

Globalization, Performance Indicators, and Demands for Education *

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Advocates of school reform often assume that highlighting economic threats posed by globalization will incentivize voters to demand more and better education. Yet despite decades of such appeals, demands for high-quality schooling remain uneven within most societies. We explain this puzzle by arguing that voters who perceive themselves as more integrated into the world economy should demand greater school reform because they see firsthand the need for equipping workers with the skills to compete in global labor markets. These voters should also be more responsive to information from internationally-benchmarked performance exams because they view global competition as more relevant. We leverage a pre-registered survey experiment to show that globally-integrated voters demand more school reform—a result that can be activated by priming individuals to think of themselves and the world as more globalized. Findings, however, are not significantly conditioned in the direction we expect by exposure to internationally-benchmarked performance data. Our study sheds light on how variation in exposure to labor market risk and access to performance information affects support for social investments, especially education.

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A recurrent theme in contemporary education debates has been the rise of international competition (Darling-Hammond and McCloskey 2008; V. Strauss 2017; West 2012). In the U.S., for example, President George W. Bush (2009) touted his landmark No Child Left Behind Act by emphasizing the importance of accountability for “communities across America who see an increasingly global economy.” In the U.K., Prime Minister Tony Blair (2005) declared that “[Britain’s] purpose is not to resist...globalisation but to prepare for it...That’s why education is government’s number one priority.” Former World Bank president Jim Yong Kim (2017) similarly insisted, “In the global economy, growth and innovation demand an educated, skilled, and engaged workforce. So we must dramatically increase our aspirations for both the quantity and quality of investments in education.”

Reformers often assume highlighting global competition will encourage citizens to demand better education (Bajoria 2011; Sahlberg 2006). Yet even as globalization has reshaped national economies, evidence points to the intractability of long-run educational inequality. In America, for instance, the disparity in test scores between students at the top and bottom deciles of the socioeconomic distribution has remained almost unchanged for 50 years (Hanushek et al. 2019). In Europe, educational inequality has actually worsened in many countries since 2000, with failing proficiency levels nearing 50 percent for low SES students, compared to barely over 20 percent for all EU students (Markowitz 2021). To the degree that these gaps at least partly reflect differences in political demand for education, voter calls for improving schools in the face of global competition appear uneven. Why?

This puzzle seems all the more striking given that parents and voters have never had as much access to information on how students are faring relative to peers abroad (Breakspear 2012; Kijima and Lipsky 2017; Pizmony-Levy et al. 2017). In recent years, the growth of international exams like the Programme for International Student Assessment (PISA), the Trends in International Math and Science Study (TIMSS), and the Progress in International Reading Literacy Study (PIRLS) has magnified reports about global job competition. Frequently, results have prompted alarming headlines about how many advanced countries are falling behind (Balingit and Dam 2019; Kristof 2011). If citizens not only know that globalization can cause job and income loss – but also that many students are not ready to compete – why have political demands for education not increased more equitably within societies?

This research note seeks to answer these two puzzles. We argue that even as labor markets have become more globalized overall, not all voters perceive similar levels of economic integration (David H Autor, Dorn, and G. H. Hanson 2016; Kim and Vogel 2020; Scheve and Slaughter 2018). Many voters find their livelihoods increasingly dependent on trade and investment opportunities abroad. Others, however, remain anchored in local labor markets, affected less by foreign competition. Consequently, we argue that globally-integrated voters should expect that for children to succeed, they will need to compete in international labor markets. By comparison, locally-rooted voters should expect that children will need to compete in domestic labor markets. This should lead

globally-integrated voters to have greater demands on education given the high-skill competition in globally-integrated labor markets.

Our second argument is that, despite globalization coinciding with the growth of widely-publicized student achievement, not all citizens should have the same educational reference points for what meets their expectations amid an increasingly globalized economy. Schools have instrumental value. Parents and citizens often have markedly different definitions of what constitutes success (Ablard 1996; York, Gibson, and Rankin 2015) and harbor different long-run aspirations for children (Spera, Wentzel, and Matto 2009; Stull 2013). As such, we claim that globally-integrated voters should be more sensitive to data spotlighting global comparisons given that they are most concerned with equipping workers with the skills to compete in global labor markets. Conversely, for locally-rooted voters, international comparisons should matter less given that they do not see competition as principally operating on a global scale.

We test our argument by fielding a pre-registered survey experiment in the U.S., conducted on a state-representative sample of 1,943 Massachusetts residents.¹ The experiment manipulates both perceptions of exposure to globalization and knowledge about the state's performance in K-12 education. We selected Massachusetts because it has a considerable mix of globally-integrated citizens in greater Boston and Western Massachusetts and locally-rooted voters in the rest of the state. Crucially, Massachusetts is also known to perform at or near the top on standardized tests relative to other U.S. states, so those who consider only national performance should be content with its performance. At the same time, the state does not perform as well by international standards. This discrepancy allows us to leverage variation in the reference points against which globally-integrated and locally-rooted respondents judge the quality of schools.

In line with our pre-registered predictions, we find that respondents with higher perceived exposure to globalization have greater baseline demands for education reform. This result can be activated experimentally by priming respondents to think of themselves and the world as more globalized. We do not, however (contrary to our pre-registered expectations), find significant evidence that citizens who perceive themselves as globally-integrated demand even higher levels of education conditional on exposure to negative information about schools referenced to international standards. One explanation may be that globally-integrated citizens have such high baseline demands for education that their preferences cannot be significantly altered by information about schools not operating at a world-class level.

These findings shed light on how globalization can shift public opinion toward social policies that protect against economic disruptions. As jobs are increasingly automated or off-shored (Autor 2015; Bhagwati and Blinder 2009; Buera, Kaboski, and Rogerson 2015), education is arguably the most important policy lever to help workers insure themselves

¹The pre-registered analysis plan can be found here.

against labor market risks (Busemeyer 2014). Yet while heightened labor market precarity might be expected to augment incentives for all voters to enlist the support of governments in investing in high-quality schools, we find it exacerbates inequalities in preferences. To the degree that globally-integrated voters set a higher bar for performance, and these attitudes are mediated through local institutions and school funding formulas in many countries (Baker and Corcoran 2012; Ladd, Chalk, and Hansen 1999), the result may be more educational stratification among socioeconomic groups.

Our study adds to mounting scholarship on how globalization affects demands for social investments in education (Garrizmann, Busemeyer, and Neimanns 2018; Ansell and Gingrich 2018; Estevez-Abe, Iversen, and Soskice 2001), which has traditionally been an understudied topic in political science (Gift and Wibbels 2014; Busemeyer and Trampusch 2011; Moe and Wiborg 2016). Numerous studies investigate how voters react to labor market competition from abroad by supporting state expenditures on entitlements (Balcells Ventura 2006; Garrett 1998; Rodrik 1998; Walter 2017). Less research, however, has probed how globalization influences political attitudes toward schooling. To the extent that it has (Busemeyer and Garrizman 2019), we offer a new theoretical framework and employ an experimental strategy that explicitly manipulates perceived exposure to globalization and access to performance information.

