on these attitudes, we also study (vi) *behavior* related to the attitudes we examine (specifically, self-reported political behavior, economic choices, and past cooperation with Chinese ethnic minorities).

We find that the new curriculum was often successful in changing students' attitudes on important issues, in the direction intended by the Chinese government. Regarding *governance*, students exposed to the new curriculum have greater trust in government officials, view government officials as more civic-minded, and see bribery as less prevalent and effective. With respect to *political institutions*, students exposed to the new curriculum see China as more democratic, and view individuals' political participation as a defining characteristic of democracy, but are more skeptical of unconstrained democracy—precisely the message conveyed by the new curriculum (and matching the government's aim of teaching students about “socialist democracy”). Finally, students exposed to the new curriculum express more skeptical views of unconstrained free markets, again matching the content of the new curriculum and the government's aim of teaching students about Chinese (as opposed to Western, free-market) *economic institutions*.

On the other hand, we do not find statistically significant effects for some of the attitudes that we examine. As desired by the government, students express somewhat more “multi-ethnic” views of Chinese national identity, and also express a somewhat stronger sense of their own national *identity*, though these effects are not statistically significant. The new curriculum did not cause students to favor policies protecting the *environment*. In fact, attitudes move in the opposite direction of what the government intended, perhaps because environmental protection can be seen as opposed to economic growth—another high priority.

We also surveyed students regarding their engagement in *behavior* related to the attitudes that the government wished to shape. Here our results are mixed: students exposed to the new curriculum engage in significantly less risky investment activity (investing in stocks and bonds), consistent with viewing markets with more skepticism. Studying the new curriculum is not associated with significantly different rates of cooperating with ethnic minorities, which is consistent with students not reporting a significantly more expansive sense of their national identity. In the political institutions dimension, we find that students exposed to the new curriculum engage in slightly more political activity (such as voting/planning to vote, and participating in political organizations), but the difference between their behavior and that of students exposed to the old

curriculum is not statistically significant. This stands in contrast to the highly significant differences in views on Chinese governance and political institutions.

The statistically insignificant effects of the new curriculum on political behavior may, in part, reflect Peking University students' very constrained opportunities to engage in political behavior.<sup>2</sup> In Section 5, we examine the association between stated attitudes and reported political behavior in the Asian Barometer Survey, a broader sample with an older population. In the Asian Barometer sample, we indeed find a statistically significant relationship between stated trust in local government officials and political behavior: more trust is associated with less participation in demonstrations and less refusal to pay taxes. While this evidence is merely suggestive, the greater trust in government officials that we attribute to the new curriculum may reduce anti-government behavior among affected students in the decades ahead.

Our 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).<sup>3</sup> Despite striking examples of schooling changes being associated with ideological changes (e.g., education in Nazi Germany), it is 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.

Recently, scholars have begun making progress toward identifying the causal effect of education on political 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 educational *content* on attitudes. In a 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. Specifically, our identification

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<sup>2</sup>For example, Beijing (the place of residence of all of our surveyed students) last held a People's Congress election in 2011; thus, freshmen in our sample, who entered university in 2012, had no opportunity to vote in Beijing—and likely no opportunity to vote in their previous place of residence given their age.

<sup>3</sup>See also Kremer and Sarychev (1998), Gradstein and Justman (2002, 2005), Spilimbergo (2009), Friedman et al. (2011), Campante and Chor (2012), Alesina and Reich (2013), and Bandiera et al. (2015).

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 $\times$ 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 $\times$ time varying shocks that affect adjacent cohorts differentially, but smoothly (e.g., province-specific trends in economic activity), in a specification that includes province-specific cross-cohort trends. We also implement a variety of techniques (following Anderson, 2008) to address concerns regarding statistical inference, given that we test multiple hypotheses.

Beyond identifying the causal effect of typically endogenous curriculum change, 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 students' views. Whether the Chinese government can shape the political attitudes of Chinese children is difficult to know *ex ante*: on the one hand, the Chinese government is greatly concerned with information control; it seems to be very effective in implementing policies across 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—or even react negatively against it.<sup>4</sup> The new curriculum might also fail to persuade students because the internet allows students to easily access content that differs from official Party positions.<sup>5</sup> 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 finding that China's Communist Party successfully shaped 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 (Strömberg, 2004; DellaVigna and Kaplan, 2007; Bursztyn and Cantoni, 2012; Yanagizawa-Drott, 2014; DellaVigna et al., 2014). 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 political attitudes. Our findings suggest that alongside other mechanisms of social and political control, political elites can shape students' attitudes by choosing the content of the education system.

The paper proceeds as follows: in Section 2, we discuss China's 8th Curriculum Reform, which is the focus of our study; we identify specific attitudes the Chinese government wished to shape, and present qualitative and quantitative evidence of changes in textbook content that reflect the

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<sup>4</sup>Fouka (2014) presents evidence that government policies aimed to promote cultural assimilation among German-Americans in the United States in the early 20th century backfired.

<sup>5</sup>Edmond (2013) models sophisticated consumers of potentially-biased government media, and emphasizes the importance of media centralization for the government's ability to control information and prevent revolt.

Chinese government’s aims. In Section 3, we describe our survey of Peking University students, which is our primary data source, and discuss our approach to statistical inference. In Section 4, we present our empirical model and our main results. In Section 5, we provide a discussion of robustness, economic magnitudes, and external validity. Finally, in Section 6, we place our findings within the social science literature on the effects of schooling on political beliefs and attitudes, and conclude.

## 2 China’s curriculum reform

We study China’s 8th Curriculum Reform, a nationwide education reform undertaken by the Chinese central government beginning in 2001.<sup>6</sup> The curriculum reform was described by government officials as “historically important,” and among the most significant changes in educational policy since China’s economic reforms.<sup>7</sup> Our focus will be the reformed textbooks of senior high school (*gaozhong xinkebiao*) students, corresponding to grades 10–12 in the Chinese educational system.<sup>8</sup>

### 2.1 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 2010, different Chinese provinces, in different years, introduced new high school curricula and textbooks for incoming cohorts of senior high school students. 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.<sup>9</sup>

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

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<sup>6</sup>The previous, 7th curriculum reform was initiated in 1992.

<sup>7</sup>The quote comes from Muju Zhu, Vice Chief at the Basic Education Bureau, Ministry of Education of China. See Zhao, Hongtao (2007), “High School Curriculum Reform is a Historically-Important Mission”, available at: <http://goo.gl/Xf2j1X>, last accessed June 27, 2015. Tao Qi, Minister of Education of Shandong Province, placed the curriculum reform alongside reform of the job allocation system for college graduates as the most important educational policy changes in the post-economic reform era. See Song, Quanzheng (2004), “High School Curriculum Reform, the Earlier the Better—Minister of Education Tao Qi Discussing the Curriculum Reform,” available at <http://goo.gl/81F7ND>, last accessed June 27, 2015.

<sup>8</sup>For reference, in Appendix A, we briefly describe the structure of the Chinese high school curriculum.

<sup>9</sup>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 limited potential for “contamination” of the old curriculum students by those treated by the new curriculum.

curriculum to entering high school students in 2010 (graduating in 2013). The introduction dates by province are presented in Figure 1.<sup>10</sup>

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.

## 2.2 Political aims of curriculum reform

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 Curriculum 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."<sup>11</sup> An author of the new Politics textbooks described the development of the new curriculum as follows:

The Politics textbook is the spiritual material that the country provides for its 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.<sup>12</sup>

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 was designed for "moral and ideological education."<sup>13</sup> Indeed, the State Council, China's chief administrative authority, issued a memo in 2004 titled "Suggestions on Strengthening the Ideological

<sup>10</sup>In Appendix B, Table B.1, we provide citations to government documents and official news reports announcing the introduction of the new curriculum in each province.

<sup>11</sup>Translated excerpts from this and other official documents preparing the Curriculum Reform are presented in Appendix C. 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; see, for example, Gua, Hua (2010), "New curriculum and 'wearing new shoes to walk on the old path'," available at <http://goo.gl/VFDmwB>, last accessed June 27, 2015. We examine changes in instructional methods across curricula in further detail in Section 5.

<sup>12</sup>Appendix B includes this and other 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](http://www.pep.com.cn/sxzz/js/tbjx/kb/jsys/bx1/201008/t20100830_824446.htm), last accessed February 9, 2014.

<sup>13</sup>See Appendix B 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](http://www.pep.com.cn/sxzz/js/tbjx/kb/jsys/bx1/201008/t20100830_824446.htm), last accessed February 9, 2014). Chinese high school students specialize in either a science track or a humanities track, with students in both tracks studying the Politics material on which we focus. While the Politics material is higher-stakes for humanities track students, students in both tracks are tested on it as part of the college entrance process. We find similar effects of the new curriculum for the two tracks (see Section 5); our baseline analysis pools students from the two tracks.

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.”<sup>14</sup> 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 the government’s objectives for the curriculum reform (these documents are described in Appendix C).

### 2.3 Changes in textbook content and the *gaokao*: qualitative evidence

To identify specific changes in the Politics curriculum content that matched the government’s objectives, we first performed a comprehensive comparison of the old and new editions of the *Economic Life* and *Political Life* textbooks.<sup>15</sup> The Politics textbooks (unlike other subjects) are common to all provinces of China except Shanghai—one set for the old curriculum and one set for the new curriculum—greatly simplifying our analysis, and reducing concern about endogenous variation in textbook content. While much of the textbooks’ content was maintained across curricula, some content changed considerably.

We identified sections that were entirely new to the reformed textbooks, sections that were removed from the old textbooks, and sections that were extensively revised. We also examined variation in the material on which students were tested in China’s high-stakes college entrance exam (*gaokao*). Specifically, we compared the *gaokao* frameworks across curricula to confirm that the framework associated with the new curriculum incorporated the revisions, additions, and deletions of the new curriculum in a manner that matches changes in the textbook content that we identified.<sup>16</sup> Indeed, for all of the textbook content changes on which we focus, we find corresponding changes in the *gaokao* framework; this is *prima facie* evidence that the changes in content would have been important to teachers and students.

It is clear from our analysis that several sets of striking curriculum changes were consistent with the objectives outlined in the government documents. These changes fit into five broad categories of political attitudes that the Chinese government wished to change: (i) views on *governance*;

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<sup>14</sup>The document is available online at <http://www.people.com.cn/GB/jiaoyu/1053/2405224.html>, last accessed February 9, 2014. See Appendix C for translated excerpts.

<sup>15</sup>These textbooks made up two-thirds of the old Politics curriculum and half of the new Politics curriculum. The old curriculum included a *Philosophy* textbook, and the new curriculum includes both *Philosophy* and *Cultural Life*. We felt that the *Philosophy* textbook was too nebulous to systematically link to the political objectives of the Chinese government, and the *Cultural Life* textbook could not be compared across curricula. We do examine the content of the *Cultural Life* textbook in our quantitative textual analysis, below. Images of the covers of old and new Politics curriculum textbooks can be seen in Appendix B.2.

<sup>16</sup>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.”



(ii) views on Chinese *political institutions*; (iii) views on *economic institutions*; (iv) students' views on Chinese *identity*; and, (v) attitudes toward the *environment*. Here we describe the qualitative evidence of textbook changes matching the government's desired attitude changes.<sup>17</sup>

**Governance** It is clear from the government documents on curriculum reform that a high priority was to teach students about institutions that legitimized the Chinese government and its officials, especially adherence to rule of law. Reflecting this aim, the new curriculum's *Political Life* textbook includes an added 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 the Chinese government", "the principles of the Chinese government", and "the significance and necessity of rule of law".

**Political institutions** The Chinese government's documents on curriculum reform also emphasize teaching students about "socialist democracy". This notion of democracy is more limited than the Western concept: it involves the participation of citizens while maintaining the political status quo of one-party rule (Brady, 2008). Reflecting this, the new *Political Life* textbook includes entirely new sections on political participation and electoral institutions. Some of these are descriptive, providing information on voting for offices such as Village Head and People's Congress Representative. Others are prescriptive; importantly, the new curriculum does 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.

For example, the *Political Life* textbook, pp. 17–18, includes a new section titled, "Cherish your voting rights," which states:

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.

A bit further into the *Political Life* textbook, there is another new section titled, "Orderly and disorderly political participation," which states that orderly political participation depends on (p. 30):

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<sup>17</sup>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.

whether citizens can correctly handle the relationship between their political rights and political duties. As long as we are under the leadership of the Chinese Communist Party, following the constitution, laws and regulations, we can ensure orderly political participation. Without the leadership of the Chinese Communist Party, violation of laws, regulations, and procedures will inevitably lead to disorderly participation.

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 need to realize their democratic supervising rights responsibly”.

**Economic institutions** Government documents shaping the new curriculum emphasized the importance of the “socialist market economy” (as opposed to a free market economy) for economic and social development. 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 markets alone to allocate resources will lead to inefficiency and waste, as well as socioeconomic instability. Market functioning alone can also result in economic fluctuations and chaos, unfair redistribution, widening income gaps, and even cause severe polarization.

Many changes in the *gaokao* framework also emphasize the important role played by 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.”

**Identity** The Chinese government made it a high priority to cultivate a “national spirit” encompassing both the majority Han Chinese and the minority ethnic groups in China. The new *Political Life* textbook adds (p. 72) an entire section titled “Principles of dealing with relationships among

ethnic groups: equality, unity, joint prosperity.” The new *Cultural Life* textbook adds two sections (pp. 71–81) titled: “The Eternal Chinese Ethnic Spirit” and “Promoting the Chinese Ethnic Spirit.” The emphasis on ethnic and national pride and 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 *Cultural Life* textbook (pp. 71–72) includes:

The power of the Chinese civilization is primarily manifested by the power of the Chinese ethnic spirit. . . . [A]fter five thousand years of development, the Chinese ethnic group has formed a great ethnic spirit centered around patriotism, and encompassing unity, peace, diligence, bravery, and perseverance.

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.”

**Environment** Government documents structuring the curriculum reform mention consciousness of the environment as a value that ought to be instilled in Chinese students. The new *Economic Life* textbook includes a new section titled, “Establishing the correct view on consumption”, which states (p. 22):

We should protect the environment and consume “green.” Facing a severe shortage in resources, and environmental pollution, we should establish an attitude of environmental friendliness, and maintain the harmony between people and nature.

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.

## 2.4 Changes in textbook content and the *gaokao*: quantitative evidence

In addition to our qualitative analysis of the textbooks’ content, we conducted a quantitative analysis of the text in the old and new Politics curricula.<sup>18</sup> To structure our analysis, we searched for each word contained in the Chinese State Council document, “Suggestions on Strengthening the Ideological and Moral Construction of Our Youths,” which outlined the government’s objectives for the reform. For each word, we calculated the frequency of that word in the old Politics

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<sup>18</sup>We digitized and examined the *Economic Basics* (10th grade module A) and *Political Basics* (10th grade module B) texts for the old curriculum and the *Economic Life*, *Political Life*, and *Cultural Life* texts for the new curriculum.

textbooks and the new. We also refine our search for words, manually identifying 67 out of the 1,166 words within the State Council document that match our five broad categories of interest.<sup>19</sup> For comparison, we also search for the 1,166 most frequent words in the Chinese language, taken from the *Modern Chinese Frequency Dictionary* (Beijing Language College and Language Education Research Institute, 1985), and again calculate the frequency of each word in the old and new textbooks.

In Figure 2, we present the cumulative distribution functions of the percentage change in the frequency of words across curricula, for three sets of words: the full set of government document words, the subset of government document words that match our five main attitudes of interest, and the dictionary words. One can see in the figure that the words present in the government document increase in frequency systematically more than the comparison dictionary words. Moreover, the words linked to our five broad categories of interest show much greater increases in frequency than the other government document words—again, this is seen across the distribution of words.

In addition to examining the full set of 67 words in the government document that were related to the five categories of attitude change we identified as government objectives, it is of interest to focus on key terms in the government document most closely linked to these attitudes. In Table 1, Panel A, we present counts and the percentage change in frequency of two “key words” for each category of attitudes that we examine. One can see that these key words are typically associated with unusually large increases in frequency. The one exception is “market economy”, which *decreases* in frequency. This change, and the very large increase in frequency of the term “Socialism with Chinese characteristics”, reflect the more negative treatment of markets in the new textbooks.

We also show in Table 1, Panel B, the counts and changes in frequency of: (i) two political terms that are not focused on by the Chinese government; (ii) two “neutral” (non-political) words; and (iii) “Hu Jintao” and “Jiang Zemin”, two presidents of China who held office during the curriculum reform process, but whose names were never mentioned in the old curriculum. One can see that the changes in frequency we found for the five attitudes of interest are large relative to these “comparison” words.

Our quantitative analysis thus confirms our conclusions from reading the Politics textbooks and examining the *gaokao* frameworks: the language used in the State Council document is far more prevalent in the new curriculum than the old, and the specific concepts on which we focused our qualitative discussion show even sharper changes in prevalence across curricula.

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<sup>19</sup>In Appendix C.3, we present the full list of these words that match the government objectives on which we focus.

### 3 Survey of Peking University students

We measure students' beliefs using a web-based survey we conducted April and May 2013 (the entire set of survey questions is provided in Appendix E). 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 multiple iPads and iPods.<sup>20</sup>

#### 3.1 Survey questions measuring political attitudes and behavior

We study six broad categories of outcomes from among the larger set of survey questions: responses to survey questions regarding the five categories of political attitudes that the Chinese government aimed to shape (discussed in detail above), and questions eliciting self-reported behavior linked to these attitudes.<sup>21</sup> Within the six broad categories, we organize survey questions into sub-categories where appropriate. We always code the responses to these questions such that the Chinese government's desired attitudes are assigned larger, more positive numbers.

The specific survey questions eliciting our outcome variables are shown in the following table:

Category: Governance	
Panel A: <i>Trust in government officials</i>	
A.1–6	Describe your level of trust in the following institutions: (1 = complete distrust; 5 = complete trust)
A.1	Central government
A.2	Provincial government
A.3	Local government
A.4	Courts
A.5	Armed forces
A.6	Police
Panel B: <i>Bribery and civic-mindedness</i>	
B.1	Village heads put their own interest before those of people. (1 = fully agree; 5 = fully disagree)
B.2	Village heads care primarily about the powerful and rich people, and neglect the interests of ordinary people. (1 = fully agree; 5 = fully disagree)

*Continued on next page*

<sup>20</sup>The survey's content and implementation procedure were approved by the UC-Berkeley Committee for Protection of Human Subjects, Protocol ID 2012-05-4323. The recruitment email (in Chinese and in English translation), a screenshot from the survey, and an image of an iPad winner are all provided in Appendix E.

<sup>21</sup>In addition to the survey questions studied as outcomes, the survey included questions on students' personal backgrounds (which we use to test for balance across curricula and as controls in our robustness analysis); questions on students' perceptions of teaching practices (which we examine in Section 5); questions regarding political attitudes not discussed in government documents related to the curriculum reform (discussed in Appendix E and Appendix F); and, questions about attitudes and beliefs outside the political realm (again, discussed in Appendix E and Appendix F). The latter categories were included in the survey as part of a broader study of China's elite.

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- B.3–7 In your opinion, how often is it necessary for people like you to have to make unofficial payments/gifts in these situations: (1= always; 5=never)
- B.3 Interacting with the traffic police?
- B.4 Requesting official documents (such as passport or birth certificate)?
- B.5 Interacting with the civil courts?
- B.6 Interacting with the providers of primary or secondary education?
- B.7 Interacting with doctors?
- B.8 Do you think that paying a bribe is an acceptable way to accomplish something? (1 = no)
- B.9 Do you think that paying a bribe is an effective way to accomplish something? (1 = no)
- B.10 From the perspective of local government officials, do you think they would accept bribe when it is offered to them? (1 = no)
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**Category: Political Institutions**

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Panel C: *Perception of Chinese democracy*

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

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

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- E.1 Which of the following do you think are characteristics of a democracy? (1 = “People’s participation in the political process” listed first; 0 = otherwise)
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**Category: Economic Institutions**

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Panel F: *Skeptical of markets*

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- F.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. (1=chooses (b) or (c); 0=otherwise)
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**Category: Identity**

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Panel G: *Ethnic identity*

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*Continued on next page*

G.1	Generally speaking, would you say that people in minority groups can be trusted, or that you cannot be too careful in dealing with them? (1 = cannot be too careful; 5 = completely trustworthy)
G.2	China is a country made up of multiple ethnic groups. Which one of the following statements regarding ethnic minority groups do you agree with more? (a) Compared to Han Chinese, ethnic minority groups are relatively independent groups. (coded as 0) (b) Ethnic minority groups are the same as Han Chinese, and they are all Chinese people. (coded as 1)
G.3	China is a country made up of multiple ethnic groups. Which one of the following statements regarding ethnic minority groups do you agree with more? (a) Ethnic minority groups share the same historic heritage and cultural traditions as the Han Chinese. (coded as 1) (b) Ethnic minority groups have different historic heritage and cultural traditions from the Han Chinese. (coded as 0)
G.4	Can you imagine yourself marrying a member of a different ethnic group in the future? (1 = yes)
Panel H: <i>National identity</i>	
H.1	Where would you place your identity on a spectrum, with being Chinese on one end (5) and being a world citizen on the other end (1)
<b>Category: Environment</b>	
Panel I: <i>Attitudes about environment</i>	
I.1	Would you be willing to give part of your income or pay more taxes, if you were sure that the extra money was used to protect the environment? (1 = yes)
I.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. (1=chooses (e); 0=otherwise)
I.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. (1=chooses (a); 0=otherwise)
<b>Category: Behavior</b>	
Panel J: <i>Political behavior</i>	
J.1	I have voted for local (county or district) People's Congress representatives before. (1 = yes)
J.2	I plan to vote for local (county or district) People's Congress representatives. (1 = yes)
J.3	Are you a CCP member, or reserved member of the CCP? (1 = yes)
J.4	Have you ever participated in political groups other than CCP and Communist Party Youth Organization? (1 = yes)
Panel K: <i>Avoiding risky investment</i>	
K.1–2	Have you had the following investment experiences before? (Choose all that apply)
K.1	Stocks. (1 = no)
K.2	Bonds. (1 = no)
Panel L: <i>Cooperation with minority</i>	
L.1	Have you worked with minority group students at school before (in study groups or class projects)? (1 = yes)

A natural concern given the large number of survey question outcomes we examine is the

possibility of false positives. To address concerns about multiple hypothesis testing, we construct a z-score index variable for each of the sub-categories of attitudes we examine: trust in government officials, bribery and civic-mindedness, perception of Chinese democracy, etc. Following Anderson (2008), we standardize each component of the index and sum individuals' standardized outcomes (z-scores), weighting each outcome by the inverse of the covariance matrix of the standardized outcomes.<sup>22</sup> The index for each category will both help us address concerns about multiple hypothesis testing (by reducing the number of hypotheses we test), and also capture broad attitude changes that are only imperfectly measured by any single survey question. In addition to examining the effects of the new curriculum on broad indices, when we examine individual survey question outcomes, below, we address concerns about multiple hypothesis testing by presenting p-values which are adjusted using the false discovery rate (FDR) procedure (Benjamini, Krieger, and Yekutieli, 2006; Anderson, 2008). For transparency, we also show estimated effects of the new curriculum on *all* of our survey questions (not just the outcomes of interest) in Appendix F, Figure F.2.

