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Abstract:

We investigated how childhood education and experiences helped to form non-cognitive skills and later, trade policy preferences. We used individual-level data with approximately 10,000 observations collected 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, patience, and generalized trust and (2) positive views about the role of group work, competition, reciprocity, patience, and generalized trust leads people to prefer the Trans-Pacific Strategic Economic Partnership Agreement (TPP).

Key words: Trade policy; Policy preferences; TPP; Informal school curriculum; Childhood sporting experience; Social capital

JEL classification: F13; D83; I21; Z13; Z29

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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). Furthermore, in that same year, Donald Trump was elected president of the United States and then announced its secession from the Trans-Pacific Strategic Economic Partnership Agreement (TPP) and the Paris agreement. In a number of European countries, individual political parties increased their popularity and therefore their influence on economic policy.

Thus, unilateralism appears pervasive in developed countries, although these countries are expected to promote globalization by seeking market integration among countries. The views of economic researchers on policies systematically differ from those of ordinary people (Caplan, 2002). Researchers of international economics consider it important that people understand the mutual benefit of international trade between countries to gain their support for globalization. However, it is unknown whether people support globalization and international cooperation even when aware that economists promote the benefits of participating in the European Union and TPP. Educated people are observed to have a tendency to prefer international trade and immigration (Mayda and Rodrik, 2005; Mayda, 2006)¹. This is congruent to the argument that a lack of basic knowledge on economics leads to unexpected outcomes and people should therefore learn about economics (Caplan, 2007).

However, people's views about globalization appear to depend not only on logical thinking but also on emotions or perceptions. As observed in Mayda and Rodrik (2005), even after controlling for cognitive skills captured by schooling years, non-economic factors such values and attachments play an important role in determining trade preferences. That is, people's non-cognitive skills including their values and perception are possibly key factors in avoiding unilateralism. The issue of how non-cognitive skills are formed in the field of behavioral and education economics has become a hot topic (e.g., Algan et al., 2013; Heckman et al., 2010a; 2010b; Hryshko et al., 2011; Kawaguchi and Miyazaki, 2009; Fehr et al., 2008). Despite this, little is

¹ Sasaki et al. (2017) found that the effect of education on perceptions about immigrants varied according to country and various specifications. In Japan, South Korea, and Singapore, people with higher education levels tend to discriminate against foreigners while the opposite results are observed in Germany. In contrast, Tomiura et al. (2017) found that more educated people are more likely to prefer immigrants as well as imports.

known about how 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. The contribution of this paper is to examine the trade preference formation by bridging educational economics and international economics from the viewpoint of behavioral economics.

The purpose of this paper is to examine how childhood experiences form non-cognitive skills and in turn trade policy preferences. We examined several types of childhood experiences, and we used proxies for bridging and bonding social capital in childhood (primary school age). Here, sporting experiences are considered as bridging social capital while participation in community activities is treated as bonding social capital. In addition, the informal “hidden curriculum” in school is also considered. In July 2016, we collected individual level data from all over Japan, with a sample size of approximately 10,000 observations. Thus, under the condition where there is conflict between unilateralism and globalism, we examined how childhood experiences influence the trade preference.

We used the variables of experiences and types of education in childhood as exogenous instrumental variables (IV) to control for the endogeneity of key independent variables. This will capture non-cognitive skills when the formation of trade preferences is examined. The key findings of this study are that sporting experiences and informal education formed non-cognitive skills, which in turn had a crucial influence on the preference for international trade. The remainder of this article is organized as follows. Hypotheses are proposed in Section 2 and Section 3 explains the data. Section 4 provides the empirical method used and we present and interpret the estimation results in Section 5. The final section offers some conclusions.

2. Related Literature and Hypotheses

According to the traditional and standard economic theory, international trade increases productivity and then economic benefits. International trade is promoted by interdependence among countries. Competitive pressure increases as a consequence of international trade. In the long run, a country’s benefit results in the benefit of other countries through trade. Therefore, international trade is not regarded as a zero-sum game. However, in reality, not everyone supports free trade, instead seeking the protection of domestic industries. Based on the established trade theory, existing research that highlights the reasons why domestic markets should

be protected focus on human capital (e.g, Blonigen, 2011; Mayda and Rodrik, 2005; Scheve and Slaughter, 2001) and the characteristics of the sectors where individuals are employed (e.g., Beaulieu, 2002a; Ito 2015).² More recently, as determinants of trade preferences, researchers have considered other factors such as task routineness, gender (Blonigen and McGrew, 2014), and status quo bias (Tomiura et al., 2016), which can be categorized as issues in the field of behavioral economics.³ However, existing studies have not considered the process regarding how trade preferences are formed. Investigating preference formation during childhood can be considered a hot issue within behavioral economics (e.g., Kawaguchi and Miyazaki, 2009; Fehr et al., 2008). Thus, we attempted to investigate whether childhood experiences formed people's non-cognitive skills, which in turn influenced their trade preferences in adulthood. As is illustrated in Figure 1, the shaded arrows are examined in this paper.⁴

Trade is considered to increase mutual benefits. Therefore, interaction and cooperation with other individuals are critical to understand trade benefits. The theoretical model has indicated that trade liberalization, as a cooperative relationship, evolves gradually in a non-cooperative environment (Chisik, 2003). Basically, constructing reciprocal relations with others is thought to be a key factor to maintain stable trade networks. International trade basically increases the economic gains as a larger number of countries participate in trade. Therefore, Hypothesis 1 is postulated:

Hypothesis 1: Those who understand that benefits emerge from group work and reciprocity prefer free trade.

The 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 for international trade. For instance, in the real

² In a similar way, the determinants of votes for trade liberalization bills were investigated (Kaempfer and Marks, 1993; Baldwin and Magee, 2000; Beaulieu, 2002b). Candidates in close elections are more likely to be protectionist because of electoral pressure in Japan (Ito, 2015).

³ The role of morals in international trade is examined within the framework that countries incur "psychological costs" when they renege on formal international trade agreements (Furusawa, 2009).

