Trade policy preference, childhood sporting experience, and informal school curriculum: An examination of views of the TPP from the viewpoint of behavioral economics

Eiji Yamamura1 | Yoshiro Tsutsui2

1 Seinan Gakuin University, Japan
2 Konan University, Japan

Correspondence
Eiji Yamamura, Department of Economics, Seinan Gakuin University, 6-2-92 Nishijin, Sawara-ku Fukuoka 814-8511, Japan. Email: yamaei@seinan-gu.ac.jp

Funding information
This study was supported by the Grant-in-Aid for Scientific Research B (Grant No. 16H03628) from the Japan Society for the Promotion of Science

Abstract
We investigated how childhood education and experiences helped to form noncognitive skills and later, trade policy preferences. We used individual-level data with approximately 10,000 observations collected in July 2016. Using the instrumental variables (IV) method, with sporting experience and informal education in the childhood as exogenous IV, we found that (1) sporting experiences and informal education lead people to have positive subjective views about the role of group work, competition, reciprocity, and generalized trust and (2) positive views about the role of group work, competition, reciprocity, and trust lead people to prefer the Trans-Pacific Strategic Economic Partnership Agreement (TPP).

1 INTRODUCTION

A 2016 referendum in the United Kingdom resulted in a striking change in its role in Europe—its withdrawal from the European Union (Brexit). In that same year, Donald Trump was elected President of the United States; he soon declared that the United States would withdraw from the Trans-Pacific Strategic Economic Partnership Agreement (TPP) and the Paris Agreement. In a number of European countries, nationalistic political parties grew more popular and increased their influence on economic policy. Thus, unilateralism appears to have become a pervasive practice, even among developed countries that would normally promote globalization by seeking market integration among countries. The following question naturally arises: how can unilateralism be avoided, enabling countries to maintain interdependence and economic trade benefits.

It has been observed that educated people tend to prefer international trade and immigration (Mayda, 2006; Mayda & Rodrik, 2005). Further, international economics specialists who hope to build public support for globalization want people to understand the mutual benefits provided by international trade. This finding supports the argument that a lack of basic economic knowledge leads to...
unexpected outcomes and that people should therefore study economics (Caplan, 2007). However, it is not clear that people will necessarily support globalization and international cooperation, even if they understand that large benefits can be gained by participating in bodies such as the European Union and TPP. The critical point is whether globalization widens the income gap among people. For instance, international trade has increased unemployment within a country (Acemoglu, Autor, Dorn, Hanson, & Price, 2016; Autor, Dorn, & Hanson, 2013, 2016). As suggested by Helpman, Itskhoki, and Redding (2010a), increase of wage inequality comes first after liberalizing the international trade even though the inequality decreases eventually. Then, some people are afraid that they might benefit much less than others and become losers as an outcome of the trade.

People’s views about globalization appear to depend, not only on logical thinking, but also on emotions and perceptions. As Mayda and Rodrik (2005) have observed, even after controlling for cognitive skills developed during years of schooling, noneconomic factors, such as values and attachments, play an important role in determining people’s trade preferences. In other words, people’s noncognitive skills, including their values and perceptions, are potential key factors in avoiding unilateralism. The issue of how noncognitive skills are formed has become a hot topic in the field of behavioral and education economics (e.g., Algan, Cahuc, & Shleifer, 2013; Heckman, Moon, Pinto, Savelyev, & Yavitz, 2010a,b; Hryshko, Luengo-Prado, & Sørensen, 2011; Kawaguchi & Miyazaki, 2009; Fehr, Bernhard, & Rockenbach, 2008). No studies have analyzed the extent to which the process of preference formation in childhood influences trade preferences in adulthood, although a number of studies have analyzed the determinants of international trade preferences (e.g., Blonigen & McGrew, 2014; Tomiura, Ito, Mukunoki, & Wakasugi, 2016).

The purpose of this paper is therefore to examine the way in which childhood experiences form noncognitive skills, which in turn influence trade policy preferences, by considering the degree of support for TPP. We have examined several types of childhood experiences, using proxies for experiences that bridge and bond social capital in childhood (during the primary school years). In this study, sporting experiences are used as a proxy for bridging social capital, while community participation is used as a proxy for bonding social capital. The informal “hidden curricula” in schools are also considered. In June 2016, immediately after the Japan House of Councilors election, researchers collected individual data from all over Japan—the sample includes approximately 10,000 observations. These data make it possible to examine the ways in which childhood experiences influence trade preferences and, by extension, views on the TPP. Collecting data in 2016 ensured that the national context featured conflicts between unilateralism and globalism.

This study has used types of experience and education in childhood as exogenous instrumental variables (IV) to control for the endogeneity of key independent variables. This approach captures noncognitive skills while examining the formation of trade preferences. The key findings of this study are that sporting experiences and informal education developed noncognitive skills, which in turn had a crucial influence on participants’ views of the TPP. This paper makes an important contribution to the study of trade preference formation by bridging educational and international economics from the viewpoint of behavioral economics. It is the first study to link the role of childhood experiences with later international trade preferences. In particular, group work and similar aspects of the informal “hidden curriculum” of schools enable people to recognize the benefits of international trade by developing an appreciation for cooperation and competition.

The remainder of this article is organized as follows. Section 2 provides a survey of the relevant literature and Section 3 proposes testable hypotheses. Section 4 explains the process of data collection and presents the basic statistics. Section 5 describes the empirical method and identification strategy used. Section 6 presents and interprets the estimated results. The final section offers some reflections and conclusions.
According to standard and traditional economic theory, international trade first increases productivity and later results in economic benefits. Interdependence among countries promotes international trade, which increases competitive pressure. In the long run, the trade relationships that benefit one country also benefit its trading partners. For this reason, international trade is not considered a zero-sum game. In reality, however, many people do not support free trade, instead seeking to protect domestic industries. The development of international economics in the 21st century has enabled us to analyze the reasons why some people are strongly opposed to trade.

Since 2000, international trade researchers have shifted their attention from countries and industries towards the heterogeneous firms actually engaged in international trade (Bernard, Jensen, Redding, & Schott, 2016; Melitz & Trefler, 2012). The current model assumes that firms with different productivity levels can coexist in an industry. An exploration of heterogeneous firms has led researchers to analyze intra-industry, as well as inter-industry, trade. The influential work of Melitz (2003) has provided a model that demonstrates how exposure to trade leads more productive firms to enter the export market, while less productive firms continue to produce goods only for the domestic market. Naturally, the least productive firms are eventually forced to leave the market. Further increases in an industry’s exposure to trade result in additional inter-firm reallocations that favor more productive firms. If the labor market functions perfectly, workers can always find jobs, even when an increase in competitive pressure in the open economy forces less efficient firms to leave the market. However, this theory does not fully account for the real situation.

In labor economics, a search and matching model has been developed; by incorporating search friction, it enables researchers to analyze imperfect labor markets (Pissarides, 2000). The search and matching model fills the gap between the traditional trade theory and real-life situations. Since 2010, researchers have added labor “friction” to the Merlitz model, something that traditional trade theory does not consider. Using this model, researchers have analyzed trade liberalization and various types of labor markets in different contexts and with different products (e.g., Grossman, Helpman, & Kircher, 2017; Helpman & Itskhoki, 2010, Helpman et al., 2010a; Helpman, Itskhoki, & Redding, 2010b). According to Helpman and Itskhoki (2010), the impact of trade openness on unemployment varies in accordance with the degree of friction in the labor market. Helpman et al. (2010a) have developed a model that shows that wage inequality is higher in a trade context than in autarky, while gradual trade liberalization first increases and later decreases inequality. Enhancing international trade thus reduces inequality in the long term, even though it may exacerbate it in the short term.

Various empirical analyses show that trade between the United States and China has reduced domestic industry employment and wages, while increasing unemployment in the United States (Acemoglu et al., 2016; Autor et al., 2013, 2016). Trade with China has had a similarly detrimental effect on the labor market in Norway (Balsvik, Jensen, & Salvanes, 2015), Spain (Donoso, Martin, & Mendoza, 2014), and Germany (Dauth, Findeisen, & Suedekum, 2014). In contrast, using cross-country data, Dutt, Mitra, and Ranjan (2009) have shown that increased trade openness is associated with a lower rate of unemployment. Felbermyer, Prat, and Schmerer (2011) have arrived at similar results, based on panel data from 20 OECD countries. All in all, researchers have not yet reached agreement about changes in unemployment, income inequality, and wage rates as outcomes of international trade and globalization. Bloom, Draca, and Van Reenen (2016) have found that greater competition in the final market, through trade-induced investment in innovation, leads to productivity growth. This option has had a positive impact on the labor market in the long run.

Drawing on established trade theory, existing research has focused on human capital to highlight the reasons for protecting domestic markets (e.g., Blonigen, 2011; Mayda & Rodrik, 2005; Scheve &
Slaughter, 2001); it has also explored the characteristics of sectors in which individuals are employed (e.g., Beaulieu, 2002a; Ito, 2015). More recently, researchers have considered the extent to which factors such as task routineness and gender determine trade preferences (Blonigen & McGrew, 2014) and status quo bias (Tomura et al., 2016); these issues derive from the field of behavioral economics. However, no existing studies have considered the process by which trade preferences are formed. Investigating preference formation during childhood has become a hot issue within behavioral economics (e.g., Fehr et al., 2008; Kawaguchi & Miyazaki, 2009).

3 FRAMEWORK OF ANALYSIS AND TESTABLE HYPOTHESES

This study investigates whether people’s childhood experiences form noncognitive skills, which in turn influence their trade preferences, as reflected in their attitudes toward the TPP in adulthood (see Figure 1).