### 3.2 Survey response rate

The response rate we achieved, 18.6%, is very much in line with other online surveys that rely on impersonal, email recruitment.<sup>23</sup> 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, the response rate was in line with our expectations from the literature on online surveys, so our sample size is by design large enough to identify economically meaningful effects of the new curriculum as statistically significant.

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

<sup>22</sup>We also standardize the z-score index to allow for easier interpretation of the magnitudes of our regression estimates. 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 G). Such index variables have been used to evaluate the effectiveness of policy interventions on a set of related outcomes; see, for example, Kling, Liebman, and Katz (2007).

<sup>23</sup>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, Hadlock, and Levine (2004).



in response rates by curriculum, conditional on province and cohort fixed effects.<sup>24</sup> In fact, we find that the (conditional) response rate differs across curricula by less than 2 percentage points, statistically indistinguishable from zero (see the note to Table G.3 in Appendix G). Second, we can test for balance of observable student characteristics across curricula in our sample (again conditional on province and cohort fixed effects). As we discuss below, we find that our sample is balanced between curricula across a range of observable covariates. The lack of evidence of selection correlated with the curriculum studied indicates that we are able to estimate an internally valid causal effect of the new curriculum, conditional on being in our sample. We further discuss concerns about selection into the survey, selection into Peking University, and the external validity of the effects that we estimate in Section 5.

### 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 if they try to provide “correct” answers to questions that are similar in structure or content to exam questions, and if the correct answer differed across curricula, then responses to exam-style questions might differ even if attitudes do not.

To address this possibility, 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, other than a small number of factual questions related to the new curriculum, which we do not include as part of our analysis of political attitudes, the vast majority of questions explicitly asked about students' own opinions. Most of our questions looked nothing like exam questions, and they typically came from pre-existing social surveys that had nothing to do with the analysis of Chinese education. For example, we asked students about their trust in various categories of government officials, which plausibly may have been influenced by students' study of a curriculum emphasizing the rule of law and citizen oversight of officials. Importantly, no exam ever asked students direct questions about their trust of government officials.

One can see suggestive evidence in the distribution of students' responses that our attempts to write questions that elicited students' *opinions* were successful. This can be best examined in the case of the variables relating to trust in government officials, as they are measured on a 1–5 scale, allowing one to see shifts across the distribution of attitudes (we present the distributions

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<sup>24</sup>In Appendix G, we show the number of respondents by province×cohort cell, as well as the number of students enrolled in Peking University from each cell.

of responses to these questions by curriculum in Appendix G, Table G.4). A first indication that respondents are likely not attempting to provide “correct” responses is the broad range of answers to all of the questions we asked. In each curriculum, for all outcomes, we found responses in the full range, from 1 to 5, and in every case the modal response was provided by less than 60% of students. Another indication that in the new curriculum there was not a clearly “correct” answer to our questions about trust is that modal responses were not located at an end of the distribution. Nor was there always the same modal response: we see either modes of 3 or 4 for our various outcomes.

The changes in the distribution of responses across curricula are also consistent with students’ opinions changing, rather than simply moving to a new “correct” response. One can see that for many outcomes, not only are there shifts in the distribution toward the new curriculum modal response (from below), but there are also movements *away* from the modal response (moving up). For example, we asked students about their trust in local government on a 1–5 scale. Under the old curriculum, the modal response was 3, with nearly 48% of students indicating this level of trust. Under the new curriculum, the mode remained 3 (indicating no change in a “correct” answer), with 45.25% of students choosing this response. Interestingly, responses of 1, 2, and the modal response of 3 are all less common under the new curriculum, while the number of responses of “4” increased by nearly 12 percentage points (over 50%).

**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.<sup>25</sup>

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. Importantly, recent scholarship on China provides evidence that criticism of the government online is both prevalent (despite a lack of complete anonymity) and tolerated by the government; censors focus their attention on silencing speech that may generate collective action (King, Pan, and Roberts, 2013), which the privately expressed attitudes in our survey surely would not do.

Second, the main survey was conducted privately, online, so there would have been no direct social stigma attached to particular responses, nor should there have been strong experimenter de-

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<sup>25</sup>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.

mand effects. 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).<sup>26</sup>

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 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. More students reported trust in the police at a level of "2" than at a level of "5". 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. Peking University is known to be a setting in which liberal views can be expressed, even contrary to government aims. Indeed, the University posted an article from the *Atlantic* magazine on its website stating that it is "an open secret that teachers at the school and neighboring Tsinghua University often broach topics critical of the government in the classroom"; a student quoted in the article states that most students are "very liberal minded, so it's ok to talk about sensitive political things."<sup>27</sup>

We also examine whether students who are more risk averse (and so likely to be more concerned about responding in a socially or politically acceptable way) exhibit different effects of the new curriculum from students who are less risk averse. We find that the more risk averse respondents in the study *do not* show significantly different effects of the new curriculum (see Appendix G, Table G.5).

**Stated preferences versus revealed preferences** As a final check that students' 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. In the game, we elicit students' certainty equivalent to a risky gamble (the greater the certainty equivalent, the more risk-seeking is a student; see Dohmen et al., 2011). We find a positive, highly statistically significant relationship between self-reported risk preferences and the certainty equivalents from the incentivized game (in a bivariate regression, the coefficient on stated risk aversion is 0.163, with a  $p < 0.001$ ). While questions about risk preferences are not likely to be associated with stigmatized attitudes, this remains a useful check that students responded to the survey in a manner that reflects their preferences.

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<sup>26</sup>The paper and pencil follow-up was also completed privately.

<sup>27</sup>The article can be found at [http://english.pku.edu.cn/News\\_Events/News/Outlook/10590.htm](http://english.pku.edu.cn/News_Events/News/Outlook/10590.htm), last accessed on January 26, 2014.

## 4 Empirical analysis

### 4.1 Comparisons of means

To begin our analysis of the effect of the new curriculum, we simply compare means of students' political attitudes across curricula; specifically, we examine means of the z-score indices constructed from the six broad categories of outcomes (12 sub-categories) described above. Within the set of provinces for which we observe both students who studied the old curriculum and students who studied the new curriculum, we group together provinces that have the same curriculum introduction date (and thus, have the same number of cohorts in our sample under each curriculum).<sup>28</sup> To allow for a difference in differences-style comparison, we also plot mean attitudes among students in provinces that do not have variation in curriculum among the cohorts we study; we calculate means across cohorts that match the relevant comparisons for provinces with variation in curriculum.

In Figure 3, we present these means graphically. The bars show means for the relevant group of students in the provinces *with* variation in curriculum in our sample: comparing the bars, one can see differences in political attitudes between students who studied different curricula. The dots show means for the corresponding cohorts within the set of provinces *without* variation in curriculum among the cohorts we study: comparing the dots, one can see the difference in political attitudes across the same cohorts in the *absence* of any change in curriculum.

The top left graph (Panel A) shows means of trust in government officials by the curriculum studied, for each set of provinces. One can see that for each set of provinces examined with variation in curriculum, the mean level of trust is greater among individuals who studied under the new curriculum. Examining the mean trust in government officials among students from provinces without variation in curriculum in our sample, one can see almost no difference in trust across cohorts. Panel B shows means of the index variable measuring perceptions of bribery and views of government officials' civic mindedness. For each set of provinces with variation in curriculum, we find that studying the new curriculum is associated with the view that bribery is less prevalent and effective, and with more positive views of officials. There is very little difference in views on bribery and government officials across cohorts among students from provinces without variation in curriculum in our sample.

In Panels C–I, one can see that for some attitudes (e.g., perceptions of Chinese democracy, skep-

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<sup>28</sup>The oldest students in our survey sample were college seniors in the spring of 2013; they graduated from high school in 2009 and entered high school in 2006. Thus, if a province introduced the new curriculum for the 2006 high school entry cohort, the oldest students in our sample from that province (and all younger students, naturally) would have studied under the new curriculum, and we would lack within-province, cross-cohort variation in curriculum. The youngest students in our sample were college freshmen in the spring of 2013; they graduated from high school in 2012, and entered high school in 2009. Thus, if a province introduced the new curriculum in 2010, we would not observe anyone from that province who studied the new curriculum. The 13 provinces with variation in curriculum in our sample are Beijing, Hunan, Heilongjiang, Jilin, Shaanxi, Henan, Xinjiang, Jiangxi, Shanxi, Hubei, Yunnan, Inner Mongolia, and Hebei.

ticism of markets, and views on Chinese ethnic identity), there are consistent differences across curricula for all sets of provinces (in the direction the Chinese government desired). Other attitudes (e.g., national identity or views of the environment) are not consistently associated with the curriculum studied. Examining differences in attitudes among students from provinces without variation in curriculum in our sample, one can see that there are rarely differences in attitudes across cohorts that match the differences associated with the curriculum studied.

Panel J shows that engagement in political behavior, such as voting, is often lower among students exposed to the new curriculum. Some of this is simply due to differences in opportunities to engage in political behavior across cohorts. For example, Beijing last had a People’s Congress election in 2011; thus, freshmen in our sample, who entered university in 2012, had no opportunity to vote in Beijing—and likely no opportunity to vote at all given their age.<sup>29</sup> Older students also have had more chances to join political organizations such as the Chinese Communist Party—seniors are twice as likely to be in the CCP as freshmen. This is apparent, too, in the political behavior of students from provinces without variation in curriculum in our sample.

In the last row, one can see that students exposed to the new curriculum systematically engage in less risky investment behavior (Panel K), consistent with the greater skepticism of markets seen in Panel F. There is almost no difference in the investment behavior of students from the same cohorts, but coming from provinces without variation in curriculum in our sample. Finally, we do not see consistent differences across curricula in cooperating with minorities (Panel L).

Overall, for our broad categories of *governance*, *political institutions*, and *economic institutions*, the raw data suggest that the government may have been able to shift attitudes in the desired direction, while evidence on *identity* and on *environment* is more mixed, as is the effect of the new curriculum on *behavior* associated with the government’s desired attitude changes.

## 4.2 Empirical model

We next examine these differences in a regression framework, including all provinces, and controlling for province and cohort fixed effects. We estimate a generalized difference in differences model, as follows:

$$y_{icp} = \sum_c \gamma_c + \sum_p \delta_p + \beta \text{NewCurriculum}_{cp} + \varepsilon_{icp}, \quad (1)$$

where  $y_{icp}$  is either an individual survey question or an index variable ( $i$  denotes the individual,  $c$  the high school entry cohort, and  $p$  the province of high school attendance);  $\gamma_c$  and  $\delta_p$  are full sets of cohort and province fixed effects; and  $\beta$  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,  $\varepsilon_{icp}$ , to be correlated across

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<sup>29</sup>Note that among provinces that introduced the new curriculum in 2009, all of the students who studied the new curriculum in our sample were freshmen.

individuals within a province $\times$ cohort cell (the level at which the curriculum varies).<sup>30</sup> In addition to this baseline specification, we will estimate additional specifications below: (i) we disaggregate the effects of the new curriculum by cohort; (ii) we include individual-level controls; (iii) we include province $\times$ cohort-level controls; (iv) and, we include 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. 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 (non-random introduction of the curriculum across provinces is discussed further in Section 5). 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 $\times$ time varying shocks are not necessarily province $\times$ cohort varying shocks: a confounding factor would need to differentially affect different high school entry cohorts within a province to threaten our identification strategy. The cross-cohort variation we exploit is within a very narrow window, and very *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.

Finally, even unobserved factors that *do* vary at the province $\times$ 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-specific changes in attitudes across cohorts. This specification is especially demanding as it attributes to the new curriculum only the “jump” in attitudes relative to the cross-cohort trend. 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.

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<sup>30</sup>We also present p-values based on clustering at the province level; due to the small number of clusters in this case, we implemented the wild bootstrap procedure (Cameron, Gelbach, and Miller, 2008).

### 4.3 Balance of student characteristics

We present summary statistics for the survey sample 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. A lack of balance could arise from differential selection into the survey sample or 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 are younger on average (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, 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. (We estimate equation 1 with student characteristics as outcomes, and present the coefficient on the *NewCurriculum* dummy variable.) 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 statistically indistinguishable on observable characteristics from those who studied under the old curriculum.

### 4.4 Regression estimates of the effect of the new curriculum

We begin our regression analysis by estimating our difference in differences model in equation 1, but rather than pool the students who studied under the old curriculum and new curriculum into two coarse categories (old curriculum and new), we allow students to have different attitudes depending on the “distance” between their cohort and the first cohort that studied under the new curriculum in their province. This allows us to examine whether outcomes differed across cohorts even prior to the curriculum reform (which would call into question our identification strategy), and also to verify that there is a sharp change in outcomes precisely with the first cohort exposed to the new curriculum. We treat the last cohort studying under the old curriculum in a particular province as the omitted category, and compare it to the cohorts entering high school two or more years before the curriculum change, the first cohort that studied the new curriculum, and the cohorts that entered high school two or more years after the new curriculum was introduced.

In Figure 4, we present coefficients and 95% confidence intervals on the dummy variables indicating a student’s cohort relative to the introduction of the new curriculum in his/her province, for each of the index variables in our six broad outcome categories. In the *governance*, *political institutions*, and *economic institutions* graphs, one can see clear, significant jumps in outcomes—shifts in attitudes in the Chinese government’s desired direction—moving from the last cohort under the old curriculum to the first cohort that studied the new curriculum. We do not find significant differences in *identity*, and attitudes toward the *environment* move in the direction opposite to the one hypothesized. Our findings for *behavior* are mixed, with the “avoiding risky investment” outcome sharply differing across curricula (the increase in the outcome reflects *less* risky investment among students exposed to the new curriculum), while political behavior and cooperation with minorities do not differ much across cohorts.

Figure 4 also allows to examine whether attitudes were trending in the direction desired by the Chinese government even prior to the introduction of the new curriculum. One can see that there is almost no evidence of meaningful pre-trends in Figure 4; indeed, it is almost never the case that students who entered high school two or more years prior to the curriculum change have attitudes or behavioral outcomes that significantly differ from students in the final cohort that studied the old curriculum. One can also see that outcomes are quite similar for all cohorts that studied under the new curriculum: the sharp differences in attitudes we find across curricula are not limited either to the first year of introduction, or to the students in our sample who are youngest, and thus closest to their exposure to the high school curriculum.

We next estimate the standard difference in differences model (equation 1), examining differences between students exposed to the new and old curricula, controlling for province and cohort fixed effects. Figure 5 shows the coefficient estimate on the *NewCurriculum* dummy variable from estimating equation 1, as well as the 95% confidence interval, for each of the individual survey questions presented in Section 3, as well as the index variables analyzed in Figures 3 and 4. For ease of presentation, we standardize each outcome variable and we plot the absolute value of the coefficient; coefficients with positive signs are denoted with closed symbols, while coefficients with negative signs are denoted with open symbols (we also indicate the sign of the estimate in brackets). As noted above, responses are coded such that a positive effect indicates a movement towards the Chinese government’s desired attitudes. The figure also includes p-values (adjusted using the false discovery rate procedure) from a test that the coefficient on *NewCurriculum* equals zero.

Scanning the dot plot, one can see quite a bit of consistency within the categories and sub-categories that we examine: across a wide range of questions about trust in government officials, we find significant increases in trust associated with study of the new curriculum. One can also see that students view government officials as more civic-minded (less self-interested and less likely to serve the rich and powerful) and see bribery as less necessary across a range of domains. Note that in some cases, individual results are not statistically significant when we adjust p-values



to reflect our testing of multiple hypotheses, but the consistency of the signs of the effects, and the significant index variables are suggestive of meaningful attitude changes.

Continuing to move down the dot plot, one can see that students view China as more democratic if they studied the new curriculum; they view people's participation as a defining characteristic of democracy (albeit not statistically significantly so); and, they often express greater skepticism of the wisdom of the masses, or "unconstrained democracy". The finding that students exposed to the new curriculum both see China as more democratic, and are more cautious about unconstrained democracy matches what we see in the new curriculum textbooks' content.

Attitudes toward the market were only elicited in one survey question, which shows a significant shift toward greater skepticism of unconstrained markets—consistent with the new curriculum textbooks' content. Attitudes toward ethnic minorities show mixed differences across curricula. Students' express an identity that is more "Chinese" than "world citizen" if they study the new curriculum, but the result is not statistically significant. Next, one can see that attitudes toward the environment consistently move in the opposite direction from that intended by the government, though not statistically significantly so. Finally, there are positive, but insignificant, effects of the new curriculum on political behavior and cooperation with minorities, and a positive, significant effect on avoiding risky investments.

In Table 3, we present the analysis shown in Figure 5 (but note that outcomes are not standardized), as well as some additional information. We show coefficient point estimates; standard errors clustered at the province  $\times$  cohort level; standard p-values and FDR-adjusted p-values; means and variances of the dependent variables; and, estimated persuasion rates (we discuss persuasion rates in Section 5, below). As can also be seen in Figure 5, along the three dimensions that the curriculum significantly affected (views on governance, political institutions, and economic institutions), studying under the new curriculum is associated with a change in attitudes of around 10–20% of a standard deviation.

We also include in Table 3 an important falsification exercise. A natural question that arises in interpreting our finding of a significant effect of the new curriculum on trust in government officials is whether the new curriculum was associated with greater trust more broadly, rather than specifically greater trust in government officials. We thus examine students' responses to questions about their trust in a variety of non-governmental entities (NGOs, banks, foreign investors) and about their trust in people in general. In the bottom row of Panel A in Table 3, one can see that 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 is very close to zero and not significant), reinforcing our interpretation that the content in the new curriculum specifically increased trust in Chinese government officials.

## 5 Discussion

### 5.1 Robustness checks

We next explore the robustness of our results for the six outcome categories examined; we show robustness specifications only for the z-score indices constructed to summarize each category's outcomes. As above, if a category includes only a single question, we examine that, rather than an index variable.

In Table 4, Panel A, we present our baseline estimates of the effects of the new curriculum using a parsimonious specification that includes only province and cohort fixed effects. In addition to our coefficient estimates and standard errors clustered at the province $\times$ cohort level, we add (in parentheses in the fourth row) p-values based on clustering at the province level; due to the small number of clusters in this case, we implemented the wild bootstrap procedure (Cameron, Gelbach, and Miller, 2008). For comparison, p-values from standard errors clustered at the province $\times$ cohort level are presented in the row above. One can see that changing the level of clustering does not affect our statistical inferences.

Because we have a relatively small number of treated observations in our sample, we also make our statistical inferences in an alternative manner, by comparing the treatment effect we estimate for each index variable 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, for each of the six main index variable categories. In Appendix G, Figure G.3, we plot the distribution of t-statistics from the 10,000 estimated placebo treatment effects for each outcome and mark the location of the t-statistic of the *actual* treatment effect within the 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; across outcomes, the inferences drawn are very similar to the standard regressions.

We next examine the robustness of the estimated effects of the new curriculum to the inclusion of additional control variables. We begin by adding to our baseline specification student-level controls for the individual and household characteristics reported in Panels A–D of Table 2.<sup>31</sup> In Table 4, Panel B, one can see that including these individual-level controls does not affect our

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<sup>31</sup>The one exception is the indicator that a student studied the humanities track in high school, because it is missing for more than 300 students who did not take the *gaokao* exam as part of their admission to Peking University. Note that we do include a dummy for whether a student took the *gaokao* exam.

findings.<sup>32</sup>

An alternative approach to studying differences in student characteristics across curricula is to use our students' background characteristics (the same used as controls in Table 4, Panel B) to predict the z-score index variables for our six categories of outcomes, and test whether *predicted* outcomes differ across curricula. In Appendix G, Table G.8, we present the estimated coefficient on the *NewCurriculum* dummy from estimating equation 1 with predicted index variables as the outcomes. In every case, the estimated effect of the new curriculum on the predicted outcomes based on observables is close to 0 and statistically insignificant.

Another important question about our analysis is whether the introduction of the new curriculum coincided with other provincial variation which might affect attitudes at the province $\times$ cohort level. One possibility is that school spending may have been greater for those cohorts in a province exposed to the new curriculum; if so, then some of our effects may be driven by school spending, rather than changes in the curriculum's content. We thus control for provincial spending on secondary education at the province $\times$ cohort level (calculated as a province's average level of spending during the three years of senior high school for each cohort).<sup>33</sup> One can see in Table 4, Panel C that the estimated effects of the new curriculum controlling for spending on secondary education at the province $\times$ cohort level are nearly identical to the baseline estimates.

Another possibility is that students who experienced important political transitions while in high school may have differing views on governance, political institutions, etc. To examine this possibility, we collected information on all of the transitions of provincial governors and provincial party secretaries (from [baike.baidu.com](http://baike.baidu.com) and [www.wikipedia.org](http://www.wikipedia.org)) that occurred while students in our sample were in high school. We then estimate our baseline specification, but controlling for either the experience of a provincial governor turnover or a provincial party secretary turnover while a student was in high school. In Appendix G, Table G.9, one can see that these controls do not affect our results.

More generally, one might be interested in the determinants of a province adopting the new curriculum in a particular year and be concerned that these factors may affect student attitudes. We explore this question in detail in Appendix G, Table G.10, using two approaches: first, we treat China's provinces as a cross-section, and allow province characteristics in 2003 (just prior to the first wave of introduction) to determine the timing of adoption; second, we consider a panel (observations at the province $\times$ year level), with province characteristics in a given year determining new curriculum adoption in the following year. For each dataset we estimate OLS models and Cox proportional hazard models. Our most robust finding is that greater 2003 province income is quite predictive of earlier introduction of the new curriculum (as are other variables correlated

<sup>32</sup>We also examine whether differences in students' personalities may affect our results, estimating our baseline model for our six broad outcome categories, controlling for an individual's "Big 5" personality traits z-scores, and our results are unchanged (see Appendix G, Table G.7).

<sup>33</sup>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).

with income, such as fiscal revenues and employment). Educational variables are generally less predictive, except for the percentage of primary school students enrolling in secondary school, which again is correlated with income.

To determine whether higher 2003 incomes were associated with systematic differences in attitudes across cohorts, in Table 4, Panel D, we present estimated effects of the new curriculum, but controlling for the interaction between a province's 2003 gross regional product per capita interacted with the four cohort fixed effects. One can see that including these controls does not affect our findings.

Another concern is that differing trends in attitudes across cohorts in different provinces may play some role in generating the differences in attitudes we attribute to the new curriculum. To address this concern, 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*. In Table 4, Panel E, 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.

A final concern about our baseline specification is regarding our sample's composition. Some provinces do not have any variation in curriculum studied among the four cohorts in our sample, but these provinces are included in our baseline estimates (though they were excluded from our comparison of means in Figure 3). One might wish to estimate the effects of the new curriculum on a balanced panel that includes only provinces in which we observe variation in 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 (adjacent) first cohort of the new curriculum, from the 13 provinces for which we observe students from both of these cohorts in our sample. Using this alternative dataset, our results are very similar to those estimated using the entire set of province $\times$ cohort cells (see Appendix G, Table G.11).

## 5.2 Addressing additional questions about our findings

**Concerns about the online survey response rate** An important question about our estimates is whether they may have been driven by unusual selection into our online survey. Above we noted that response rates between students under the two curricula are statistically indistinguishable, and that student characteristics in our sample are balanced across curricula, suggesting that students' self-selection into our survey likely does not explain our results. Still one might wonder whether the sample on which we estimate the effect of the new curriculum is very atypical, even relative to the rest of Peking University.