The results also speak to a burgeoning literature on the policy impacts of global performance assessments (GPAs) (Kelley 2017; Kelley and Simmons 2015). Research on internationally-benchmarked performance indicators has grown exponentially (Davis 2012; Honig and Weaver 2019; Merry, Davis, and Kingsbury 2015; Papanicolas and Jha 2017). Studies on educational GPAs have typically examined how rating countries on student outputs can stimulate domestic and systemic-level pressures that bolster the adoption of best practices and improve how schooling is delivered (Bieber and Martens 2011; Bisbee et al. 2019; Davoli and Entorf 2018; Davies, Gift, and Lastra-Anadón 2021; Ramirez, Schofer, and Meyer 2018). We contribute to this literature by testing whether information from GPAs can cause some voters to demand more education reform than others depending on individual-level variation in globalization exposure.

GLOBAL INTEGRATION AND DEMANDS FOR EDUCATION

Increasing international labor market integration has coincided with heightened recognition of new threats posed by job loss and the undercutting of wages as a result of competition emerging from outside of national borders (Ebenstein, Harrison, and McMillan 2015; James 2018; Rodrik 2021; Stiglitz 2018). Labor market anxieties are often thought to bolster skill acquisition, as schooling is seen as a hedge against employment risk (Estevez-Abe, Iversen, and Soskice 2001).

Politically, unease about global job competition has led to broad exhortations by public officials, policymakers, academics, and practitioners alerting the public to the

importance of education (Goldstein 2019; R. Strauss 2013; West 2012). At a macro level, appeals have often been framed in terms of a global race for competitiveness aimed at ensuring that a country's economy does not lose ground to its competitors (Hanushek 2014; Goldin and Katz 2008). At the individual level, appeals have frequently been framed in terms of a global contest for the best, highest-paying jobs (Heim 2016; Levy 2016). The latter displays, in particular, often give the impression that all citizens are susceptible to competition posed by rapid globalization and that voters should take similar interest in ensuring that future generations are equipped to compete economically with graduates from across the world.

Yet while employment competition has become increasingly global in most nations, data reveal a nuanced picture. Within most countries, labor markets are highly heterogeneous in the extent to which they expose workers to dynamics such as trade, off-shoring, foreign direct investment (FDI), and automation (David H Autor, Dorn, and G. H. Hanson 2016). Occupational, sectoral, geographic, and other differences mean that some workers are more affected by globalization than others (Acemoglu et al. 2016; Bernard, Jensen, and Schott 2006; Feler and Senses 2017; Galle, Rodriguez-Clare, and Yi 2017). Against this backdrop, employment competition for some voters remains mostly global, whereas for others, it is much more geographically proximate.

Building on these observations, we theorize that perceived exposure to globalization should influence political demands for education differently across the population by shaping the relevant employment risks of households. We claim that voters who view themselves as immersed in the global economy should demand the highest quality education. To protect against labor market insecurities, globally-integrated voters are likely to believe that training must be sufficient to enable them to compete with workers from abroad poised to do similar tasks either more effectively or at a lower cost. As a result, they should demand world-class schools that fulfill these considerable requirements.

By comparison, voters who do not believe their lives are affected by globalization have less stringent quality expectations. To protect their jobs and income, locally-rooted voters should perceive that training needs to be competitive with workers more locally. The priority is on transmitting skills and expertise commensurate with others in their proximate geographic circle. Locally-rooted voters should not need to demand education quality that meets world-class standards because workers outside the country are not their relevant competitors. Instead, they should vote and demand schools that enable graduates to maintain job security when contending with counterparts confined to their location.

GLOBAL PERFORMANCE ASSESSMENTS IN EDUCATION

In addition to how exposed voters are to the global economy, we argue that their preferences for education should be conditioned by access to performance information on schools. Although exams in most countries were originally confined to government-administered

tests, in recent decades, the stature of GPAs has risen exponentially (Piro 2019; Kamens and McNeely 2010; Verger, Parcerisa, and Fontdevila 2019). A major concern stemming from educational GPAs is that many advanced nations routinely underperform relative to expectations given their wealth and resources. For instance, in 2018, the most recent PISA wave, the U.S. ranked 37th in math globally, lower than the OECD average and behind countries like Latvia, Lithuania, and Hungary (Schleicher 2019). Fewer than one in ten American fifteen-year olds was deemed a “top-performer” on math as judged by scoring at a proficiency level of 5 or higher (**nces18**).

These concerns have only been magnified by the recognition that even schools that score highly relative to national exams often do less well when benchmarked to global standards (Fairchild 2010). For example, in the U.S., the most comprehensive study of this topic to date showed that America’s best performing state in 2009 – Massachusetts – still trailed 14 other countries according to PISA (Hanushek, Peterson, and Woessmann 2010). Such comparisons have also coincided with concerns about the rigor of state proficiency standards (Peterson and Kaplan 2013; Peterson and Lastra-Anadon 2010).

We claim that disparities in results between national exams and GPAs matter not only because of their differing standards, but also because voters may have incentives to pay attention to different types of indicators. In particular, we claim, a relevant gradient is their perceived exposure to global competition. Globally-integrated voters should be more responsive to internationally-benchmarked data that highlights student outcomes vis-à-vis other nations. GPAs provide information relevant to voters who believe graduates participate in internationally mobile job markets. Because these voters view competition as fundamentally international in scale – where jobs can just as easily be taken by graduates abroad as by graduates domestically – it should matter whether schools fare well not just compared to other schools in their community or even their country, but also relative to a global standard. When presented with GPA information indicating a failure to meet world-class requirements, globally-integrated voters should demand that politicians invest more in quality schooling. This should raise preferences for education beyond an already high baseline.

By contrast, we predict that demands for education among locally-rooted voters should be less responsive to cross-country student performance data. Because voters anchored in local economies do not view employment competition as extending beyond national borders, their main concern should be on ensuring that schools train graduates to compete with others in their proximate geographic area. Whether graduates can compete in international labor markets should be of secondary or minimal importance. Consequently, unlike for globally-integrated voters, internationally-benchmarked exam data documenting student underperformance should not lead locally-rooted voters to exert significantly more pressure on politicians to invest in better schools. The result should be a widening of the gap in political demands for education between voters based on their perceived exposure to global competition.

The above discussion leads to two key hypotheses:

- **H1:** *Globally-integrated citizens should have higher baseline demands for school reform than locally-rooted citizens.*
- **H2:** *When receiving negative information about the performance of schools that is benchmarked to international standards, globally-integrated citizens should increase their demands for school reform more than locally-rooted citizens, controlling for their respective baseline demands for school reform.*

DATA & METHODS

We test our main predictions with a pre-registered survey experiment that assesses political demand for education as a function of: 1) perceived exposure to global labor markets; and 2) access to internationally-benchmarked data on student performance. We randomly embed experimental conditions that manipulate both individual-level perceptions of immersion into the global economy, as well as information that spotlights educational underperformance on a global scale. Our survey experiment was administered to 1,943 adults resident in the U.S. state of Massachusetts.²

Test case: Massachusetts

We conducted our survey in Massachusetts for two main reasons. First, we expected its labor force to display considerable variation in perceived exposure to globalization. Greater Boston and other urban pockets have large shares of white-collar, internationally-mobile workers employed in industries like higher education, technology, and tradeable goods. Recent research shows that Boston, in particular, is in the “most exposed” category of commuting zones in the U.S. (David H. Autor, Dorn, and G. Hanson 2013). By contrast, rural areas have significant employment in sectors including agriculture, tourism, manufacturing, and non-tradeable services. Combined, this variation in exposure to international forces may alter perceived job competition and orientations toward the global economy.