Trade is seen as increasing mutual benefits. To understand the benefits of trade, it is important to understand the value of interacting and cooperating with other individuals. The theoretical model indicates that trade liberalization, as a cooperative relationship, evolves gradually in a noncooperative environment (Chisik, 2003). Basically, the ability to construct reciprocal relationships with others is one key to maintaining stable trade networks. As more countries participate in international trade, the economic gains increase. Hypothesis 1 therefore postulates:

Hypothesis 1: Those who understand the benefits that can emerge from group work and reciprocity will prefer free trade and will thus favor the TPP.

Networks can be roughly divided into two types. “Bonding social capital” refers to connections between individuals within a group, while “bridging social capital” unites heterogeneous individuals belonging to different groups (Putnam, 2000). There are various obstacles facing international trade. For instance, in the real world, the market information is often insufficient. Contracts can be breached; a transaction may fail because potential participants do not know whether an anonymous trading partner will be trustworthy. Bonding social capital, such a network within an ethnic group, can function in trade (e.g., Rauch, 2001; Rauch & Trindade, 2002). However, as a historical case study of Mediterranean trade has shown, the closed trade network has been replaced with an open trade network (Greif, 1994). In the current era of globalization, trading with unfamiliar individuals seems more likely to increase benefits. Therefore, bridging social capital is more effective and important than bonding social capital in gaining benefits from international trade. Trust in others in an anonymous society is a fundamental element, acting to increase benefits and economic development throughout the world (e.g., Bjørnskov, 2012; Bjørnskov & Méon, 2015; Zak & Knack, 2001). Generalized trust allows economic exchanges to be extended beyond closed societies; it is thus a key factor that enhances international trade. For this reason, Hypothesis 2 is as follows:

FIGURE 1 The effect of childhood experiences on trade preferences through the formation of noncognitive skills

Note. The shaded arrows denote the focus of this study. The Appendix shows that the direct effect is generally weak; childhood experiences are therefore appropriate for IVs.
Hypothesis 2: Those who are able to trust and to build bridging social networks prefer international trade and thus favor the TPP.

Hypotheses 1 and 2 formalize the effects of noncognitive skills on trade preferences.

4 | DATA

4.1 | The data collection process

To explore peoples’ childhood experiences, existing noncognitive skills, and current trade preferences, we collected individual-level data via an online survey in July 2016. The Nikkei Research Company (a company with significant experience in academic research) was commissioned to conduct the web survey. Web users are presumably different from nonweb users; they may be more likely to have benefited from trade than nonweb users. However, Figure 2 demonstrates that nearly 100 percent of Japanese people are web users in the 20 to 29, 30 to 39, and 40 to 49 age groups. Even for older age groups, the percentage of web users is over 90 percent for people aged 50 to 59 and 80 percent for people aged 60 to 69. Hence, most people of working age are web users in Japan. This study aimed to gather a large enough sample of the working age population to facilitate quantitative analysis. The sampling method used was designed to gather a representative sample of the working age population of Japan.

The 24th House of Councilors election took place in the summer of 2016. Until 2015, people under 20 years old had no voting rights. However, the Public Offices Election Law was amended to give the vote to 18 and 19 year olds. The House of Councilors election in 2016 was the first time that 18 and 19 year-old voters were able to participate in a national election. The 2016 referendum in the United Kingdom was conducted on June 23, 2016, resulting in Brexit. Twelve countries (including the United States and Japan) signed up to the TPP in February 2016. It subsequently became a point of dispute whether the TPP would be ratified. The TPP became one of the hottest international issues during the U.S. presidential campaign, intensively covered in the Japanese media. During this period, directly after the U.K. referendum, Japanese voters were more likely than usual to think about the TPP. Naturally, in the Japan House of Councilors election, support for the TTP became a major point of dispute.

FIGURE 2  Percentage of webusers in each age group

Source. Statistics Bureau, Ministry of Internal Affairs and Communications (2015). Communications Usage Trend Survey. Retrieved from http://www.soumu.go.jp/johotsusintokei/statistics/statistics05.html
Polling day for the House of Councilors election was July 10, 2016. Our survey was of selected Japanese citizens between 18 and 66 years old, from all regions of Japan, was carried out during the week of July 12 to 19, 2016, immediately after the election. The survey continued until 10,000 observations had been gathered. Of the 12,176 respondents who began the survey, 9,997 completed it. Consequently, 9,997 observations were gathered to provide data for this study. The age range and demographic composition of the sample, shown in Figure 3, is almost equivalent to that of the 2015 Japan Census, although the percentage of younger participants in our sample is somewhat lower. Over all, the sample used in the present study can be considered representative of public opinion in Japan.

4.2 Features of the data

The definition and mean values of key variables used for the estimates are shown in Table 1. Questionnaire respondents were asked, “To what degree, do you agree the statement that Japan should ratify the TPP agreement?” Trade preferences were measured by the degree of support for the TPP, with views ranging from 1 (strongly disagree) to 5 (strongly agree). The respondent’s choice is VIEW TPP.

Noncognitive skills were captured by the following four statements, with responses ranging from 1 (strongly disagree) to 5 (strongly agree):

1. Group work leads to a better outcome than working individually.
2. Competition results in benefits for all.
3. If someone does me a favor, I am prepared to return it.
4. Most people can be trusted.

Statements (1) and (3) were used to test the extent to which participants understood the importance of cooperation and interdependence. In economic terms, competition produces winners and losers in the short term, resulting in inequality among people. In the long term, competition can potentially generate benefits for all. Thus, time preference differences can potentially reflect differing views of competition. In other words, a person’s view of international trade outcomes may depend on whether he or she sees
| Variables       | Definition                                                                 | Mean | Max | Min |
|-----------------|----------------------------------------------------------------------------|------|-----|-----|
| VIEW TPP        | Degree of support for the TPP                                              | 3.18 | 5   | 1   |
|                 | 1 (strongly disagree) to 5 (strongly agree)                                 |      |     |     |
| V_GROUP         | Group work leads to better outcomes than working individually             | 3.35 | 5   | 1   |
|                 | 1 (strongly disagree) to 5 (strongly agree)                                 |      |     |     |
| V_COMPET        | Competition results in benefits for society                                | 3.84 | 5   | 1   |
|                 | 1 (strongly disagree) to 5 (strongly agree)                                 |      |     |     |
| V_RECIPRO       | If someone does me a favor, I am prepared to return it                    | 4.21 | 5   | 1   |
|                 | 1 (strongly disagree) to 5 (strongly agree)                                 |      |     |     |
| V_TRUST         | Most people can be trusted.                                                | 3.36 | 5   | 1   |
|                 | 1 (strongly disagree) to 5 (strongly agree)                                 |      |     |     |
| NON_COG_SKILL   | Sum of V_GROUP, V_COMPET, V_RECIPRO, and V_TRUST                           | 17.7 | 25  | 5   |
|                 | Proxy variables for investment in bridging social capital                  |      |     |     |
| TEAM SPORTS PRIM| Assign a value of 1 if the respondent participated in team sports at primary school (6–12 years old); if not, assign a value of 0. | 0.24 | 1   | 0   |
| INIDI SPORTS PRIM| Assign a value of 1 if the respondent participated in individual sports at primary school (6–12 years old); if not, assign a value of 0. | 0.12 | 1   | 0   |
|                 | Proxy variable for investment in bonding social capital                    |      |     |     |
| SOCIAL PRIM     | Degree of participating in community activities as a primary school student | 2.10 | 3   | 1   |
|                 | 1 (not at all), 2 (only participated in main community events), 3 (participated in all community events) |      |     |     |
|                 | Informal school curriculum: learning from others and competition           |      |     |     |
| GROUP PRIM      | Assign a value of 1 if there was a task in which students worked together as a group at primary school; if not, assign a value of 0 | 0.43 | 1   | 0   |
| Variables       | Definition                                                                 | Mean | Max | Min |
|-----------------|-----------------------------------------------------------------------------|------|-----|-----|
| COMPET PRIM     | Assign a value of 1 if there were running races during sporting events at primary school and teachers ranked the finishing order; if not, assign a value of 0 | 0.89 | 1   | 0   |
| Cognitive skills|                                                                             |      |     |     |
| EDU             | Years of schooling                                                          | 14.7 | 18  | 6   |
| ECONOMIC        | Assign a value of 1 if the respondent majored in economics at university; if not, assign a value of 0 | 0.11 | 1   | 0   |
| Control variables|                                                                             |      |     |     |
| AGE             | Respondents’ ages                                                            | 44.9 | 66  | 18  |
| AGESQ           | Square of the respondents’ ages                                              | 2,166| 4,356| 324 |
| MALE            | Assign a value of 1 if the respondent is male; otherwise assign a value of 0 | 0.53 | 1   | 0   |
| INCOM DUMMIES   | 12 household income dummies (income level) are included.                     | —    | —   | —   |
| JOB ORDINARY EMP| Assign a value of 1 if the respondent is a rank-and-file employee; if not, assign a value of 0 | 0.28 | 1   | 0   |
| JOB MANAGER     | Assign a value of 1 if the respondent works in a managerial position; if not, assign a value of 0 | 0.08 | 1   | 0   |
| JOB TEACHER     | Assign a value of 1 if the respondent works as a teacher; if not, assign a value of 0 | 0.02 | 1   | 0   |
| JOB MEDICAL     | Assign a value of 1 if the respondent works in the medical service sector; if not, assign a value of 0 | 0.02 | 1   | 0   |
| JOB AGRI        | Assign a value of 1 if the respondent works in primary industry; if not, assign a value of 0 | 0.004| 1   | 0   |

*Note.* Apart from the job dummies indicated, 13 other job dummies were included in the estimation model. In addition to the types of job presented in Table 1, these were: (1) Chief Executive Officer, (2) Temporary employee, (3) Public officer, (4) Specialist (lawyer, accountant), (5) Self-employed, (6) SOHO (Small Office Home Office), (7) Part-time worker, (8) Outside worker (9) Home worker, (10) Student (university), (11) High school student, (12) No job or retired, (13) Other worker.
them from a long- or short-term perspective (time preference). The variable (2) was used to test participants’ understanding of the importance of competition and the long-term view. Trusting others is a prerequisite for extending market exchanges outside a closed society. Statement (4) was used to test the effect of trusting others. The respondents’ choices to statements (1), (2), (3), and (4) are \( V_{\text{GROUP}} \), \( V_{\text{COMPET}} \), \( V_{\text{RECIPRO}} \), and \( V_{\text{TRUST}} \), respectively. To assess these variables as a whole, we combined them into a synthetic index of noncognitive skills, expressed as \( \text{NON}_\text{COG}_\text{SKIL} \). We also used variables for cognitive skills obtained through formal education: \( \text{EDU} \) and \( \text{ECONOMIC} \). \( \text{EDU} \) captures years of school as a quantitative effect. In the survey, we asked whether participants had majored in economics at university. Based on their response, we created the dummy variable \( \text{ECONOMIC} \), assigning a value of 1 if the respondent majored in economics, and 0 if he/she did not.