⁴ We also show that the direct effect of childhood experiences on trade preference is generally weak, so that the former variables are appropriate for IV.

world, there is often insufficient market information provided. Furthermore, there is the possibility of breaching the contract. If so, the transaction may fail because it is unknown whether the anonymous trading partner is reliable in the market. Bonding social capital, such as the network within an ethnic group, can function in trade (e.g., Rauch, 2000; Rauch and Trnidade, 2002). However, as observed in a historical case study about Mediterranean trade, the closed trade network has been replaced with the opened trade network (Greif, 1994). Thus, in the current era of globalization, trading with unfamiliar individuals seems to be more effective to increase benefits. Therefore, bridging social capital is more effective and important in gaining benefits from international trade. Trust in others in an anonymous society is a fundamental key element to increase benefits and economic development throughout the world (e.g., Zak and Knack, 2001; Bjørnskov, 2012; Bjørnskov and Méon, 2015). Generalized trust enhances the extending of economic exchanges to outside the closed society, and is therefore a key factor in enhancing international trade. Here, we propose Hypothesis 2:

Hypothesis 2: Those who trust and have bridging social networks prefer international trade.

Market competition enhanced by free trade is expected to result in economic benefits in the long run by fostering new industries or by giving industries a comparative advantage. This is despite the fact that international trade can change the industry structure, which harms industries that do not have a comparative advantage. International trade often reduces the short-run benefits of industries without comparative advantages, which in turn generates unemployment. If the labor market functions well, unemployed people will find jobs in the export sector. That is, international trade causes the reallocation of labor between sectors, and each moving worker must pay adjustment costs (Furusawa and Lai, 1999). However, from a long-term viewpoint, after paying an adjustment cost, the industry structure becomes more efficient and the demand for labor increases and unemployment is then reduced. Therefore, patient people have a more positive view on free trade. Here, we raise Hypothesis 3:

Hypothesis 3: Those who consider that competition generates benefits and consider patience to be important prefer international trade.

The effects of non-cognitive skills on trade preferences have been formalized in Hypotheses 1 to 3. We now proceed to a hypothesis regarding the determinants of non-cognitive skills. We focus on the effects of childhood experiences on non-cognitive skills.

Early childhood education has been found to be effective in forming non-cognitive skills, which play a crucial role in creating positive outcomes in adulthood (Heckman et al., 2010a; 2010b; 2013). More specifically, an increasing number of studies have explored how specific features of education (such as teaching practices) formed preferences and views about society (e.g., Aspachs-Bracons et al., 2008; Hryshko et al., 2011; Milligan et al., 2004). Algan et al. (2013) investigated whether teaching practices at school changed students' beliefs and found a positive causal relationship between "working in groups" and students' beliefs in cooperation and trust. Informal school education is considered to influence non-cognitive skills (Algan et al., 2013; Ito et al., 2014). Social participation extends personal relationships in society and thereby teaches the importance of interaction between people and collective action, which accumulates non-cognitive skills. However, informal school curriculums and social participation during childhood are unlikely to influence trade preferences directly, partly because primary school pupils are unable to understand the notion of international trade. That is, informal curriculums and social participation only affect trade preference via the channel in which these experiences influence non-cognitive skills. In Japan, there are some differences in informal curriculum among primary schools. Group work is adopted in some schools but not others. Based on egalitarianism, in some primary schools teachers do not rank the finishing order of pupils in running races. Ito et al. (2014) found that group work and pro-competition curriculums foster non-cognitive skills such as mutual reciprocity and cooperation.⁵ Thus, we propose Hypothesis 4:

Hypothesis 4: Those who have experienced social participation in a community and competition and group work in school tend to cooperate and trust others.

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 the closed community within a

⁵ Glaeser et al (2007) constructed a model where schooling teaches people to interact with others, which increases the benefits of civic participation. Following this line, education possibly leads people to prefer group work and reciprocity.

community but also by exchanges with children from other schools and towns. People seem to learn and form their values from experiences outside of the closed personal relations within a school. In number of studies, sports were found to play a critical role in forming not only cognitive but also non-cognitive skills (e.g., Cabane et al., 2016; Lechner and Sari, 2105; Lechner, 2009; Light, 2010; Pfeifer and Cornelissen, 2010; Rees and Sabia, 2010). Those who join team sports are expected to learn how to improve team performance. Furthermore, they are thought to learn that the performance of team can be improved by cooperation and trust among team members. They also had the opportunity to play with those from other schools and towns, and therefore interchanged with them. Through such experiences, they learned how to bridge network with other groups. Consequently, they were more likely to grow accustomed to strangers and thereby trust others. Hence, we raise Hypothesis 5:

Hypothesis 5: Those who experience team sports in childhood tend to cooperate and trust others.

3. Data

To explore peoples' experiences in childhood, their current non-cognitive skills, and their current trade preferences, we collected individual-level data via an online survey in July 2016. We commissioned the Nikkei Research Company (a company with significant experience in academic research) to conduct the web survey. The survey was conducted with randomly selected people aged 20 to 66 years from all over Japan, and was to run until approximately 10,000 observations had been gathered. Consequently, we gathered 9,997 observations.

The definition and mean values of the key variables used for the estimations are shown in Table 1. Trade preference was measured by the degree of support for the TPP, which ranges from 1 (strongly disagree) to 5 (strongly agree).

Non-cognitive skills was captured by the following 5 statements, which also range 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) I should contain my craving for success in the far distant future.
- (5) I generally trust others.

Statements (1) and (3) were used to test the effect of understanding the importance of cooperation and interdependence. In terms of economics, the outcome of

competition can be considered as follows. In the short term, competition produces winners and losers, resulting in inequality among people. However, in the long term, competition possibly generates benefits for all. Thus, the difference in time preference possibly leads to a difference in views about competition. Hence, views about international trade depend on whether people consider the outcome of international trade from a long- or short-term perspective (time preference). The variable from statement (4) is considered to capture the time preference. The variables (2) and (4) are used to test the effect of understanding the importance of competition and the long-term view. Trusting others extends market exchanges outside of the closed society. Statement (5) was used to test the effect of trusting others. Furthermore, to consider the various facets of these variables as a whole, we summed these five variables into a synthetic index of non-cognitive skills, which is expressed as NON_COG_SKIL. We also used variables for cognitive skills obtained through formal education such as EDU and ECONOMIC.