Second, Massachusetts is distinctive in that it performs exceptionally well on K-12 outcomes relative to U.S. states, but less so according to global standards. Because Massachusetts is among the best performing states in the U.S. on the NAEP – a fact

²The survey experiment was fielded by Bovitz that maintains a representative sample of respondents in the United States. For publications using Bovitz data, see, for example: Bolsen, Druckman, and Cook (2014), Chong and Druckman (2013), and Druckman, Peterson, and Slothuus (2013). More information about the sample can be found in Appendix Section Sample Characteristics.

often highlighted to residents³ – this should lead citizens to default toward thinking that the schools in the state are of high quality. In the 2019 NAEP, for example, Massachusetts ranked 1st on math nationally (NCES 2022). However, less publicized is that if Massachusetts were a country, it would have ranked only 12th globally in that subject on the latest PISA wave in which it participated (2015) (DOE 2016).⁷ This discrepancy enables us to leverage variation in the educational standards that should be relevant to globally-integrated and locally-rooted voter. As we argued, globally-integrated voters should be more responsive to international data documenting underperformance on PISA, despite Massachusetts’s reputation as an academic high-performer by national criteria.

Treatments

Respondents were randomly assigned to three treatment arms and a control with equal probability of assignment. In the *GPA* treatment arm, we provide respondents with negative information from PISA on the performance of Massachusetts schools relative to an internationally-benchmarked standard that reads, “According to internationally benchmarked standards, schools in Massachusetts do not fare particularly well. For example, according to the Programme for International Student Assessment (PISA), if Massachusetts were a country, it would fare only about average on math relative to other advanced nations.”

Our *GPA* treatment simulates reporting of PISA data in a way commonly done by journalists, politicians, or activists (Hopfenbeck and Gorgen 2017; Stack 2007). Although the text does note that Massachusetts schools do not fare well relative to other countries, the language should be considered mild compared to more negative framings often used to provoke outrage, to call for accountability, or to push for reform (Grey and Morris 2018; Gillis, Polesel, and Wu 2016).

The *Globalization Encouragement* treatment cues respondents to think about how globalization affects them and the world around them and the role they play in the process

³Headlines in local newspapers – such as “Mass. Students Are Again Tops in National Test” (*Boston Globe*),⁴ “Massachusetts Test Scores Top Nation’s School Districts Again” (*Boston Magazine*),⁵ and “Massachusetts Public Schools Rank No. 1 in the Country. Do You Agree?” (*Boston.com*)⁶ – repeatedly emphasize the strength of Massachusetts schools to its residents.

⁷One analysis, for example, reports that “Massachusetts, which is a high-achieving U.S. state and which averaged above the national PISA score, is still two years of formal schooling behind Shanghai” (Ryan 2013). A 2016 news article titled “Decent PISA Numbers, But Can Mass. Students Really Do The Math?” a prominent business and education leader lamented that “a poor country [China] is actually managing to do better than Massachusetts in math, and about the same in science” (Kennedy 2016).

by providing respondents with the following text, “Increasingly, more and more people think that they and the world around them are affected by globalization and that they play an important role in contributing to this process.”. The *Combination* treatment combines the *Globalization encouragement* and *GPA* treatments together and is randomly assigned to the remaining 25% of the sample.

We use the *Globalization encouragement* treatment to raise and reinforce the salience of globalization in the minds of respondents (Jose, Kuo, and Balcells 2013). The aim is to activate perceptions of the impact of globalization at both the personal and societal levels, as well as the role of individuals in shaping it (Buchan et al. 2009; Schaffer and Spilker 2014). This approach builds on extensive literature in international political economy using “Globalization-as-Treatment” experiments (Naoi 2020). Such studies attempt to “switch on” cognitive, psychological, or material orientations that feed into variables of interest, such as preferences toward immigration (Jens and Hiscox 2010), trade policy (Sungmin and Tomz 2017), outsourcing (Mansfield and Mutz 2013), government accountability (Jensen and Rosas 2020), and even integration into the international economy itself (Margalit 2012).

Dependent variable

Our dependent variable is support for school reform that we measure by asking respondents, “Do you agree or disagree with the following statement? Public K-12 schools in Massachusetts need to be reformed.” We dichotomize the variable for ease of interpretation to signify “agreement” with the need for reform.⁸

Non-Experimental Independent Variable

Our main observational independent variable is the degree of perceived globalization exposure, which we measure through self-reported answers of how much globalization affects respondents and the world around them, as well as the extent to which they shape global processes. Designed to parallel our experimental treatments, these dimensions capture both micro- and macro-level perceptions of the impacts of globalization, as well as the role of individuals in affecting the process. We asked respondents whether they agreed or disagreed with the following three statements: 1) “Globalization affects my life in an important way”; 2) “The world around me is affected by globalization in an

⁸Respondents answer on a standard Likert scale from 1 (“Strongly disagree”) to 5 (“Strongly agree”). Variable is coded as 0 if respondent disagrees or is neutral toward reform. These represent a change in the probability of greater demand for reform rather than the change in probability along the ordered Likert scale. We provide results in an ordered probit model in Appendix Models of perceived integration.

important way”; and 3) “I contribute to globalization in an important way.” For each question, we coded the responses on a standard Likert scale, from 1 (“Strongly disagree”) to 5 (“Strongly agree”). We then averaged answers across all of the questions to create a *Globalization Index* for each respondent, ranging from 1 (most locally-rooted) to 5 (most globally-integrated).⁹

RESULTS

Tests of Hypothesis 1

First, we report results for Hypothesis 1, which predicts that perceived exposure to globalization boosts support for school reform. Using respondents assigned to the control, Figure 1 shows that agreeing with all three questions proxying perceptions of globalization is positively related to willingness to reform Massachusetts schools. Agreeing that “Globalization affects my life in an important way” correlates with an 8 percentage point increase in support for school reform, compared to a 39 percent baseline (significant at .10 level). Similarly, agreeing that “The world around me is affected by globalization in an important way” is directionally linked to a 5 percentage point increase in support (though not statistically significant). Finally, agreeing that “I contribute to globalization in an important way” coincides with a 10 percentage point increase in support (significant at .05 level). When we average the binarized responses to these questions into an index of support for school reform for each respondent, perceived exposure to globalization is associated with a 12.5 percentage point greater support for reform.¹⁰

Our experimental tests also yield consistent findings. Receiving the *Global Encouragement* treatment results in an 8 percentage point increase in support for school reform, compared to the control group receiving no information.¹¹ Overall, these findings are

⁹A potential concern is that it is not material exposure to trade and globalization, but general exposure to the world outside of Massachusetts, that might be driving our results. We test whether it is a broader measure of global exposure in Appendix Section Alternative Measures of Global Exposure and find no support for respondents who are more exposed to the international environment absent material exposure to globalization driving these results. We also map the variation in our dependent variable and non-experimental independent variable in Appendix Section Variation in Dependent and Independent Variable. Support for education reform and perceptions of globalization vary geographically in the theoretically expected way.

¹⁰We provide results for the full Likert scale in Table A2. The results are directionally as expected, though not as precisely estimated as when focusing on the dichotomized DV signifying agreement with school reform.