Experiences in childhood can be derived from formal and informal education and from social experiences. Informal education has also been called the “hidden curriculum” of schools (Ito, Kubota, & Ohtake, 2014). Following Ito et al. (2014), we used a dummy, \( \text{GROUP}_\text{PRIM} \), assigning a score of 1 to experiences of group work in primary school and a score of 0 to the absence of such experiences. Using the dummy \( \text{COMPET}_\text{PRIM} \), we also assigned a score of 1 to experiences in which a teacher ranked the finishing order in primary school running races. Children develop noncognitive skills during experiences outside school. Experiences of community participation can be important childhood social experiences, teaching children the benefits of collective action. This is captured by \( \text{SOCIAL}_\text{PRIM} \), which ranges from 1 (did not participate at all) to 3 (participated in all community events). Sporting experiences have also been observed to improve life outcomes in adulthood (e.g., Cabane, Hille, & Lechner, 2016; Lechner, 2009; Lechner & Sari, 2015; Light, 2010; Pfeifer & Cornelissen, 2010; Rees & Sabia, 2010). For this reason, we included the sporting experiences of our respondents as schooled children. The experiences were then divided into team and individual sporting experiences. Team sports seem to be more effective in developing interpersonal relationships and helping children understand the benefits of teamwork. Through sporting matches, children meet peers from other schools and communities. By participating in sports, children learn to interact with people from different communities and to extend their horizons beyond their own schools and communities. Such experiences can help individuals to look at the world with a wider field of vision. We used a dummy, \( \text{TEAM}_\text{SPORTS}_\text{PRIM} \) (\( \text{INIDI}_\text{SPORTS}_\text{PRIM} \)), assigning a score of 1 if the respondent participated in team (individual) sports during the period of primary school and a score of 0 if one did not participate.

Table 2 exhibits the correlation matrix of key variables. We see from Table 2 that \( \text{VIEW}_\text{TPP} \) is significantly and positively related with four noncognitive skill variables, a result that confirms our prediction. In contrast, \( \text{VIEW}_\text{TPP} \) is not significantly related to three variables of childhood experiences, \( \text{INDI}_\text{SPORTS}_\text{PRIM} \), \( \text{SOCIAL}_\text{PRIM} \), and \( \text{GROUP}_\text{PRIM} \), despite being significantly and positively related to \( \text{TEAM}_\text{SPORTS}_\text{PRIM} \) and \( \text{COMPET}_\text{PRIM} \). Accordingly, \( \text{INDI}_\text{SPORTS}_\text{PRIM} \), \( \text{SOCIAL}_\text{PRIM} \), and \( \text{GROUP}_\text{PRIM} \) can, to a certain extent, corroborate the assumption that childhood experiences are exogenous to \( \text{VIEW}_\text{TPP} \). Apart from this finding, we have observed a significant positive correlation between noncognitive skill variables. A multicollinearity problem is thought to occur when these variables are incorporated as independent variables at the same time in the estimated function. For this reason, as explained in the following section, noncognitive skill variables are included separately when we carry out the estimate.

Figures 4a to 4e demonstrate the distribution of key variables such as \( \text{VIEW}_\text{TPP} \) and noncognitive skills. About 50 percent of respondents selected 3 in response to \( \text{VIEW}_\text{TPP} \). The percentage of support for the TPP is slightly larger than that of nonsupport for the TPP. The distribution of \( V_{\text{GROUP}} \) is similar to \( \text{VIEW}_\text{TPP} \). The distribution of \( V_{\text{COMP}} \), \( V_{\text{RECIPRO}} \), and \( V_{\text{TRUST}} \) are skewed towards the right, suggesting that these variables have large values. This implies that most people are likely to acquire higher noncognitive skills. This is consistent with the observation that various noncognitive skills are positively correlated (see Table 2).
### TABLE 2  Correlation matrix

| Variables                  | VIEW TPP | V_GROUP | V_COMPET | V_RECIPRO | V_TRUST | TEAM SPORTS PRIM | INIDI SPORTS PRIM | SOCIAL PRIM | GROUP PRIM | COMPET PRIM |
|----------------------------|---------|---------|----------|-----------|---------|------------------|-------------------|-------------|------------|-------------|
| VIEW TPP                   | 1       |         |          |           |         |                  |                   |             |            |             |
| V_GROUP                   | 0.10*** | 1       |          |           |         |                  |                   |             |            |             |
| V_COMPET                  | 0.20*** | 0.26*** | 1        |           |         |                  |                   |             |            |             |
| V_RECIPRO                 | 0.09*** | 0.25*** | 0.39***  | 1         |         |                  |                   |             |            |             |
| V_TRUST                   | 0.10*** | 0.25*** | 0.16***  | 0.21***   | 1       |                  |                   |             |            |             |
| TEAM SPORTS PRIM          | 0.05*** | 0.10*** | 0.09***  | 0.05***   | 0.04    | 1                |                   |             |            |             |
| INIDI SPORTS PRIM         | −0.01   | 0.02    | 0.04***  | 0.02      | 0.003   | −0.09***         | 1                 |             |            |             |
| SOCIAL PRIM               | 0.03    | 0.10*** | 0.12***  | 0.14***   | 0.14*** | 0.14***          | 0.08***           | 1           |            |             |
| GROUP PRIM                | −0.001  | 0.13*** | 0.09***  | 0.09***   | 0.04*** | 0.04***          | 0.07***           | 0.11***     | 1          |             |
| COMPET PRIM               | 0.05*** | 0.09*** | 0.18***  | 0.20***   | 0.07*** | 0.07***          | 0.07***           | 0.03        | 0.16***    | 0.19***     |

*Note. ***Denotes statistical significance at the 1% level.*
5.1 Baseline model

In the baseline model, the estimated function takes the following form, enabling us to assess noncognitive skills in relation to trade preferences, by measuring views on the TPP:
The key variables are cognitive skills. We have included V_GROUP, V_COMPET, V_RECIPRO, and V_TRUST separately in different estimations. Hypotheses 1 and 2 state that an ability to understand the benefits of mutual dependence, cooperation, competition, and generalized trust is necessary for an appreciation of international trade and therefore TPP. Hence, the noncognitive skill variables are expected to be positive. To break down human capital into noncognitive skills and cognitive skills, we included EDU and ECONOMIC as independent variables. As Caplan has observed (2002, 2007), people who understand economics have systematically different opinions about economic policy. The variable ECONOMIC was included to capture that qualitative effect.

Views about international trade may be related to age; the relationship is potentially nonlinear. For this reason, we incorporated both AGE and its square, AGESQ. The control variable vectors are represented by $X_i$, and $B$ is the vector of their coefficients. Existing studies have argued that the impact of globalization on an individual’s economic situation depends on the characteristics of the industries in which he or she has worked (Autor et al., 2016) and his or her economic status within society.

$$\text{VIEW TPP}_i = \alpha_0 + \alpha_1 \text{Noncognitive Skill}_i + \alpha_2 \text{EDU}_i + \alpha_3 \text{ECONOMIC}_i + \alpha_4 \text{AGE}_i + \alpha_5 \text{AGESQ}_i + \alpha_6 \text{MALE}_i + X_i B + u_i.$$ (1)
(Chetverikov, Larsen, & Palmer, 2016). The control variables included in $X_i$ are 17 income dummies and 17 job dummies.\(^6\)

There is the possibility of endogeneity bias in the baseline model because the causality between trade preference and noncognitive skills is not clear. Furthermore, there seems to be a third group of factors that determines the dependent variable and key independent variables. Higher levels of support for trade policy and positive attitudes toward group work, could be determined at the same time by unobserved circumstances. To give a simple example, an individual working in a team at an exporting firm might develop a positive attitude toward group work and international trade simultaneously. In the function, the error term, including third factors, is correlated with the key independent variables. This, inevitably, causes endogeneity bias. To control for this, childhood experiences have been used as exogenous IV to conduct an IV model estimation.

