Cultural Integration: Experimental Evidence of Convergence in Immigrants' Preferences*

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October 2014

Abstract

Cultural traits play a significant role in the determination of economic outcomes and institutions. This paper presents evidence from laboratory experiments on the cultural integration of individuals of Chinese ethnicity in Australia, focusing on social preferences, risk attitudes, and preferences for competition. We find that greater exposure to Western culture is in general associated with a convergence to Western norms of behavior. Specifically, the share of education an individual receives in the West has a strong negative impact on altruism, trust towards individuals of Chinese ethnicity, and trustworthiness, while it has a significant and positive impact on trust towards Australians. For risk and competitive preferences, our results are gender-specific. These findings have important implications for policy making and institution building in multi-cultural societies.

Keywords: Cultural integration; cultural transmission; cultural diversity; cultural assimilation; acculturation; immigration; social preferences; preferences for competition; risk aversion
JEL Classification: C91; J15; D64; D03.

* We would like to thank Yan Chen, Catherine Eckel, Sherry Li, Tom Wilkening, participants at the Annual Meeting of the American Economic Association (2014), and seminar participants at Monash University, University College London, and Victoria University of Wellington for helpful comments. Edwin Ip, Boon Han Koh, Joseph Vecci and Kevin Wu have provided excellent research assistance. We thank the Australian Research Council and the Faculty of Business and Economics at the University of Melbourne for their financial support.

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1. Introduction

Social preferences, preferences for competition, and risk attitudes vary significantly across cultures (see, e.g., Henrich et al., 2005; Holm and Danielson, 2005; Buchan et al., 2006; Alesina and Giuliano, 2011a; Luttmer and Singhal, 2011; Gneezy et.al., 2009; Vieider et al, 2014). This paper seeks to examine how these cultural traits evolve over time when members of one culture move to a country with a distinctly different culture.[3] Do we see a persistence of cross-cultural differences or a convergence to the traits of the host country?

Cultural traits play a significant role in the determination of economic outcomes (see, e.g., Guiso et al., 2006). They are also important in shaping the economic, political, and social institutions of a society.[4] For these reasons, policy makers are often actively interested in how best to design policies that encourage cultural integration because they believe it will contribute to harmony and resilience in society. Examples of such policies include strict citizenship tests or changes in educational curriculum to emphasise key cultural values. The particular policy approach taken by a government will depend on the degree of cultural integration that is targeted. However, whatever the ultimate aim, effective policy making requires a good understanding of the rate and process of cultural integration.

The goal of this paper is to analyze the extent to which cultural integration occurs. We broadly define cultural integration as the process via which immigrants take on the

[3] By culture, we refer to "those customary beliefs and values that ethnic, religious, and social groups transmit fairly unchanged from generation to generation" (Guiso et al., 2006).

[4] For example, Algan and Cahuc (2009) show the impact of civic virtue on labor market institutions (the provision of unemployment benefits), Alesina et al. (2010) study the influence of family values on labor market regulations, and Alesina and Giuliano (2011b) examine how family values affect political participation. See also Algan and Cahuc (2014) for a survey of the literature on the impact of trust on economic development through the realms of finance, innovation, organization of firms, the labor market and the product market.

characteristics of the host country.[5] Our focus will be on social preferences (altruism, trust, and trustworthiness), preferences for competition, and risk attitudes. We present evidence from laboratory experiments and focus on the convergence patterns of individuals of Chinese ethnicity in Australia. To evaluate both own-ethnicity and cross-ethnicity effects, we conducted single-ethnicity sessions, with individuals of Chinese ethnicity only, as well as mixed-ethnicity sessions, with individuals of Chinese ethnicity and Australians of European descent. The subjects participated in a Dictator Game, a Trust game, a Risk Game, and a Competition Game.

To assess the degree of cultural integration, we consider the impact of exposure to Western culture on the subjects' behavior in these four games. Our measure of exposure is the share of each participant's education that was gained in Australia. We use this measure since it is a more direct measure of the amount of exposure immigrants have to the cultural traits of the host country than the percentage of one's lifetime spent in a Western country. Even if immigrants spend a considerable portion of their life in the host country, they may end up having minimal exposure to the institutions and culture of their new home if they interact mainly with their own ethnic group. Indeed, Western education share as compared to the percentage of one's life spent in Australia is found to have a similar but statistically stronger relationship with cultural integration.