Experiences in childhood can be divided into formal and informal education and social experiences. Informal education was known as the “hidden curriculum” in a school (Ito et al., 2014). Following Ito et al. (2014), we used a dummy, GROUP PRIM, taking 1 if there is group work in the primary school, otherwise 0. In addition, the dummy COMPET PRIM was used, taking 1 if the teacher ranked the finishing order in running races at primary school. From experiences outside of school, children have the opportunity to develop their non-cognitive skills. Experiences of community participation in childhood are also important childhood social experiences, teaching children how to understand the benefits of collective action. Sporting experiences have also been observed to improve life outcomes in adulthood (e.g., Cabane et al, 2016; Lechner and Sari, 2105; Lechner, 2009; Light, 2010; Pfeifer and Cornelissen, 2010; Rees and Sabia, 2010). Furthermore, we included the sporting experiences of the respondents as school-aged children. The experiences were then divided into team and individual sporting experiences. Team sports seem to be more effective in developing interpersonal relations and understanding the benefits of team work. Through sporting matches, children have the chance to meet other children from other schools and communities. Therefore, participation in sports enables children to interact with people from different communities and to extend their world to outside that of their own school and community. This in turn helps individuals to look at the world with a wider field of vision.

4. Framework and Method

In the baseline model, to assess the non-cognitive skills on trade preferences, the estimated function takes the following form:

$$\text{TRADE PREF}_i = \alpha_0 + \alpha_1 \text{Cognitive Skill}_i + \alpha_2 \text{EDU}_i + \alpha_3 \text{ECONOMIC}_i + \alpha_4 \text{AGE}_i + \alpha_5 \text{AGESQ}_i + \alpha_6 \text{MALE}_{it} + X'_i B + u_i. \quad (1)$$

The key variables are cognitive skills. We included V_GROUP, V_COMPET, V_RECIPRO, V_PATIENT, and V_TRUST separately in different estimations. Hypotheses 1–3 state that understanding the benefit from mutual dependence, cooperation, competition, long-term view (time preference), and generalized trust seems to be critical for people to prefer international trade. Hence, the non-cognitive skills variables are expected to be positive. To decompose human capital into non-cognitive skills and cognitive skills, we included EDU and ECONOMIC as independent variables. EDU captures schooling years considered as the quantitative effect. As observed by Caplan (2002; 2007), those with knowledge about economics have systematically different views about economic policy. ECONOMIC is included to capture this qualitative effect.

Views about international trade may be related to age and its relation is possibly non-linear. Hence, we incorporate not only AGE but also its square AGESQ. Furthermore, the vectors of the control variables are denoted by X_i , and B is the vector of their coefficients. These control variables are 17 income dummies and 19 occupation dummies.

There is the possibility of endogenous bias in the baseline model because the causality between trade preference and non-cognitive skills is not clear. To control for this, childhood experiences are used as exogenous IV to conduct an IV model estimation.

In the first-stage estimation of the IV model, to exogenously determine the non-cognitive skills, the estimated function takes the following form:

$$\text{Cognitive Skill}_i = \beta_0 + \beta_1 \text{TEAM_SPORTS}_i + \beta_2 \text{INDI_SPORTS}_i + \beta_3 \text{GROUP_PRIM}_i + \beta_4 \text{COMPET_PRIM}_i + \beta_5 \text{SOCIAL_PRIM}_i + Y'_i C + e_i. \quad (2)$$

According to Hypothesis 4 regarding the informal school curriculum, the coefficients of GROUP_PRIM, COMPET_PRIM, and SOCIAL_PRIM are expected to be positive. Childhood sporting experiences are observed to form non-cognitive skills

through social learning (Light, 2010). However, childhood sporting experiences are unlikely to be related to trade preference. Therefore, the proxy for sporting experiences can be considered as an exogenous IV. Team sports are thought to better help children learn about the importance of interpersonal cooperation to beat opponents than individual sports. Based on Hypothesis 5, we predicted that the coefficient of TEAM_SPORTS will be positive.

Furthermore, the age at which people experience sports is also thought to be important because early childhood education has a great impact on life outcomes (Heckman et al., 2010a; 2010b; 2013). To compare the effects of team and individual sports according to age groups, we asked respondents in the survey whether they had experienced team and/or individual sports as primary school pupils (ages 6–12), junior high students (ages 13–15), and high school students (ages 16–18). We then made six dummy variables for team and individual sports experiences across the three schooling periods: TEAM_SPORTS_PRIM, TEAM_SPORTS_JUNIOR, TEAM_SPORTS_HIGH, INDI_SPORTS_PRIM, INDI_SPORTS_JUNIOR, and INDI_SPORTS_HIGH. We also aggregated these six dummies to make the proxies for team and individual sports experiences; for example, TEAM_SPORTS and INDI_SPORTS, which range from 0 (never participated in any sport) to 3 (participated in sport throughout the time at school). In an alternative model, as exogenous IV, we incorporate these six dummies separately.

5. Results

5.1. Baseline OLS model

The estimation results of the baseline OLS model are presented in Table 2. The results show that non-cognitive skills such as V_GROUP, V_COMPET, V_RECIPRO, V_PATIENT, and V_TRUST are positive and are significant at the 1% level. Thus, the results of V_GROUP and V_RECIPRO imply that those with a positive view about group work and who consider mutual benefit to be important tend to prefer trade. These results are consistent with Hypothesis 1. Furthermore, the results of V_TRUST can be interpreted to state that those who trust others are inclined to prefer trade. Thus, fostering generalized trust is important to enhance international trade. This is consistent with Hypothesis 2. The results of V_PATIENT show that patient people who consider the issue from a long-term view tend to prefer trade. This is consistent with Hypothesis 3. NON_COG_SKILL, which combines these factors, also shows a significant positive value. This suggests that, overall, non-cognitive skills lead people to prefer international trade.

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 prefer trade, which is consistent with existing studies (e.g., Blonigen, 2011; Mayda and Rodrik, 2005; Tomiura et al., 2016). Regarding the job dummies, only the estimates on four job dummies are exhibited because they were the only ones to show statistical significance and are treated as key variables in Tomiura et al. (2016). Among these, the result for JOB_AGRI is the most interesting. It shows a significant negative coefficient, suggesting that agriculture is the most sensitive and import-competing sector in Japan. This is consistent with previous research (Ito 2015, Tomiura et al. 2016).

ECONOMIC shows a significant positive coefficient, which is consistent with Caplan (2002, 2007). This suggests that those who learn about economics at university tend to support free trade. In contrast, the coefficient of EDU is positive but not significant. The estimates of AGE and AGESQ show negative and positive values, respectively, and are statistically significant. This indicates that younger people prefer free trade, although this tendency decreases as one become older.

5.2. IV model.

We used various sets of IV for robustness checks and report the results of the IV models in Tables 3, 4, and 5. Furthermore, to check the relation between exogenous IV variables and trade preference, we exhibit the estimation results in the Appendix when the variables of the informal curriculum and sporting experience are added to the OLS Baseline model (1).