### 5.2 Identification strategy

Early childhood education has been found to be effective in forming noncognitive skills, which play a crucial role in creating positive outcomes in adulthood (Heckman et al., 2010a,b; Heckman, Pinto, & Savelyev, 2013). More specifically, an increasing number of studies have explored the way in which specific features of education (such as teaching practices) form preferences and views about society (e.g., Aspachs-Bracons, Clots-Figueras, Costa-Font, & Masella, 2008; Hryshko et al., 2011; Milligan, Moretti, & Oreopoulos, 2004). Algan et al. (2013) have investigated the extent to which teaching practices in schools change students’ beliefs; they have found a positive causal relationship between “working in groups” and the students’ belief in cooperation and trust. Informal school education is considered to influence noncognitive skills (Algan et al., 2013; Ito et al., 2014). Social participation extends personal relationships in society and thereby teaches the importance of engaging in collective action; it helps people accumulate noncognitive skills. However, informal school curricula and social participation during childhood are unlikely to influence trade preferences or views of the TPP directly, partly because primary school pupils are unable to understand the notion of international trade. In other words, informal curricula and social participation only affect trade preferences through a channel, in which these experiences influence noncognitive skills. In Japan, there are some differences in the informal curricula of primary schools. Group work is adopted in some schools but not in others. In some more egalitarian primary schools, teachers do not rank pupils when they run races. Ito et al. (2014) have found that group work and pro-competition curricula foster noncognitive skills, such as mutual reciprocity and cooperation.\(^7\)

Experiences of community participation are expected to lead people to form interpersonal networks within a community (Putnam, 2000). Furthermore, generalized trust seems to be fostered, not only by closed communities within the larger community, but also by exchanges with children from other schools and towns. People seem to learn and develop values from experiences outside the closed personal relationships within a school. In a number of studies, sports have been found to play a critical role in forming both cognitive and noncognitive skills (e.g., Cabane et al., 2016; Lechner, 2009; Lechner & Sari, 2015; Light, 2010; Pfeifer & Cornelissen, 2010; Rees & Sabia, 2010). Children who join team sports are expected to learn how to improve team performance. They usually learn that team performance can be improved by cooperation and trust among team members. Playing with children from other schools and towns provides opportunities for interchange. Through such experiences, children learned how to bridge a network with other groups. They grow accustomed to strangers and are therefore more likely to trust others.

Following the argument above, we presented the function in the first-stage estimate of the IV model, to exogenously determine noncognitive skills. The estimated function takes the following form:
Cognitive Skill\_i = \beta_0 + \beta_1\text{TEAM}\_\text{SPORTS PRIM}_i + \beta_2\text{INDI}\_\text{SPORTS PRIM}_i \\
+ \beta_3\text{GROUP}\_\text{PRIM}_i + \beta_4\text{COMPET}\_\text{PRIM}_i + \beta_5\text{SOCIAL}\_\text{PRIM}_i + \gamma_i'\text{C} + \epsilon_i. \tag{2}

Early childhood education has a great impact on life outcomes (Heckman et al., 2010a, 2010b, 2013). The above discussion of informal school curricula suggests that the coefficients of \text{GROUP}\_\text{PRIM}, \text{COMPET}\_\text{PRIM}, and \text{SOCIAL}\_\text{PRIM} are likely to be positive. Childhood sporting experiences are observed to form noncognitive skills through social learning (Light, 2010). This study therefore predicts that the coefficient of \text{TEAM}\_\text{SPORTS PRIM} and \text{INDI}\_\text{SPORTS PRIM} will be positive. More than individual sports, team sports are thought to help children learn about the importance of interpersonal cooperation in overcoming opponents. Accordingly, the absolute value of the coefficient of \text{TEAM}\_\text{SPORTS PRIM} is expected to be larger than that of \text{INDI}\_\text{SPORTS PRIM}. At the same time, childhood sporting experiences are unlikely to be related to trade preference, as measured by views on the TPP. The proxy for sporting experiences can therefore be considered an exogenous IV. In the first and the second stages of the IV model, the set of independent variables, including various control dummies, has also been incorporated into all estimates.

6 | RESULTS

6.1 | Baseline OLS model

The estimated results of the baseline OLS model are presented in Table 3. The results show that noncognitive skills such as \text{V}\_\text{GROUP}, \text{V}\_\text{COMPET}, \text{V}\_\text{RECIPRO}, and \text{V}\_\text{TRUST} are positive and are significant at the 1 percent level. Thus, the results of \text{V}\_\text{GROUP} and \text{V}\_\text{RECIPRO} imply that people with a positive view of group work, who consider mutual benefit to be important, tend to prefer trade. These results are consistent with Hypothesis 1. Furthermore, the results of \text{V}\_\text{TRUST} can be interpreted as stating that people who trust others are inclined to prefer trade. Thus, fostering generalized trust is an important prerequisite for enhancing international trade. This finding is consistent with Hypothesis 2. \text{NON}\_\text{COG}\_\text{SKILL}, which combines these factors, also shows a significant positive value. In addition, column (6) shows the result when all noncognitive skill variables are included at the same time. With the exception of \text{V}\_\text{RECIPRO}, these noncognitive skill variables consistently give a significantly positive result. As Table 2 illustrates, the correlation between these key variables leads to a multicollinearity problem in the regression estimation, causing the statistical significance of \text{V}\_\text{RECIPRO} to disappear. What is observed here suggests that, overall, noncognitive skills lead people to support the TPP.

Let us now turn to the results of the control variables. The results of the income dummies suggest that people with higher earnings are more likely to support the TPP, which is consistent with existing studies (e.g., Blonigen, 2011; Mayda & Rodrik, 2005; Tomiura et al., 2016). Regarding the job dummies, 17 job dummies have been included in the estimate. However, the estimates for only four job dummies are shown, as they were the only ones to show statistical significance; they are treated as key variables in Tomiura et al. (2016). The result for \text{JOB}\_\text{AGRI} is the most interesting. It shows a significant negative coefficient, suggesting that agriculture is the most sensitive and import-competing sector in Japan, a finding consistent with previous research (Ito, 2015; Tomiura et al., 2016).

\text{ECONOMIC} shows a significant positive coefficient, which is consistent with Caplan (2002, 2007). This result suggests that people who study economics at university tend to support free trade. By contrast, the coefficient of \text{EDU} is positive but not significant. The estimates of \text{AGE} and \text{AGESQ} show negative and positive values, respectively, and are statistically significant. This indicates that
**TABLE 3**  
Baseline estimation (OLS model)

|                | (1)       | (2)       | (3)       | (4)       | (5)       | (6)       |
|----------------|-----------|-----------|-----------|-----------|-----------|-----------|
| V_GROUP        | 0.09*** (9.04) | 0.04*** (2.88) |           |           |           |           |
| V_COMPET       | 0.22*** (21.4) |           | 0.20*** (16.9) |           |           |           |
| V_RECIPRO      | 0.11*** (8.04) | 0.01 (0.38) |           |           |           |           |
| V_TRUST        | 0.07*** (8.78) | 0.04*** (5.22) |           |           |           |           |
| NON_COG_SKILL  |           |           |           |           | 0.04*** (13.6) |           |
| EDU            | 0.01* (1.68) | 0.01 (1.08) | 0.01* (1.97) | 0.01 (1.63) | 0.01 (1.42) | 0.01 (1.42) |
| ECONOMIC       | 0.13*** (4.27) | 0.13*** (4.42) | 0.13*** (4.23) | 0.13*** (4.31) | 0.13*** (4.24) | 0.13*** (4.24) |
| AGE            | −0.01** (−2.03) | −0.02** (−2.66) | −0.02** (−2.89) | −0.01** (−2.06) | −0.01* (−1.97) | −0.01* (−1.97) |
| AGESQ          | 0.0002*** (2.80) | 0.0002*** (3.41) | 0.0002*** (3.53) | 0.0002** (2.66) | 0.0002** (2.62) | 0.0002** (2.62) |
| MALE           | 0.17*** (9.75) | 0.18*** (10.3) | 0.20*** (11.6) | 0.20*** (11.4) | 0.19*** (10.6) | 0.19*** (10.6) |
| **INCOME<100** |           |           |           |           |           |           |
| INCOM_100<200  | −0.08 (−1.51) | −0.07 (−1.37) | −0.07 (−1.45) | −0.08 (−1.50) | −0.08 (−1.51) | −0.07 (−1.37) |
| INCOM_200<400  | 0.01 (0.27) | −0.003 (−0.07) | 0.01 (0.12) | 0.01 (0.12) | 0.004 (0.08) | −0.01 (−0.01) |
| INCOM_400<600  | 0.07 (1.53) | 0.04 (0.80) | 0.06 (1.22) | 0.06 (1.21) | 0.05 (1.14) | 0.03 (0.60) |
| INCOM_600<800  | 0.11** (2.21) | 0.07 (1.41) | 0.10* (1.93) | 0.10* (1.85) | 0.09* (1.77) | 0.06 (1.14) |
| INCOM_800<1,000| 0.16*** (3.26) | 0.12** (2.33) | 0.16*** (3.02) | 0.15*** (2.85) | 0.14*** (2.79) | 0.10** (2.02) |
| INCOM_1,000<1,200| 0.23*** (3.10) | 0.18** (2.35) | 0.22*** (2.86) | 0.20*** (2.74) | 0.20*** (2.71) | 0.16** (2.08) |
| INCOM_1,200<1,400| 0.35*** (6.62) | 0.30*** (5.11) | 0.34*** (6.27) | 0.34*** (6.23) | 0.33*** (6.28) | 0.29*** (4.90) |

(Continues)
| (1) | (2) | (3) | (4) | (5) | (6) |
|-----|-----|-----|-----|-----|-----|
| INCOM_1,400 < 1,600 | 0.16* (1.96) | 0.12 (1.41) | 0.16* (1.97) | 0.15* (1.81) | 0.15* (1.79) | 0.11 (1.31) |
| INCOM_1,600 < 1,800 | 0.23** (2.17) | 0.18 (1.67) | 0.22** (2.06) | 0.21* (1.90) | 0.20* (1.92) | 0.16 (1.51) |
| INCOM >=2,000 | 0.36*** (3.82) | 0.30*** (3.34) | 0.36*** (3.79) | 0.35*** (3.72) | 0.34*** (3.71) | 0.29*** (3.26) |
| JOB ORDINARY EMP | Default | Default | Default | Default | Default | Default |
| JOB MANAGER | 0.21*** (6.29) | 0.20*** (6.05) | 0.22*** (6.69) | 0.21*** (6.20) | 0.20*** (6.07) | 0.19*** (5.74) |
| JOB TEACHER | -0.20*** (-2.72) | -0.18** (-2.66) | -0.21*** (-3.00) | -0.23** (-3.25) | -0.22** (-3.10) | -0.18** (-2.75) |
| JOB MEDICAL | -0.14** (-2.37) | -0.13** (-2.15) | -0.15** (-2.49) | -0.14** (-2.52) | -0.15** (-2.56) | -0.12** (-2.15) |
| JOB AGRI | -0.82*** (-3.69) | -0.82*** (-3.82) | -0.83*** (-3.67) | -0.83*** (-3.68) | -0.83*** (-3.69) | -0.82*** (-3.81) |