As an additional check that the treatment effects we estimate from the online survey do not greatly differ from what we would find among non-respondents at Peking University, we conducted a paper and pencil follow-up survey using in-person recruitment, in June and July, 2014 (see Appendix E.5 for a more detailed description of the follow-up survey). The follow-up survey

was conducted by a team of Peking University undergraduates, who recruited survey participants in the Peking University dorms, and handed out a paper version of the same survey questionnaire as was used online (to be completed individually, and privately). The recruiters invited 446 students who had not completed the online survey to complete the paper survey; the response rate in the follow-up survey was 78%, for a total of 347 respondents.

We estimate our baseline specification on the follow-up survey sample, examining the index variable outcomes in our 12 sub-categories, and find that in 8 of 12 cases the signs of the estimated effects of the new curriculum match our baseline estimates (compare Table 5, Panels A and B). Results for governance, economic institutions, and the environment are both qualitatively and quantitatively very similar between the main survey and the follow-up. Thus, although there are two categories (views of the “wisdom of the masses” and political behavior) for which we find quite different effects of the new curriculum in the follow-up survey, we are reassured that the follow-up survey results generally match those in the main survey.

**Concerns about differential selection into Peking University following curriculum change** Another concern is that students with pre-existing differences in political attitudes were differentially selected into Peking University across the two curricula: students who had political attitudes more concordant with the new curriculum’s ideological aims may have scored better on the *gaokao* college entrance exam, and thus been admitted to the University in greater numbers following the curriculum change. One check of whether this was likely an important driver of our results is to examine the effects of the new curriculum on students who were enrolled in the science track in high school. These students were examined on the Politics material, but the test was much lower-stakes than that taken by students in the humanities track, and would not have played a first-order role in determining their university admissions.

We thus split the sample by students’ high school subject track.<sup>34</sup> Among the sub-sample of students who studied the science track in high school, the effects of the new curriculum are qualitatively and quantitatively very similar to our main results (see Table 5, Panel C). The one notable difference between the main results and those estimated on the science track students is that the effect of the new curriculum on skepticism toward free markets is no longer statistically significant (though the coefficient is positive). When we examine the sub-sample of humanities track students, we again find results that are qualitatively very similar to our baseline findings (see Table 5, Panel D).

**Checking implementation of the curriculum reform and students’ textbook recall** To what extent was the curriculum reform implemented as designed, with the new textbooks introduced according to our assignment of province×cohort cells? As a check that our province×cohort-level

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<sup>34</sup> Around 15% of the students in our sample could not be assigned to a subject track because they did not take the *gaokao* (our assignment of track was based on a question we asked about the subjects a student was examined on in the *gaokao*).

assignment of students to curricula is accurate—and as a check that students have some recollection of their high school textbook—we examine students’ responses to a survey question (asked at the end of our survey) in which we presented them with images of the covers of Politics textbooks from the old and new curricula and asked them to identify the textbook they used (allowing them to indicate that they did not remember which textbook was theirs). Remarkably, we find that nearly every student in our survey—around 94%—identified as their high school textbook the one that we would predict based on the introduction dates by province presented in Figure 1. We also estimate our baseline econometric model of equation 1, predicting students’ choice of the new curriculum Politics textbook (as opposed to selecting the old textbook, reporting that they did not remember their textbook, or reporting a textbook not shown). The results in Table 6, column 1, confirm that the curriculum reform was rolled out according to what we expected, and indicate that the vast majority of students recall their high school textbook.

**Effects of the curriculum on students’ factual knowledge** It is also of interest to examine whether purely descriptive (rather than persuasive) textbook content that differed across curricula generated persistent differences in students’ knowledge. In addition to ideological content, the new curriculum included new factual content regarding Chinese political institutions. We next examine whether factual details of China’s political system were differentially *known* by individuals who studied under the new curriculum.

Our survey included questions asking students whether they were aware of elections for the position of village head and for the position of People’s Congress Representative. Discussion of these elections is much more extensive in the new curriculum textbook than in the old curriculum textbook (as seen in Table 1, the word “election” appears 2 times in the old curriculum and 120 times in the new). We thus estimate our baseline regression model, with the two “election awareness” variables as outcomes; one can see in Table 6, columns 2–3, that study of the new curriculum is, indeed, strongly associated with greater knowledge of political institutions covered in the new curriculum textbooks. An index variable outcome based on these two factual questions also shows a significant effect of the new curriculum on students’ knowledge of Chinese political institutions (Table 6, column 4).

An important question regarding the nature of the political persuasion we observe is to what extent it was based on the provision of new information, as opposed to purely ideological, persuasive content. On the one hand it is clear that there was new, purely ideological content introduced in the new curriculum—this can be seen in many of the quotes from the new curriculum’s textbooks above. On the other hand, our findings here suggest that factual additions to the new curriculum may have affected students’ beliefs and attitudes as well.

**The impact of changes in instructional methods** A final question about the implementation of the curriculum reform is whether, in addition to changing the content of textbooks, the curriculum

reform changed teaching *practice*. Indeed, under the reform, 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, Cahuc, and Shleifer, 2013, on the importance of teaching practices in shaping students beliefs and attitudes). However, as noted above, there is a widespread perception in China 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 6, we present the estimated effects of the new curriculum on the teaching practices index (column 5), and on students' perceptions of the focus of teaching on *gaokao* preparation (column 6). One can see that the new curriculum did not have a statistically significant effect on the broad teaching methods index or on students' perceptions of teachers' focus on *gaokao* preparation. Thus, we do not believe that changed teaching practices concurrent with the textbook reform explain our findings.

### 5.3 Benchmarking the effect sizes

**Persuasion rates** In order to quantify the magnitude of the effect of the new curriculum, for each individual question in our six broad categories of outcomes 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 (and analogously for behavior). One could calculate this as the estimated treatment effect of the new curriculum divided by the share of students who do not hold the desired belief (engage in the desired behavior) in the entire sample.<sup>35</sup> A more correct

<sup>35</sup>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 than or equal to the median answer. In Table 3, 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 are calculated with the binary analogue. Note that in one case—"bribes are not necessary in interactions

definition of the persuasion rate would require us to divide the effect of the new curriculum by the share of students without the desired attitude 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 distort 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.

In our presentation of regression results in Table 3, we included estimates of the implied conditional persuasion rates. The persuasion rates we find are substantial: across all outcomes (including those for which the effects did not go in the government's desired direction), the median persuasion rate was 8%; more than a quarter of the outcomes we examine show persuasion rates of greater than 20%. This is a large effect 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. (2014) find a persuasion rate of 4–5% for Serbian radio in Croatia.<sup>36</sup> 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.<sup>37</sup>

**Effects on attitudes and behavior: evidence from the Asian Barometer Survey** Our survey results on behavior—particularly political behavior—reflect the ambiguity of the mapping from political attitudes to political behavior.<sup>38</sup> As noted above, we believe that this analysis is affected by Peking University students' constrained opportunities to engage in many political activities of interest. We thus examine the association between political attitudes and reported political behavior using data from the Asian Barometer Survey, which covers a broader population, including older individuals who are less constrained in acting on their political attitudes.<sup>39</sup>

The Asian Barometer Survey asks respondents about their trust in various government officials, just as we asked the students in our sample. The survey also asks respondents about various

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with police"—the median response equals the maximum possible response, so no persuasion rate is presented. Also note that we do not present persuasion rates when outcomes did not move in the direction desired by the Chinese government as students were not, on average, persuaded to hold the government's desired attitudes.

<sup>36</sup>Enikolopov, Petrova, and Zhuravskaya (2011) find an 8% persuasion rate in an analysis of an independent Russian TV station's effect on voting for the opposition parties it supported. They find a much larger, 65%, persuasion rate for the TV station's message of opposition to the pro-government party.

<sup>37</sup>See Gentzkow and Shapiro (2004) for a discussion of the influence of media and education on ideology.

<sup>38</sup>See Holbrook (2011) for a discussion of the strengths and weaknesses of inferring attitudes from behavior.

<sup>39</sup>The survey is hosted by the Institute of Political Science, Academia Sinica, and the Institute for the Advanced Studies of Humanities and Social Sciences, National Taiwan University. See <http://www.asianbarometer.org>.



forms of disruptive political expression, including whether they have attended a demonstration or protest march at least once during the past three years, and whether they have refused to pay taxes or fees to the government during the same time period. Around 3% of respondents report having attended a demonstration, and 1.5% report refusing to pay taxes. We examine the association between reported levels of trust in local government officials (most relevant to the political behaviors we study) and reported political actions, among mainland Chinese respondents with at least 12 years of schooling.

Our regression estimates (presented in Appendix G, Table G.12) indicate that one standard deviation greater trust in the Asian Barometer Survey is associated with a 2 percentage point reduction in the likelihood of attending a protest or demonstration, and a 1 percentage point reduction in the likelihood of refusing to pay taxes or fees. In Figure 5, we saw that studying the new curriculum is associated with around a one-quarter standard deviation increase in trust in local government officials. Thus, under the assumption that the relationship between an individual's trust in government officials and their political action is similar for students in our survey to that for the broader set of educated individuals in the Asian Barometer sample, the new curriculum would make students around 15–20% less likely to engage in these disruptive political activities relative to their means.

## 5.4 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 generalizing from our results to the effect of the curriculum change on other Chinese students exposed to it. 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 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, so are likely to be less easily persuaded by the content of their high school

textbooks than are other students.<sup>40</sup>

It is also worth noting that our survey can shed some light on heterogeneous effects of the new curriculum. In Appendix G, Table G.13, we examine the effects of the new curriculum allowing there to be heterogeneity depending on students', and their parents', characteristics. While we find that these characteristics (e.g., parents membership in the CCP or students' consumption of foreign media) are associated with differing political attitudes across students, they are *not* significant sources of heterogeneity in the effects of the new curriculum.<sup>41</sup>

## 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 the legitimacy of the Chinese government's institutions; political participation and democracy in China; and, the role of the state in the economy. In all of these aims, we find evidence that the new curriculum introduced by 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 attitudes 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. We do not find statistically compelling evidence that the government was successful in this aim, though in general attitudes moved in the direction the government desired. The new curriculum 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, and perhaps because environmental issues were not greatly emphasized in the new curriculum. Finally, the effects of the curriculum on students' behavior were mixed, which may reflect constraints on students' political behavior.

Our findings provide evidence on three broad theories of the roles played by school curricula in shaping political attitudes. First, and most broadly, they suggest that an authoritarian state can effectively indoctrinate students. Chinese students who studied under the new curriculum trusted a broad range of government officials more; viewed Chinese political institutions as more democratic; 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).

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<sup>40</sup>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>).

<sup>41</sup>One might also wonder whether, due to variation in response rates, our estimates differ from what one would find from a sample that matched the composition of Peking University. In Appendix G, Table G.14, we examine the effects of the new curriculum, but re-weighting each observation by the inverse of the survey response rate in the respondent's province  $\times$  cohort cell. Using the re-weighted observations produces results very similar to our baseline estimates.

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 and the teaching of civic values (e.g., Dewey, 1916; Lipset, 1959; Glaeser, Ponzetto, and Shleifer, 2007; Bandiera et al., 2015) also find support in our results, which suggest that educational content can shape students' views of political institutions. Finally, our results provide weaker evidence of education forming students' national and ethnic identities (see Weber, 1976; Gradstein and Justman, 2002; Gradstein and Justman, 2005; Clots-Figueras and Masella, 2013; Alesina and Reich, 2013): the new curriculum only marginally (and not significantly) affected students' expressed identities.

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 can be a significant 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

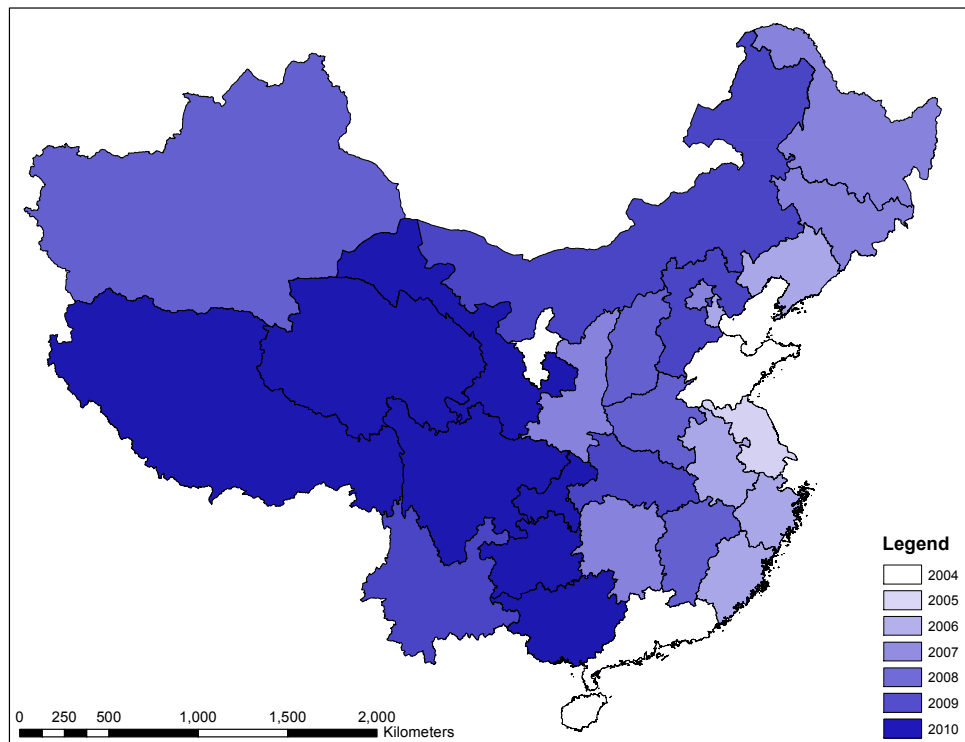


Figure 1: Years of introduction of the new curriculum textbooks.



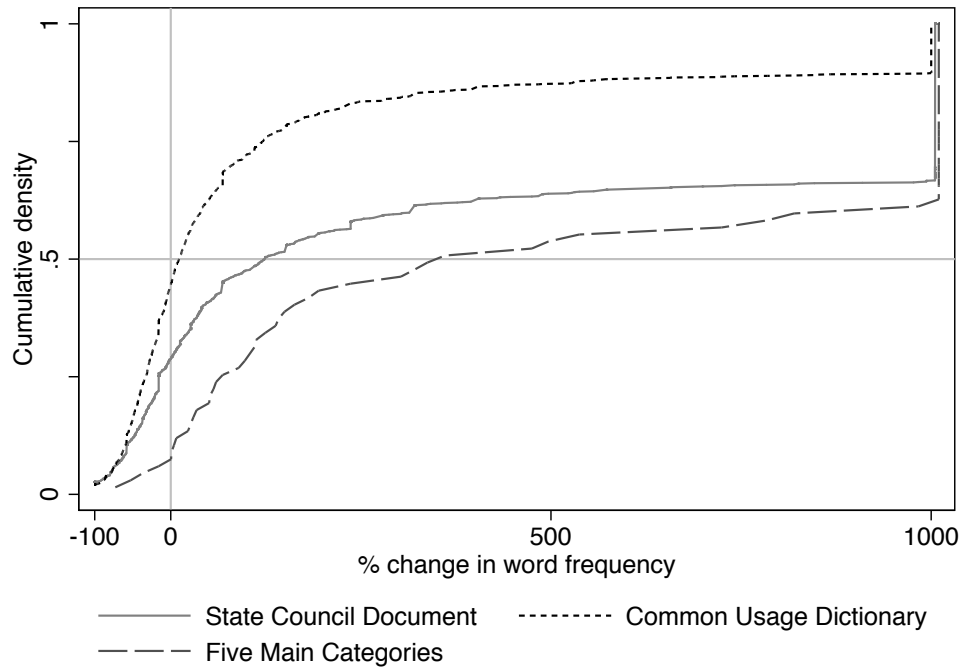


Figure 2: Cumulative distribution functions of the percentage change in a word's frequency across curricula for three sets of words: the 1,166 words in the State Council document, "Suggestions on Strengthening the Ideological and Moral Construction of Our Youths"; the subset of 67 State Council document words that match our five main attitudes of interest; and, the 1,166 most frequent words in the Chinese language, taken from the *Modern Chinese Frequency Dictionary*. The percent change in frequency is top-coded at 1,000; words appearing only in the new curriculum (with percentage change equal to  $\infty$ ) are assigned the top-code.

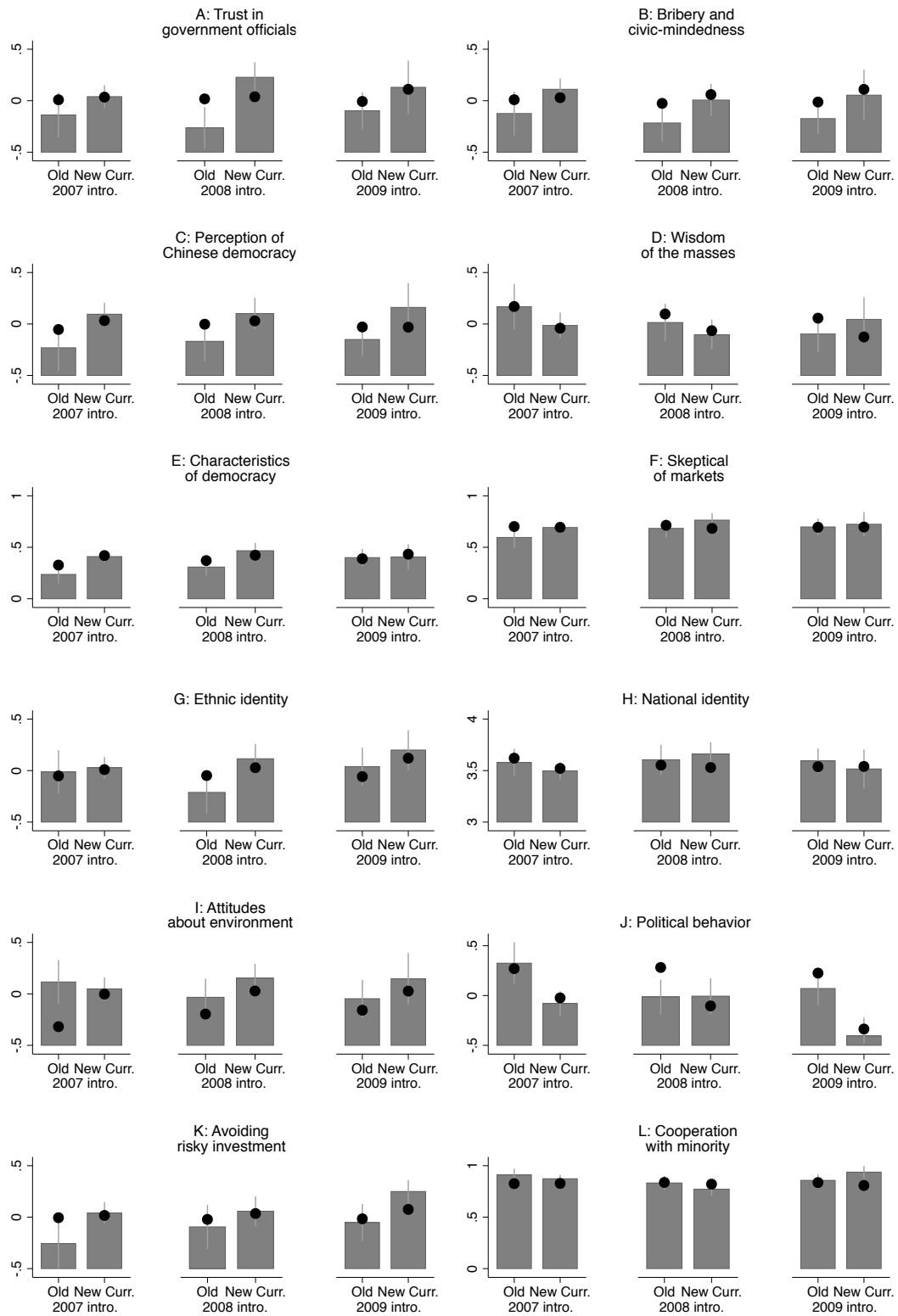


Figure 3: Differences in means between students who studied the old curriculum and the new curriculum. The bars show means for the relevant group of students in the 13 provinces with variation in curriculum in our sample. Provinces are organized into three categories by the year when the new high school curriculum was introduced: either 2007, 2008, or 2009. 95% confidence intervals are indicated by lines. For comparison, the dots show means for the corresponding cohorts within the set of provinces without variation in curriculum among the cohorts we study.

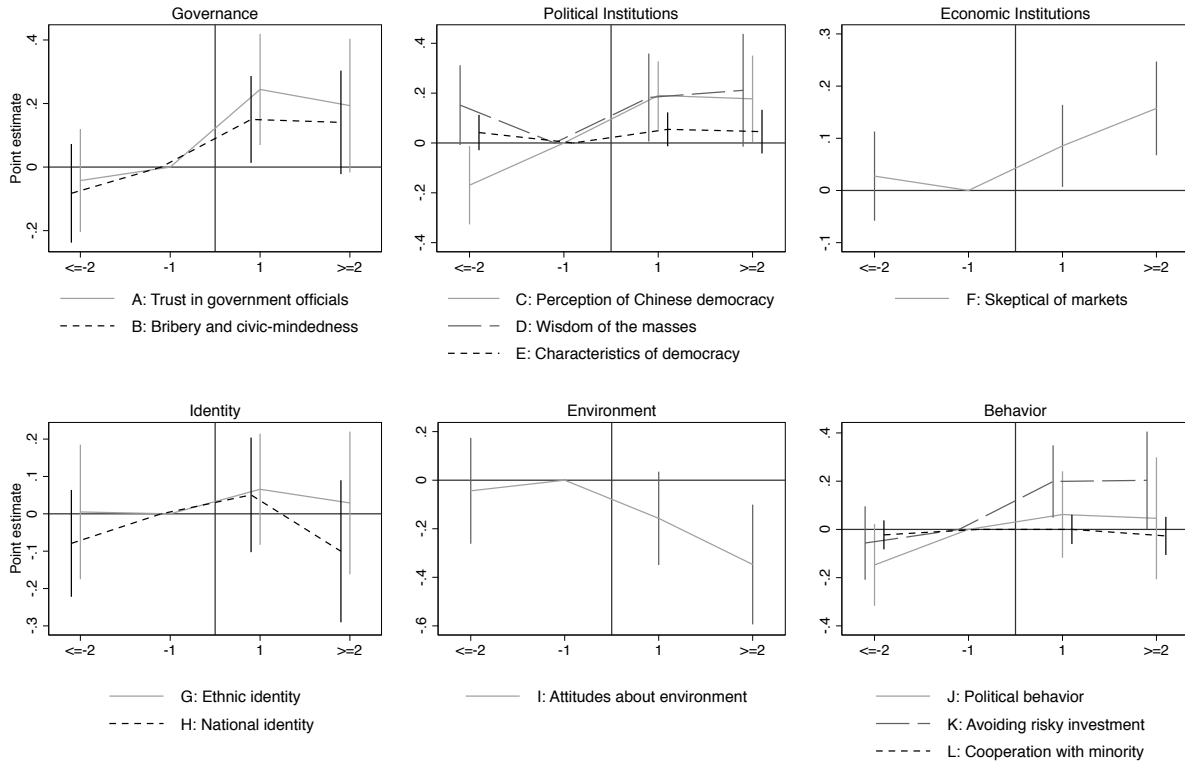


Figure 4: Estimated effects of the new curriculum by students' cohort relative to the introduction of the new curriculum. Each figure shows coefficient estimates and 95% confidence intervals from regressions of each outcome category's z-score (or individual survey question) on province and cohort fixed effects, as well as a set of dummy variables indicating the timing of the student's entry to high school relative to the introduction of the new curriculum in his/her province. Standard errors used to calculate the 95% confidence intervals are clustered at the province $\times$ cohort level. The " $\leq -2$ " category entered two years or more before the first cohort exposed to the new curriculum; the " $-1$ " category was the final high school cohort under the old curriculum (and this is the omitted category); the " $1$ " category is the first cohort in a province that studied under the new curriculum (i.e., the cohort entering high school immediately following the " $-1$ " cohort); and, the " $\geq 2$ " category includes students who were either the second cohort under the new curriculum or beyond.