¹¹Appendix Table C1 also tests alternative, indirect measures of perceived and actual

consistent with the expectations of H1. Respondents with higher perceived exposure to globalization express more support for school reform across both observational and experimental specifications.¹²

Tests of Hypothesis 2

Next, we report results for H2, which predicts that informing respondents of poor school performance relative to internationally-benchmarked standards will raise demands for school reform more among globally integrated than locally rooted citizens. We fail to reject the null hypothesis. As shown in Figure 2 (and in the corresponding Appendix Table A5), when interacting the *GPA* treatment with each of our observational measures of perceived exposure to globalization, we find that the coefficients are not statistically significant. It is notable that these are fairly well-estimated null results: although the standard errors for the interaction terms are slightly larger than for the main coefficients in each model, the size of the interactions are much smaller than those of the main effects.¹³ This increases our confidence that this is a real null effect and not just an artifact of a limited sample size.¹⁴ When we leverage the experimental assignment to the *Global Encouragement* treatment, the effects of its interaction with the *GPA* treatment are significant but of the

global integration, including whether respondents consider themselves “citizens of the world”, whether they were born outside the United States, whether they travel to other states or countries for work, and whether they have traveled abroad at all. Results are mostly insignificant but in the expected direction in three out of five cases.

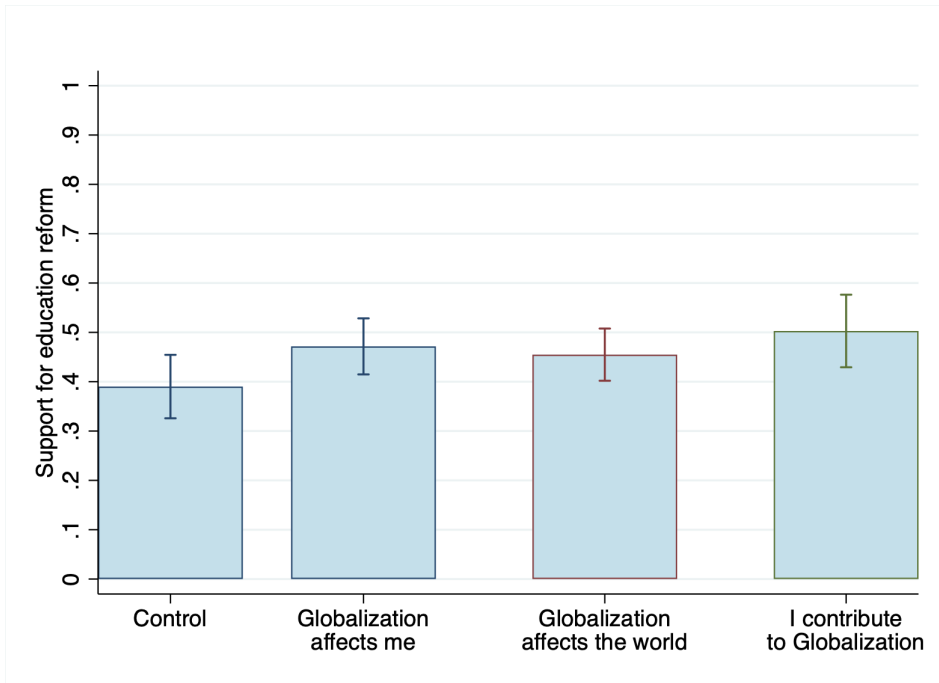
¹²We do not, however, find significant evidence that respondents who *work* in globally integrated industries (as opposed to *perceiving* themselves to be globally integrated) demand even higher levels of education conditional on exposure to negative information about schools referenced to international standards. This should be taken with some caution as only two thirds of respondents provide sufficient data to evaluate how globally-exposed they are (contrary to our expectations when designing the survey), while by design all of our respondents answer questions about their perceptions. We show and discuss these results in Appendix Trade Based Measures of Global Integration.

¹³For example, the interaction of the global and benchmark and the globalization index in Model 1 has a coefficient that is one sixth of that of the globalization index in that model. We also provide results for the original 1-5 Likert scale in Table A4. Similarly, we do not find statistically significant interaction effects.

¹⁴We do note that the level of support for school reform among those that perceive themselves to be globally integrated is higher for those who receive the global benchmark prime –much like we find overall. Our hypotheses was about the subgroup of those globally integrated experiencing a significantly larger effect from the benchmark prime, and we do not find evidence for that.

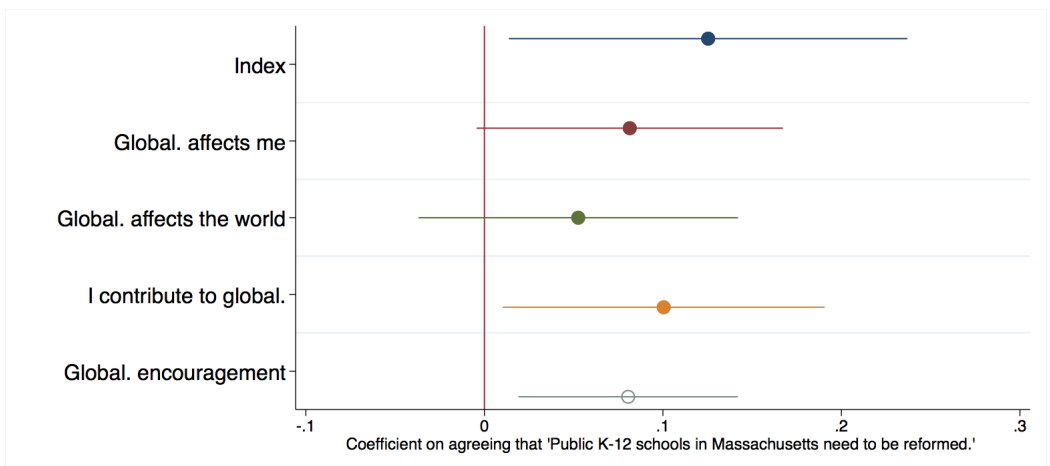
Figure 1. Perceived levels of global integration and support for education reform

Panel A: Support levels



Note: Y-axis is share supporting school reform and x-axis indicate binarized agreement. Point estimates and 95% confidence intervals from separate models in regression in Table A3 (level from control group shown from model 1, for simplicity). Estimate for Globalization Index not shown as it is not binary.

Panel B: Coefficients on global integration variables



Note: Dichotomous dependent variable is "supports school reform". Coefficient plot of support for school reform, with point estimates and 95% confidence intervals. Full set of coefficients are shown in Table A3.

opposite direction expected. Receiving both information about Massachusetts school performance on PISA and being primed to think about globalization reduces demand for school reform by 14 percentage points, compared to what you would expect when receiving each treatment separately. One potential explanation is that there is a “ceiling” on support for school reform among globally-integrated citizens, meaning that – once support reaches a certain level – it becomes harder to prompt even more demand for higher quality schools.¹⁵