Other job dummies

| Constant | Yes | Yes | Yes | Yes | Yes | Yes |
| R²       | 0.06 | 0.08 | 0.05 | 0.05 | 0.06 | 0.08 |
| Observations | 9,997 | 9,997 | 9,997 | 9,997 | 9,997 | 9,997 |

Note. Dependent variable is VIEW TPP. ***,**,* Denote statistical significance at the 1%, 5%, and 10% levels, respectively. T-values are calculated based on robust standard errors clustered on prefectures. “Yes” means that variables are included as independent variables.
younger people have a more positive view of the TPP, although this tendency decreases as they become older. The $R^2$ is less than 0.1 in all estimates. The fit of the model should therefore be carefully considered, even though the key variable results are the critical factor.

### 6.2 IV model

Tables 4 to 6, and Appendix Table A1 include all of the OLS model control variables, including the income and job dummies, even though the estimates are not reported.

#### 6.2.1 Baseline IV model

Table 4 presents the results of the baseline IV model. During the first stage, it is essential to check its validity, based on various tests for under-identification, weak identification, and over-identification. These show the validity of the estimates. The coefficients of TEAM SPORTS PRIM and INDI SPORTS PRIM show positive results in all columns. The statistical significance of TEAM SPORTS PRIM can be seen in all columns, while that of INDI SPORTS PRIM only appears in columns (2) and (4). Furthermore, the coefficients of TEAM SPORTS PRIM are larger than those of INDI SPORTS PRIM in all estimates. This suggests convincingly that team sports in general have a greater effect on positive views about cognitive skills. The coefficients of GROUP_PRIM and COMPET_PRIM are significant and positive, with the exception of COMPET_PRIM when V_TRUST is the dependent variable. The coefficients of GROUP_PRIM are larger than those of COMPET_PRIM when V_GROUP and V_TRUST are dependent variables. Thus, GROUP_PRIM (with its relatively large effect) can be interpreted in a similar way to TEAM SPORTS PRIM, as the latter has a larger effect than INDI SPORTS PRIM. With respect to social participation, the coefficients of SOCIAL_PRIM are significant and positive in all columns. All in all, and consistent with our predictions, childhood experiences and education have a clear influence on noncognitive skills.

The second-stage results of Table 4 show that the coefficients of V_GROUP, V_COMPET, V_RECIPRO, V_TRUST, and NON_COG_SKILL are all positive and significant at the 1 percent level. Therefore, even after controlling for endogeneity bias, noncognitive skills formed in childhood lead people to support the TPP. These results support Hypotheses 1 and 2. Turning to the degree of their effects, the absolute value of the coefficients of V_COMPET, V_RECIPRO, V_GROUP, and V_TRUST are approximately 0.30. These results imply that a 1-point increase in these variables on the 5-point scale leads to a 0.30-point increase in international trade preference. These values are about three times larger than those of V_COMPET, V_RECIPRO, V_GROUP, and V_TRUST in the OLS results reported in Table 3. Hence, the OLS results are under-estimated. As discussed in Section 4, the third factors could be correlated noncognitive skills as well as support for trade policy. Workers in multinational companies are likely to support international trade and to have greater noncognitive skills. The OLS estimation includes 17 job dummies; however, it is not possible to control for the detailed characteristics of various companies in which respondents worked. In other words, in the OLS estimations, the error term is positively correlated with the capturing of key independent variables. This, in turn, results in an under-estimation bias about the degree of these effects on the dependent variable.

#### 6.2.2 Robustness check for IV model

We used various sets of IV to carry out robustness checks and have reported the results of the IV models in Tables 5–6, and 7. As explained in Section 4, unobserved childhood circumstances have
|                         | (1)       | (2)       | (3)       | (4)       | (5)       |
|-------------------------|-----------|-----------|-----------|-----------|-----------|
| **Second stage**        |           |           |           |           |           |
| V_GROUP                 | 0.27***   |           |           |           |           |
|                         | (5.49)    |           |           |           |           |
| V_COMPET                |           | 0.30***   |           |           |           |
|                         |           | (6.77)    |           |           |           |
| V_RECIPRO               |           |           | 0.26***   |           |           |
|                         |           |           | (5.99)    |           |           |
| V_TRUST                 |           |           |           | 0.28***   |           |
|                         |           |           |           | (4.20)    |           |
| NON_COG_SKILL          |           |           |           |           | 0.07***   |
|                         |           |           |           |           | (6.06)    |
| EDU                    | 0.01*     | 0.003     | 0.01*     | 0.002     | 0.01      |
|                         | (1.12)    | (0.74)    | (1.96)    | (0.58)    | (1.07)    |
| ECONOMIC               | 0.13***   | 0.13***   | 0.13***   | 0.12***   | 0.13***   |
|                         | (4.16)    | (4.47)    | (4.08)    | (4.05)    | (4.15)    |
| **First stage**         |           |           |           |           |           |
| EDU                    | 0.01      | 0.02***   | −0.004    | 0.02***   | 0.05***   |
|                         | (1.99)    | (3.38)    | (−0.82)   | (4.05)    | (3.14)    |
| ECONOMIC               | 0.01      | 0.01      | 0.02      | 0.05      | 0.10      |
|                         | (0.37)    | (0.30)    | (0.49)    | (1.25)    | (0.96)    |
| **Exogenous IV**        |           |           |           |           |           |
| TEAM SPORTS PRIM        | 0.13***   | 0.09***   | 0.07***   | 0.14***   | 0.52***   |
|                         | (5.23)    | (5.02)    | (5.32)    | (5.95)    | (7.80)    |
| INDI SPORTS PRIM       | 0.03      | 0.07***   | 0.06      | 0.05*     | 0.14      |
|                         | (1.18)    | (2.90)    | (1.66)    | (1.75)    | (1.47)    |
| SOCIAL PRIM            | 0.09***   | 0.07***   | 0.09***   | 0.14***   | 0.45***   |
|                         | (6.36)    | (8.93)    | (8.98)    | (8.60)    | (10.9)    |

(Continues)
TABLE 4  (Continued)

|                  | (1)     | (2)     | (3)     | (4)     | (5)     |
|------------------|---------|---------|---------|---------|---------|
| GROUP PRIM       | 0.20*** (11.4) | 0.07*** (3.87) | 0.09*** (5.87) | 0.08** (2.69) | 0.65*** (10.3) |
| COMPET PRIM      | 0.16*** (5.50) | 0.37*** (15.3) | 0.43*** (12.8) | 0.06 (1.50) | 0.96*** (11.7) |
| Under-identification (Kleibergen–Paap rk LM stat) | 291.7 P = 0.00 | 292.1 P = 0.00 | 339.7 P = 0.00 | 190.2 P = 0.00 | 447.0 P = 0.00 |
| Weak-identification (Kleibergen–Paap F stat) | 62.0 P = 0.00 | 67.6 P = 0.00 | 83.1 P = 0.00 | 39.0 P = 0.00 | 103.6 P = 0.00 |
| Over-identification (Hansen J-stat) | 8.13 P = 0.08 | 2.88 P = 0.57 | 3.09 P = 0.54 | 5.85 P = 0.20 | 4.34 P = 0.36 |
| Observations     | 9,997   | 9,997   | 9,997   | 9,997   | 9,997   |

Note. The dependent variable is VIEW TPP. ***,**, *Denote statistical significance at the 1%, 5%, and 10% levels, respectively. T values are calculated based on robust standard errors clustered on prefectures. Other control variables included in Table 2 are also included in the first and second stages of the model.
|                  | (1)          | (2)          | (3)          | (4)          | (5)          |
|------------------|--------------|--------------|--------------|--------------|--------------|
| **Second stage** |              |              |              |              |              |
| V_GROUP          | 0.24*** (3.56) |              |              |              |              |
| V_COMPET         |              | 0.31*** (4.24) |              |              |              |
| V_RECIPRO        |              |              | 0.28*** (4.18) |              |              |
| V_Trust          |              |              |              | 0.25*** (3.36) |              |
| Non_Cog_Skill    |              |              |              |              | 0.06*** (4.02) |
| Father’s EDU     | -0.006 (-1.33) | -0.007 (-1.42) | -0.007 (-1.48) | -0.006 (-1.30) | -0.006 (-1.44) |
| Mother’s EDU     | -0.002 (-0.45) | -0.003 (-0.56) | -0.001 (-0.11) | -0.0004 (-0.57) | -0.002 (-0.41) |
| EDU              | 0.005 (0.70)  | 0.003 (0.40)  | 0.01 (1.42)   | 0.003 (0.45)  | 0.005 (0.71)  |
| ECONOMIC         | 0.14*** (4.05) | 0.15*** (4.22) | 0.14*** (4.09) | 0.14*** (3.77) | 0.14*** (3.98) |
| **First stage**  |              |              |              |              |              |
| Father’s EDU     | 0.003 (0.67)  | 0.003 (0.83)  | 0.005 (1.37)  | 0.003 (0.58)  | 0.02 (1.33)   |
| Mother’s EDU     | -0.005 (-0.87) | -0.001 (-0.18) | -0.01** (-2.21) | -0.001 (-0.11) | -0.02 (-1.11) |
| EDU              | 0.01** (2.34)  | 0.02*** (3.12) | -0.01 (-1.04) | 0.02*** (2.92) | 0.05*** (2.68) |
| ECONOMIC         | 0.02 (0.51)   | 0.002 (0.06)  | 0.01 (0.39)   | 0.05 (1.30)   | 0.11 (1.04)   |
| **Exogenous IV** |              |              |              |              |              |
| Team Sports      | 0.13*** (5.08) | 0.09*** (4.32) | 0.06*** (3.08) | 0.14*** (5.18) | 0.49*** (6.36) |
| Indi Sports      | 0.03 (0.93)   | 0.06** (2.42) | 0.02 (0.72)   | 0.04 (1.10)   | 0.07 (0.74)   |