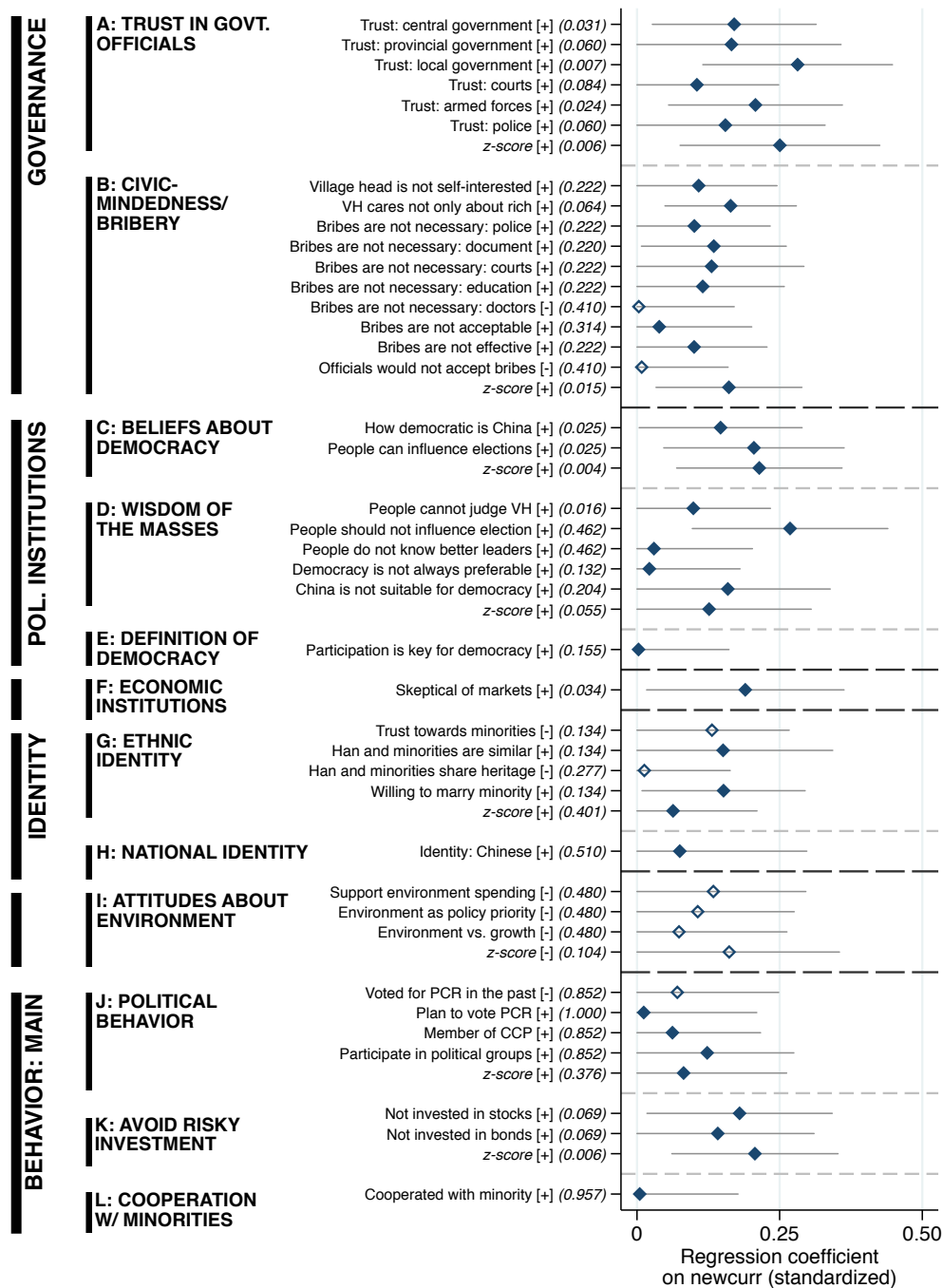


Figure 5: Dot plot showing effect of the new curriculum on all questions within six broad categories of outcomes. Figure shows estimated coefficients on the *NewCurriculum* dummy variable from a regression of the (standardized) outcome listed on *NewCurriculum* and province and cohort fixed effects. Coefficients are presented as absolute values; coefficients with positive signs are denoted with closed symbols, while coefficients with negative signs are denoted with open symbols (the sign of the coefficient is indicated in brackets as well). Figure also shows 95% confidence intervals calculated using standard errors clustered at the province  $\times$  cohort level (censored below at 0) and p-values calculated using the false discovery rate procedure (in parentheses).

Table 1: Changes in word counts for five broad categories of interest

Word in English	Word in Chinese	Outcome Category	Count in Old Curr.	Count in New Curr.	Percent Change in Frequency
<i>Panel A: Categories of interest</i>					
Rule of Law	依法治国	Governance	0	10	$\infty$
Supervision	监督	Governance	30	116	225%
Election	选举	Political Institutions	2	120	4,948%
Democracy	民主	Political Institutions	11	282	2,057%
Market economy	市场经济	Economic Institutions	208	67	-73%
Socialism with Chinese characteristics	中国特色社会主义	Economic Institutions	4	97	1,940%
Chinese ethnic group	中华民族	Identity	1	100	8,313%
Homeland	祖国	Identity	1	51	4,191%
Environmental protection	环保	Environment	0	4	$\infty$
Sustainable development	可持续发展	Environment	0	3	$\infty$
<i>Panel B: Comparison terms</i>					
Opening-up	对外开放	—	20	19	-20%
Domestic	国内	—	47	43	-23%
Region	地区	—	69	66	-20%
Resident	居民	—	48	54	-5%
Jiang Zemin	江泽民	—	0	4	$\infty$
Hu Jintao	胡锦涛	—	0	7	$\infty$

Note: Frequency equals the count of a word divided by the total number of words in the textbooks used in the new or old curriculum. The old curriculum textbooks contained a total of 145,062 words; the new curriculum textbooks contained a total of 172,424 words. Panel A shows counts of “key words” closely linked to the five broad categories of attitudes on which we focus, by curriculum. Panel B shows analogous counts for political concepts that were not focused on by the Chinese government; counts for “neutral” terms; and, counts for the names of political leaders of China in the early 21st century who were not mentioned in the old textbooks. All terms come from the State Council Document, “Suggestions on Strengthening the Ideological and Moral Construction of Our Youths,” issued in 2004.

Table 2: Summary statistics

Variable	All		Old Curr.	New Curr.	Unconditional		Conditional	
	Mean	Std.Dev.	Mean	Mean	Diff.	p-value	Diff.	p-value
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<i>Panel A: Personal</i>								
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
Han	0.916	0.277	0.901	0.923	0.021	0.113	0.006	0.791
Female	0.459	0.498	0.441	0.467	0.026	0.277	-0.030	0.523
Urban	0.782	0.413	0.772	0.787	0.015	0.453	0.022	0.533
# of siblings	0.402	0.812	0.473	0.369	-0.105	0.008	-0.022	0.727
<i>Panel B: Parents</i>								
Father high edu.	0.787	0.410	0.779	0.790	0.012	0.561	0.041	0.195
Father urban	0.744	0.436	0.737	0.748	0.012	0.583	-0.013	0.702
Father non-agri.	0.852	0.355	0.829	0.863	0.034	0.048	-0.002	0.941
Mother high edu.	0.727	0.446	0.696	0.741	0.045	0.040	0.048	0.155
Mother urban	0.745	0.436	0.737	0.748	0.012	0.583	0.007	0.848
Mother non-agri.	0.831	0.375	0.814	0.838	0.024	0.189	0.011	0.694
Parents in CCP	0.543	0.499	0.544	0.542	-0.002	0.931	0.000	0.996
<i>Panel C: Education</i>								
Taken gaokao	0.874	0.332	0.884	0.869	-0.015	0.361	-0.008	0.732
HS humanities track	0.308	0.462	0.314	0.304	-0.010	0.680	-0.020	0.583
Social science major	0.329	0.470	0.325	0.331	0.006	0.781	-0.013	0.697
<i>Panel D: Politics</i>								
CCP Youth League member	0.981	0.135	0.982	0.981	-0.002	0.808	0.007	0.559
<i>Panel E: New curriculum</i>								
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. Number of observations: 1954 (619 old curriculum, 1335 new curriculum).

Table 3: Estimated effects of the new curriculum on all outcomes

	beta	s.e.	p-value	FDR adj. p-value	Mean dep.var.	Std.Dev. dep.var.	Persuasion rate
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
<b>Category: Governance</b>							
<i>Panel A: Trust in government officials</i>							
Trust: central government	0.127	[0.054]	0.022	0.031	3.981	0.748	0.384
Trust: provincial government	0.126	[0.075]	0.093	0.060	3.619	0.770	0.197
Trust: local government	0.229	[0.069]	0.001	0.007	3.169	0.819	0.466
Trust: courts	0.078	[0.055]	0.154	0.084	3.630	0.755	0.132
Trust: armed forces	0.172	[0.064]	0.009	0.024	3.816	0.838	0.207
Trust: police	0.122	[0.070]	0.085	0.060	3.486	0.799	0.099
<b>z-score index</b>	0.247	[0.088]	0.006	—	0	1	—
Trust: non-governmental institutions	-0.001	[0.093]	0.992	—	0	1	—
<i>Panel B: Bribery and civic-mindedness</i>							
Village head is not self-interested	0.095	[0.061]	0.125	0.222	3.112	0.875	0.106
VH cares not only about rich	0.147	[0.053]	0.006	0.064	3.457	0.900	0.304
Bribes are not necessary: police	0.102	[0.069]	0.141	0.222	4.163	1.014	n/a
Bribes are not necessary: documents	0.112	[0.054]	0.040	0.220	4.437	0.831	0.168
Bribes are not necessary: courts	0.150	[0.095]	0.116	0.222	3.999	1.146	0.089
Bribes are not necessary: education	0.136	[0.086]	0.116	0.222	3.527	1.180	0.045
Bribes are not necessary: doctors	-0.004	[0.105]	0.969	0.410	3.443	1.234	n/a
Bribes are not acceptable	0.018	[0.038]	0.637	0.314	0.681	0.466	0.055
Bribes are not effective	0.040	[0.026]	0.127	0.222	0.198	0.399	0.048
Officials would not accept bribes	-0.002	[0.018]	0.914	0.410	0.056	0.230	n/a
<b>z-score index</b>	0.161	[0.065]	0.015	—	0	1	—
<b>Category: Political Institutions</b>							
<i>Panel C: Perception of Chinese democracy</i>							
How democratic is China	0.246	[0.122]	0.047	0.025	5.180	1.686	0.175
People can influence elections	0.199	[0.078]	0.012	0.025	3.202	0.976	0.279
<b>z-score index</b>	0.213	[0.074]	0.004	—	0	1	—
<i>Panel D: Wisdom of the masses</i>							
People cannot judge VH	0.244	[0.079]	0.003	0.016	2.428	0.910	0.418
People should not influence elections	0.021	[0.063]	0.735	0.462	1.723	0.717	0.006
People do not know better leaders	0.020	[0.073]	0.789	0.462	2.363	0.912	0.021
Democracy is not always preferred	0.074	[0.042]	0.085	0.132	0.689	0.463	0.205
China is not suitable for democracy	0.225	[0.162]	0.169	0.204	4.994	1.788	0.063
<b>z-score index</b>	0.183	[0.094]	0.055	—	0	1	—
<i>Panel E: Characteristics of democracy</i>							
Participation is key for democracy	0.048	[0.034]	0.155	—	0.392	0.488	0.076
<b>Category: Economic Institutions</b>							
<i>Panel F: Skeptical of markets</i>							

Continued on next page

	beta	s.e.	p-value	FDR adj. p-value	Mean dep.var.	Std.Dev. dep.var.	Persuasion rate
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Skeptical of markets	0.087	[0.041]	0.034	—	0.698	0.459	0.240
<b>Category: Identity</b>							
<i>Panel G: Ethnic identity</i>							
Trust towards minorities	-0.096	[0.050]	0.059	0.134	3.573	0.736	n/a
Han and minorities are similar	0.062	[0.040]	0.126	0.134	0.784	0.412	0.242
Han and minorities share heritage	-0.005	[0.030]	0.866	0.277	0.184	0.388	n/a
Willing to marry minority	0.054	[0.026]	0.040	0.134	0.847	0.360	0.288
<b>z-score index</b>	0.063	[0.075]	0.401	—	0	1	—
<i>Panel H: National identity</i>							
Identity: Chinese	0.053	[0.081]	0.510	—	3.542	0.717	0.079
<b>Category: Environment</b>							
<i>Panel I: Attitudes about environment</i>							
Support environment spending	-0.033	[0.021]	0.108	0.480	0.933	0.250	n/a
Environment as policy priority	-0.034	[0.028]	0.219	0.480	0.113	0.317	n/a
Environment vs. growth	-0.034	[0.044]	0.446	0.480	0.694	0.461	n/a
<b>z-score index</b>	-0.162	[0.099]	0.104	—	0	1	—
<b>Category: Behavior</b>							
<i>Panel J: Political behavior</i>							
Voted for PCR in the past	-0.035	[0.045]	0.437	0.852	0.462	0.499	n/a
Plan to vote for PCR	0.006	[0.051]	0.906	1.000	0.489	0.500	0.012
Member of CCP	0.027	[0.035]	0.431	0.852	0.266	0.442	0.037
Participation in political groups	0.029	[0.018]	0.115	0.852	0.058	0.233	0.030
<b>z-score index</b>	0.082	[0.092]	0.376	—	0	1	—
<i>Panel K: Avoiding risky investment</i>							
Not invested in stocks	0.055	[0.025]	0.032	0.069	0.892	0.311	0.386
Not invested in bonds	0.026	[0.016]	0.102	0.069	0.966	0.182	0.495
<b>z-score index</b>	0.207	[0.074]	0.006	—	0	1	—
<i>Panel L: Cooperation with minority</i>							
Cooperated with minority	0.002	[0.032]	0.957	—	0.842	0.365	0.011

All regressions include a full set of province and cohort fixed effects (not reported). Robust standard errors in brackets, clustered at the province  $\times$  cohort level. The z-score index (weighting by the inverse covariance of the standardized outcomes) and the FDR-adjusted p-values are computed following Anderson (2008). For non-binary dependent variables, persuasion rates are based on the binary analogue (a dummy taking the value 1 for outcomes above the median value). Persuasion rates are not calculated when outcomes did not move in the direction desired by the Chinese government or when the median value of the outcome equals the maximum possible value of the outcome.



Table 4: Robustness of baseline regressions

Dependent variable:	A: Trust in govt. officials	B: Bribery and civic- mindedness	C: Perception of Chinese democracy	D: Wisdom of the masses	E: Characteristics of democracy	F: Skeptical of markets	G: Ethnic identity	H: National identity	I: Attitudes about environment	J: Political behavior	K: Avoid risky investment	L: Cooperation with minority
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
<i>Panel A: Baseline</i>												
New Curriculum	0.247 [0.088]	0.161 [0.065]	0.213 [0.074]	0.164 [0.089]	0.048 [0.034]	0.087 [0.041]	0.063 [0.075]	0.053 [0.081]	-0.162 [0.099]	0.082 [0.092]	0.207 [0.074]	0.002 [0.032]
p-value	(0.006)	(0.015)	(0.004)	(0.067)	(0.155)	(0.034)	(0.401)	(0.510)	(0.104)	(0.376)	(0.006)	(0.957)
(wild bootstrap p-value)	(0.062)	(0.048)	(0.030)	(0.190)	(0.258)	(0.074)	(0.550)	(0.568)	(0.166)	(0.480)	(0.054)	(0.926)
<i>Panel B: With individual-level controls</i>												
New Curriculum	0.243 [0.084]	0.163 [0.066]	0.194 [0.073]	0.169 [0.089]	0.044 [0.033]	0.080 [0.040]	0.074 [0.073]	0.057 [0.080]	-0.156 [0.102]	0.107 [0.092]	0.195 [0.072]	0.005 [0.030]
<i>Panel C: With province <math>\times</math> cohort-level controls</i>												
New Curriculum	0.248 [0.088]	0.164 [0.067]	0.216 [0.074]	0.159 [0.089]	0.050 [0.033]	0.085 [0.039]	0.060 [0.075]	0.062 [0.071]	-0.160 [0.098]	0.090 [0.085]	0.209 [0.074]	0.004 [0.031]
<i>Panel D: Controlling for 2003 provincial GRP <math>\times</math> cohort FEs</i>												
New Curriculum	0.262 [0.097]	0.125 [0.073]	0.159 [0.079]	0.196 [0.097]	0.046 [0.038]	0.084 [0.041]	0.098 [0.083]	0.072 [0.078]	-0.088 [0.111]	0.168 [0.091]	0.199 [0.083]	-0.011 [0.035]
<i>Panel E: Province-specific cohort trends</i>												
New Curriculum	0.221 [0.095]	0.209 [0.088]	0.118 [0.074]	0.311 [0.121]	0.068 [0.039]	0.090 [0.050]	-0.000 [0.087]	0.171 [0.082]	-0.114 [0.115]	-0.024 [0.100]	0.272 [0.099]	0.021 [0.030]
Mean DV	0	0	0	0	0.392	0.698	0	3.542	0	0	0	0.842
Std.Dev. DV	1	1	1	1	0.488	0.459	1	0.717	1	1	1	0.365

All regressions include a full set of province and cohort fixed effects (not reported). Panel B controls for the individual and household characteristics reported in Panels A–D of Table 2 (except for the high school track). Panel C controls for spending on secondary education at the province  $\times$  cohort level. Panel D includes an interaction between a province's gross regional product in 2003 and a full set of cohort fixed effects. Panel E includes a cohort trend interacted with a full set of province fixed effects. Robust standard errors in brackets, clustered at the province  $\times$  cohort level. The wild bootstrap p-value is calculated allowing for clustering at the province level. Median number of observations across columns: 1705 (Panel A, Panels C–E); 1487 (Panel B). Number of clusters: 116 (29 with wild bootstrap).

Table 5: Selection into the survey and into Peking University

Dependent variable:	A: Trust in govt. officials	B: Bribery and civic- mindedness	C: Perception of Chinese democracy	D: Wisdom of the masses	E: Characteristics of democracy	F: Skeptical of markets	G: Ethnic identity	H: National identity	I: Attitudes about environment	J: Political behavior	K: Avoid risky investment	L: Cooperation with minority
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
<i>Panel A: Baseline</i>												
New Curriculum	0.247 [0.088]	0.161 [0.065]	0.213 [0.074]	0.164 [0.089]	0.048 [0.034]	0.087 [0.041]	0.063 [0.075]	0.053 [0.081]	-0.162 [0.099]	0.082 [0.092]	0.207 [0.074]	0.002 [0.032]
<i>Panel B: Follow-up survey only</i>												
New Curriculum	0.171 [0.235]	0.196 [0.170]	0.266 [0.300]	-0.372 [0.306]	-0.002 [0.099]	0.085 [0.106]	0.441 [0.218]	-0.187 [0.166]	-0.149 [0.255]	-0.126 [0.198]	0.032 [0.208]	0.023 [0.092]
<i>Panel C: Science track students only</i>												
New Curriculum	0.304 [0.099]	0.238 [0.088]	0.212 [0.102]	0.144 [0.103]	0.128 [0.047]	0.036 [0.056]	0.129 [0.101]	0.108 [0.100]	-0.120 [0.114]	0.048 [0.132]	0.149 [0.092]	-0.015 [0.044]
<i>Panel D: Humanities track students only</i>												
New Curriculum	0.454 [0.150]	0.264 [0.145]	0.513 [0.169]	0.207 [0.171]	-0.050 [0.072]	0.209 [0.071]	-0.015 [0.149]	-0.105 [0.101]	0.022 [0.150]	0.220 [0.165]	0.336 [0.156]	0.093 [0.053]

All regressions include a full set of province and cohort fixed effects (not reported). Robust standard errors in brackets, clustered at the province  $\times$  cohort level. Median number of observations across columns: 329.5 (Panel B); 1041 (Panel C); 455 (Panel D). Median number of clusters across columns: 81.5 (Panel B); 115 (Panel C); 110 (Panel D).

Table 6: Additional tests: identifying textbooks, factual knowledge, and teaching practices

Dependent variable:	Factual knowledge					
	New textbook cover	Aware: VH elected	Aware: able to vote PCR	z-score index (Factual knowledge)	z-score index (Teaching style)	Teaching focused on <i>gaokao</i>
	(1)	(2)	(3)	(4)	(5)	(6)
New Curriculum	0.865 [0.015]	0.079 [0.034]	0.038 [0.028]	0.198 [0.075]	-0.007 [0.083]	0.108 [0.069]
Observations	1,691	1,754	1,755	1,754	1,691	1,691
Mean DV	0.642	0.765	0.871	0	0	1.957
Std.Dev. DV	0.480	0.424	0.335	1	1	0.882

All regressions include a full set of province and cohort fixed effects (not reported). Robust standard errors in brackets, clustered at the province $\times$ cohort level.

## 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. All students face an examination on the Politics curriculum that is a component of their university admissions process: students in the science track are examined on the content of the first year Politics textbook in the "little *gaokao*" during eleventh grade, while students in the humanities track are examined on this material in the (very high stakes) *gaokao* exam at the end of senior high school.