CONCLUSION

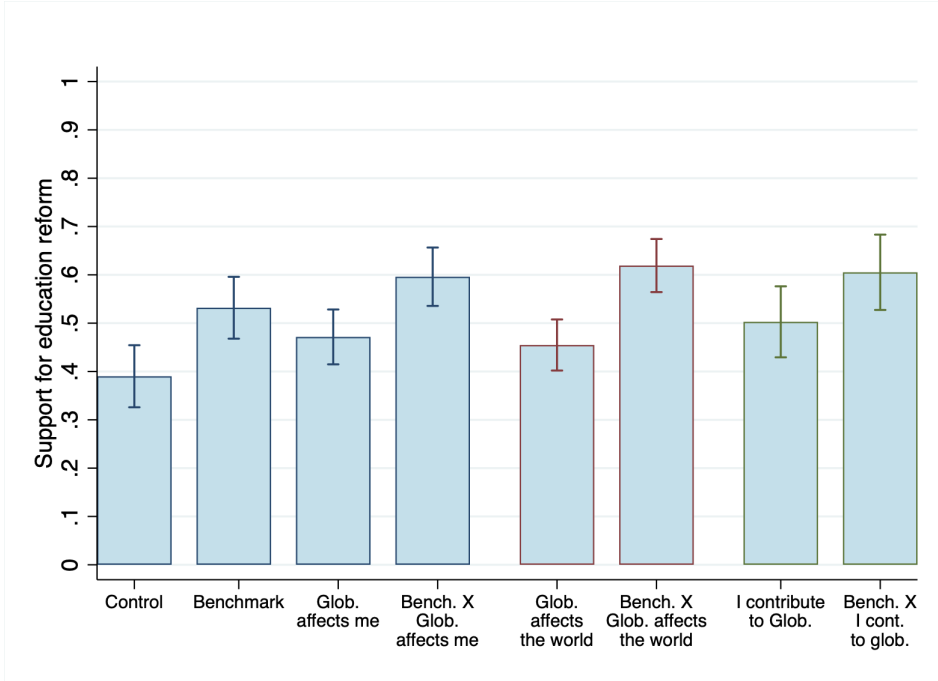
This research note explained why voters demand education differently in response to globalization, despite the common consensus that concerns about job and income loss should uniformly raise preferences for schooling. We hypothesized that as voters see themselves as more integrated into global labor markets – where job competition from abroad is a main concern – they should demand better education as their children will face larger international labor markets. Additionally, the demands of globally-integrated voters should be more responsive to school quality information reported by GPAs because these data are relevant for the international competition they face. We tested our predictions using a pre-registered survey experiment in Massachusetts, a state with considerable variation in globalization exposure and whose K-12 school system performs better relative to other U.S. states than many countries.

Consistent with expectations, we found that globally-integrated voters possess higher baseline demands for education than locally-rooted voters. This result was amplified by experimentally activating voters to think of themselves and the world as more globalized. Demand for education, however, did not increase proportionally more among globally-integrated voters when presented with information highlighting student underperformance from PISA, an internationally-benchmarked exam. One reason for this outcome may be that preferences for education among globally-integrated voters already approaches a ceiling, meaning that it is hard to increase demands for schooling further. Another possibility is that globally-integrated voters are already aware how Massachusetts schools fare relative to other countries, making the facts presented by the information treatment less salient.

¹⁵Indeed, demand for education reform is quite high, both among those that do not believe themselves to be globally integrated (approximately 40 percent), and those that do (approximately 50 percent of respondents who self-identify as globally integrated support education reform). In Appendix Trade Based Measures of Global Integration we provide results where the independent variable is *working* in globally integrated industries. Results are also consistent with the H2 null.

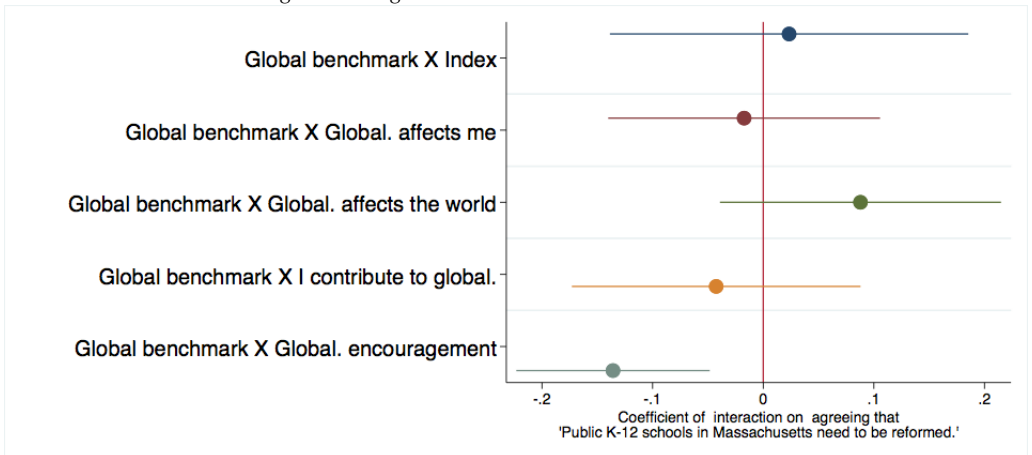
Figure 2. Perceived levels of global integration, global benchmark treatment, and support for education reform

Panel A: Support levels



Note: Y-axis is share supporting school reform by subgroup indicated in the x-axis (e.g. Benchmark X Globalization affects me indicates the subgroup receiving the global benchmark treatment as well as agreeing with the statement “globalization affects me”). Point estimates and 95% confidence intervals from separate models in regression in Table A5 (control level and level for global benchmark shown from model 1, for simplicity). Globalization Index not shown as it is not binary.

Panel B: Coefficients on interaction of global benchmark treatment with global integration variables



Note: Dichotomous dependent variable. Plot of global benchmark interacted with global integration coefficients indicated on support for school reform, from separate models in Table A5.

The findings suggest that differential perceptions of exposure to globalization could aggravate educational inequality. Globalization exposure is frequently concentrated geographically due to network effects and increasing returns associated with local economic specialization. To the degree that voters in globally-integrated locations demand more education, politicians may display more urgency to improve schooling. At the same time, perceived globalization exposure is not just a proxy for economic status. Voters in towns and counties across countries that have felt the disruption of trade, off-shoring, automation, and FDI may also be more apt to lobby their representatives for education reform. Globalization in such places could prove a double-edge sword: while increasing the obsolescence of jobs and industries, simultaneously boosting the incentives to invest in high-quality schooling.

From a policy angle, vested interests looking to raise across-the-board demands for education should be aware of how individual-level perceptions of globalization exposure affect demands for school reform. Invoking globalization to motivate citizens to vote and lobby for education can be effective. However, it likely resonates less with voters who think that globalization plays a more modest role in their lives and in the broader economy. Our findings suggest that one approach for overcoming such disparities might be take advantage of the fact that perceptions of globalization exposure appear malleable. Ensuring, for example, that arguments about the importance of investing in schools to prepare students for a globalized economy are explicitly complemented with frames about how everyone is (or will in the future be) affected by globalization could prove useful.

Our study adds to an extensive literature on the impacts of globalization exposure on demands for state investments, pivoting the focus from entitlements to the less studied area of education. The findings also complement a growing literature on how GPAs shape preferences for public services. Future research could test the external validity of our results by replicating our analysis in other U.S. states and other countries. Scholars could also examine how globalization affects alternative measures of demand for education, including willingness to move districts or to exercise private options. Researchers might also provide more granular data on test score comparisons, including at the district or school levels. We found that more globally-integrated voters demand more education. Access to internationally-benchmarked data, however, does not significantly moderate those preferences.

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APPENDIX TABLES

Sample Characteristics

The sample, taken from April 28, 2020 to May 7, 2020, is designed to be representative of Massachusetts residents along the dimensions presented in Table A1 from the American Community Survey (which shows 2017 five-year estimates for Massachusetts).