(Continues)
TABLE 5  (Continued)

|                     | (1)           | (2)           | (3)           | (4)           | (5)           |
|---------------------|---------------|---------------|---------------|---------------|---------------|
| SOCIAL PRIM         | 0.09*** (6.32)| 0.07*** (5.99)| 0.08*** (6.46)| 0.15*** (9.55)| 0.45*** (9.86)|
| GROUP PRIM          | 0.20*** (9.54)| 0.07*** (3.91)| 0.08*** (5.04)| 0.07** (3.06) | 0.65*** (9.83)|
| COMPET PRIM         | 0.14*** (4.03)| 0.35*** (10.9)| 0.41*** (12.4)| 0.03 (0.77)   | 0.88*** (7.79)|
| Under-identification test (Kleibergen–Paap rk LM stat) | 230.1, P = 0.00 | 217.3, P = 0.00 | 232.8, P = 0.00 | 160.0, P = 0.00 | 348.4, P = 0.00 |
| Weak-identification (Kleibergen–Paap F stat) | 49.0, P = 0.00 | 50.9, P = 0.00 | 57.3, P = 0.00 | 33.3, P = 0.00 | 80.4, P = 0.00 |
| Over-identification test (Hansen J-stat) | 8.12, P = 0.08 | 3.34, P = 0.50 | 3.46, P = 0.48 | 8.89, P = 0.06 | 5.29, P = 0.25 |
| Observations       | 8,536         | 8,536         | 8,536         | 8,536         | 8,536         |

Note. Parents’ years of schooling and a dummy for the residential prefecture at 6 years old have been added to the model in Table 3. ***,**,,* Denote statistical significance at the 1%, 5%, and 10% levels, respectively. T-values are calculated based on robust standard errors. Father’s EDU and Mother’s EDU are the father and mother’s schooling years, respectively. Other control variables included in Table 2 are also included in the first and second stages of the model.
### TABLE 6  Estimation where exogenous IV variables are restricted (IV model)

|                | (1)          | (2)          | (3)          | (4)          | (5)          |
|----------------|--------------|--------------|--------------|--------------|--------------|
| **Second stage** |              |              |              |              |              |
| V_GROUP        | 0.20*** (3.38)|              |              |              |              |
| V_COMPET       |              | 0.27*** (3.30)|              |              |              |
| V_RECIPRO      |              |              | 0.26*** (3.18)|              |              |
| V_TRUST        |              |              |              | 0.22*** (2.96)|              |
| NON_COG_SKILL |              |              |              |              | 0.05*** (3.51)|
| EDU            | 0.01 (1.36)  | 0.004 (0.83) | 0.01* (1.96) | 0.004 (0.83) | 0.01 (1.29)  |
| ECONOMIC       | 0.13*** (4.21)| 0.13*** (4.42)| 0.13*** (4.04)| 0.12*** (4.11)| 0.13*** (4.18)|
| **First stage** |              |              |              |              |              |
| EDU            | 0.01** (2.17) | 0.02*** (3.67)| −0.001 (−0.32)| 0.02*** (4.22)| 0.06*** (3.46)|
| ECONOMIC       | 0.02 (0.69)  | 0.02 (0.64)  | 0.02 (0.75)  | 0.05 (1.43)  | 0.14 (1.32)  |
| **Exogenous IV** |              |              |              |              |              |
| INDI SPORTS PRIM | 0.01 (0.48)  | 0.06** (2.23) | 0.03 (1.25)  | 0.05 (0.92)  | 0.06 (0.64)  |
| SOCIAL PRIM    | 0.11*** (7.93)| 0.10*** (11.7)| 0.12*** (11.6)| 0.16*** (10.2)| 0.55*** (13.2)|
| GROUP PRIM     | 0.23*** (12.6)| 0.12*** (5.93)| 0.14*** (8.03)| 0.09*** (3.44)| 0.78*** (11.8)|

(Continues)
|                              | (1)  | (2)  | (3)  | (4)  | (5)  |
|------------------------------|------|------|------|------|------|
| Under-identification        | 236.1| 161.0| 205.7| 158.6| 360.6|
| (Kleibergen–Paap rk LM stat)| $P = 0.00$ | $P = 0.00$ | $P = 0.00$ | $P = 0.00$ | $P = 0.00$ |
| Weak-identification (Kleibergen–Paap $F$ stat) | 80.7 | 54.5 | 70.6 | 53.4 | 127.9 |
|                              | $P = 0.00$ | $P = 0.00$ | $P = 0.00$ | $P = 0.00$ | $P = 0.00$ |
| Over-identification (Hansen $J$-stat) | 2.26 | 1.98 | 1.51 | 1.70 | 1.45 |
|                              | $P = 0.32$ | $P = 0.37$ | $P = 0.46$ | $P = 0.42$ | $P = 0.48$ |
| Observations                 | 9,997| 9,997| 9,997| 9,997| 9,997|

*Note.* The dependent variable is VIEW TPP. ***, **, *Denote statistical significance at the 1%, 5%, and 10% levels, respectively. $T$-values are calculated based on robust standard errors clustered on prefectures. The results of the first stage are not reported but are available upon request from the corresponding author. Other control variables included in Table 2 are also included in the first and second stages of the model.
TABLE 7  Estimation where the exogenous IV variables are restricted (IV model)

|          | (1)     | (2)     | (3)     | (4)     | (5)     |
|----------|---------|---------|---------|---------|---------|
| **Second stage** |         |         |         |         |         |
| V_GROUP  | 0.23*** (4.07) |         |         |         |         |
| V_COMPET |         | 0.28*** (5.29) |         |         |         |
| V_RECIPRO|         |         | 0.25*** (4.77) |         |         |
| V_TRUST  |         |         |         | 0.49*** (4.05) |         |
| NON_COG_SKILL |         |         |         |         | 0.06*** (4.71) |
| EDU      | 0.01 (1.23) | 0.003 (0.83) | 0.01* (1.96) | −0.001 (−0.35) | 0.01 (1.11) |
| ECONOMIC | 0.13*** (4.20) | 0.13*** (4.49) | 0.13*** (4.14) | 0.11*** (3.56) | 0.12*** (4.19) |

| **First stage** |         |         |         |         |         |
| EDU      | 0.01** (2.05) | 0.02*** (3.37) | −0.003 (−0.73) | 0.02*** (4.19) | 0.06*** (3.15) |
| ECONOMIC | 0.02 (0.66) | 0.01 (0.47) | 0.02 (0.61) | 0.06 (1.44) | 0.14 (1.22) |

| **Exogenous IV** |         |         |         |         |         |
| GROUP PRIM | 0.22*** (12.6) | 0.09*** (4.85) | 0.10*** (7.15) | 0.11*** (3.53) | 0.75*** (11.8) |
| COMPET PRIM | 0.20*** (7.47) | 0.41*** (15.5) | 0.47*** (13.2) | 0.13*** (3.25) | 1.18*** (13.3) |

| Under-identification (Kleibergen–Paap rk LM stat) | 204.9 | 222.4 | 264.1 | 43.4 | 293.7 |
| P = 0.00 | P = 0.00 | P = 0.00 | P = 0.00 | P = 0.00 |

| Weak-identification (Kleibergen–Paap F stat) | 105.6 | 128.9 | 160.3 | 21.4 | 162.5 |
| P = 0.00 | P = 0.00 | P = 0.00 | P = 0.00 | P = 0.00 |

| Over-identification (Hansen J-stat) | 6.88 | 0.02 | 0.01 | 2.41 | 3.59 |
| P = 0.01 | P = 0.87 | P = 0.89 | P = 0.12 | P = 0.06 |

| Observations | 9,997 | 9,997 | 9,997 | 9,997 | 9,997 |

Note. The dependent variable is VIEW TPP. ***, **, * Denote statistical significance at the 1%, 5%, and 10% levels, respectively. T-values are calculated based on robust standard errors clustered on prefectures. Other control variables included in Table 3 are also included but their results are not reported.
influenced the process of individual preference formation. For instance, parent characteristics have a significant impact on children’s preferences (Kawaguchi & Miyazaki, 2009). The influence of surrounding people can be expected to vary across different residential areas. If these factors are not sufficiently controlled, the estimation results are biased. To avoid this, residential prefecture dummies (from when the respondents were 6 years old), and parents’ years of education have been added to the set of independent variables in the model in Table 4; the results are shown in Table 5, although the sample size has been reduced to approximately 8,500.