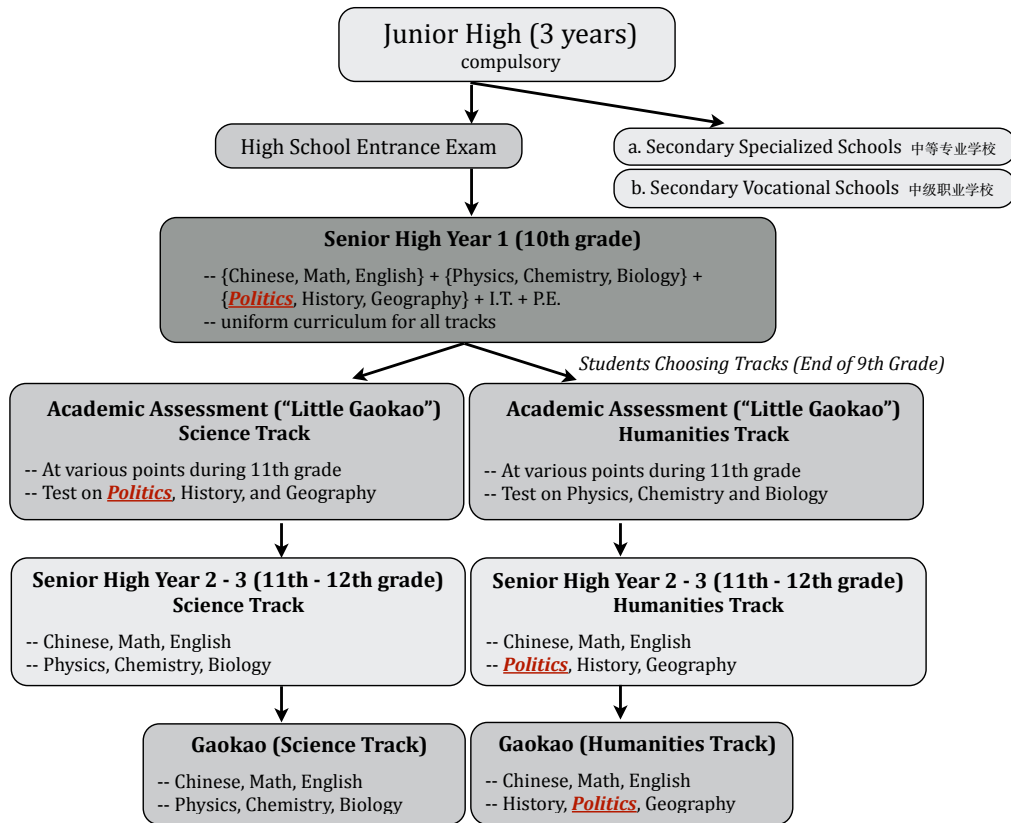


Figure A.1: The Chinese secondary education system

## **Appendix B   Textbooks**

### **B.1   New curriculum introduction dates by province**

In Table B.1, we show for each province the high school entry cohort to which the new curriculum was introduced. We also provide an official source that indicates the introduction date for each province.

Table B.1: Curriculum Reform Introduction Timeline

Province	Year of Introduction	Document Title	Source Title	Document Website Link
Anhui	2006	安徽拟建样本校推动高中新课改	Shanghai Municipal Education Commission	goo.gl/Ro3knX
Beijing	2007	北京市普通高中课程改革实验样本校工作指导意见 (试行)	Beijing Municipal Education Commission	goo.gl/1K4Pxe
Chongqing	2010	重庆市普通高考方案	Chongqing Municipal Education Commission	goo.gl/15cV3o
Fujian	2006	我省各地认真贯彻落实全省普通高中新课程实验工作会议精神	The Education Department of Fujian	goo.gl/8Qr31e
Gansu	2010	关于转发《甘肃省普通高等学校招生考试改革方案》的通知	The Education Department of Gansu	goo.gl/tSCJFp
Guangdong	2004	佛山市启动普通高中新课程改革实验工作	The Education Department of Guangdong	goo.gl/yfc6Wj
Guangxi	2010	广西普通高中课程改革实施方案	The Education Department of Guangxi	goo.gl/bi16jN
Guizhou	2010	省教育厅召开普通高中课程改革实验实施情况大检查培训会	The Education Department of Guizhou	goo.gl/v2cH48
Hainan	2004	海南3.5万名高中新生迎来新课程	Shanghai Municipal Education Commission	goo.gl/DXI701
Hebei	2009	河北省普通高中课程改革实施方案	The Education Department of Hebei	goo.gl/1u0pf0
Heilongjiang	2007	黑龙江省人民政府办公厅转发省教育厅等部门全省普通高中课程改革工作方案的通	Provincial Government of Heilongjiang	goo.gl/9FYAzM
Henan	2008	河南省教育厅关于印发《河南省普通高等学校统一招生考试改革方案》的通知	The Education Department of Henan	goo.gl/9g4hgL
Hubei	2009	省人民政府办公厅关于印发湖北省普通高中课程改革实施方案(试行)的通知	The Education Department of Hubei	goo.gl/bdBW1r
Hunan	2007	我省拟取消高中会考今秋全面实施高中课程改革	Provincial Government of Hunan	goo.gl/SSpo33
Inner Mongolia	2009	全区普通高中将从明年起实行新课程改革	The Education Department of Inner Mongolia	goo.gl/tTo2kG
Jiangsu	2005	江苏省普通高中课程改革实施方案	Municipal Government of Suqian	goo.gl/mx21rQ
Jiangxi	2008	全省高中新课改有序进行正研究2011年高考改革方案	Provincial Government of Jiangxi	goo.gl/R2P9Uz
Jilin	2007	关于印发《吉林省普通高中新课程方案(试行)》的通知	Provincial Government of Jilin	goo.gl/z3qczh
Liaoning	2006	辽宁省普通高中课程改革工作方案	The Education Department of Liaoning	goo.gl/qBTXh7
Ningxia	2004	宁夏高中新课改:在理想与现实冲突不断摸索	The Education Department of Jiangsu	goo.gl/3FrzM4
Qinghai	2010	青海省普通高中新课程改革实施方案(试行)	County Government of Haixi	goo.gl/KqzMLV
Shaanxi	2007	陕西省教育厅关于印发《陕西省普通高中新课程改革实施方案》的通知	The Education Department of Shaanxi	goo.gl/JKOMUt
Shandong	2004	关于全省教育工作情况的报告	Shandong Province People's Congress	goo.gl/D9YvwJ

Continued on next page

Shanxi	2008	认真贯彻落实党的十七大精神推动全省教育事业又好又快发展	The Education Department of Shanxi	goo.gl/JPKM5N
Sichuan	2010	四川出台普通高中课程改革方案	Ministry of Education of PRC	goo.gl/HWSY2b
Tianjin	2006	天津进行新课程改革高中选修课学分	The Central People's Government of PRC	goo.gl/nmjVn0
Tibet	2010	西藏普通高中新课程改革工作有序推进	Provincial Government of Hunan	goo.gl/SSpo33
Xinjiang	2008	关于印发《新疆维吾尔自治区普通高中课程改革实施方案》的通知	The Education Department of Xinjiang	goo.gl/Zgik1L
Yunnan	2009	罗崇敏坚定不移全面实施高中新课程改革	The Education Department of Yunnan	goo.gl/7ZPiAu
Zhejiang	2006	浙江普通高中今秋实行新课改	Municipal Education Department of Fuzhou	goo.gl/j9adNY

## B.2 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*.





### B.3 A few words on the new senior high school Politics textbook, from the 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.<sup>1</sup> 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.

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<sup>1</sup>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](http://www.pep.com.cn/sxzz/js/tbjx/kb/jsys/bx1/201008/t20100830_824446.htm).

## Appendix C Government documents

### C.1 Summary of government documents consulted

#### 1. “Decision on Deepening the Education Reform, and Comprehensively Promoting the ‘Quality-oriented Education’”<sup>2</sup>

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”<sup>3</sup>

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”<sup>4</sup>

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”<sup>5</sup>

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.

### C.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

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<sup>2</sup>The original document can be found at [http://www.moe.gov.cn/publicfiles/business/htmlfiles/moe/moe\\_177/200407/2478.html](http://www.moe.gov.cn/publicfiles/business/htmlfiles/moe/moe_177/200407/2478.html).

<sup>3</sup>The original document can be found at [http://www.gov.cn/gongbao/content/2002/content\\_61386.htm](http://www.gov.cn/gongbao/content/2002/content_61386.htm).

<sup>4</sup>The original document can be found at <http://www.people.com.cn/GB/jiaoyu/1053/2405224.html>.

<sup>5</sup>The original document can be found at [http://www.moe.gov.cn/publicfiles/business/htmlfiles/moe/moe\\_711/201001/78375.html](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 conduct 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.

### C.3 Search words relating to five major categories of attitude change, taken from the 2004 State Council memo

In our quantitative analysis of the old and new Politics textbooks, we examined the frequency of 67 words found in the State Council's memo, "Strengthening the Ideological and Moral Construction of the Youth" (2004), which were related to the five attitudes on which we focus. The 67 words are provided in Table C.2, below.

Table C.2: Search words (five main categories)

Word in English	Word in Chinese	Count in Old Curr.	Count in New Curr.	Percent Change in Frequency
Party	党	33	250	537%
Homeland	祖国	1	51	4,191%
Socialism with Chinese characteristics	中国特色 社会主义	4	97	1,940%
Our country	我国	429	512	0.4%
Chinese ethnic group	中国民族	1	100	8,313%
Nation	国家	508	648	7%
Ethnicity	民族	19	500	2,114%
Inheritance	传统	8	117	1,130%
Fine tradition	党	1	4	237%
Socialism	社会主义	246	440	50%
Moderately prosperous society	小康社会	0	26	∞
Patriotism	爱国主义	2	21	783%
Citizen	公民	55	184	181%
Environment	环境	10	52	337%
Unity	团结	5	49	724%
China	中国	207	614	150%
Market economy	市场经济	208	67	-73%
Develop	发展	624	773	4%
Economic sectors	经济成分	0	2	∞
Organizational structure	组织形式	5	6	1%
Employment	就业	21	56	124%
Interest	利益	58	164	138%
Abuse of power	以权谋私	1	1	-16%
Corruption	腐败	0	3	∞
Culture	文化	46	1174	2,047%
Minority	少数	6	41	475%
Great revival	伟大复兴	0	10	∞
Revival	复兴	0	13	∞
Scientific view of development	科学发展观	0	19	∞
People-oriented	以人为本	0	4	∞
Rule for the people	执政为民	0	4	∞
Participate	参与	22	156	497%
Discuss	讨论	6	21	194%
Unification	统一	42	78	56%
Law	法律	81	118	23%
Administration	行政	39	74	60%
Nationalist	爱国	2	44	1,751%

*Continued on next page*

History	历史	28	134	497%
Citizens	人民	221	635	142%
Ethnic pride	民族自尊	0	2	∞
Reform & Opening-up	改革开放	22	25	-4%
Law-abiding	守法	4	9	89%
Democracy	民主	11	282	2,057%
Legal institution	法制	22	156	497%
Engage in	参加	35	63	51%
Law compliance	遵纪守法	2	3	26%
Election	选举	2	120	4,948%
Civil administration	民政	3	15	321%
Civil participation	决策	8	103	983%
Party and govt bodies	党政机关	0	1	∞
Government	政府	55	301	360%
Legislation	法规	27	43	34%
Legal	合法	56	42	-37%
Green	绿色	0	13	∞
The people's government	人民政府	2	5	110%
Focus on	关注	1	17	1,330%
Characteristics	特色	9	125	1,068%
Organizations of the masses	人民团体	0	1	∞
Fulfill (duty)	履行	21	53	112%
Illegal	非法	5	10	68%
According to the law	依法	57	88	30%
Politics	政治	30	328	820%
Common	共同	61	143	97%
Police	公安	2	5	110%
Democratic parties	民主党派	0	24	∞
Without party affiliation	无党派	0	3	∞
Maintain	维护	33	103	163%
The entire party	全党	0	2	∞

Frequency equals the count of a word divided by the total number of words in the textbooks in the new or old curriculum. The old curriculum textbooks contained a total of 145,062 words; the new curriculum textbooks contained a total of 172,424 words. All terms come from the State Council Document, "Suggestions on Strengthening the Ideological and Moral Construction of Our Youths," issued in 2004. Terms are listed in the order of appearance in the State Council Document.

## Appendix D Government's aims, changes in the curriculum, and changes in the *gaokao* framework

### D.1 Governance

- State Council (1999): mentions “the rule of law” as one of the 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.2 Political institutions

- 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 duties 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: orderly and disorderly 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 directly participating in democratic decision-making
  - The meaning and significance of Chinese villages and urban dwellers governing themselves

## D.3 Economic institutions

- 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 the 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 standards

#### D.4 Identity

- State Council (1999): specifies that teaching “multi-ethnic harmony” is a goal of moral education at school. Also states goal of teaching students about “China’s fine traditions” and China’s place in international affairs.
- 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 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 the 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   Detailed description of survey sections**

In this section we first provide a complete description of our survey including every question asked.

## Complete Set of Survey Questions Survey of Peking University Undergraduates

This document includes all questions asked in our Peking University survey. In Appendix F, below, we plot estimated effects of the new curriculum one question at a time for *all* survey questions, using responses to the main (online) wave of our survey. We regress each survey question outcome on the *New Curriculum* dummy variable in a model including province and cohort fixed effects (i.e., the baseline model in the main text of the paper). We then plot the estimated coefficient on the *New Curriculum* dummy for each survey question. In addition to showing the estimated effect of the new curriculum on each survey question outcome, we also show confidence intervals and p-values using the FDR adjustment within survey question category (further detail is provided in Appendix F). To calculate the FDR adjusted p-values and to ease the presentation of the results, we re-organize the questions into conceptually-related categories (original ordering available from the authors upon request). For several questions listed at the end of the survey, there is no variation conditional on province and cohort, so we will not estimate effects of the curriculum on these questions.

### A. Individual background characteristics, media consumption, and risk preferences

*Our survey asked a range of questions about students' backgrounds. Specifically, the survey included four sets of questions that we include in our balance table in the main text of the paper: (i) a set of questions regarding students' own background characteristics; (ii) a set of questions about students' parents; (iii) a set of questions about students' educational backgrounds; and (iv) a question about students' participation in the Communist Youth League. We do not expect these variables to have been affected by the curriculum change. The survey also asked students about: (v) whether their parents voted in local elections in the past; (vi) students' media consumption; and, (vii) students' risk preferences. We do not expect these variables to have been affected by the curriculum change, though students' exposure to the new curriculum might have affected parents' voting or students' knowledge of parents' voting behavior and it is possible that changed political attitudes would change students' media choices.*

#### (i) Background characteristics included in the balance table: personal

1. Date of birth (year/month/day)
2. Height (cm)
3. Ethnicity  
a = Han      b = Zhuang      c = Man      d = Hui  
e = Miao      f = Uyghur      g = Others
4. Gender

- a = Male                      b = Female
5. Hukou/migration status before entering college  
     a = Urban                  b = rural
6. Number of siblings

(ii) Background characteristics included in the balance table: parents

7. Father's educational attainment (only count the level that is completed)  
     a = No schooling      b = Elementary school      c = Junior high  
     d = High school      e = Vocational college      f = College and above
8. Father's Hukou/migration status  
     a = Urban                  b = rural
9. Father's occupation  
     a = Agricultural      b = Non-agricultural
10. Mother's educational attainment (only count the level that is completed)  
     a = No schooling      b = Elementary school      c = Junior high  
     d = High school      e = Vocational college      f = College and above
11. Mother's Hukou/migration status  
     a = Urban                  b = rural
12. Mother's occupation  
     a = Agricultural      b = Non-agricultural
13. Either parent a member of CCP?  
     a = Yes                      b = No

(iii) Background characteristics included in the balance table: education

14. Have you ever taken the *gaokao*?
15. Besides Chinese, Math and English, what other subjects did you choose to be tested on during *gaokao*? (multiple choice)  
     a = Physics              b = Chemistry              c = Biology  
     d = Politics              e = History                  f = Geography
16. Indicate your college major.

(iv) Background characteristics included in the balance table: politics prior to college

17. Have you been you a member of the Communist Party youth organization?  
     a = Yes                      b = No

(v) Parents' voting experience (as reported by students)

18. My parents have voted for local (county or district) People's Congress representatives before.

(vi) Students' media consumption

19. Where do you obtain news and other important information?

Please rank your top three information sources from the following:

- a = Domestic TV      b = Domestic radio      c = Domestic internet sites  
d = Domestic newspaper and magazines      e = SMS  
f = Friends      g = Others

20. How often do you obtain news and other important information from foreign websites?

- a = More than once a day      b = Once a day  
c = Once a week      d = Once a month  
e = Less often than once a month

21. Typically, how do you get access to foreign websites?

- a = Do not go to foreign websites at all  
b = Free access from the library  
c = Peking University internet service bundle  
d = Other private internet services (e.g. Netpass)  
e = Other channel (please specify)

22. What's your typical purpose going on foreign websites? Please rank your top 3 purposes.

- a = Reading news      b = Entertainment  
c = Social network      d = Searching for information/resources  
e = Applying for foreign schools      f = Academic reasons  
g = Others (please specify)

23. Do you own a computer on campus?

- a = Yes      b = No, use dorm mate's computer  
c = No, use library's computer      d = Others (please specify)

(vii) Students' risk preferences

24. Generally speaking (either in life or work), please tick a box on the scale, where the value 0 means: "unwilling to take risks" and the value 10 means: "fully prepared to take risk."

25. Regarding your future career life, please tick a box on the scale, where the value 0 means: "unwilling to take risks" and the value 10 means: "fully prepared to take risk."

26. If you had 10,000RMB that you were saving in the bank, how much, if any, would you choose to invest in the stock market?

- a = 0%      b = More than 0% but less than 25%  
c = Between 25% and 50%      d = Between 50% and 75%  
e = Between 75% and 100%      f = 100%

### B. “First stage”: changes in factual political knowledge

*Our survey asked students factual questions about political institutions that were discussed in much greater depth under the new curriculum. Note: these questions appeared later in the actual survey, so students did not begin the survey attempting to respond to our questions with “factually correct” answers.*

27. I know that the village head is elected by ordinary people through vote (one-man one-vote).

a = Yes

b = No

28. I know that I can participate in the voting of local (county or district) People’s Congress representatives.

a = Yes

b = No

### C. Primary attitudes of interest

*Our survey asked students a number of questions about beliefs and attitudes that the curriculum reform was aimed at changing. These questions belong to 5 broad categories that we examine in the text, with each of these broad categories split into narrower sub-categories. The 5 broad categories are as follows:*

- I. **Governance**, split into (i) trust in government officials and (ii) views on the civic-mindedness of officials and on the necessity of unofficial payments.
- II. **Political Institutions**, split into (i) perception of the degree to which Chinese political institutions are democratic; (ii) students’ views on the wisdom of the masses and unconstrained democracy; and, (iii) students’ views of the defining characteristics of democracy.
- III. **Economic Institutions**, which includes a question on (i) attitudes toward unconstrained, free-market economic institutions.
- IV. **Identity**, split into (i) views on ethnic identity (i.e., on minorities and a unified Chinese ethnic heritage) and (ii) students’ sense of national (as opposed to international) identity.
- V. **Environment**, which includes questions on (i) attitudes toward environmental regulation.

#### **I. Governance**

##### (i) Trust in government officials

On a 1-5 scale, with 1 meaning complete distrust, and 5 meaning complete trust, describe your level of trust in the following institutions:

29. Central government

30. Provincial government

31. Local government



- 32. Courts
- 33. Armed forces
- 34. Police

(ii) Views on the civic-mindedness of officials and on the necessity of unofficial payments

For the following questions, please choose:

- |                       |              |
|-----------------------|--------------|
| a = Strongly disagree | b = Disagree |
| c = Neutral           | d = Agree    |
| e = Strongly agree    |              |

- 35. Village heads put their own interest before those of people.
- 36. Village heads care primarily about the powerful and rich people, and neglect the interests of ordinary people.

In your opinion, how often is it necessary for people like you to have to make unofficial payments/ gifts in the following situations:

- |             |            |               |
|-------------|------------|---------------|
| a = Never   | b = Seldom | c = Sometimes |
| d = Usually | e = Always |               |

- 37. Interacting with the traffic police?
- 38. Requesting official documents (such as passport or birth certificate)?
- 39. Interacting with the civil courts?
- 40. Interacting with the providers of primary or secondary education?
- 41. Interacting with doctors?

For the following questions, please choose:

- |         |        |
|---------|--------|
| a = Yes | b = No |
|---------|--------|

- 42. Do you think that paying a bribe is an acceptable way to accomplish something?
- 43. Do you think that paying a bribe is an effective way to accomplish something?
- 44. From the perspective of local government officials, do you think they would accept bribe when it is offered to them?

**II. Political Institutions**

(i) Beliefs about the degree to which Chinese political institutions are democratic

- 45. Where would you place our country under the present government?

- |                         |   |   |   |   |                       |   |   |   |    |
|-------------------------|---|---|---|---|-----------------------|---|---|---|----|
| Completely undemocratic |   |   |   |   | Completely democratic |   |   |   |    |
| 1                       | 2 | 3 | 4 | 5 | 6                     | 7 | 8 | 9 | 10 |

- 46. In reality, ordinary people are able to influence who becomes the village head.

(ii) Views on the wisdom of the masses and unconstrained democracy

For the following questions, please choose:

a = Strongly disagree

b = Disagree

c = Neutral

d = Agree

e = Strongly agree

47. Ordinary people can judge who would make a better village head.
48. Theoretically speaking, ordinary people should be able to influence the decision of who becomes the village head.
49. Ordinary people know clearly which leader is doing a better job.
50. For the following statements regarding democracy, choose one that you agree the most:
- a = Democracy is preferable to any other form of political system.
- b = Under some circumstances, an authoritarian government may be preferable to a democratic one.
- c = For people like me, it does not matter whether a government is democratic or authoritarian.
- d = Do not know.
51. Here is a scale of 1 to 10 measuring the extent to which people think democracy is suitable for our country.
- | Completely unsuitable |   |   |   |   | Perfectly suitable |   |   |   |    |
|-----------------------|---|---|---|---|--------------------|---|---|---|----|
| 1                     | 2 | 3 | 4 | 5 | 6                  | 7 | 8 | 9 | 10 |

(iii) Characteristics of "democracy"

52. From your own perspective, which of the following do you think are characteristics of a democracy? List them in order of importance to you. (1=most important, 5=least important)
- a = Direct election of national government representatives
- b = Freedom of speech and press
- c = The management of the country reflects the will of the ruling class
- d = People's participation in the political process
- e = Competitive election

**III. Economic Institutions**

(i) Attitudes toward unconstrained, free-market economic institutions

53. For the following statements regarding a market economy, choose one that you agree the most:

- a = A market economy is preferable to any other form of economic system.  
 b = Under some circumstances, a planned economy may be preferable to a market economy.  
 c = For people like me, it does not matter whether the economic system is organized as a market economy or as a planned economy.  
 d = Do not know.

#### ***IV. Identity***

##### **(i) Ethnic identity**

54. Generally speaking, would you say that people in minority groups can be trusted, or that you cannot be too careful in dealing with them?  
 a = Completely trustworthy                      b = Relatively trustworthy  
 c = Neutral    d = Relatively careful  
 e = Completely untrustworthy, need to be very careful
55. China is a country made up of multiple ethnic groups. Which one of the following statements regarding ethnic minority groups do you agree more?  
 a = Comparing to Han Chinese, ethnic minority groups are relatively independent groups.  
 b = Ethnic minority groups are the same as Han Chinese, and they are all Chinese people.
56. China is a country made up of multiple ethnic groups. Which one of the following statements regarding ethnic minority groups do you agree more?  
 a = Ethnic minority groups share the same historic heritage and cultural traditions as the Han Chinese.  
 b = Ethnic minority groups have different historic heritage and cultural traditions with the Han Chinese.
57. Can you imagine yourself marrying a member from a different ethnic group in the future?  
 a = Can imagine                                      b = Cannot imagine

##### **(ii) National identity**

58. Where would you place your identity on a spectrum, with being Chinese on one end and being a world citizen on the other end?
- |                       |   |                           |   |                    |
|-----------------------|---|---------------------------|---|--------------------|
| Chinese identity only |   | Equal mixture             |   | World citizen only |
|                       |   | Chinese and world citizen |   |                    |
| 1                     | 2 | 3                         | 4 | 5                  |

#### ***V. Environment***

##### **(i) Attitudes toward environmental regulation**

59. As we all know, the government's fiscal resources are limited. 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?

a = Support

b = Don't support

60. 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

61. 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.