TABLE A1 *Demographic Targets for Survey Experiment*

Demographic Characteristic	Proportion (%)
Male	48
Female	52
18-24	9
25-34	18
35-44	15
45-54	18
55-64	17
65+	20
Hispanic	8.8
Non-Hispanic	81.0
White/Causasian	82.8
Black/African-American	7.4
American Indian or Alaska Native	0.2
Asian	5.3
Native Hawaiian or Pacific Islander	0.0
Some other race	4.1
Employed	62.3
Unemployed	6.0
Not in labor force	32.7
Less than high school	9.7
High school diploma or GED	24.7
Some college	15.8
Associate's degree	7.7
Bachelor's degree	23.4
Masters, Ph.D. or other Professional degree	18.7
Greater Boston Area	45.0
Rest of state	55.0

A2 REFERENCES

Models of perceived integration

In this section, we replicate results from Figures 1 and 2. In Table A2, we use the full Likert Scale from 1-5 from respondents assigned to the control arm of the experiment in an ordered probit model. In Table A3, we provide results for Figure 1 in table form.

TABLE A2 *Beliefs about global integration and support for education reform: Ordered probit models.*

	Support for Education Reform (1-5)			
	(1)	(2)	(3)	(4)
Index	0.239 ⁺ (0.125)			
Global. affects me		0.140 (0.0944)		
Global. affects the world			0.128 (0.0990)	
I contribute to global.				0.180 ⁺ (0.101)
Observations	522	522	522	522

Each column shows results from separate Ordered probit models restricted to respondents in the control group. Support for education reform is answer to the question “Do you agree or disagree with the following statement? Public K-12 schools in Massachusetts need to be reformed.” It ranges from “Strongly disagree” (1) to “Strongly agree” (5). + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

In Table A4, we use the full Likert scale ranging from 1 (“Strongly disagree that schools need to be reformed”) to 5 (“Strongly agree that schools need to be reformed”) from respondents in an ordered probit model. In Table A5, we provide results for Figure 2 in table form.

For both hypotheses, we prefer the dichotomized measure used in Figures 1 and 2, and Tables A3 and A5 for ease of interpretation, although results are substantively similar.

TABLE A3 *Beliefs about global integration and support for education reform. Dichotomous dependent variable in OLS models.*

	Support for Education Reform				
	(1)	(2)	(3)	(4)	(5)
Index	0.125* (0.0568)				
Global. affects me		0.0814+ (0.0437)			
Global. affects the world			0.0526 (0.0455)		
I contribute to global.				0.100* (0.0459)	
Globally integrated encouragement					0.0805* (0.0313)
Constant	0.371*** (0.0365)	0.390*** (0.0327)	0.402*** (0.0367)	0.402*** (0.0265)	0.437*** (0.0217)
Observations	522	522	522	522	1013

Each column shows results from separate OLS models restricted to respondents in the control group (columns 1-4), and those in the control group and the global integration encouragement prime (in column 5). Support for education reform is the answer to the question "Do you agree or disagree with the following statement? Public K-12 schools in Massachusetts need to be reformed", binarized among those who agree, and those who disagree or are neutral. + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

TABLE A4 *Global Benchmark, beliefs about global integration and support for education reform: Ordered probit models.*

	(1)	(2)	(3)	(4)
Global Benchmark	0.204 ⁺ (0.115)	0.233* (0.103)	0.130 (0.115)	0.246** (0.0799)
Global. index	0.244 ⁺ (0.127)			
Global Benchmark X Global. Index	0.0512 (0.179))			
Global. affects me		0.140 (0.0956)		
Global Benchmark X Global. affects me		-0.0160 (0.134)		
Global. affects the world			0.129 (0.101)	
Global Benchmark X Global. affects the world			0.153 (0.141)	
I contribute to Global.				0.188 ⁺ (0.103)
Global Benchmark X I contribute to Global.				-0.0726 (0.144)
Observations	1012	1012	1012	1012

Each column shows results from separate Ordered probit models restricted to respondents in the control group and the global benchmark treatment and observational measures of global integration (columns 1-4). Support for education reform is answer to the question "Do you agree or disagree with the following statement? Public K-12 schools in Massachusetts need to be reformed." It ranges from "Strongly disagree" (1) to "Strongly agree" (5). + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

TABLE A5 *Global Benchmark, beliefs about global integration and support for education reform. Dichotomous dependent variable in OLS models.*

	Support for Education Reform				
	(1)	(2)	(3)	(4)	(5)
Global Benchmark	0.123* (0.0519)	0.142** (0.0462)	0.0765 (0.0518)	0.145*** (0.0379)	0.129*** (0.0312)
Global. index	0.125* (0.0568)				
Global Benchmark X Global. Index	0.0234 (0.0825)				
Global. affects me		0.0814+ (0.0437)			
Global Benchmark X Global. affects me		-0.0173 (0.0626)			
Global. affects the world			0.0526 (0.0455)		
Global Benchmark X Global. affects the world			0.0879 (0.0647)		
I contribute to Global.				0.100* (0.0459)	
Global Benchmark X I contribute to Global.				-0.0425 (0.0665)	
Global. encouragement					0.0805* (0.0313)
Global Benchmark X Global. encouragement					-0.136** (0.0446)
Constant	0.371*** (0.0365)	0.390*** (0.0327)	0.402*** (0.0367)	0.402*** (0.0265)	0.437*** (0.0217)
Observations	1012	1012	1012	1012	2001

Each column shows results from separate OLS models restricted to respondents in the control group and the global benchmark treatment and observational measures of global integration (columns 1-4), and data from all treatment arms and an indicator for being exposed to the global integration encouragement prime (in column 5). Support for education reform is the answer to the question "Do you agree or disagree with the following statement? Public K-12 schools in Massachusetts need to be reformed", binarized among those who agree, and those who disagree or are neutral. + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

A6 REFERENCES

ADDITIONAL RESULTS

In our main specification in the Results Section we use a variable that asks respondents, “Do you agree or disagree with the following statement? Public K-12 schools in Massachusetts need to be reformed.” Respondents answer on a standard Likert scale from 1 (“Strongly disagree”) to 5 (“Strongly agree”) which we dichotomize for ease of interpretation in our primary specification. A 1 in the dichotomized variable signifies “agreement” with the need for reform and 0 if respondent disagrees or is neutral toward reform. These represent a change in the probability of greater demand for reform rather than the change in probability along the ordered Likert scale.

Although respondents may prefer many different types of change (improving teacher quality, revamping curricula, introducing school choice, etc.), support for reform should broadly signal dissatisfaction with some element of schools. To the extent that preparing students for a career is a central expectation, this question should capture a key component of whether respondents think that schools are meeting standards. The question specifically asks about schools in Massachusetts to enable comparison both to other U.S. states and other countries. It is also a hard test for the willingness to change one’s mind in response to primes or information, given that it goes beyond being dissatisfied with schools and involves taking controversial measures (unlike, e.g. investing more in education), as exemplified by low levels of support for reform in the control group (less than 40%).

In this section, we provide results in an ordered probit model. We look at two other dependent variables – the subjective assessment of satisfaction with school, the importance of education, and the need for greater spending in education. These are included in Table A6 and all results are similar to our primary specification.