Furthermore, to confirm the relationship between the exogenous IV variables and trade preferences, Appendix Table A1 presents the variables for informal curriculum and sporting experience added to the OLS model when the dependent variable is VIEW TPP. The control variables are equivalent to those specified in Table 5. Appendix Table A1 suggests that the coefficients of COMPET_PRIM are statistically significant and positive in all columns. TEAM SPORTS PRIM is positive and statistically significant in column (3). Furthermore, Table 2 shows a strong correlation between VIEW TPP and COMPET_PRIM (TEAM SPORTS PRIM). TEAM SPORTS PRIM and COMPET_PRIM could be invalid as exogenous instruments. In Table 6, TEAM SPORTS and COMPET_PRIM are therefore excluded from the set of instruments in the Table 4 specification. It is also true that engaging in team sports or social activities outside school can reflect personal characteristics. Individual characteristics inevitably correlate with the error term. These experiences have been found to improve life outcomes in adulthood in several respects. They influence trade preferences, not only by helping to develop noncognitive skills, but also through other channels. For this reason, the variable used to capture these experiences may be invalid as an exogenous instrumental variable. Hence, TEAM SPORTS PRIM, INDI SPORTS PRIM, and SOCIAL PRIM are excluded from the instrumental variables in the Table 4 specification—these results are shown in Table 7.

In the first stage of Tables 5, 6, and 7, as in Table 4, the set of the exogenous instrumental variables is valid in all columns, based on various tests for its validity. When it comes to the second-stage results, there are significant and positive coefficients in all columns for the proxies for noncognitive skills: V_GROUP, V_COMPET, V_RECIPRO, V_TRUST, and NON_COG_SKILL. The results shown in Table 4 are therefore robust to alternative specifications. What we have observed thus far in Tables 4 to 7 strongly supports Hypotheses 1 and 2.

The findings of this study suggest that the influence of noncognitive skills on trade preferences, measured using views on the TPP, is robust to alternative specifications, even after controlling for endogeneity bias. Furthermore, childhood education and sporting experiences play an important role in the formation of noncognitive skills. From this we derive the argument that policymakers should place greater emphasis on fostering noncognitive skills to promote international trade and economic development.

7 | CONCLUSION

As the results of various political elections in 2016 have shown, unilateralism has become a pervasive position in developed countries such as the United States and the United Kingdom, even though these countries have taken the initiative to drive globalization by promoting market integration. It is important for people to understand the benefits of interdependence between countries in promoting international trade because people who understand those benefits are more likely to support international trade policies, such as the TPP, at election time. Existing studies have analyzed the determinants of international trade preferences. However, little is known about the process of the trade preference formation in childhood.
This paper has empirically examined the long-term process through which international trade preferences, measured using views on the TPP, are formed. We have treated childhood experience and education as exogenous IVs that help to form noncognitive skills. We examined the relationship between such skills and international trade preferences. Learning experiences from the far distant past are unlikely to be related to trade preferences; however, they are likely determinants of noncognitive skills. We controlled for cognitive skills measured by years of schooling and a dummy for studying economics at university. The key findings are as follows: (1) sporting experiences, group learning, and social participation in childhood result in people developing positive subjective views about the role of group work, competition, reciprocity, and generalized trust; (2) greater noncognitive skills lead to people developing positive views of the TPP.

These findings imply that, not only group learning in class, but also experiences that extend children’s interpersonal relationships outside school, can help them gain a broader perspective and ultimately appreciate the benefits of international trade.

As the data used in this paper are limited to Japan, this argument may not apply to people in other countries. To generalize the discussion, we hope to examine these hypotheses using data from other countries with different economic and social conditions. The findings of this paper are based on cross-sectional survey data. The experiment was not conducted in a natural setting and the validity of the exogenous instruments is not completely secure, although we have used the most appropriate method available for the estimation, given the constraints. Future research should include a natural experiment or field experiments to scrutinize the role of childhood experiences and trade preferences. These issues should be addressed in future research.

ACKNOWLEDGMENT

We would like to thank Editage (www.editage.jp) for English language editing. We would like to thank the two anonymous referees Hiroaki Miyamoto (International Monetary Fund), and Yasuyuki Todo (Waseda University) for valuable comments and constructive suggestions that helped improve the quality of this paper. We also would like to thank Statistics Bureau, Ministry of Internal Affairs and Communications to allow us to use the data. This study was supported by the Grant-in-Aid for Scientific Research B (Grant No. 16H03628) from the Japan Society for the Promotion of Science.

NOTES

1 Sasaki, Okuyama, Ogaki, and Ohtake (2017) have found that the effect of education on perceptions of immigrants vary according to country and various personal characteristics. In Japan, South Korea, and Singapore, people with higher levels of education tend to discriminate against foreigners, while the opposite pattern has been observed in Germany. By contrast, Tomiura, Ito, Mukunoki, and Wakasugi (2017) have found that more educated people are likely to favor both immigrants and imports.

2 The policy views of economic researchers differ systematically from those of ordinary people (Caplan, 2002).

3 In a similar way, the determinants of votes for trade liberalization bills have been investigated (Baldwin & Magee, 2000; Beaulieu, 2002b; Kaempfer & Marks, 1993). Candidates in close elections are more likely to be protectionist because of electoral pressure in Japan (Ito, 2015).

4 The role of morals in international trade has been examined within the framework that countries incur “psychological costs” when they renege on formal international trade agreements (Furusawa, 2009).

5 We also show that the direct effect of childhood experiences on trade preferences is generally weak; the former variables are appropriate for IV.

6 In addition to the four dummies shown in Table 1, we also controlled for 13 kinds of jobs; (1) chief executive officer, (2) temporary employee, (3) public officer, (4) specialists (lawyer, accountant), (5) self-employment, (6) SOHO (small
office, home office), (7) part-time worker, (8) outside worker (9) home worker, (10) student (university), (11) high-

school student, (12) no job or retired, (13) other worker.

7 Glaeser, Ponzetto, and Shleifer (2007) have constructed a model in which schooling teaches people to interact with
others, increasing the benefits of civic participation. This argument suggests that education can lead people to prefer
group work and reciprocity.

ORCID

Eiji Yamamura http://orcid.org/0000-0002-5903-3582

REFERENCES

Acemoglu, D., Autor, D. H., Dorn, D., Hanson, G., & Price, B. (2016). Import competition and the great U.S.
employment sag of the 2000s. *Journal of Labor Economics, 34*(S1), S141–S198.

Algan, Y., Cahuc, P., & Shleifer, A. (2013). Teaching practices and social capital. *American Economic Journal: Applied Economics, 5*(3), 189–210.

Aspachs-Bracons, O., Clots-Figueras, I., Costa-Font, J., & Masella, P. (2008). Compulsory language educational pol-
icies and identity formation. *Journal of European Economic Association, 6*(2–3), 434–444.

Autor, D. H., Dorn, D., & Hanson, G. H. (2013). The China syndrome: Local labor market effects of import compe-
tition in the United States. *American Economic Review, 103*(6), 2121–2168.

Autor, D. H., Dorn, D., & Hanson, G. (2016). The China shock: Learning from labor-market adjustment to large
changes in trade. *Annual Review of Economics Annual Reviews, 8*(1), 205–240.

Baldwin, R. E., & Magee, C. S. (2000). Is trade policy for sale? Congressional voting on recent trade bills. *Public Choice, 105*(1–2), 79–101.

Balsvik, R., Jensen, S., & Salvanes, K. (2015). Made in China, sold in Norway: Local labor market effects of an
import shock. *Journal of Public Economics, 127*, 137–144.

Beaulieu, E. (2002a). Factor or industry cleavages in trade policy? An empirical analysis of the Stolper–Samuelson
theorem. *Economics and Politics, 14*(2), 99–131.

Beaulieu, E. (2002b). The Stolper–Samuelson theorem faces congress. *Review of International Economics, 10*(2),
343–360.

Bernard, A., Jensen, B., Redding, S., & Schott, P. (2016). *Global firms* (NBER Working Paper No. 22727).
National Bureau of Economic Research, Cambridge, MA.

Bjørnskov, C. (2012). How does social trust affect economic growth? *Southern Economic Journal, 78*(4), 1346–
1368.

Bjørnskov, C., & Méon, P.-G. (2015). The productivity of trust. *World Development, 70*, 317–331.

Blonigen, B. (2011). Revisiting the evidence on trade policy preferences. *Journal of International Economics, 85*(1),
129–135.

Blonigen, B., & McGrew, J. (2014). Task routineness and trade policy preferences. *Economics and Politics, 26*(3),
505–518.

Bloom, N., Draca, M., & Van Reenen, J. (2016). Trade induced technical change? The impact of Chinese imports
on innovation, IT, and productivity. *Review of Economic Studies, 83*(1), 87–117.

Cabane, C., Hille, A., & Lechner, M. (2016). Mozart or Pelé? The effects of adolescents’ participation in music and
sports. *Labour Economics, 41*, 90–103.

Caplan, B. (2002). Systematically biased beliefs about economics: Robust evidence of judgmental anomalies from
the survey of Americans and economists on the economy. *Economic Journal, 112*(479), 433–458.

Caplan, B. (2007). *The myth of the rational voter: Why democracies choose bad policies*. Princeton, NJ: Princeton
University Press.

Chetverikov, D., Larsen, B., & Palmer, C. (2016). IV quantile regression for group-level treatments, with an applica-
tion to the effects of trade on the distribution of wages. *Econometrica, 84*(2), 809–833.
Chisik, R. (2003). Gradualism in free trade agreements: A theoretical justification. *Journal of International Economics, 59*(2), 367–397.

Dauth, W., Findeisen, S., & Suedekum, J. (2014). The rise of the East and the Far East: German labor markets and trade integration. *Journal of the European Economic Association, 12*(6), 1643–1675.

Donoso, V., Martin, V., & Minondo, A. (2014). Do differences in exposure to Chinese imports lead to differences in local labour market outcomes? An analysis for Spanish provinces. *Regional Studies, 49*(10), 1746–1764.

Dutt, P., Mitra, D., & Ranjan, P. (2009). International trade and unemployment: Theory and cross-national evidence, *Journal of International Economics, 78*(1), 32–44.