We now turn to the results of the IV model in Table 3. In the first stage, an over-identification test shows the validity of the estimation with the exception of column (1). Not only the degree of team sport experiences under the age of 18 years but also that of individual sports improving non-cognitive skills shows a significant positive value, with the exception of V_PATIENT being the dependent variable. Furthermore, the coefficients of TEAM_SPORTS are larger than those of INDI_SPORTS when V_GROUP and V_TRUST are dependent variables. This convincingly suggests that team sports have a greater effect on positive views about group work and generalized trust. In contrast, the coefficients of INDI_SPORTS are larger than those of TEAM_SPORTS when V_COMPET and V_RECIPRO are dependent variables. This indicates that individual sports experience leads more people to have positive view about competition because interpersonal relations are less likely to play a role in understanding the meaning of competition. Regarding the coefficients of

GROUP_PRIM and COMPET_PRIM, they 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 larger effect) can be interpreted similarly to TEAM_SPORTS, as the latter has a larger effect than INDI_SPORTS. 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 non-cognitive skills. These results are consistent with Hypotheses 4 and 5.

In the second-stage results of Table 3, the coefficients of V_GROUP, V_COMPET, V_RECIPRO, V_PATIENT, V_TRUST, and NON_COG_SKILL are all positive and significant at the 1% level. Therefore, even after controlling for endogeneity bias, non-cognitive skills formed in childhood lead people to prefer trade. There is, however, the possibility that the parents' characteristics influenced the formation of non-cognitive skills. If parents' characteristics are not controlled, the estimation results are biased. To avoid this, the father's and mother's schooling years are included in the model in Table 3 and the results are shown in Table A1 of the Appendix, although its sample size is reduced to approximately 8,500. The results of Table A1 are similar to those of Table 3. Hence, these results strongly support Hypotheses 1, 2, and 3.

To further check the validity of the exogenous instruments, we included IV variables into Equation (1). The results are shown in Table A2 of the Appendix, which suggests that the coefficients of TEAM_SPORTS and COMPET_PRIM are significant and positive with the exception of column (2). Hence, TEAM_SPORTS and COMPET_PRIM are possibly invalid as exogenous instruments. Thus, in the specification exhibited in Table 4, we exclude TEAM_SPORTS and COMPET_PRIM from the set of exogenous instruments.

In the first stage of Table 4, from the results of the over-identification test, the set of the exogenous instruments are valid in all columns. Regarding the results of the second stage, in all columns, we can see significant and positive coefficients for the proxies for non-cognitive skills: V_GROUP, V_COMPET, V_RECIPRO, V_PATIENT, V_TRUST, and NON_COG_SKILL. The coefficient of V_PATIENT is 0.33, which is larger than those of the other proxies for non-cognitive skills. Therefore, the time preference formed in childhood experience is the most influential factor in making people prefer international trade. The coefficients of V_COMPE and

V_RECIPRO are approximately 0.20 and those of V_GROUP and V_TRUST are approximately 0.16. These results imply that a 1-point increase in these variables on the 5-point scale leads to a 0.20- and 0.16-point increase in the international trade preference. As for TEAM_SPORTS and COMPET_PRIM, they do not show consistent statistical significance and therefore their direct effect on trade preference is not as robust.

In Table 5, sporting experience variables are decomposed into three categories according to the schooling age groups. Thus, there are six variables: TEAM SPORTS PRIM, TEAM SPORTS JUNIOR, TEAM SPORTS HIGH, INDI SPORTS PRIM, INDI SPORTS JUNIOR, and INDI SPORTS HIGH. These are used in the first stage to consider how the effects of sporting experiences differ according to age and the kinds of sports. We see from Table 5 that TEAM SPORTS PRIM is statistically significant in all columns. Therefore, as a whole, team sports experience at a younger age has a larger effect on non-cognitive skills. In contrast, it is interesting to observe that participating in individual sports at primary school age has no effect while the opposite is true for experiences at an older age. In our interpretation, before establishing the self, experiences with others are critical, whereas individual experiences became more important as people grow older to establish the self. Sportspeople possibly form tightly knit groups, which are closed to outsiders. If so, they share a conservative view and oppose trade liberalization to protect domestic industries. In this case, sporting experience accumulates bonding social capital rather than bridging social capital. Hence, an empirical investigation is required to test whether sporting experiences lead people to prefer international trade. Our results clearly show that childhood sporting experiences foster bridging social capital, which can lead people to prefer trade liberalization in adulthood.

Our observations thus far suggest that the influence of non-cognitive skills on trade preferences is robust to alternative specifications even after controlling for endogenous bias. Furthermore, childhood education and sporting experiences play an important role in the formation of non-cognitive skills. From this we derive the argument that policymakers should put place a greater emphasis on fostering non-cognitive skills to promote international trade and economic development.

There are many examples of anecdotal evidence about the influence of sporting experiences on the formation of non-cognitive skills. For example, Shinya Yamanaka (2012 Nobel Prize winner) participated in both judo and rugby at school days, and suffered broken bones on more than ten occasions. He learned much from these experiences (Nihon Keizai Newspaper 2008). His time playing sports as a teenager

led Yamanaka to believe that his successes were the result of cooperation with many people while his failures were due to his own mistakes (Yamanaka, 2017). He originally trained as a plastic surgeon, but was not good at performing operations and experienced repeated setbacks. He then decided to change careers and spent 3 years as a Post-Doctoral Fellow in the United States (Nihon Keizai Newspaper 2015). Before winning the Nobel Prize, Yamanaka gave the following advice to a young student, “it is important to continue to challenge to improve one’s best” and “inscrutable are the ways of heaven” (Nihon Keizai Newspaper 2008). A further example is that of Kazuhiro Takei, a top corporate lawyer (Nihon Keizai Newspaper 2015). Takei played football in early childhood, and then tennis from junior high until university (Minamiyama, 2017). He walked a hard road in his experience of sports. Even with considerable practice he could not improve his tennis game. However, he endured hours of rigorous training and withstood adversity.⁶ This experience led Takei to consider the importance of patience and to believe that fortune awaits honest toil and earnest endeavor (Minamiyama 2017, 6). Thanks to the formation of non-cognitive skills through sporting experiences as a teenager, Takei later studied abroad at Harvard Law School and an MBA course at Oxford to obtain a wider legal perspective and knowledge. These cases are in line with the findings in this paper.