In Table A6 we explore the relationship between the global integration index and perceptions of the education system and a different set of measures of attitudes towards local schools. All five alternative measures of perceptions of schools show the similar relationship that our preferred dependent variable, demand for school reform. We prefer the demand for school reform variable as this does not frame education as a valence good that most respondents should demand more of (as in the importance of education and need for more funding variables).

In Table A7, we provide correlations between all measures of exposure to globalization. The global integration index is composed of the first three rows: globalization affects me, globalization affects the world around me, and I contribute to globalization. Both “Exposed Industry” and “Level of Exposure” ask respondents to self-report the industry they work in using the three-digit North American Industry Classification System (NAICS) categories.¹⁶

¹⁶The full list of NAICS codes can be found at the United Census Bureau website here <https://www.census.gov/naics/?58967?yearbck=2017>. From the self-reported industries

TABLE A6 *Relationship Between Global Integration Index and Perceptions of the Education System*

	High satisfaction with schools (1)	Degree of satisfaction with schools (2)	Importance of education (world) (3)	Importance of education (country) (4)	Need for more funding (5)
Global integration Index	0.128* (0.0568)	0.259* (0.112)	0.224*** (0.0433)	0.238*** (0.0433)	0.268*** (0.0525)
Constant	0.511*** (0.0372)	2.423*** (0.0736)	0.729*** (0.0322)	0.722*** (0.0325)	0.536*** (0.0365)
Observations	522	522	522	522	522

Each column shows results from separate OLS models restricted to respondents in the control group. Model 1 codes as 1 (and zero otherwise) those answering A or B to the question “Students are often given the grades A, B, C, D, and Fail to denote the quality of their work. Suppose the public K-12 schools themselves were graded in the same way. What grade would you give the public K-12 schools in Massachusetts as a whole?” Model 2 uses the same question coding A as 5, B as 4, C as 3, D as 2 and Fail as 1. Model 3 codes as 1 those agreeing with the statement “It is important for their future that children in my local schools receive some of the best education in the world”. Model 4 codes as 1 those agreeing with the statement “It is important for their future that children in my local schools receive some of the best education in the country.” Model 5 codes as 1 those answering “greatly increase” or “increase” to the question “Do you think that government funding for public K-12 schools in Massachusetts should increase, decrease, or stay about the same?” + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

TABLE A7 *Correlation coefficients between perceived and actual levels of global integration*

	Global integration Index	Globalization affects me	Globalization the world	I contribute to global.	Exposed Industry
Global. affects me	0.8342***				
Global. affects the world	0.8234***	0.6033***			
I contribute to global.	0.7078***	0.3534***	0.3415***		
Exposed Industry	-0.0715**	-0.0719**	-0.0694**	-0.0267	
Level of Exposure	0.0075	-0.0072	0.0076	0.0178	0.6933***

Pairwise correlation coefficients. + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

A8 REFERENCES

In Table A8, we provide for reference a table with the effect of receiving the global benchmark treatment on its own, independently of its interactions with other variables.

TABLE A8 *Global benchmark treatment and support for education reform*

	(1)	(2)
Global benchmark	0.129*** (0.0312)	0.0733* (0.0312)
Constant	0.437*** (0.0217)	0.437*** (0.0217)
Treatment FE		X
Observations	1012	2001

Each column shows results from separate OLS models restricted to respondents in the control group and the GPA treatment (column 1), and including all four treatment arms (column 2). We include an indicator for each treatment arm in column 2. + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Finally in Tables A9, we test whether respondents that perceive themselves to be more integrated in the global economy are more or less likely to send their children to a traditional public school. This analysis is restricted to respondents with children, so the sample size is smaller. There is no relationship between whether respondents perceive

there, we calculate a respondent’s level of export orientation and import competition. Export orientation is defined as a sector’s exports divided by the sector’s total output. Import competition is defined as a sector’s total imports divided by a sector’s total output. Formally, this is defined as,

$$X_i/Y_i, \tag{A1}$$

$$M_i/Y_i, \tag{A2}$$

where X_i is the level of exports for sector i , Y_i is the total output for sector i , and M_i is the level of imports for sector i . Equation A1 is export orientation, and Equation A2 is import competition. For non-tradeable industries that do not export or import goods, we impute a level of 0 import orientation and export orientation. See Mansfield and Mutz 2009 for other applications in political science. Using these values, we create a binary indicator for “some global integration” that takes the value of 1 if either variable is positive, and zero otherwise. We also create a measure of the level of actual global integration for each respondent by taking the average of the values of their total Export Orientation and Import Competition measures.

themselves to be more integrated in the global economy and whether they send their children to public schools except for whether the respondent believes they contribute to globalization, which has a negative and significant relationship. This washes out cumulatively when we combine all three perception of globalization variables in the global integration index.

TABLE A9 *Perceived and actual global integration and children attending traditional public schools or not*

	Child Attends Traditional Public School					
	(1)	(2)	(3)	(4)	(5)	(6)
Global integration Index	-0.0620 (0.0500)					
Global. affects me		0.00716 (0.0377)				
Global. affects the world			0.00831 (0.0399)			
I contribute to global.				-0.130** (0.0394)		
Exposed Industry					-0.0415 (0.0390)	
Level of exposure						-0.0682 (0.0885)
Observations	431	431	431	431	431	302

Each column shows results from separate OLS models restricted to respondents with children, from all treatment arms. Dependent variable is answer to the question "Thinking about the school-age child (or children) who currently live with you, what kinds of schools have they attended?". It is coded as 1 if the respondent answered "Traditional Public Schools". We include an indicator for each treatment arm. + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

TRADE BASED MEASURES OF GLOBAL INTEGRATION

We present, for reference, results that use levels of trade exposure as a measure of global integration. To measure actual levels of global integration, we construct a measure of trade exposure by asking respondents to self-report where they work using the three-digit North American Industry Classification System (NAICS) categories.

Unfortunately, this analysis is limited, as 528 of the 1,943 (27%) respondents did not report an NAICS industry category, resulting in missing observations. This missing might come due to respondent fatigue – the full list of categories is long – or the fact that some respondents might also be unemployed and skip the question despite there being an option for unemployed in these categories.

As a result, these estimates are noisier, and possibly biased by nonrandom nonresponse than those using perceived globalization levels (for which we have full responses). We implement analogous models to the ones above using these measure of actual levels of global integration instead of perceived integration. In particular, we implement three types of OLS models. In the first one, we use just the indicator of “some global integration”. In the second, we include the measure of the actual level of global integration. In the third, we include the level of integration measure as well as the indicator for having some integration. We find that the effects of trade exposure are directionally consistent with our hypothesis H1: trade exposure is positively associated with more support for education reform in all models. These results are shown in Appendix Table B1. None of the coefficients are statistically significant, however. The non-significant nature of these results may also be consistent with a view where sector-specific exposure to globalization is not on its own determinant of policy preferences (Walter 2017). For this reason, along with the limited number of observations, our preferred estimates are those based on subjective perceptions of globalization.¹⁷

To test H2, we interact trade exposure with the global benchmark treatment.¹⁸ In this case, again we find evidence to support results at odds with our theory: the interaction of global benchmark with each of our actual integration variables is negative and significant.

¹⁷If we were to take these null results at face value (rather than as a result of our limited observations and incompleteness of the exposure measure, one possible explanation for the null finding may be that globally-integrated respondents have such high baseline demands for education that their preferences cannot be significantly increased beyond a certain ceiling. Globally-integrated respondents might also be aware already of how schools in their state perform relative to international standards, making the prime less impactful.