Fehr, E., Bernhard, H., & Rockenbach, B. (2008). Egalitarianism in young children. *Nature, 454*(28), 1079–1083.

Felbermyer, G., Prat, J., & Schmerer, H.-J. (2011). Trade and unemployment: What do the data say? *European Economic Review, 55*(6), 741–758.

Furusawa, T. (2009). WTO as moral support. *Review of International Economics, 17*(SI), 327–337.

Glaeser, E. L., Ponzetto, G. A. M., & Shleifer, A. (2007). Why does democracy need education? *Journal of Economic Growth, 12*(2), 77–99.

Greif, A. (1994). Cultural beliefs and the organization of society: A historical and theoretical reflection on collectivist and individualist societies. *Journal of Political Economy, 102*(5), 912–950.

Grossman, G., Helpman, E., & Kircher, P. (2017). Matching, sorting, and the distributional effects of international trade. *Journal of Political Economy, 125*(1), 224–264.

Heckman, J., Moon, S. H., Pinto, R., Savelyev, P. A., & Yavitz, A. (2010a). The rate of return to the HighScope Perry Preschool Program. *Journal of Public Economics, 94*(1–2), 114–128.

Heckman, J., Moon, S. H., Pinto, R., Savelyev, P. A., & Yavitz, A. (2010b). Analyzing social experiments as implemented: A reexamination of the evidence from the HighScope Perry Preschool Program. *Quantitative Economics, 1*(1), 1–46.

Heckman, J., Pinto, R., & Savelyev, P. (2013). Understanding the mechanisms through which an influential early childhood program boosted adult outcomes. *American Economic Review, 103*(6), 2052–2086.

Helpman, E., & Itskhoki, O. (2010). Labour market rigidities, trade and unemployment. *Review of Economic Studies, 77*(3), 1100–1137.

Helpman, E., Itskhoki, O., & Redding, S. (2010a). Inequality and unemployment in a global economy. *Econometrica, 78*(4), 1239–1283.

Helpman, E., Itskhoki, O., & Redding, S. (2010b). Unequal effects of trade on workers with different abilities. *Journal of the European Economic Association, 8*(2–3), 421–433.

Hryshko, D., Luengo-Prado, M. J., & Sørensen, B. E. (2011). Childhood determinants of risk aversion: The long shadow of compulsory education. *Quantitative Economics, 2*(1), 37–72.

Ito, B. (2015). Does electoral competition affect politicians’ trade policy preferences? Evidence from Japan. *Public Choice, 165*(3), 239–261.

Ito, T., Kubota, K., & Ohtake, F. (2014). The hidden curriculum and social preferences (RIETI Discussion Paper Series No. 14-E-024). Research Institute of Economy, Trade and Industry, Tokyo, Japan.

Kaempfer, W. H., & Marks, S. V. (1993). The expected effects of trade liberalization: Evidence from US congressional action on fast-track authority. *World Economy 16*(6), 725–740.

Kawaguchi, D., & Miyazaki, J. (2009). Working mothers and sons’ preferences regarding female labor supply: Direct evidence from stated preferences. *Journal of Population Economics, 22*(1), 115–130.

Lechner, M. (2009). Long-run labour market and health effects of individual sports activities. *Journal of Health Economics, 28*(4), 839–854.

Lechner, M., & Sari, N. (2015). Labor market effects of sports and exercise: Evidence from Canadian panel data. *Labour Economics, 35*(C), 1–15.

Light, R. L. (2010). Children’s social and personal development through sport: A case study of an Australian swimming club. *Journal of Sport & Social Issues, 34*(4), 379–395.
Mayda, A. (2006). Who is against immigration? A cross-country investigation of individual attitudes toward immigrants. *Review of Economics and Statistics, 88*(3), 510–530.

Mayda, A., & Rodrik, D. (2005). Why are some people (and countries) more protectionist than others? *European Economic Review, 49*(6), 1393–1430.

Melitz, M. (2003). The impact of trade on intra-industry reallocations and aggregate industry productivity. *Econometrica, 71*(6), 1695–1725.

Melitz, M., & Trefler, D. (2012). Gains from trade when firms matter. *Journal of Economic Perspectives, 26*(2), 91–118.

Milligan, K., Moretti, E., & Oreopoulos, P. (2004). Does education improve citizenship? Evidence from the United States and the United Kingdom. *Journal of Public Economics, 88*(9–10), 1667–1695.

Pfeifer, C., & Cornelissen, T. (2010). The impact of participation in sports on educational attainment—new evidence from Germany. *Economics of Education Review, 29*(1), 94–103.

Pissarides, C. A. (2000) *Equilibrium unemployment theory* (2nd edn). Cambridge MA: MIT Press.

Putnam, R. (2000). *Bowling alone: The collapse and revival of American community.* New York: Touchstone Books.

Rauch, J. E. (2001). Business and social networks in international trade. *Journal of Economic Literature, 39*(4), 1177–1203.

Rauch, J. E., & Trindade, V. (2002). Ethnic Chinese networks in international trade. *Review of Economics & Statistics, 84*(1), 116–130.

Rees I., & Sabia, J. (2010). Sports participation and academic performance: Evidence from the National Longitudinal Study of Adolescent Health. *Economics of Education Review, 29*(5), 751–759.

Sasaki, S., Okuyama, N., Ogaki, M., & Ohtake, F. (2017). *Education and pro-family altruistic discrimination against foreigners: Five-country comparisons* (ISER Discussion Paper No. 1002). Institute of Social and Economic Research, Osaka University, Japan.

Scheve, K., & Slaughter, M. (2001). What determines individual trade-policy preferences? *Journal of International Economics, 54*(2), 267–292.

Tomiura, E., Ito, B., Mukunoki, H., & Wakasugi, R. (2016). Individual characteristics, behavioral biases, and trade policy preferences: Evidence from a survey in Japan. *Review of International Economics, 24*(5), 1081–1095.

Tomiura, E., Ito, B., Mukunoki, H., & Wakasugi, R. (2017). *Individual characteristics, behavioral biases, and attitudes toward immigration: Evidence from a survey in Japan* (RIETI Discussion papers No. 17033). Research Institute of Economy, Trade and Industry, Tokyo, Japan.

Zak, P. J., & Knack, S. (2001). Trust and growth. *Economic Journal, 111*(470), 295–321.

**How to cite this article:** Yamamura E, Tsutsui Y. Trade policy preference, childhood sporting experience, and informal school curriculum: An examination of views of the TPP from the viewpoint of behavioral economics. *Rev Int Econ*. 2019;27:61–90. [https://doi.org/10.1111/roie.12356](https://doi.org/10.1111/roie.12356)
### Table A1 Checking the exogeneity of IV variables (OLS model)

|                  | (1)          | (2)          | (3)          | (4)          | (5)          | (6)          |
|------------------|--------------|--------------|--------------|--------------|--------------|--------------|
| V_GROUP          | 0.09*** (7.25) | 0.04*** (2.77) |              |              |              |              |
| V_COMPET         |              | 0.21*** (19.0) | 0.20*** (15.1) |              |              |              |
| V_RECIPRO        |              |              | 0.10*** (7.88) | 0.01 (0.41)  |              |              |
| V_TRUST          |              |              |              | 0.07*** (7.95) | 0.04*** (5.13) |              |
| NON_COG_SKILL    |              |              |              |              | 0.04*** (11.2) |              |
| EDU              | 0.01 (1.12)  | 0.004 (0.78) | 0.01 (1.45)  | 0.01 (1.11)  | 0.01 (0.99)  | 0.002 (0.58) |
| ECONOMIC         | 0.14*** (4.92) | 0.14*** (5.14) | 0.14*** (4.90) | 0.14*** (4.97) | 0.14*** (4.95) | 0.14*** (5.19) |
| Father’s EDU     | −0.005 (−1.40) | −0.006 (−1.43) | −0.006 (−1.43) | −0.005 (−1.36) | −0.006 (−1.52) | −0.006 (−1.52) |
| Mother’s EDU     | −0.003 (−0.50) | −0.003 (−0.50) | −0.003 (−0.39) | −0.003 (−0.56) | −0.003 (−0.44) | −0.003 (−0.47) |
| TEAM SPORTS      | 0.04 (1.51)  | 0.03 (1.24)  | 0.05* (1.76) | 0.04 (1.63)  | 0.03 (1.22)  | 0.02 (0.88)  |
| INDI SPORTS      | −0.02 (−0.74) | −0.03 (−1.03) | −0.02 (−0.70) | −0.02 (−0.73) | −0.02 (−0.75) | −0.03 (−1.10) |
| SOCIAL PRIM      | 0.02 (1.16)  | 0.01 (0.67)  | 0.02 (1.26)  | 0.02 (1.02)  | 0.01 (0.53)  | 0.001 (0.06) |
| GROUP PRIM       | −0.01 (−0.61) | −0.01 (−0.47) | −0.002 (−0.10) | 0.001 (0.09) | −0.02 (−1.05) | −0.02 (−0.97) |
| COMPET PRIM      | 0.09*** (3.67) | 0.03 (1.04)  | 0.07** (2.40) | 0.11*** (3.84) | 0.07*** (2.75) | 0.03 (0.92)  |
| Other control variables in Table 2 | Yes | Yes | Yes | Yes | Yes | Yes |
| $R^2$            | 0.07         | 0.09         | 0.07         | 0.07         | 0.08         | 0.09         |
| Observations     | 8,536        | 8,536        | 8,536        | 8,536        | 8,536        | 8,536        |

Note. The dependent variable is VIEW. Parents’ years of schooling and a dummy for the residential prefecture at 6 years old have been added. ***,**,* Denote statistical significance at the 1%, 5%, and 10% levels, respectively. $T$-values are calculated based on robust standard errors clustered on prefectures. “Yes” means that the variables are included as independent variables.