6. Conclusion.

As shown in the results of various political elections in 2016, unilateralism appears pervasive in developed countries such as the United States and the United Kingdom, although these countries have an initiative to drive globalization by promoting market integration. It is important for people to understand the benefits of interdependence between countries to promote international trade because those who understand it are more likely to support international trade policies such as TPP at election time. Existing studies have analyzed the determinants of international trade preferences. However, little is known about the process of preference formation in childhood.

This paper empirically examined how international trade preferences are formed in a long-term process. We treated childhood experience and education as exogenous IV to form non-cognitive skills. We then examined the relation between such skills and international trade preferences, as learning experiences from the far distant

⁶ Yasuyuki Todo is Japanese researcher in the field of international and development economics, and was a schoolmate of Takei. According to Todo, classmates attached an honorific suffix to Takei’s name because he was well-known by his earnest character. In Japanese, he was called “Takei-san” by fellow pupils.

past are unlikely to be related to trade preferences but are considered to be determinants of non-cognitive skills. Furthermore, we controlled for cognitive skills measured by schooling years and a dummy for learning about economics at university. The key findings are: (1) sporting experiences, group learning, and social participation in childhood resulted in people having positive subjective views about the role of group work, competition, reciprocity, patience, and generalized trust, and (2) greater non-cognitive skills makes people prefer free trade.

The findings imply that not only group learning within school classes but also experiences that extend children's interpersonal relations to others outside of their school are important to help people view matters from a broader perspective and then to understand the benefits of international trade.

The data used in this paper are limited to Japan and so it is unknown whether our argument holds true in other countries. Thus, to generalize the discussion, we should examine our hypotheses using data from other countries with different economic and social conditions. The findings of this paper are based on cross-section survey data. The experiment was not conducted in a natural setting and the validity of the exogenous instruments is not completely acceptable, even though we attempted to use the appropriate method for estimation under the constraints. Therefore, future research should include a natural experiment or field experiments should be conducted to scrutinize the role of childhood experiences and trade preferences.

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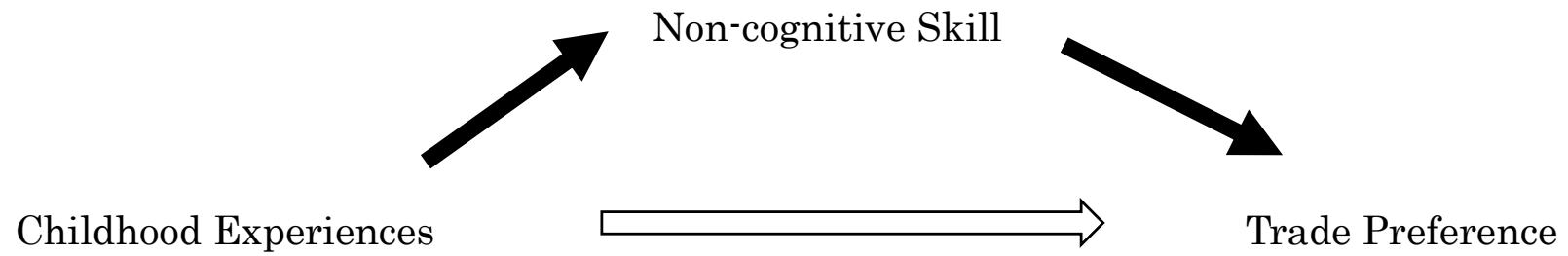


Figure 1. Effect of childhood experiences on trade preferences through the formation of non-cognitive skills

Note: Shaded arrows denote the focus in this study. The Appendix shows that the direct effect is generally weak, so that childhood experiences are appropriate for the IVs.

Table 1. Basic statistics and definitions of key variables used for estimation

Variables	Definition	Mean	Max	Min
TRADE PEF	Degree of support for the TPP 1 (strongly disagree) – 5 (strongly agree)	3.18	5	1
V_GROUP	Group work leads to better outcomes than working individually 1 (strongly disagree) – 5 (strongly agree)	3.35	5	1
V_COMPET	Competition results in benefits for society 1 (strongly disagree) – 5 (strongly agree)	3.84	5	1
V_RECIPRO	If someone does me a favor, I am prepared to return it 1 (strongly disagree) – 5 (strongly agree)	4.21	5	1
V_PATIENT	I should contain my craving for success in the far distant future 1 (strongly disagree) – 5 (strongly agree).	3.41	5	1
V_TRUST	I generally trust others 1 (strongly disagree) – 5 (strongly agree).	3.36	5	1
NON_COG_SKILL	Sum of V_GROUP, V_COMPET, V_RECIPRO, V_PATIENT and V_TRUST.	17.7	25	5
Proxy variables for investment in bridging social capital				
TEAM SPORTS PRIM	Takes 1 if the respondent participated in team sports at primary school age (about 6–12 years old), other wise 0.	0.24	1	0
TEAM SPORTS JUNIOR	Takes 1 if the respondent participated in team sports at junior high age (about 13–15 years old), other wise 0	0.28	1	0
TEAM SPORTS HIGH	Takes 1 if the respondent participated in team sports at high school age (about 16–18 years old), other wise 0.	0.17	1	0
TEAM SPORTS	Sum of TEAM SPORTS PRIM, TEAM SPORTS JUNIOR, and TEAM SPORTS HIGH.	0.70	3	0
INIDI SPORTS PRIM	Takes 1 if the respondent participated in individual sports at at primary school age (about 6–12 years old), other wise 0.	0.12	1	0
INIDI SPORTS JUNIOR	Takes 1 if the respondent participated in individual sports at junior high age (about 13–15 years old), other wise 0.	0.29	1	0

INDI SPORTS HIGH	Takes 1 if the respondent participated in individual sports at high school age (about 16–18 years old), other wise 0.	0.18	1	0
INDI SPORTS	Sum of INDI SPORTS PRIM, INDI SPORTS JUNIOR, and INDI SPORTS HIGH	0.60	3	0
	Proxy variable for investment in bonding social capital			
SOCIAL PRIM	Degree of participating in community activities as a primary school student 1 (not at all), 2 (only participated in main community events), 3 (participated in all community events)	2.10	3	1
	Informal school curriculum to learn from others and competition			
GROUP PRIM	Takes 1 if there was a task in which students worked together as a group at primary school, otherwise 0.	0.43	1	0
COMPET PRIM	Takes 1 if there were running races during sporting events at primary school and teachers ranked the finishing order, otherwise 0.	0.89	1	0
	Cognitive skills			
EDU	Schooling years	14.7	18	6
ECONOMIC	Takes 1 if the respondent majored in economics at university, otherwise 0.	0.11	1	0
	Control variables			
AGE	Respondents' ages	44.9	66	18
AGESQ	Square of respondents' ages	2166	4356	324
MALE	Takes 1 if the respondent is male, otherwise 1	0.53	1	0
INCOM DUMMIES	12 household income dummies (income level) are included	-----	----	---
JOB ORDINARY EMP	Takes 1 if the respondent is a rank-and-file employee, otherwise 1	0.28	1	0