¹⁸In model 1, we interact the global benchmark treatment with the binary measure of integration, whereas in models 2 and 3 we interact the global benchmark treatment with the level of integration. In model 3, we additionally include the binary measure of actual integration as a main non-interacted variable.

TABLE B1 *Actual levels of global integration and support for education reform.*

	(1)	(2)	(3)
Exposed Industry	0.0556 (0.0859)		0.00246 (0.118)
Level of exposure		0.118 (0.119)	0.115 (0.161)
Constant	0.444*** (0.0277)	0.445*** (0.0269)	0.444*** (0.0277)
Observations	362	362	362

Each column shows results from separate OLS models restricted to respondents in the control group. Dependent variable is support for education reform. + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

This suggests that there is no additional effect of the global benchmark treatment on support for education reform for those that are more globally integrated. The main effects of this variable is as expected for the exposure to the global benchmark treatment: it is positively and significantly associated with more support for education reform.

None of the measures of actual global integration is statistically significant. Results are displayed in Table B2. Given issues with missing observations as well with the relevance of these measures as direct measures of global integration, we report these results but consider our analyses using perceived globalization as our main estimates.

TABLE B2 *Global Benchmark, actual levels of global integration and support for education reform.*

	(1)	(2)	(3)
Exposed Industry	0.0556 (0.0859)		-0.0553 (0.0858)
Level of exposure		0.118 (0.119)	0.182 (0.133)
Global benchmark	0.149*** (0.0399)	0.143*** (0.0388)	0.143*** (0.0388)
Level of exposure X Global benchmark		-0.413* (0.160)	-0.420** (0.156)
Exposed Industry X Global benchmark	-0.249+ (0.134)		
Constant	0.444*** (0.0277)	0.445*** (0.0269)	0.447*** (0.0274)
Observations	682	682	682

Each column shows results from separate OLS models restricted to respondents in the control group and the global benchmark treatment and observational measures of global integration. Exposed industry is an indicator for whether or not the industry of employment (NAICS 3 digits) had any imports or exports on 2019. Level of exposure is the average of the imports and exports over gross output in 2019 (see text for details). + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

ALTERNATIVE MEASURES OF GLOBAL EXPOSURE

One potential concern with our results is that what we are picking through our global perception index is merely global exposure and not the impact of globalization on a respondent's material life. For example, if someone believes that they contribute to globalization, they could perceive foreign travel as a way of contributing to globalization. This would be a separate channel to the one laid out in our theory where we hypothesized that it was exposure to the material effects of globalization that drives demand for school reform.

To test this potential channel, in Tables C1 and C2, we use other potential measures of global exposure, including whether respondents consider themselves to be "Citizens of the World", whether the respondent was not born in the United States, whether they work in other states or countries, and whether they have traveled to other countries. We replicate the analyses from Figures 1 and 2 respectively to test H1 and H2 using these other measures. For Table C1, none of these measures except working in other states is significant. These results provide support that it is our hypothesized channel – exposure to the material effects of globalization – that is driving demand for school reform and not a broader definition of global exposure.

TABLE C1 *Alternative measures of global integration and support for education reform.*

	Support for Education Reform				
	(1)	(2)	(3)	(4)	(5)
World citizen	0.00592 (0.0520)				
Not born USA		-0.0317 (0.0650)			
Works in other states			0.105* (0.0531)		
Works in other countries				0.0861 (0.0663)	
Has traveled to other countries					-0.0412 (0.0530)
Constant	0.432*** (0.0457)	0.441*** (0.0233)	0.411*** (0.0289)	0.429*** (0.0265)	0.469*** (0.0470)
Observations	522	522	418	418	522

Each column shows results from separate OLS models restricted to respondents in the control group.
+ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

TABLE C2 *Global Benchmark, alternative measures of global integration and support for education reform.*

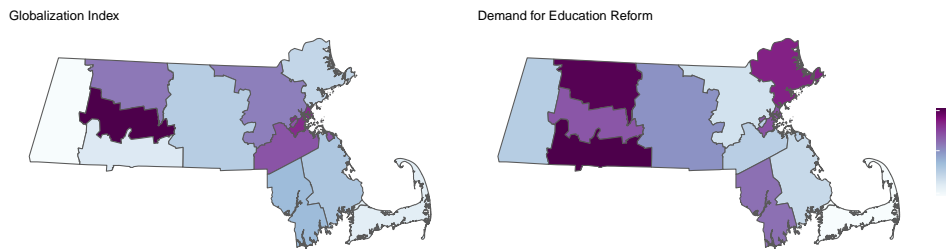
	Support for Education Reform				
	(1)	(2)	(3)	(4)	(5)
Global Benchmark	0.0161 (0.0650)	0.133*** (0.0332)	0.159*** (0.0415)	0.141*** (0.0382)	0.0527 (0.0663)
World citizen	0.00592 (0.0520)				
Global Benchmark X World citizen	0.147* (0.0741)				
Not born in USA		-0.0317 (0.0650)			
Global Benchmark X Not born in USA		-0.0521 (0.0985)			
Works in other states			0.105* (0.0532)		
Global Benchmark X Works in other states			-0.111 (0.0797)		
Works in other countries				0.0861 (0.0663)	
Global Benchmark X Works in other countries				-0.0901 (0.103)	
Has traveled to other countries					-0.0412 (0.0530)
Global Benchmark X Has traveled to other countries					0.0981 (0.0751)
Constant	0.432*** (0.0457)	0.441*** (0.0233)	0.411*** (0.0289)	0.429*** (0.0265)	0.469*** (0.0470)
Observations	1012	1012	789	789	1012

Each column shows results from separate OLS models restricted to respondents in the control group and the global benchmark treatment and observational measures of global integration. + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

VARIATION IN DEPENDENT AND INDEPENDENT VARIABLE

Figure C1 maps geographic variation within counties of Massachusetts in average perceptions of globalization exposure and in the support for school reform, providing some suggestive evidence of their relationship. Counties that comprise the greater Boston area (including Middlesex, Norfolk, and Suffolk counties in the East of the state) and the Springfield area (including Franklin, Hampden, and Hampshire counties in the West) show high levels of agreement with the idea that globalization affects their lives in important ways, and high demand for school reform. In addition, simple regressions with the globalization index as an independent variable show that it is significantly related with the satisfaction with the quality of schooling, attitudes towards the importance of education and towards the funding of education. These are shown in Appendix Table A6.¹⁹

Figure C1. Geographic variation and Perception of the Degree that Globalization Affects a Respondent's Life and Support for Education Reform



Notes: In the left-hand side panel, we plot mean county level response to the globalization index. In the right-hand side panel, we plot mean county level responses to the globalization index that includes answers to the questions 1) "Globalization affects my life in an important way"; 2) "The world around me is affected by globalization in an important way"; and 3) "I contribute to globalization in an important way." We drop Nantucket and Dukes counties in these maps as there were only three respondents between those two counties (both have approximately <1% of the population of Middlesex, the largest county).

¹⁹In our pre-registered specifications, we emphasize models of actual globalization, based on exposure to globalized industries. Unfortunately, one third of respondents did not answer this question to construct a measure of exposure to globalization based on employment. We show and discuss those models in Appendix Trade Based Measures of Global Integration.