#### D. Behavior related to primary outcomes of interest

*Our focus in the survey was to determine whether the change in educational content affected students' political beliefs and attitudes. In addition to asking about attitudes, the survey asked students about several actions that they may have taken that are plausibly related to attitudes that the curriculum aimed to change. Specifically, the survey asked about: (i) political behavior (related to views on Chinese political institutions); (ii) investments in risky financial securities (related to views on markets); and, (iii) interactions with members of minority ethnic groups (related to attitudes toward and beliefs about ethnic minorities).*

##### (i) Political behavioral outcomes

62. I have voted for local (county or district) People's Congress representatives before.

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

64. Are you a CCP member, or reserved member of the CCP?

a = Yes

b = No

65. Have you ever participated in political groups other than CCP and Communist Party Youth Organization?

a = Yes

b = No

(ii) Investment in risky financial securities

Have you had the following investment experiences before?

66. Stocks?

67. Bonds?

(iii) Interactions with members of minority ethnic groups

68. Have you worked with minority group students at school before (in study groups or class projects)?

a = Yes

b = No

E. Additional political attitudes that are of interest

*Our survey included questions asking students about political attitudes that are of interest to us, but that are not our focus in the body of the paper 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. Specifically, the survey included questions regarding: (i) generalized trust and trust in non-governmental organizations (which we did not expect to have been affected by the curriculum change); (ii) efficiency/equity preferences; (iii) views on infrastructure investment; (iv) views on civil disobedience; (v) the "Three Represents" political ideology espoused by ex-President Jiang Zemin; (vi) students' perceptions of current political institutions; and, (vii) nationalistic and militaristic attitudes.*

(i) Generalized trust and trust in non-governmental organizations

69. Generally speaking, would you say that most people can be trusted, or that you cannot be too careful in dealing with people?

a = Completely trustworthy

b = Relatively trustworthy

c = Neutral

d = Relatively careful

e = Completely untrustworthy, need to be very careful

On a 1-5 scale, with 1 meaning complete distrust, and 5 meaning complete trust, describe your level of trust in the following institutions:

70. Non-governmental organizations (NGOs)

71. Banks and financial system

72. Foreign investors

(ii) Equity / efficiency preferences

73. As we all know, the government's fiscal resources are limited. 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 improve social welfare (education, support for the poor, health care, etc.)?
74. Which of the following statements do you agree with more?
- a = Government should enact policies that make the distribution of income more equal, even if they reduce the rate of economic development.
  - b = Government should enact policies that increase the rate of economic development, even if they make the distribution of income more unequal.

(iii) Views on infrastructure investment

75. As we all know, the government's fiscal resources are limited. 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 improve infrastructure (roads, ports, railroads, etc.)?
- a = Support
  - b = Don't support

(iv) Views on civil disobedience

For the following questions, please choose:

- a = Strongly disagree
  - b = Disagree
  - c = Neutral
  - d = Agree
  - e = Strongly agree
76. If government does not operate according to the law, people should have the rights to disobey the government.
77. I'm not fearful of officials and I don't hesitate to object to any official who has done something wrong, or report his misconduct to the authorities.

(v) The "Three Represents"

78. Which of the following groups and their interests should influence government policy?  
(Please rank the top three)
- a = Farmer/peasants
  - b = Township or village enterprise employees
  - c = Factory workers
  - d = SOE employees
  - e = Private enterprise employees
  - f = SOE managers
  - g = Private enterprise managers/owners
  - h = Teachers
  - i = Intellectuals
  - j = Celebrities
  - k = Civil servants
  - l = Government officials
  - m = CCP members

- n = Bank owners (or managers in financial sector)
- o = Employees at foreign firm

79. What qualities should qualify a person for membership in the CCP?

- a = Ideology
- b = Political mission
- c = Income
- d = Social status
- e = Family ties
- f = Others

(vi) Perceptions of current institutions

80. Which of the following groups and their interests, to the best of your knowledge, are actually influencing government policy? (Please rank the top three)

- a = Farmer / peasants
- b = Township or village enterprise employees
- c = Factory workers
- d = SOE employees
- e = Private enterprise employees
- f = SOE managers
- g = Private enterprise managers / owners
- h = Teachers
- i = Intellectuals
- j = Celebrities
- k = Civil servants
- l = Government officials
- m = CCP members
- n = Bank owners (or managers in financial sector)
- o = Employees at foreign firm

81. What qualities, to the best of your knowledge, actually do qualify a person for membership in the CCP?

- a = Ideology
- b = Political mission
- c = Income
- d = Social status
- e = Family ties
- f = Others

(vii) Nationalistic and militaristic attitudes

82. Does Japan do more good or harm to the region?

- a = Much more good than harm
- b = Somewhat more good than harm
- c = Equal harm and good
- d = Somewhat more harm than good
- e = Much more harm than good
- f = Don't know

83. Of course, we all hope that there will not be another war, but if it were to come to that, would

you be willing to fight for your country?

a = Yes

b = No

#### F. Additional behavioral outcomes that are of interest

*Our survey asked students about behaviors that may be related to students' views on Chinese political and economic institutions more broadly. Specifically, the survey asked about: (i) experience with less risky financial transactions (which we expect should not have been affected by the curriculum change); (ii) pro-social behavior; (iii) complaining to authority figures and participation in civil disobedience; and, (iv) participation in patriotic protests (which we expect should not have been affected by the curriculum change).*

##### (i) Experience with less-risky financial transactions

Have you had the following investment experiences before?

84. Bank savings account

85. Credit card

86. Bank loan

87. None of {bank savings account, credit card, bank loan, stocks, bonds}

##### (ii) Pro-social behavior

88. Have you donated money to charity before?

a = Yes

b = No

89. Have you ever participated in the activities of a non-profit (such as volunteer services)?

a = Yes

b = No

##### (iii) Complaining to authority figures and participation in civil disobedience

90. Have you ever complained to school authorities to protect your personal interest (e.g. regarding tuition, dorm assignment)?

a = Yes

b = No

91. Have you ever reported government misconduct to either relevant agencies, or representatives, or civil servants?

a = Yes

b = No

92. Have you ever participated in protests concerning social issues (such as pollution and education)?

a = Yes

b = No



(iv) Participation in patriotic protests

93. Have you ever participated in anti-Japanese protests?

a = Yes

b = No

G. Behavior in incentivized games

*Our survey included two incentivized preference elicitation games. We elicited students' risk preferences as well as their preferences for redistribution.*

94. Certainty equivalent of a risky gamble in risk preference elicitation game (larger certainty equivalent implies less risk aversion).

95. Average payment allocated toward "self" (rather than "other") in game eliciting preferences for redistribution (larger value implies less equity-minded).

H. High school teachers' methods of instruction

*Our survey asked students about instructional methods in their high schools to study whether teaching practices changed along with the change in educational content. On the one hand, one aim of the curriculum reform was to increase student interaction with teachers; on the other hand, the very high stakes of the gaokao college entrance exam did not change.*

96. On a scale of 1 to 5, how much did your high school teacher encourage participation during lecture?

97. On a scale of 1 to 5, how much did your high school teacher encourage you to study and explore the answers on your own, as opposed to telling you the answer up front?

98. On a scale of 1 to 5, how much do you think memorizing material was important for doing well in high school?

99. On a scale of 1 to 5, how much do you think class/lecture and teaching activities in high school were centered on *gaokao* preparation?

I. Textbook covers: checking policy implementation and student recollection

*Our survey asked students to identify the Politics textbooks they used in high school, providing them with images of the covers of textbooks published under the old and new curricula. We check that our treatment assignment by provinceXcohort cell (based on official reports) matched actual exposure to textbooks. Responses to this question also provide evidence of students' recollection of their high school Politics course. Note: we only showed pictures of the textbook covers; they were not labeled as belonging to either the old or new curriculum.*

100. Please choose the covers of the textbooks that you used in your high school political science courses.

a = High school new curriculum

b = High school old curriculum

c = Can't remember

d = Others; please specify the publisher's name if you remember

### I. Students' personalities

*Our survey included 25 questions about students' personalities measuring the "Big 5" personality traits. The 5 traits are: (i) neuroticism; (ii) extraversion; (iii) openness; (iv) agreeableness; and, (v) conscientiousness. We do not expect these variables to have been affected by the curriculum change. Note that the questions are organized by personality trait below, rather than listed in the order in which they appeared in the survey (as noted above, the original survey ordering is available from the authors).*

#### (i) Neuroticism

On each numerical scale that follows, indicate which point is generally more descriptive of you.

If the two terms are equally descriptive, mark the midpoint.

101.	Calm				Eager
	1	2	3	4	5
102.	Confident				Cautious
	1	2	3	4	5
103.	Upbeat				Discouraged
	1	2	3	4	5
104.	Don't Give a Darn				Easily Embarrassed
	1	2	3	4	5
105.	Unflappable				Distractible
	1	2	3	4	5

#### (ii) Extraversion

On each numerical scale that follows, indicate which point is generally more descriptive of you.

If the two terms are equally descriptive, mark the midpoint.

106.	Prefer Being Alone				Prefer Being with Other People
	1	2	3	4	5
107.	Pessimistic				Optimistic
	1	2	3	4	5
108.	Private				Exhibitionist

	1	2	3	4	5
109.	Cool				Outgoing
	1	2	3	4	5
110.	Thoughtful				Conversational
	1	2	3	4	5

(iii) Openness

On each numerical scale that follows, indicate which point is generally more descriptive of you.  
If the two terms are equally descriptive, mark the midpoint.

111.	No-nonsense				A Dreamer
	1	2	3	4	5
112.	Practical				Theoretical
	1	2	3	4	5
113.	Following Authority				Following Imagination
	1	2	3	4	5
114.	Seek Routine				Seek Novelty
	1	2	3	4	5
115.	Prefer Things Clear-cut				Comfortable with Ambiguity
	1	2	3	4	5

(iv) Agreeableness

On each numerical scale that follows, indicate which point is generally more descriptive of you.  
If the two terms are equally descriptive, mark the midpoint.

116.	Abrupt				Courteous
	1	2	3	4	5
117.	Selfish				Generous
	1	2	3	4	5
118.	Cold				Warm
	1	2	3	4	5
119.	Independent				Team Player
	1	2	3	4	5
120.	Skeptical				Trusting
	1	2	3	4	5

(v) Conscientiousness

On each numerical scale that follows, indicate which point is generally more descriptive of you.

If the two terms are equally descriptive, mark the midpoint.

121.	Messy				Neat
	1	2	3	4	5
122.	Open-ended				Decisive
	1	2	3	4	5
123.	Easily Distracted				Stay Focused
	1	2	3	4	5
124.	Comfortable with Chaos				A Preference for Order
	1	2	3	4	5
125.	Procrastinate				On Time
	1	2	3	4	5

#### K. Students' values and beliefs about the determinants of success

*Our survey asked students about: (i) their values; as well as (ii) whether they believed success was more determined by internal or external factors.*

##### (i) Values

Here is a list of qualities that children can be encouraged to learn at home. Which, if any, do you consider to be especially important? (can choose up to three)

- 126. Chose "independent"?
- 127. Chose "hard work"?
- 128. Chose "feeling of responsibility"?
- 129. Chose "imagination"?
- 130. Chose "tolerance and respect for other people"?
- 131. Chose "thrift, saving money and things"?
- 132. Chose "determination, perseverance"?
- 133. Chose "religious faith"?
- 134. Chose "unselfishness"?
- 135. Chose "obedience"?
- 136. Chose "self-expression"?

137. One's wealth is the measure of one's personal worth.

a = Strongly disagree

b = Disagree

c = Neutral

d = Agree

e = Strongly agree

138. If you were making decisions for a company. Would you let your company carry on profitable

activities that are not illegal, but not quite moral?

For the following question, please choose:

- |                       |              |
|-----------------------|--------------|
| a = Strongly disagree | b = Disagree |
| c = Neutral           | d = Agree    |
| e = Strongly agree    |              |

139. I can't stand the powerful and influential bullying the powerless and the weak. I like to stand up for the weak.

140. I see myself as an autonomous individual.

- |                       |              |
|-----------------------|--------------|
| a = Strongly disagree | b = Disagree |
| c = Neutral           | d = Agree    |
| e = Strongly agree    |              |

(ii) Internal versus external determinants of success

141. What determines the success of a business? Pick two of the following:

- |                          |                            |
|--------------------------|----------------------------|
| a = Guanxi               | b = Business strategy      |
| c = Corruption           | d = Quality of the product |
| e = Corporate management | f = Luck                   |

142. In China today, hard work has fair returns.

- |                       |              |
|-----------------------|--------------|
| a = Strongly disagree | b = Disagree |
| c = Neutral           | d = Agree    |
| e = Strongly agree    |              |

143. In China today, ability and talent earn fair returns.

- |                       |              |
|-----------------------|--------------|
| a = Strongly disagree | b = Disagree |
| c = Neutral           | d = Agree    |
| e = Strongly agree    |              |

144. In China today, corruption is unavoidable if you want to be successful.

- |                       |              |
|-----------------------|--------------|
| a = Strongly disagree | b = Disagree |
| c = Neutral           | d = Agree    |
| e = Strongly agree    |              |

L. Perceptions of returns to schooling, occupational preferences, and labor market experience

*Our survey included (i) a set of questions eliciting students' beliefs about the returns to schooling, which we do not expect to have been affected by the curriculum change; (ii) questions about students'*

*occupational preferences (both sector and location); and, (iii) questions about students' actual work experience as interns.*

(i) Beliefs about the returns to schooling

145. Suppose, hypothetically, you were to stop school after finishing junior high. Think about the kinds of jobs you might be offered and that you might accept. How much do you think you will earn in a typical week, month or year when you are about 30 to 40 years old?
146. How about if you were to stop school after finishing senior high?
147. How about if you were to stop school after finishing this school year?
148. How about if you were to stop school after finishing college?
149. Now, we would like you to think about adult men who are about 30 to 40 years old and who have completed only elementary school. Think not just about the ones you know personally, but all men like this throughout the country. How much do you think they earn in a typical week, month or year?
150. How about if he were to stop school after finishing junior high?
151. How about if he were to stop school after finishing senior high?
152. How about if he were to stop school after finishing college?

(ii) Preferences regarding occupational sector and location

153. Rank the top three types of jobs from the following in terms of their appeal to you:
- |   |  |
|---|--|
| a = Working in the national civil service   | b = Working in the local civil service   |
| c = Working in the military   | d = Working for a Chinese private firm   |
| e = Working for a foreign firm in China   | f = Working for a state-owned enterprise |
| g = Working for institutional organizations (e.g. school, hospital, research institute, etc.) |  |
| h = Starting your own firm as an entrepreneur   |  |
| g = Others  |  |
154. Rank the following locations in terms of their appeal to you as places to live and work:
- |                       |                                    |
|-----------------------|------------------------------------|
| a = Hometown          | b = Beijing / Shanghai / Guangzhou |
| c = Hong Kong / Macau | d = A foreign country              |
| e = Others            |                                    |

(iii) Prior work experience

155. Have you worked in an internship before?
- |         |        |
|---------|--------|
| a = Yes | b = No |
|---------|--------|
156. If you have interned before, in which sector is your internship organization?  
(Choose all that apply)

- |                            |                          |
|----------------------------|--------------------------|
| a = Government agency      | b = Chinese private firm |
| c = Foreign firm in China  | d = SOE                  |
| e = Newly established firm | f = Others               |
| g = Never interned before  |                          |

#### M. Additional survey questions excluded from the analysis in the dot plots

*Our survey included a final group of questions which are not easily analyzed as outcomes in our baseline model. The dorm names and addresses are unstandardized text; students' provinces and dates of educational transitions exhibit practically no variation conditional on cohort and province fixed effects. We thus do not present estimated effects of the curriculum change on these variables in Appendix F, but list them here for completeness.*

- 157. Dorm address and room number.
- 158. Birthplace (province/ city).
- 159. Province where you completed 10th grade.
- 160. In which province did you take the *gaokao*?
- 161. Date of entry into high school (year/ month).
- 162. Date of high school graduation (year/ month).

## E.2 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 risk 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>

北京大学光华管理学院  
2013年5月6日

### E.3 Screenshot of online survey



勺海营销研究集团  
DATASEA MARKETING RESEARCH GROUP

N、政策目标

N1. 人们经常谈论这个国家未来十年的目标。以下列出了一些常见的国家的目标。请您选择您所认为的最值得优先考虑的国家目标。（单选）

☐ 高速的经济增长

☐ 持久的经济稳定

☒ 维护国家的秩序

☐ 让人民在重要政府决策上有更多的发言权

☐ 保护环境

N2. 以下是人们谈论环境和经济发展问题的时候，经常使用的两个论断。这两个论断哪一个更接近您自己的观点？（单选）

☒ 环境保护应该给予优先考虑，即使这样做会导致经济发展趋缓，就业机会减少

☐ 经济发展和创造就业机会应该给予优先考虑，即使这样做会导致环境遭到一定程度上的损害

 继续

请确认答案的准确性，点击“继续”后将无法回到当前页。且请勿使用浏览器的上一页按钮

**E.4 Photo of student respondent (raffle winner)**



## E.5 Follow-up survey

As an additional check that the treatment effects we estimate from the online survey do not significantly differ from what we would find among non-respondents at Peking University, we conducted a small, paper and pencil follow-up survey using in-person recruitment, in June and July, 2014. The follow-up survey was conducted by a team of 18 Peking University undergraduates, who recruited survey participants from a broad (albeit non-random) sample of the Peking University dorms, and handed out a paper version of the same survey questionnaire as was used online (to be completed individually, and privately). In order to recruit students across majors and genders, the survey team included a mix of men and women; teams recruited in dorms across the Peking University campus, including on the medical campus.

Potential participants in the follow-up survey were reminded of the online survey, and were asked not to complete the in-person survey if they had already completed the online survey. The survey team emphasized that the survey data would only be used for academic research and that respondents' privacy would be protected. Overall, 446 students who had not completed the online survey were asked to complete the paper survey; the response rate in the follow-up survey was 78%, for a total of 347 respondents. Respondents were paid 30 RMB (around \$5) for participating in the follow-up survey, and required around 30 minutes to complete the survey. A data entry firm digitized the responses, and two research assistants manually checked a random subset of the responses for accuracy.

## Appendix F Estimated effects on all survey outcomes

We estimate our baseline difference in differences model using *every* survey question as an outcome (other than those regressions that cannot be estimated in a model with province and cohort fixed effects). We present the estimates for the survey questions in the same order as that in which they are provided in the complete survey in Appendix E.1; the questions excluded from this analysis are noted at the end of the survey. We summarize the results in a dot plot that shows the coefficient estimate on the *NewCurriculum* dummy variable from estimating equation 1, as well as the 95% confidence interval, for each outcome variable indicated.

For ease of presentation, we standardize each outcome variable and we plot the absolute value of the coefficient; coefficients with positive signs are denoted with closed symbols, while coefficients with negative signs are denoted with open symbols (we also indicate the sign of the estimate in brackets). The figure also includes p-values (adjusted using the false discovery rate procedure across questions within a category marked by light dashed lines) from a test that the coefficient on *NewCurriculum* equals zero.

Our results support the evidence provided in the main text of the paper. Moving down the dot plot, one can see that students' background variables are not significantly affected by the new curriculum, nor is their media consumption or their risk preferences. Factual knowledge, attitudes regarding governance, political institutions, and economic institutions generally are significantly affected, with much larger point estimates than for the background variables. Attitudes regarding the environment move in the opposite direction of what the government intended; and, behavioral outcomes are mixed, as discussed in the main text.

Following the behavioral outcomes, we show the questions asked about trust in non-government organizations and individuals—one can see there is no systematic effect here, and the effect on the z-score is almost exactly 0. Attitudes about which we did not have a strong prediction generally were not significantly affected, though one sees a shift toward favoring growth over equity among students exposed to the new curriculum. Behaviors about which we did not have a strong prediction also do not show significant effects of the new curriculum.

Next, we present responses to survey questions about instructional practices. One can see that while two of the questions appear to be statistically significant, they actually move in *opposite* directions. Overall the z-score index captures the mixed results on the impact of the reform on instruction: there is no significant effect.<sup>6</sup>

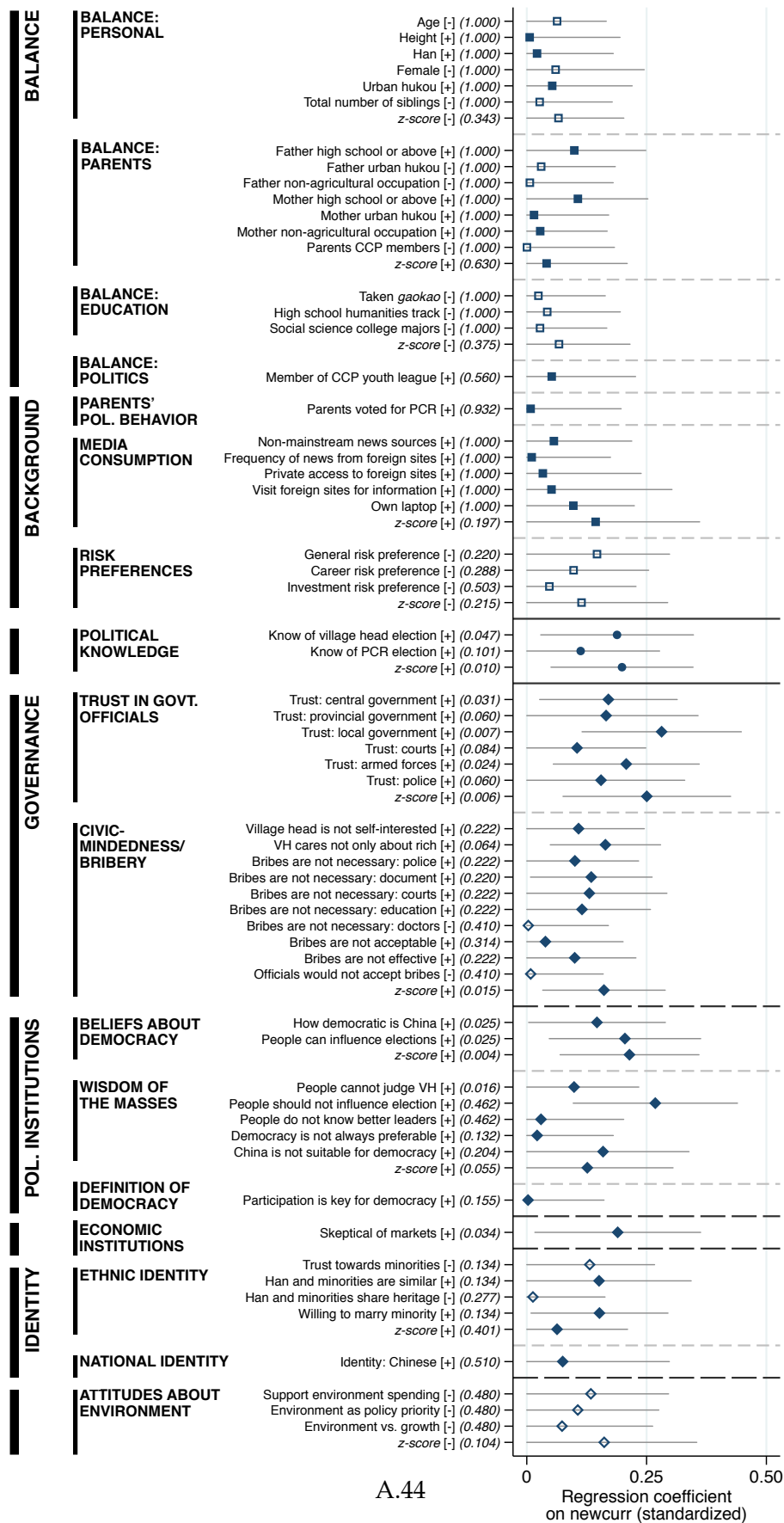
We then present results for a series of questions regarding students' personalities. One can see that, individually, these estimates are never statistically significant. For two of the "Big Five" personality traits (openness and conscientiousness), we do find statistically significant z-score estimates. These differences may be the result of noise, may reflect an effect of the new curriculum, or may result from a lack of balance along this dimension. To determine whether this potential imbalance may affect our results, we estimated our baseline model for our six broad outcome categories, controlling for an individual's 5 personality z-scores, and our results are unchanged (indeed, they are somewhat stronger—see Appendix G, Table G.7).