JOB MANAGER	Takes 1 if the respondent works in a managerial position, otherwise 1	0.08	1	0
JOB TEACHER	Takes 1 if the respondent works as a teacher, otherwise 1	0.02	1	0
JOB MEDICAL	Takes 1 if the respondent works in the medical service sector, otherwise 1	0.02	1	0
JOB AGRI	Takes 1 if the respondent works in primary industry, otherwise 1	0.004	1	0

Note: Apart from the job dummies indicated, 15 other job dummies were included in the estimation model.

Table 2. Baseline estimation (OLS model): Dependent variable is TRADE PREF

	(1)	(2)	(3)	(4)	(5)	(6)
V_GROUP	0.09*** (9.04)					
V_COMPET		0.22*** (21.4)				
V_RECIPRO			0.11*** (8.04)			
V_PATIENT				0.09*** (7.14)		
V_TRUST					0.07*** (8.78)	
NON_COG_SKILL						0.04*** (13.6)
EDU	0.01* (1.68)	0.01 (1.08)	0.01* (1.97)	0.01* (1.70)	0.01 (1.63)	0.01 (1.42)
ECONOMIC	0.13*** (4.27)	0.13*** (4.42)	0.13*** (4.23)	0.13*** (4.25)	0.13*** (4.31)	0.13*** (4.24)
AGE	-0.01** (-2.03)	-0.02** (-2.66)	-0.02*** (-2.89)	-0.02*** (-2.72)	-0.01** (-2.06)	-0.01* (-1.97)
AGESQ	0.0002*** (2.80)	0.0002*** (3.41)	0.0002*** (3.53)	0.0002*** (3.41)	0.0002** (2.66)	0.0002** (2.62)
MALE	0.17*** (9.75)	0.18*** (10.3)	0.20*** (11.6)	0.17*** (9.70)	0.20*** (11.4)	0.19*** (10.6)
INCOM<100			Reference group			
INCOM_100<200	-0.08 (-1.51)	-0.07 (-1.37)	-0.07 (-1.45)	-0.08 (-1.61)	-0.08 (-1.50)	-0.08 (-1.51)

INCOM_200<400	0.01 (0.27)	-0.003 (-0.07)	0.01 (0.12)	0.01 (0.29)	0.01 (0.12)	0.004 (0.08)
INCOM_400<600	0.07 (1.53)	0.04 (0.80)	0.06 (1.22)	0.07 (1.51)	0.06 (1.21)	0.05 (1.14)
INCOM_600<800	0.11** (2.21)	0.07 (1.41)	0.10* (1.93)	0.11** (2.22)	0.10* (1.85)	0.09* (1.77)
INCOM_800<1000	0.16*** (3.26)	0.12** (2.33)	0.16*** (3.02)	0.17*** (3.22)	0.15*** (2.85)	0.14*** (2.79)
INCOM_1000<1200	0.23*** (3.10)	0.18** (2.35)	0.22*** (2.86)	0.23*** (3.12)	0.20*** (2.74)	0.20*** (2.71)
INCOM_1200<1400	0.35*** (6.62)	0.30*** (5.11)	0.34*** (6.27)	0.36*** (6.64)	0.34*** (6.23)	0.33*** (6.28)
INCOM_1400<1600	0.16* (1.96)	0.12 (1.41)	0.16* (1.97)	0.17* (1.97)	0.15* (1.81)	0.15* (1.79)
INCOM_1600<1800	0.23** (2.17)	0.18 (1.67)	0.22** (2.06)	0.22** (2.14)	0.21* (1.90)	0.20* (1.92)
INCOM_1800<2000	0.24** (2.47)	0.15 (1.65)	0.20** (2.11)	0.22** (2.23)	0.10* (1.89)	0.20** (2.07)
INCOM>=2000	0.36*** (3.82)	0.30*** (3.34)	0.36*** (3.79)	0.36*** (3.83)	0.35*** (3.72)	0.34*** (3.71)
JOB ORDINARY EMP	Default	Default	Default	Default	Default	Default
JOB MANAGER	0.21*** (6.29)	0.20*** (6.05)	0.22*** (6.69)	0.23*** (6.76)	0.21*** (6.20)	0.20*** (6.07)
JOB TEACHER	-0.20*** (-2.72)	-0.18** (-2.66)	-0.21*** (-3.00)	-0.22** (-3.11)	-0.23** (-3.25)	-0.22** (-3.10)
JOB MEDICAL	-0.14** (-2.37)	-0.13** (-2.15)	-0.15** (-2.49)	-0.15** (-2.56)	-0.14** (-2.52)	-0.15** (-2.56)
JOB AGRI	-0.82***	-0.82***	-0.83***	-0.83***	-0.83***	-0.83***

	(-3.69)	(-3.82)	(-3.67)	(-3.72)	(-3.68)	(-3.69)
Other job dummies, Constant	Yes	Yes	Yes	Yes	Yes	Yes
R-square	0.06	0.08	0.05	0.05	0.05	0.06
Observations	9,997	9,997	9,997	9,997	9,997	9,997

Notes: ***, **, and *

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 those variables are included as independent variables.