Our results reveal that greater exposure to Western culture is generally associated with subjects' behavior more closely reflecting Western norms of behavior. Specifically, greater exposure to Western culture has a significant and negative impact on altruism, in-

[5] See Algan et al. (2012) for a discussion of the different theories of cultural integration developed in the social sciences, namely assimilation theory, multiculturalism, structuralism, and segmented assimilation synthesis (p. 4). One important difference between the different theories is the extent to which cultural characteristics of immigrants are preserved in their new existence. Hence, cultural integration may reflect the learning of and adherence to the new country's social norms and/or a change in one's own identity and norms. While differentiating between these different ways of integrating is interesting, it is not the focus of this paper.

group trust (i.e., trust towards individuals of Chinese ethnicity), and trustworthiness, while it has a significant and positive impact on out-group trust (i.e., trust towards Australians). The impact of exposure to Western culture on risk attitudes and preferences for competition are gender-specific. While greater exposure to Western culture makes women more risk-loving, it does not have a significant impact on the risk-taking behavior of men. Greater exposure to Western culture does not change the willingness of men to engage in competition either. However, women's willingness to compete has an inverted-U shaped relationship with Western education share. We find that the relationship is driven by their confidence levels.

In the economics literature, a lot of attention has been given to the *economic* integration of immigrants. There exists a recent but fast-growing literature on the *cultural* integration patterns of different immigrant groups.[6] Our paper contributes to this literature by considering cultural integration along the dimensions of social preferences (altruism, trust, and trustworthiness), preferences for competition, and risk attitudes. Cultural integration along these dimensions has hardly been analysed in the literature and the existing studies rely on survey data.[7]

In the experimental literature, a few papers have studied cultural differences between migrant and native populations, but how cultural traits evolve in multi-cultural

[6] See, for example, Manning and Roy (2010), Bisin et al. (2008), and Constant and Zimmermann (2008) on ethnic identity, Fernandez and Fogli (2009) on fertility, Algan and Cahuc (2010) on trust, de Palo et al. (2006) on social relations, Guiso et al. (2006), Alesina and Fuchs-Schuendeln (2007) and Luttmer and Singhal (2011) on preferences for redistribution, Bonin et al. (2012) on risk proclivity, and Giuliano (2007) on living arrangements.

[7] One exception is Algan and Cahuc (2010), who focus on the transmission of trust within families. In other related work, Guiso et al. (2006), Alesina and Fuchs-Schuendeln (2007), Alesina and Giuliano (2011a), and Luttmer and Singhal (2011) focus on preferences for redistribution. Guiso et al. (2006), Alesina and Giuliano (2011a), and Luttmer and Singhal (2011) find evidence of a lasting effect of culture using data from the General Social Survey in the U.S., World Values Survey, and the European Social Survey. Alesina and Fuchs-Schuendeln (2007) investigate preferences for redistribution among East and West Germans. They find that, after the German reunification, East Germans are more in favor of redistribution than West Germans, but that East Germans' preferences converge towards those of West Germans.

settings has largely been ignored. In this literature, two related papers are Guillen and Ji (2011) and Cox and Orman (2010). Both examine trust and provide mixed evidence. Guillen and Ji (2011) find that international students treat other international students and domestic students similarly, but that they exhibit decreasing levels of trust as the number of semesters studied at university increases. In contrast, Cox and Orman (2010) find that first-generation immigrants are as trusting as native-born Americans when they are interacting with native-born Americans, but they do not exhibit trust towards other immigrants. Moreover, they find that the length of time an immigrant has been a naturalized U.S. citizen has no impact on trusting behavior. Our results on trust complement the results in these two papers. While our results on in-group and out-group trust are in the same direction as those of Cox and Orman (2010), unlike them, we find that the amount of time spent in the host culture matters. Since our focus is on the dynamics of cultural integration, we also consider a broader set of preferences, including altruism, risk and competition.