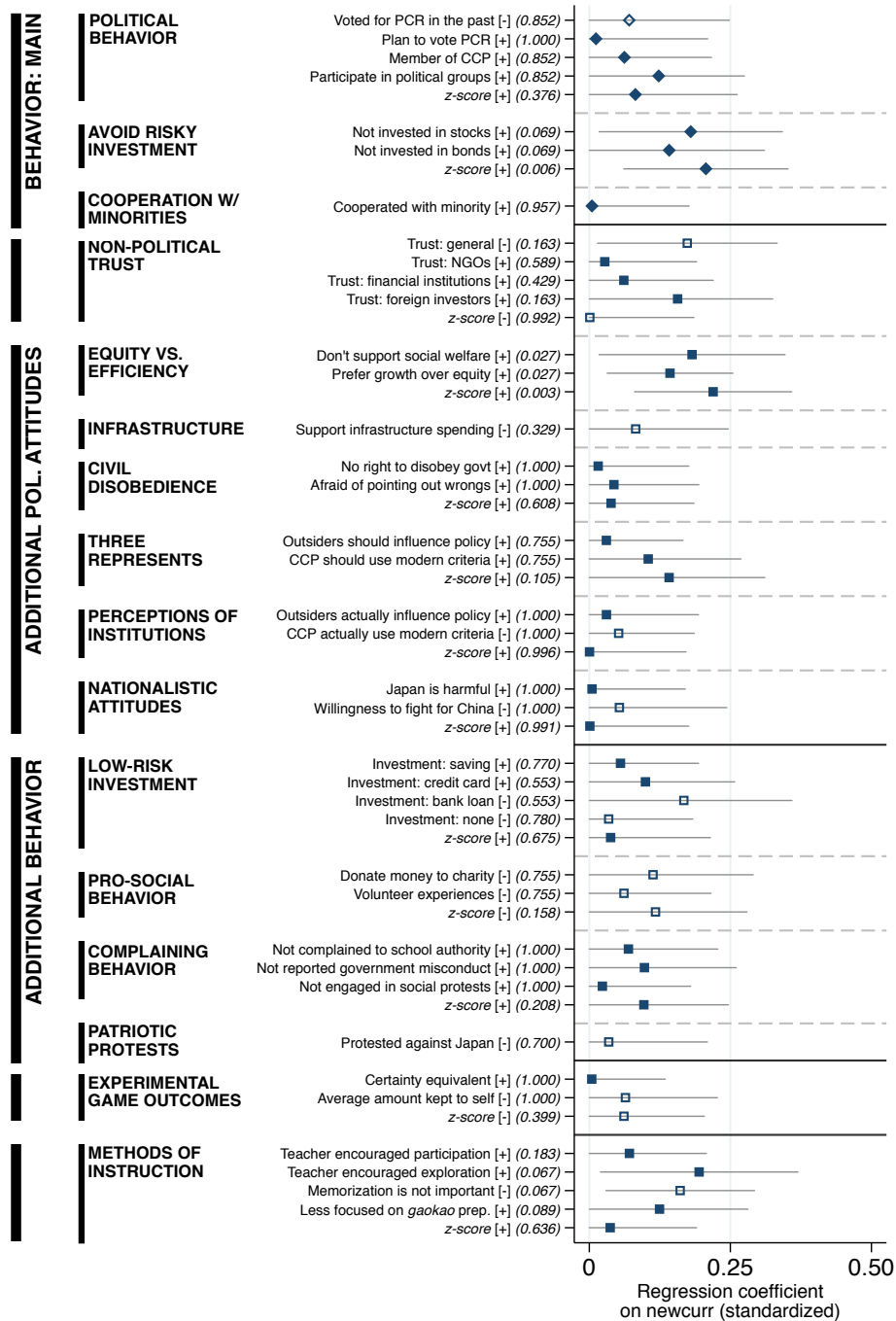
Next we examine students' values: two of sixteen outcomes show effects significant at the 10% level; we find no effects on students' views on the determinants of success. We also find no ef-

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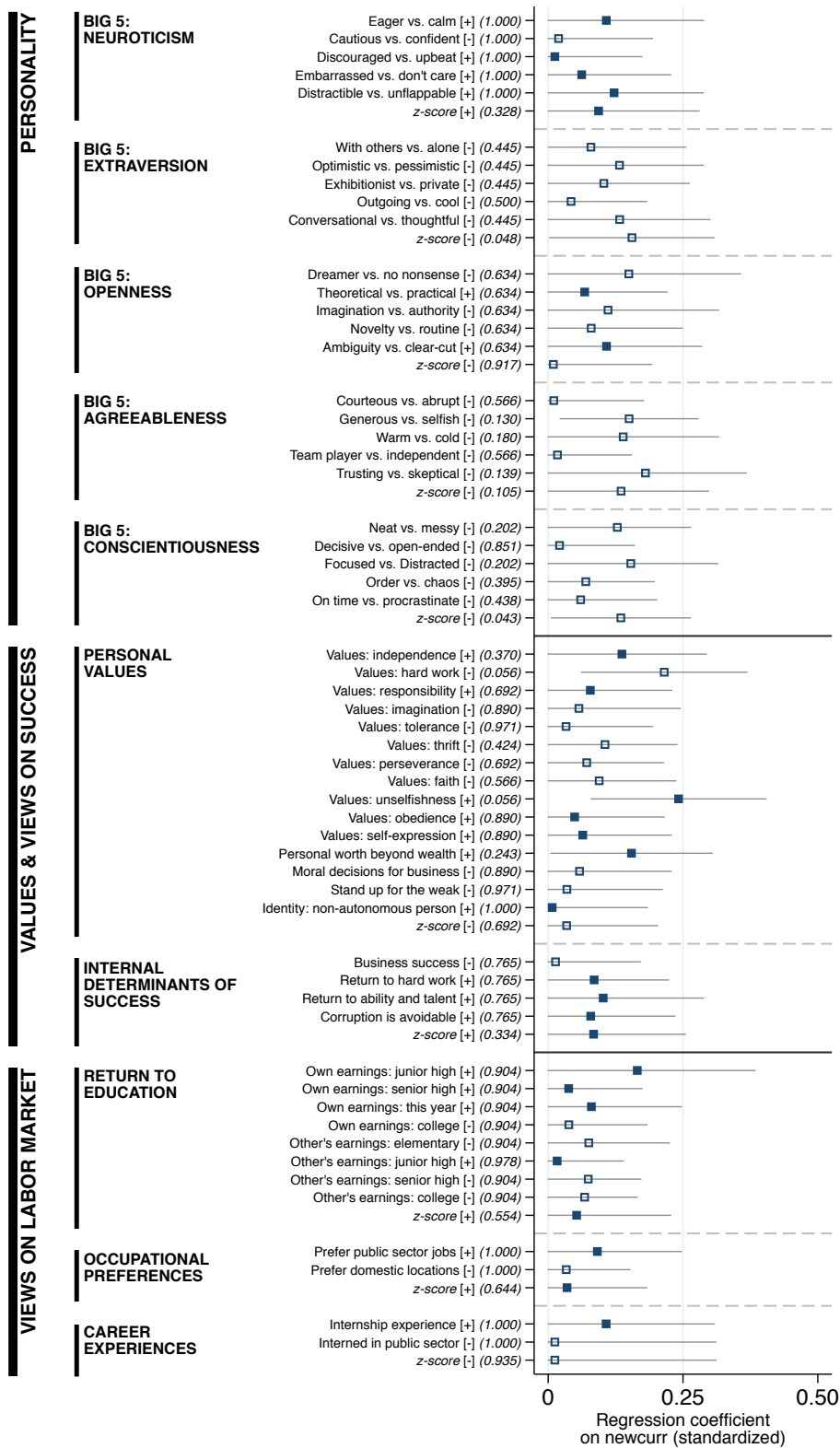
<sup>6</sup>Note also that the FDR-adjusted p-values are quite low in this section; this captures the fact that we always run two-sided statistical tests, and the FDR adjustment does not take into account the fact that one result is statistically significantly different from 0, but falls *far* short of rejecting the null that the reform had no effects on instructional methods in the desired direction.

fects on students' estimates of the returns to education, on students' job preferences, or on their self-reported internship experience. Finally, we show the estimated effect of our *NewCurriculum* dummy variable on students' identifying the new curriculum textbook as their own. This is on a different scale because the estimated effect is extremely large—students we assign to new curriculum status overwhelmingly recall the new curriculum textbooks as their own.









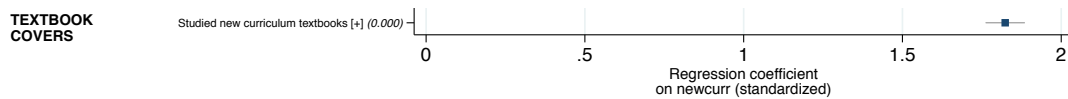


Figure F.2: Dot plot showing effect of the new curriculum on all questions in our survey. Figure shows estimated coefficients on the *NewCurriculum* dummy variable from a regression of the (standardized) outcome listed on *NewCurriculum* and province and cohort fixed effects. Coefficients are presented as absolute values; coefficients with positive signs are denoted with closed symbols, while coefficients with negative signs are denoted with open symbols (the sign of the coefficient is indicated in brackets as well). Figure also shows 95% confidence intervals calculated using standard errors clustered at the province $\times$ cohort level (censored below at 0) and p-values calculated using the false discovery rate procedure (in parentheses).

## Appendix G Additional results

### G.1 Response rates by province $\times$ cohort cell

In the main text we noted that there is not a significantly different response rate to our survey by curriculum studied, conditional on province and cohort fixed effects. In Table G.3, we present for each province $\times$ cohort cell the number of students in our survey, as well as the number of students enrolled at Peking University from each cell (the number of students by cell was provided by the admissions office of Peking University). To estimate whether the new curriculum was associated with a significantly different response rate from the old curriculum, we run a regression in which the unit of observation is the province $\times$ cohort cell, the outcome variable is the response rate, the explanatory variable is the *NewCurriculum* dummy variable analyzed in our main text, and province and cohort fixed effects are included as controls.

In the note to Table G.3, we report the coefficient on the *NewCurriculum* dummy variable in this regression, as well as the p-value from a test that the coefficient equals zero. We find that the point estimate is small (response rates differ by less than 2 percentage points), and statistically indistinguishable from 0 (the p-value is 0.519).

### G.2 Do students try to provide “correct” (or politically correct) answers?

This can be best examined in the case of the variables relating to trust in government officials, as they are measured on a 1–5 scale, allowing one to see shifts across the distribution of attitudes (we present the distributions of responses to these questions by curriculum in Table G.4). A first indication that respondents are likely not attempting to provide “correct” responses is the broad range of answers to all of the questions we asked. In each curriculum, for all outcomes, we found responses in the full range, from 1 to 5, and in every case the modal response was provided by less than 60% of students. Another indication that in the new curriculum there was not a clearly “correct” answer to our questions about trust is that modal responses were not located at an end of the distribution. Nor was there always the same modal response: we see either modes of 3 or 4 for our various outcomes.

The changes in the distribution of responses across curricula are also consistent with students’ opinions changing, rather than simply moving to a new “correct” response. One can see that for many outcomes, not only are there shifts in the distribution toward the new curriculum modal response (from below), but there are also movements *away* from the modal response (moving up). For example, we asked students about their trust in local government on a 1–5 scale. Under the old curriculum, the modal response was 3, with nearly 48% of students indicating this level of trust. Under the new curriculum, the mode remained 3 (indicating no change in a “correct” answer), with 45.25% of students choosing this response. Interestingly, responses of 1, 2, and the modal response of 3 are all less common under the new curriculum, while the number of responses of “4” increased by nearly 12 percentage points (over 50%).

### G.3 Heterogeneous effects depending on students’ risk aversion

One might be concerned that students who are more risk averse (and so likely to be more concerned about responding in a socially or politically acceptable way) exhibit different effects of the new curriculum from students who are less risk averse. To determine whether this is the case, we estimate our baseline regression model (equation 1) including an interaction between the

*NewCurriculum* dummy variable and an indicator that a student is “risk seeking” (at or above the median in the self-reported risk preferences question), along with the main effects. We find that the more risk averse respondents in the study *do not* show significantly different effects of the new curriculum: for half of the 12 outcomes we examine in our six categories of interest the interaction term is positive, and in six it is negative; it is never statistically significant (see Table G.5).

#### G.4 Principal component analysis

As another check of the robustness of our results, we present estimates of 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 G.6, we show our baseline regressions for the outcomes for which we previously used z-score indices (compare to Table 4, Panel A, in the main text). One can see that our results are very similar constructing our indices in this alternative manner.

#### G.5 Alternative approach to inference using permutation tests

Because we have a relatively small number of treated units in our sample, 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, for each of the six main index variable categories (12 total outcomes).

We plot the distribution of t-statistics from the 10,000 estimated placebo treatment effects for each outcome, in Figure G.3, 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 outcomes considered, one can see that the inferences drawn are very similar to the standard regressions.

#### G.6 The effects of student personalities

In Section Appendix F we noted that there was some evidence of differences in students’ Big 5 personality traits across curricula, conditional on province and cohort fixed effects. This might lead one to wonder whether differences in students’ personalities might play some role in the differences in political attitudes that we attributed to the new curriculum. We thus estimate our baseline model (equation 1), but control for students’ z-score indices for all five Big 5 personality traits. One can see in Table G.7 that including these controls does not affect our findings.

#### G.7 An omnibus test for selection

Our analysis in the text shows that (i) student characteristics are balanced across curricula (see Table 2); and, (ii) controlling for all of the student and household characteristics in our balance

table (other than student high school track, due to missing values) does not greatly affect our results (see Table 4, Panel B). We next conduct a more general test of the importance of selection on observables driving our results by estimating our outcome variables (the 12 index variables for the six categories of interest) using the full set of variables shown in the balance tables (again, excluding high school track), and testing whether *predicted* outcomes significantly change across curricula, controlling for province and cohort fixed effects. In Table G.8, we present the estimated coefficient on the *NewCurriculum* dummy from estimating equation 1 with predicted index variables as the outcomes. In every case, the estimated effect of the new curriculum on the predicted outcomes based on observables is close to 0 and statistically insignificant.

## G.8 The effects of provincial political transitions on student attitudes

An important question about our analysis is whether the introduction of the new curriculum coincided with other provincial variation which might affect attitudes at the province  $\times$  cohort level. One possibility is that students who experienced important political transitions while in high school may have differing views on governance, political institutions, etc. To examine this possibility, we collected information on all of the transitions of provincial governors and provincial party secretaries (from [baike.baidu.com](http://baike.baidu.com) and [www.wikipedia.org](http://www.wikipedia.org)) that occurred while students in our sample were in high school. We then estimate our baseline specification, but controlling for either the experience of a provincial governor turnover or a provincial party secretary turnover while a student was in high school. In Table G.9, one can see that including these controls does not affect our results.

## G.9 Non-random introduction of the new curriculum across provinces

As described in the main text, the introduction of the new curriculum across provinces was non-random, with richer, coastal provinces generally introducing the curriculum prior to the poorer inland provinces. As discussed in Section 4.2, our identification strategy addresses a variety of concerns about endogenous introduction of the new curriculum. We now more formally examine the determinants of the introduction date of the new curriculum.

In Table G.10, we use two approaches to study the determinants of the introduction date of the new curriculum. First, we treat China's provinces as a cross-section, and allow province characteristics in 2003 (just prior to the first wave of introduction) to determine the timing of adoption; second, we consider a panel (observations at the province  $\times$  year level), with province characteristics in a given year determining new curriculum adoption in the following year. For each dataset we estimate OLS models and Cox proportional hazard models. One can see in Table G.10, that our most robust finding is that greater 2003 province income is quite predictive of earlier introduction of the new curriculum (as are other variables correlated with income, such as fiscal revenues and employment). Educational variables are generally less predictive, except for the percentage of primary school students enrolling in secondary school, which again is correlated with income.

To determine whether higher 2003 incomes were associated with systematic differences in attitudes across cohorts, in Table 4, Panel D, we presented estimated effects of the new curriculum, but controlling for a province's 2003 gross regional product per capita interacted with the four cohort fixed effects. One can see that including these controls does not affect our findings.

## G.10 Estimation using a “short panel”

We next address concerns about the effects of our sample’s composition on the estimated treatment effects. Some provinces do not have any variation in curriculum studied among the four cohorts in our sample, but these provinces are included in our baseline estimates (though they were excluded from our comparison of means in Figure 3). One might wish to estimate the effects of the new curriculum on a balanced panel that includes only provinces in which we observe variation in curriculum. We thus estimate the effects of the new curriculum using a “short panel” that includes only students from the last cohort under the old curriculum and the (adjacent) 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 G.11: one can see that using this alternative dataset, our results are very similar to those estimated using the entire set of province  $\times$  cohort cells.

## G.11 Attitudes and behavior

In section 5.3, we relate our finding of increased trust in government officials to behavioral outcomes, generalizing from the relationship between reported attitudes and reported behavior observed in the Asian Barometer Survey. This survey asks respondents about their trust in local government officials, as we do; the only difference between our survey question and the Asian Barometer question is that Asian Barometer respondents indicate their level of trust on a 1–4 scale, rather than a 1–5 scale (for ease of interpretation, we standardized responses to the trust question). To ensure comparability with our survey sample, we limit our analysis to Chinese respondents with at least 12 years of schooling.

The Asian Barometer Survey 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 construct dummy variables indicating engagement in the two political actions, and regress these on (standardized) reported levels of trust in government officials. In robustness specifications, we control for respondents’ age, age squared, and gender. For both behavioral outcomes, we find that greater trust in local government officials is associated with significantly less frequent engagement in disruptive political action (results are presented in Table G.12). In section 5.3, we then place these findings in relation to the changes in trust induced by the new curriculum: under the assumption that the relationship between an individual’s trust in government officials and their political behavior is similar for students in our survey to that for the broader set of educated individuals in the Asian Barometer sample, the new curriculum would make students around 15–20% less likely to engage in these disruptive political activities relative to their mean.

## G.12 Heterogeneous treatment effects

It is of interest to examine heterogeneity in the effects of the new curriculum for at least two reasons: first, one might wish to wonder whether particular types of students were more susceptible to persuasive content included in high school textbooks. Second, examining heterogeneity in the

effect of the curriculum in our sample can be suggestive of whether the treatment effects we estimate are likely to be very different from those estimated on other groups of students. (Note that our finding of generally similar results between our follow-up survey sample and our main survey suggests that our survey findings have some generalizability to the broader population of Peking University students.)

We consider three dimensions of heterogeneity that *ex ante* we believed might be important determinants of students' susceptibility to persuasion. First, we compare the effects of the new curriculum on students whose parents were Chinese Communist Party members to those whose parents were not. One might believe that children of CCP members would be more receptive to government messages in textbooks than other students. Second, we compare the effects of the new curriculum on students who report rarely acquiring information from foreign websites to the effects on other students. One might expect students who only read Chinese news to be more likely to have the lessons of the textbooks "stick"—exposure to foreign media might undo any treatment effect of exposure to the new curriculum. Third, we use students' predicted levels of trust in government (we predict the government trust index variable using students' background characteristics) and test whether students with above-median levels of predicted trust reveal different treatment effects from students with below-median levels. One might expect that characteristics associated with higher levels of trust in government officials would also be associated with receptivity to the persuasive content of the new curriculum.

We estimate our baseline model (equation 1), but including the interaction between the *NewCurriculum* dummy variable and the dimensions of heterogeneity we examine (plus lower order terms). In Table G.13, Panel A, we examine the effects of the new curriculum by parents' CCP membership. While parents' CCP status is significantly predictive of some political attitudes, it is *not* predictive of differential effects of the new curriculum. In Panels B and C we conduct analogous exercises, but examining heterogeneity by students' media consumption and their predicted trust. Again, these student characteristics are often predictive of students' political attitudes, but they are not associated with heterogeneity in the effects of the new curriculum.

### G.13 Estimating weighted regressions

One might wonder whether, due to variation in response rates, our estimates differ from what one would find from a sample that matched the composition of Peking University. As a check of the external validity of our estimates to the broader Peking University population, we next estimate our baseline model (equation 1), but we re-weight each observation by the inverse of the survey response rate for the respondent's province $\times$ cohort cell. Thus, if a particular cell was under-represented in our survey sample due to low response rates, we now give observations in that cell additional weight in our regressions to match the composition of Peking University. We present our findings in Table G.14 and one can see that the results very closely match estimates from the unweighted regressions.

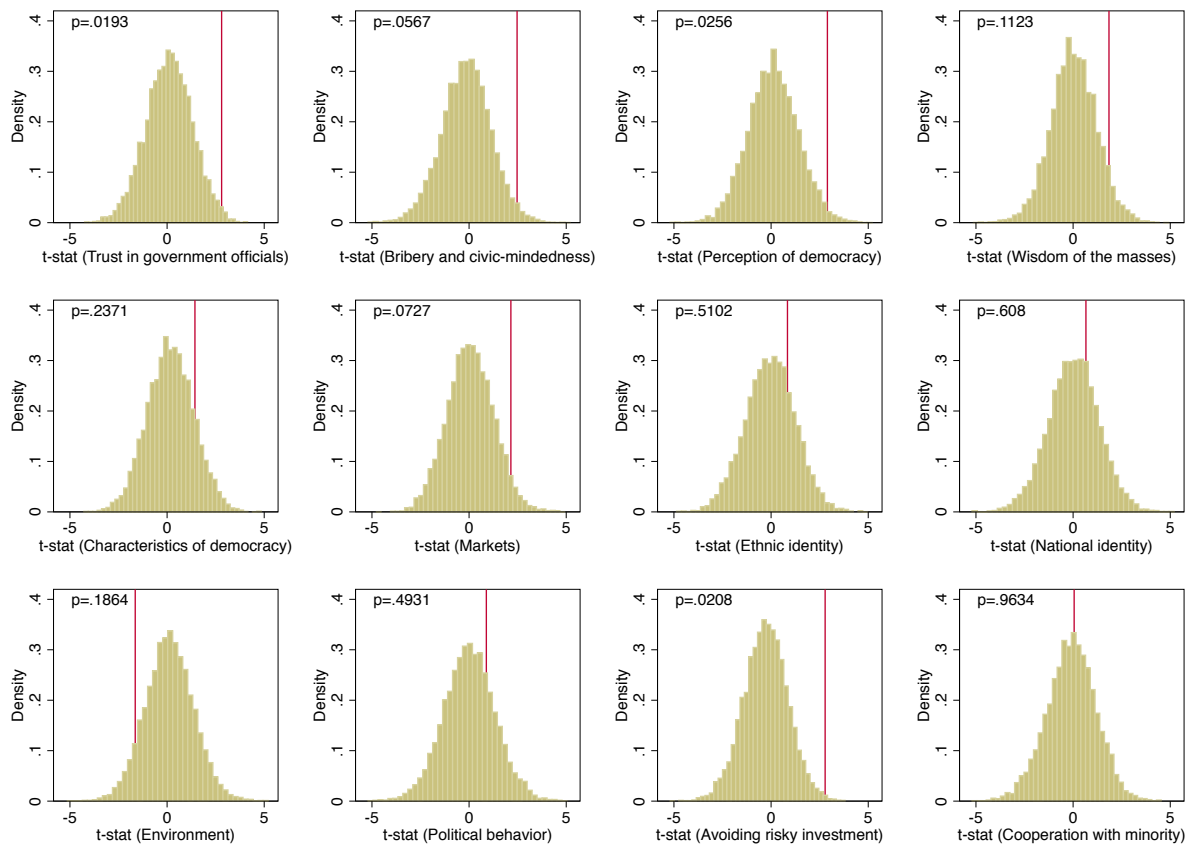


Figure G.3: Distribution of t-statistics resulting from 10,000 random assignments of provinces to treatment status, as well as t-statistics from actual treatment status.