Table 3. Estimation (IV model): Dependent variable is TRADE PEF

	Second stage					
	(1)	(2)	(3)	(4)	(5)	(6)
V_GROUP	0.27*** (5.41)					
V_COMPET		0.30*** (6.70)				
V_RECIPRO			0.26*** (5.90)			
V_PATIENT				0.54*** (5.56)		
V_TRUST					0.29*** (4.40)	
NON_COG_SKILL						0.07*** (6.00)
EDU	0.01 (1.10)	0.003 (0.76)	0.01* (1.96)	0.002 (0.48)	0.002 (0.55)	0.01 (1.06)
ECONOMIC	0.13*** (4.16)	0.13*** (4.48)	0.13*** (4.09)	0.12*** (3.64)	0.12*** (4.10)	0.12*** (4.16)
			First stage			
EDU	0.01* (1.84)	0.02*** (3.07)	-0.01 (-1.10)	0.01** (2.51)	0.02*** (3.90)	0.05*** (2.92)
ECONOMIC	0.01 (0.31)	0.01 (0.33)	0.02 (0.53)	0.02 (0.60)	0.05 (1.25)	0.10 (0.08)
		Exogenous				

		IV				
TEAM SPORTS	0.08*** (9.72)	0.05*** (6.25)	0.04*** (5.73)	0.01 (1.12)	0.07*** (6.36)	0.29*** (11.2)
INDI SPORTS	0.03*** (2.96)	0.06*** (4.19)	0.06*** (5.93)	0.01 (1.30)	0.05*** (4.33)	0.18*** (4.97)
SOCIAL PRIM	0.08*** (5.71)	0.07*** (7.71)	0.08*** (7.99)	0.04** (2.26)	0.13*** (7.78)	0.42*** (9.79)
GROUP PRIM	0.20*** (11.3)	0.07*** (3.82)	0.08*** (5.80)	0.08*** (2.76)	0.07** (2.64)	0.64*** (10.2)
COMPET PRIM	0.15*** (5.48)	0.36*** (15.3)	0.42*** (12.6)	0.16*** (6.53)	0.05 (1.32)	0.94*** (11.6)
Under- identification test	320.5 P = 0.00	309.5 P = 0.00	356.1 P = 0.00	90.5 P = 0.00	203.3 P = 0.00	468.7 P = 0.00
Over-identification test (Hansen J- stat)	85.9 P = 0.07	2.66 P = 0.61	2.97 P = 0.57	5.31 P = 0.25	6.62 P = 0.16	4.87 P = 0.30
Observations	9,997	9,997	9,997	9,997	9,997	9,997

Notes: ***, **, and * denote

statistical significance at the 1%, 5%, and 10% levels, respectively. T-values are calculated based on robust standard errors clustered on prefectures. Under-identification test is based on Kleibergen-Park rk LM statistics. Over-identification test is based on Hansen J-statistics. Other control variables included in Table 2 are also included in the first and second stage of the model.

Table 4. Estimation where exogenous IV variables are restricted (IV model): Dependent variable is TRADE PREF

			Second stage			
	(1)	(2)	(3)	(4)	(5)	(6)
V_GROUP	0.14** (2.11)					
V_COMPET		0.22** (2.46)				
V_RECIPRO			0.20** (2.38)			
V_PATIENT				0.33** (2.53)		
V_TRUST					0.16** (2.07)	
NON_COG_SKILL						0.04** (2.28)
EDU	0.01 (1.43)	0.005 (1.05)	0.01* (1.93)	0.004 (0.05)	0.005 (1.02)	0.01 (1.37)
ECONOMIC	0.13*** (4.11)	0.13*** (4.31)	0.13*** (4.00)	0.12*** (3.80)	0.12*** (4.04)	0.13*** (4.08)
TEAM SPORTS	0.02 (1.31)	0.02 (1.65)	0.02* (1.78)	0.03** (2.09)	0.02 (1.32)	0.02 (1.41)
COMPET PRIM	0.08*** (2.75)	0.02 (0.47)	0.01 (0.28)	0.05 (1.26)	0.09*** (3.31)	0.06* (1.87)
			First stage			

Under-identification test	172.1 P = 0.00	117.9 P = 0.00	141.8 P = 0.00	90.5 P = 0.00	134.9 P = 0.00	266.6 P = 0.00
Over-identification test (Hansen J-stat)	1.40 P = 0.49	0.40 P = 0.81	0.24 P = 0.88	5.31 P = 0.25	0.10 P = 0.95	0.49 P = 0.78
Observations	9,997	9,997	9,997	9,997	9,997	9,997

Notes: ***, **, and * denote statistical significance at the 1%, 5%, and 10 % levels, respectively. T-values are calculated based on robust standard errors clustered on prefectures. Under-identification test is based on Kleibergen-Park rk LM statistics. Over-identification test is based on Hansen J-statistics. 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 stage of the model.

Table 5. Estimation where exogenous IV variables are restricted (IV model): Dependent variable is TRADE PEF

	Second stage					
	(1)	(2)	(3)	(4)	(5)	(6)
V_GROUP	0.27*** (5.31)					
V_COMPET		0.30*** (6.38)				
V_RECIPRO			0.27*** (5.80)			
V_PATIENT				0.52*** (5.47)		
V_TRUST					0.29*** (4.31)	
NON_COG_SKILL						0.07*** (5.86)
EDU	0.01 (1.11)	0.003 (0.76)	0.01* (1.96)	0.003 (0.54)	0.002 (0.56)	0.01 (1.06)
ECONOMIC	0.13*** (4.17)	0.13*** (4.48)	0.13*** (4.09)	0.12*** (3.67)	0.12*** (4.09)	0.12*** (4.16)
	First stage exogenous IV					
TEAM SPORTS PRIM	0.08** (2.37)	0.07*** (3.53)	0.05*** (3.48)	0.04** (2.28)	0.10*** (3.96)	0.35*** (4.35)
TEAM SPORTS JUNIOR	0.06** (2.27)	0.01 (0.56)	0.05** (2.70)	0.02 (0.52)	0.03 (1.16)	0.22*** (2.71)
TEAM SPORTS HIGH	0.12*** (2.91)	0.07** (2.69)	0.02 (1.11)	-0.01 (-0.42)	0.09*** (2.75)	0.35*** (3.44)

INIDI SPORTS PRIM	0.01 (0.51)	0.03 (1.60)	-0.01 (0.26)	-0.04 (-1.48)	0.02 (0.52)	0.002 (0.02)
INIDI SPORTS JUNIOR	0.03 (1.12)	0.05** (2.01)	0.10*** (5.47)	0.05** (2.14)	0.05* (1.70)	0.25*** (3.76)
INIDI SPORTS HIGH	0.05** (2.40)	0.09*** (4.29)	0.05** (2.47)	-0.004 (-0.28)	0.07** (2.21)	0.22*** (3.04)
SOCIAL PRIM	0.08*** (5.64)	0.07*** (7.74)	0.08*** (7.95)	0.04** (2.20)	0.14*** (7.74)	0.42*** (9.68)
GROUP PRIM	0.19*** (11.1)	0.07*** (3.78)	0.08*** (5.83)	0.08*** (2.80)	0.07** (2.63)	0.64*** (10.7)
COMPET PRIM	0.15*** (5.47)	0.36*** (15.4)	0.42*** (12.6)	0.16*** (6.35)	0.05 (1.30)	0.93*** (11.5)
Under-identification test	322.4 P = 0.00	317.3 P = 0.00	362.7 P = 0.00	97.9 P = 0.00	207.7 P = 0.00	475.5 P = 0.00
Over-identification test (Hansen J-stat)	12.5 P = 0.13	11.6 P = 0.17	11.8 P = 0.18	10.9 P = 0.20	10.5 P = 0.22	10.2 P = 0.24
Observations	9,997	9,997	9,997	9,997	9,997	9,997

Notes: ***, **, and * denote

statistical significance at the 1%, 5%, and 10% levels, respectively. T-values are calculated based on robust standard errors clustered on prefectures. Under-identification test is based on Kleibergen-Park rk LM statistics. Over-identification test is based on Hansen J-statistics. Other control variables included in Table 3 are also included but their results are not reported.

Appendix. Table A1. Adding parent's years of schooling to the model in Table 3 (IV model)

	Second stage					
	(1)	(2)	(3)	(4)	(5)	(6)
V_GROUP	0.24*** (4.03)					
V_COMPET		0.31*** (5.82)				
V_RECIPRO			0.28*** (4.94)			
V_PATIENT				0.51*** (4.30)		
V_TRUST					0.26*** (3.10)	
NON_COG_SKILL						0.07*** (4.51)
Father's EDU	-0.003 (-0.87)	-0.003 (-0.86)	-0.004 (-0.97)	-0.005 (-1.11)	-0.003 (-0.82)	-0.003 (-0.97)
Mother's EDU	0.0001 (0.03)	-0.0003 (-0.04)	0.0002 (0.32)	-0.0001 (-0.16)	-0.0004 (-0.07)	0.0005 (0.08)
EDU	0.007 (1.19)	0.005 (1.00)	0.01** (2.13)	0.01 (1.06)	0.01 (0.86)	0.01 (1.23)
ECONOMIC	0.14*** (4.88)	0.14*** (5.22)	0.14*** (4.82)	0.13*** (4.17)	0.13*** (4.69)	0.14*** (4.86)
			First stage			
Father's EDU	0.002	0.002	0.004	0.004	0.003	0.02*

Mother's EDU	(0.56) -0.003 (-0.57)	(0.72) -0.0006 (-0.13)	(1.00) -0.01** (-2.12)	(1.13) 0.001 (0.24)	(0.67) -0.001 (-0.08)	(1.83) -0.02 (-0.92)
EDU	0.01** (2.24)	0.02*** (3.00)	-0.01 (-1.27)	0.01* (1.69)	0.02*** (2.75)	0.05*** (2.74)
CONOMIC	0.01 (0.51)	0.01 (0.27)	0.01 (0.39)	0.03 (0.84)	0.05 (1.22)	0.11 (1.12)
		Exogenous IV				
TEAM SPORTS	0.08*** (8.93)	0.05*** (6.05)	0.03*** (3.73)	0.01 (0.55)	0.07*** (5.80)	0.28*** (8.83)
INDI SPORTS	0.03** (2.31)	0.06*** (3.60)	0.04*** (4.35)	0.01 (0.90)	0.05*** (4.23)	0.16*** (3.67)
SOCIAL PRIM	0.08*** (5.18)	0.06*** (6.12)	0.07*** (5.26)	0.03* (1.89)	0.14*** (8.14)	0.39*** (8.95)
GROUP PRIM	0.20*** (10.2)	0.07*** (3.58)	0.08*** (5.35)	0.09** (2.57)	0.07** (2.25)	0.64*** (9.14)
COMPET PRIM	0.13*** (3.93)	0.35*** (10.8)	0.41*** (12.2)	0.15*** (5.75)	0.03 (0.59)	0.84*** (9.35)
Under- identification test	251.3 P = 0.00	230.7 P = 0.00	247.2 P = 0.00	62.0 P = 0.00	167.2 P = 0.00	357.0 P = 0.00
Over-identification test (Hansen J- stat)	7.91 P = 0.09	2.49 P = 0.64	3.37 P = 0.49	7.62 P = 0.25	6.03 P = 0.19	4.51 P = 0.34
Observations	8,536	8,536	8,536	8,536	8,536	8,536

Notes: ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively. T-values are calculated based on robust standard errors clustered on prefectures. Under-identification test is based on Kleibergen-Park rk LM statistics. Over-identification test is based on Hansen J-statistics. 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 stage of the model.

Table A2. Checking the exogeneity of IV variables (OLS model): Dependent variable is TRADE PEF

	(1)	(2)	(3)	(4)	(5)	(6)
V_GROUP	0.08*** (7.75)					
V_COMPET		0.21*** (20.9)				
V_RECIPRO			0.10*** (7.22)			
V_PATIENT				0.09*** (6.64)		
V_TRUST					0.07*** (8.20)	
NON_COG_SKILL						0.04*** (12.1)
EDU	0.01 (1.54)	0.01 (1.08)	0.01* (1.85)	0.01 (1.53)	0.01 (1.48)	0.01 (1.35)
ECONOMIC	0.09*** (3.73)	0.13*** (4.25)	0.13*** (4.02)	0.13*** (4.03)	0.13*** (4.09)	0.13*** (4.08)
TEAM SPORTS	0.02* (1.79)	0.02 (1.63)	0.03** (2.04)	0.03** (2.33)	0.02* (1.99)	0.02 (1.48)
INDI SPORTS	0.004 (0.44)	-0.01 (-0.52)	0.01 (0.16)	0.01 (0.62)	0.004 (0.40)	-0.002 (-0.03)
SOCIAL PRIM	0.01 (1.07)	0.01 (0.53)	0.01 (1.05)	0.02 (1.43)	0.01 (0.91)	0.004 (0.34)
GROUP PRIM	-0.0003 (-0.02)	0.001 (0.04)	0.01 (0.53)	0.01 (0.60)	0.01 (0.71)	-0.01 (-0.54)

COMPET PRIM	0.09*** (3.73)	0.02 (0.87)	0.06** (2.18)	0.09*** (3.53)	0.10*** (3.91)	0.06** (2.65)
Other control variables in Table 2.	Yes	Yes	Yes	Yes	Yes	Yes
R-square	0.06	0.08	0.06	0.06	0.06	0.06
Observations	9,997	9,997	9,997	9,997	9,997	9,997

Notes: ***, **, and * 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 those variables are included as independent variables.