Table G.3: Survey response rates

Province	High School Entry Year				Total
	2006	2007	2008	2009	
Anhui	13/78	16/76	21/69	20/63	70/286
Beijing	44/393	51/406	54/405	41/403	190/1607
Chongqing	7/95	13/104	12/88	20/80	52/367
Fujian	12/79	13/75	21/72	17/83	63/309
Gansu	8/31	7/31	9/29	6/28	30/119
Guangdong	13/97	17/116	26/95	24/90	80/398
Guangxi	6/33	6/30	8/30	11/30	31/123
Guizhou	9/35	8/37	3/36	9/36	29/144
Hainan	1/25	4/28	6/25	5/24	16/102
Hebei	17/78	18/74	16/79	30/65	81/296
Heilongjiang	15/114	15/98	14/91	16/91	60/394
Henan	33/135	19/147	41/143	40/129	133/554
Hubei	27/108	20/118	28/128	23/119	98/473
Hunan	14/108	12/94	25/102	21/114	72/418
Inner Mongolia	7/32	4/36	4/35	14/32	29/135
Jiangsu	13/140	24/146	44/159	23/185	104/630
Jiangxi	21/70	8/66	22/74	20/75	71/285
Jilin	14/75	12/82	16/85	12/80	54/322
Liaoning	13/107	19/110	22/99	26/116	80/432
Ningxia	4/23	5/26	9/26	11/26	29/101
Qinghai	5/18	2/19	3/15	2/16	12/68
Shaanxi	21/96	15/82	23/116	19/104	78/398
Shandong	30/131	18/125	26/114	42/115	116/485
Shanxi	16/79	19/70	22/70	12/76	69/295
Sichuan	7/129	13/88	21/95	25/99	66/411
Tianjin	11/93	14/86	22/98	24/94	71/371
Tibet	0/9	0/5	0/13	0/12	0/39
Xinjiang	8/53	11/59	15/52	11/70	45/234
Yunnan	6/37	3/35	6/36	7/32	22/140
Zhejiang	23/141	21/138	37/150	22/171	103/600
Total	418/2794	407/2761	576/2781	553/2846	1954/11182

Table shows the number of student responses in our survey, as well as the number of students enrolled at Peking University, for each province×cohort cell (data provided by the admissions office of Peking University). Shaded cells represent students who studied the new curriculum. To estimate whether the new curriculum was associated with a significantly different response rate from the old curriculum, we construct a dataset at the province×cohort level and regress a cell's response rate on the *NewCurriculum* dummy variable, as well as province and cohort fixed effects. The estimated coefficient on *NewCurriculum* is 0.019 (s.e. 0.029; p-value = 0.519).

Table G.4: Distribution of responses: trust in government institutions

Dependent variable:	Trust central government		Trust provincial government		Trust local government		Trust courts		Trust armed forces		Trust police	
	Old (1)	New (2)	Old (3)	New (4)	Old (5)	New (6)	Old (7)	New (8)	Old (9)	New (10)	Old (11)	New (12)
1	0.72	0.50	1.08	0.83	3.76	1.74	1.43	0.91	1.97	0.66	2.68	0.83
2	3.58	2.81	7.53	5.88	19.50	14.42	5.19	5.13	4.84	4.39	9.12	7.20
3	17.71	14.40	35.84	27.82	47.76	45.24	33.99	28.73	25.99	23.84	37.75	37.25
4	56.89	59.19	48.57	57.12	23.83	35.71	53.13	56.54	51.43	50.17	43.29	48.43
5	21.11	23.10	6.99	8.86	2.15	2.90	6.26	8.69	15.77	20.94	7.16	6.29
Observations	559	1208	558	1208	559	1207	559	1208	558	1208	559	1208
Mean DV	3.94	4.02	3.53	3.67	3.04	3.24	3.58	3.67	3.74	3.86	3.43	3.52
Std.Dev. DV	0.77	0.73	0.78	0.75	0.84	0.79	0.75	0.74	0.85	0.82	0.86	0.75

Table shows the distribution of responses to the various questions regarding trust in government officials and government bodies, split by curriculum studied.

Table G.5: Heterogeneous effects of the new curriculum by risk-aversion

Dependent variable:	A: Trust in govt. officials	B: Bribery and civic- mindedness	C: Perception of Chinese democracy	D: Wisdom of the masses	E: Characteristics of democracy	F: Skeptical of markets	G: Ethnic identity	H: National identity	I: Attitudes about environment	J: Political behavior	K: Avoid risky investment	L: Cooperation with minority
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
New Curriculum	0.245 [0.111]	0.177 [0.082]	0.238 [0.096]	0.251 [0.104]	0.037 [0.052]	0.086 [0.051]	0.082 [0.103]	0.069 [0.092]	-0.236 [0.119]	0.055 [0.112]	0.109 [0.104]	0.021 [0.039]
Risk-Seeking	0.071 [0.094]	-0.002 [0.092]	0.166 [0.077]	-0.080 [0.075]	0.008 [0.050]	0.004 [0.035]	0.146 [0.104]	-0.070 [0.061]	-0.074 [0.107]	0.000 [0.083]	-0.235 [0.100]	0.044 [0.027]
New Curriculum $\times$ Risk-Seeking	0.004 [0.110]	-0.027 [0.114]	-0.041 [0.092]	-0.137 [0.095]	0.018 [0.060]	0.002 [0.046]	-0.029 [0.120]	-0.025 [0.074]	0.120 [0.124]	0.044 [0.103]	0.162 [0.120]	-0.032 [0.034]
Observations	1,765	1,733	1,724	1,603	1,724	1,625	1,803	1,702	1,708	1,698	1,698	1,698
Mean DV	0	0	0	0	0.392	0.698	0	3.542	0	0	0	0.842
Std.Dev. DV	1	1	1	1	0.488	0.459	1	0.717	1	1	1	0.365

All regressions include a full set of province and cohort fixed effects (not reported). Robust standard errors in brackets, clustered at the province  $\times$  cohort level.

Table G.6: First principal components

Dependent variable:	A: Trust in govt. officials	B: Bribery and civic- mindedness	C: Perception of Chinese democracy	D: Wisdom of the masses	G: Ethnic identity	I: Attitudes about environment	J: Political behavior	K: Avoid risky investment
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
New Curriculum	0.440 [0.173]	0.269 [0.128]	0.234 [0.081]	0.193 [0.119]	0.084 [0.088]	-0.173 [0.113]	0.008 [0.123]	0.227 [0.081]
Observations	1,765	1,733	1,724	1,603	1,803	1,708	1,698	1,698
Mean DV	0	0	0	0	0	0	0	0
Std.Dev. DV	1.910	1.777	1.097	1.357	1.202	1.141	1.178	1.094

All regressions include a full set of province and cohort fixed effects (not reported). Robust standard errors in brackets, clustered at the province  $\times$  cohort level.

Table G.7: Robustness to controlling for *Big Five* personality traits

Dependent variable:	A: Trust in govt. officials	B: Bribery and civic- mindedness	C: Perception of Chinese democracy	D: Wisdom of the masses	E: Characteristics of democracy	F: Skeptical of markets	G: Ethnic identity	H: National identity	I: Attitudes about environment	J: Political behavior	K: Avoid risky investment	L: Cooperation with minority
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
<i>Panel A: Baseline</i>												
New Curriculum	0.247 [0.088]	0.161 [0.065]	0.213 [0.074]	0.164 [0.089]	0.048 [0.034]	0.087 [0.041]	0.063 [0.075]	0.053 [0.081]	-0.162 [0.099]	0.082 [0.092]	0.207 [0.074]	0.002 [0.032]
<i>Panel B: Controlling for Big Five personality characteristics</i>												
New Curriculum	0.315 [0.084]	0.177 [0.071]	0.236 [0.074]	0.156 [0.086]	0.042 [0.035]	0.100 [0.043]	0.106 [0.073]	0.062 [0.076]	-0.144 [0.101]	0.110 [0.091]	0.194 [0.074]	0.006 [0.032]
Mean DV	0	0	0	0	0.392	0.698	0	3.542	0	0	0	0.842
Std.Dev. DV	1	1	1	1	0.488	0.459	1	0.717	1	1	1	0.365

All regressions include a full set of province and cohort fixed effects (not reported). Robust standard errors in brackets, clustered at the province  $\times$  cohort level. Panel B includes controls for z-score index variables for all five “Big Five” personality traits. Median number of observations across columns: 1705 (Panel A), 1660 (Panel B).

Table G.8: Test for selection on observable characteristics

Dependent variable:	Predicted outcome variables											
	A: Trust in govt. officials (1)	B: Bribery and civic- mindedness (2)	C: Perception of Chinese democracy (3)	D: Wisdom of the masses (4)	E: Characteristics of democracy (5)	F: Skeptical of markets (6)	G: Ethnic identity (7)	H: National identity (8)	I: Attitudes about environment (9)	J: Political behavior (10)	K: Avoid risky investment (11)	L: Cooperation with minority (12)
New Curriculum	0.005 [0.010]	-0.001 [0.011]	0.020 [0.013]	-0.004 [0.022]	0.004 [0.006]	0.008 [0.005]	-0.011 [0.010]	-0.003 [0.009]	-0.007 [0.017]	-0.024 [0.018]	0.013 [0.020]	-0.004 [0.006]
Observations	1,765	1,733	1,724	1,650	1,724	1,625	1,803	1,702	1,708	1,698	1,698	1,698
Mean DV	0.014	-0.001	0.010	-0.009	0.394	0.697	0.010	3.553	0.005	0.001	0.004	0.841
Std.Dev. DV	0.197	0.202	0.226	0.284	0.097	0.092	0.231	0.136	0.241	0.345	0.271	0.103

Predicted z-scores are based on a full set of variables from Table 2 (except for HS humanities track), province and cohort fixed effects. All regressions include a full set of province and cohort fixed effects (not reported). Robust standard errors in brackets, clustered at the province  $\times$  cohort level.

Table G.9: Robustness to experience of provincial government turnover

Dependent variable:	A: Trust in govt. officials	B: Bribery and civic- mindedness	C: Perception of Chinese democracy	D: Wisdom of the masses	E: Characteristics of democracy	F: Skeptical of markets	G: Ethnic identity	H: National identity	I: Attitudes about environment	J: Political behavior	K: Avoid risky investment	L: Cooperation with minority
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
<i>Panel A: Baseline</i>												
New Curriculum	0.247 [0.088]	0.161 [0.065]	0.213 [0.074]	0.164 [0.089]	0.048 [0.034]	0.087 [0.041]	0.063 [0.075]	0.053 [0.081]	-0.162 [0.099]	0.082 [0.092]	0.207 [0.074]	0.002 [0.032]
<i>Panel B: Controlling for experiences of provincial government head turnover</i>												
New Curriculum	0.247 [0.087]	0.154 [0.059]	0.210 [0.072]	0.169 [0.086]	0.048 [0.034]	0.088 [0.041]	0.057 [0.070]	0.054 [0.080]	-0.166 [0.100]	0.079 [0.091]	0.208 [0.075]	0.003 [0.032]
<i>Panel C: Controlling for experiences of provincial party secretary turnover</i>												
New Curriculum	0.227 [0.093]	0.167 [0.064]	0.236 [0.075]	0.177 [0.087]	0.042 [0.035]	0.098 [0.041]	0.095 [0.075]	0.054 [0.084]	-0.118 [0.106]	0.092 [0.098]	0.217 [0.074]	0.009 [0.034]
Observations	1,765	1,733	1,724	1,603	1,724	1,625	1,803	1,702	1,708	1,698	1,698	1,698
Mean DV	0	0	0	0	0.392	0.698	0	3.542	0	0	0	0.842
Std.Dev. DV	1	1	1	1	0.488	0.459	1	0.717	1	1	1	0.365

Individuals assigned a "1" for a given turnover experience dummy variable (government head or party secretary) if the relevant official position changed hands while the student was enrolled in high school. All regressions include a full set of province and cohort fixed effects (not reported). Robust standard errors in brackets, clustered at the province  $\times$  cohort level.

Table G.10: Predicting the timing of the new curriculum's introduction

Dependent variable :	Year of Introduction		Post New Curriculum	
	Cross Section (Measured in 2003)		Panel (Lagged by 1 Year)	
	OLS	Cox Proportional Hazard Model	OLS	Cox Proportional Hazard Model
Sample:	(1)	(2)	(3)	(4)
Provincial characteristics:				
<i>Panel A: Overall Economic Performance</i>				
Gross regional product per capita	-0.136 [0.062]	0.062 [0.025]	0.009 [0.003]	0.038 [0.016]
Total fiscal revenue	-0.037 [0.009]	0.027 [0.008]	0.001 [0.000]	0.011 [0.005]
Total fiscal expenditure	-0.025 [0.011]	0.018 [0.007]	0.001 [0.004]	0.003 [0.002]
Annual disposable income (urban)	-0.364 [0.150]	0.184 [0.098]	0.035 [0.011]	0.146 [0.063]
Employment rate	-0.323 [3.037]	-0.735 [3.101]	0.442 [0.316]	1.236 [2.461]
<i>Panel B: Education</i>				
Ratio of total fiscal expenditure on culture, education, social security and public health	-9.085 [11.254]	3.993 [5.050]	-0.483 [1.588]	-0.864 [8.321]
Teachers per 1000 people for regular high school	-0.757 [0.671]	0.577 [0.361]	-0.249 [0.047]	-0.261 [0.392]
Teachers per student for regular high school	-12.14 [75.44]	11.03 [35.83]	-0.382 [0.177]	-1.472 [2.484]
Student per 1000 people for regular high school	-0.041 [0.033]	0.029 [0.021]	-0.001 [0.002]	-0.005 [0.011]
% of primary graduates entering secondary school	-0.287 [0.095]	0.173 [0.090]	-0.023 [0.006]	-0.081 [0.047]
% of school-age children enrolled in school	-0.224 [0.151]	0.092 [0.095]	-0.009 [0.007]	-0.042 [0.166]
Observations	30	30	360	244

Column (1) estimates an OLS regression on a cross section of provinces, predicting the year of the new curriculum's introduction using 2003 province characteristics. Column (2) estimates a Cox proportional hazard model, predicting the introduction event using 2003 province characteristics. Column (3) estimates an OLS regression on a panel of provinces, predicting the new curriculum's introduction using 1-year lagged province characteristics. Column (4) estimates a Cox proportional hazard model, predicting the introduction event using 1-year lagged province characteristics.



Table G.11: Estimates using a “short panel”

Dependent variable:	A: Trust in govt. officials	B: Bribery and civic- mindedness	C: Perception of Chinese democracy	D: Wisdom of the masses	E: Characteristics of democracy	F: Skeptical of markets	G: Ethnic identity	H: National identity	I: Attitudes about environment	J: Political behavior	K: Avoid risky investment	L: Cooperation with minority
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
New Curriculum	0.268 [0.088]	0.206 [0.057]	0.174 [0.053]	0.170 [0.066]	-0.091 [0.023]	0.069 [0.034]	0.070 [0.069]	0.037 [0.059]	-0.009 [0.081]	-0.167 [0.072]	0.208 [0.066]	0.013 [0.022]
Observations	449	442	440	425	440	414	460	429	430	428	428	428
Mean DV	0	0	0	0	0.392	0.698	0	3.542	0	0	0	0.842
Std.Dev. DV	1	1	1	1	0.488	0.459	1	0.717	1	1	1	0.365

Regressions estimated using the final cohort studying the old curriculum and the (adjacent) first cohort studying the new curriculum, for provinces with variation in curriculum in our sample. All regressions include a full set of province and cohort fixed effects (not reported). Robust standard errors in brackets, clustered at the province  $\times$  cohort level.

Table G.12: Outcomes from the Asian Barometer Survey

Dependent variable:	Attended a demonstration or protest march		Refused to pay taxes or fees to the government	
	(1)	(2)	(3)	(4)
Trust in local government	-0.017 [0.006]	-0.019 [0.006]	-0.012 [0.004]	-0.013 [0.005]
Observations	885	856	896	867
Individual controls	No	Yes	No	Yes
Mean DV	0.029	0.029	0.014	0.014
Std.Dev. DV	0.166	0.166	0.116	0.116

Regression results based on Asian Barometer Survey Wave 2 (2008) China module. Samples restricted to individuals who completed at least high school education. Individual controls are gender, age, and age<sup>2</sup>. *Trust in local government* is standardized.

Table G.13: Heterogeneous effects of the new curriculum

Dependent variable:	A: Trust in govt. officials	B: Bribery and civic- mindedness	C: Perception of Chinese democracy	D: Wisdom of the masses	E: Characteristics of democracy	F: Skeptical of markets	G: Ethnic identity	H: National identity	I: Attitudes about environment	J: Political behavior	K: Avoid risky investment	L: Cooperation with minority
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
<i>Panel A: Parents' CCP membership</i>												
New Curriculum	0.232 [0.106]	0.122 [0.089]	0.275 [0.088]	0.239 [0.106]	0.038 [0.040]	0.102 [0.047]	0.047 [0.115]	0.087 [0.081]	-0.167 [0.122]	0.141 [0.103]	0.097 [0.090]	0.029 [0.037]
Parents CCP members	-0.100 [0.088]	-0.030 [0.095]	0.147 [0.076]	0.275 [0.077]	-0.047 [0.024]	-0.038 [0.043]	-0.082 [0.104]	0.040 [0.068]	-0.095 [0.102]	0.189 [0.068]	-0.354 [0.091]	0.050 [0.025]
New Curriculum $\times$ Parents CCP members	0.024 [0.099]	0.067 [0.114]	-0.104 [0.095]	-0.119 [0.096]	0.016 [0.039]	-0.028 [0.051]	0.027 [0.121]	-0.058 [0.077]	0.006 [0.123]	-0.102 [0.089]	0.189 [0.103]	-0.047 [0.032]
<i>Panel B: Rarely acquire information from foreign websites</i>												
New Curriculum	0.242 [0.103]	0.221 [0.076]	0.160 [0.085]	0.135 [0.105]	0.045 [0.042]	0.116 [0.044]	0.029 [0.099]	-0.011 [0.089]	-0.100 [0.114]	0.121 [0.106]	0.199 [0.098]	0.019 [0.036]
Rarely foreign websites	0.183 [0.075]	0.154 [0.084]	-0.012 [0.071]	-0.124 [0.096]	0.018 [0.049]	0.111 [0.041]	-0.060 [0.105]	0.060 [0.061]	0.201 [0.082]	-0.068 [0.074]	0.215 [0.086]	-0.039 [0.027]
New Curriculum $\times$ Rarely foreign websites	0.011 [0.097]	-0.127 [0.104]	0.112 [0.089]	0.060 [0.113]	0.007 [0.057]	-0.058 [0.050]	0.070 [0.122]	0.137 [0.073]	-0.134 [0.097]	-0.083 [0.105]	0.015 [0.101]	-0.036 [0.034]
<i>Panel C: Predicted trust in government officials (above median)</i>												
New Curriculum	0.239 [0.106]	0.154 [0.075]	0.208 [0.087]	0.158 [0.110]	0.023 [0.039]	0.129 [0.043]	0.066 [0.079]	0.023 [0.093]	-0.196 [0.107]	0.037 [0.100]	0.202 [0.089]	0.004 [0.038]
Predicted trust in govt.	0.169 [0.117]	0.041 [0.114]	0.050 [0.101]	-0.161 [0.097]	-0.056 [0.043]	0.169 [0.052]	0.102 [0.090]	-0.040 [0.079]	0.067 [0.094]	-0.314 [0.086]	0.254 [0.108]	-0.049 [0.037]
New Curriculum $\times$ Predicted trust in govt.	0.021 [0.120]	0.018 [0.122]	0.013 [0.112]	0.024 [0.110]	0.067 [0.050]	-0.116 [0.056]	-0.003 [0.103]	0.078 [0.090]	0.086 [0.108]	0.120 [0.107]	0.010 [0.110]	-0.005 [0.040]
Observations	1,765	1,733	1,724	1,603	1,724	1,625	1,803	1,702	1,708	1,698	1,698	1,698
Mean DV	0	0	0	0	0.392	0.698	0	3.542	0	0	0	0.842
Std.Dev. DV	1	1	1	1	0.488	0.459	1	0.717	1	1	1	0.365

All panels add to our baseline specification the interaction between an indicator variable and the *NewCurriculum* dummy variable, plus the main effect of the indicator. In Panel A, the indicator is equal to 1 if at least one of the student's parents was a member of the Chinese Communist Party. In Panel B, the indicator is equal to 1 if a student reported obtaining news from foreign websites less than once per month. In Panel C, the indicator is equal to 1 if a student's predicted level of trust (based on background characteristics) was above the median. All regressions include a full set of province and cohort fixed effects (not reported). Robust standard errors in brackets, clustered at the province  $\times$  cohort level.

Table G.14: Weighted regressions

Dependent variable:	A: Trust in govt. officials	B: Bribery and civic- mindedness	C: Perception of Chinese democracy	D: Wisdom of the masses	E: Characteristics of democracy	F: Skeptical of markets	G: Ethnic identity	H: National identity	I: Attitudes about environment	J: Political behavior	K: Avoid risky investment	L: Cooperation with minority
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
New Curriculum	0.262 [0.087]	0.219 [0.066]	0.188 [0.066]	0.161 [0.092]	0.069 [0.034]	0.083 [0.046]	0.018 [0.073]	0.067 [0.095]	-0.155 [0.102]	0.042 [0.096]	0.177 [0.075]	-0.013 [0.031]
Observations	1,765	1,733	1,724	1,603	1,724	1,625	1,803	1,702	1,708	1,698	1,698	1,698
Mean DV	0	0	0	0	0.392	0.698	0	3.542	0	0	0	0.842
Std.Dev. DV	1.910	1.777	1.097	1.357	0.488	0.459	1.202	0.717	1.141	1.178	1.094	0.365

Regression weights used are the inverse survey response rates, calculated by province  $\times$  cohort cell. All regressions include a full set of province and cohort fixed effects (not reported). Robust standard errors in brackets, clustered at the province  $\times$  cohort level (116 clusters).