We are interested in the question of how preferences are shaped by the contemporaneous environment.[8] Preferences are shaped by both horizontal and vertical socialization (Bisin and Verdier, 2010). Cipriani et al. (2007) and Dohmen et al. (2012) investigate vertical socialization by studying the role parents play in shaping the pro-social and risk attitudes of their children.[9]

Our paper is also related to Brosig-Koch et al. (2011) who use a solidarity game to examine whether social behavior in East and West Germany has converged in the 20

[8] Fehr and Hoff (2011) discuss, using examples of the caste system in India and the welfare state in Europe, that preferences can change in response to changes in social institutions and these can potentially have economic consequences.

[9] Cipriani et al. (2007) study pro-social values while Dohmen et al. (2012) study risk attitudes and trust. Cipriani et al. (2007) find no evidence for a correlation between parents' and children's behavior. They state that this is consistent with theories from the psychological literature which emphasize the importance of peer effects in the socialization process.

years since reunification. They find that West Germans living in the East behave more like East Germans. This finding is consistent with our results, which also identify changes in social behavior amongst people who find themselves a significant minority in their host country and who are surrounded by new cultural stimuli.

The structure of the paper is as follows. In the next section, we discuss the experimental design and procedure. In section 3, we present our hypotheses based on the literature on individualistic versus collectivist societies and the previous experimental literature on behavior in China and the West. After discussing our main results in section 4, we consider selection effects in section 5, investigating whether convergence patterns differ by migrant type (those who migrate more permanently with their families vs. those who migrate temporarily to study). We conclude in section 6.

2. Experimental Design

To examine behavioral patterns of subjects with different levels of exposure to Western culture, we focus on two games that elicit social preferences, and two games that measure risk attitudes and preferences for competition. All our subjects hence participated in four games and a survey. In this section, we discuss the subject pool, the treatments, the experimental design, and the procedure employed in each part of the experiment.

2.1 Subject Pool

Immigrants have always been central to Australia's culture. Similar to the United States, early immigrants to Australia were from Western Europe. In recent years, immigrants have been increasing from the Asian region. These recent immigrants are culturally more dissimilar, so we study their patterns of cultural integration.

To facilitate the examination of the pattern and extent of cultural integration, a subject pool consisting of individuals of Chinese ethnicity currently residing in a Western

culture (Australia in this case) was selected. Chinese immigrants are the third largest immigrant group in Australia after the United Kingdom and New Zealand. They comprise 6.4% of all immigrants to Australia.[10] The experiment was conducted at the University of Melbourne and the participants with Chinese ethnicity were recruited through the following means: (i) Students with Chinese names in the subject database of the Experimental Economics Laboratory at the University of Melbourne were sent emails inviting them to attend the experiment;[11] (ii) students studying Chinese were sent emails inviting them to participate in the experiment; (iii) the same invitation was placed in the weekly members' newsletter of the Chinese Groups of the University of Melbourne;[12] (iv) advertisements were placed on the student portal of another university in the city (Monash University) and emails were sent to students studying Intermediate Microeconomics at this university; (v) an open invitation to the experiment was placed on one of the researchers Facebook page and advertisements were also placed on the University of Melbourne and Monash University Facebook pages; (vi) finally, knowledge of the experiment was also spread through word of mouth. In all these cases, subjects were only recruited if they were of Chinese ethnicity.[13]

[10] Source: Migration, Australia, 2011-2012 and 2012-2103, Australian Bureau of Statistics (2013), available at http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/3412.02011-12%20and%202012-13?OpenDocument.

[11] Students voluntarily sign up to the database in response to standard recruitment drives that occur each semester.

[12] Chinese Groups is the umbrella name applied to the association of five groups: Chinese Culture Society, Chinese Debating Group, Chinese Music Group, Chinese Publishers' Group, and Chinese Theatre Group. There were 400-500 members on their database at the time the invitation was placed.

[13] We recruited as widely as possible so as to minimise the probability of selection bias. Note that selection bias would only affect our results to the extent that it differed with length of time in Australia.

We also ran sessions which included Australians of European descent. Subjects were classified as Australian if they were both born in Australia and had Australian citizenship. In addition, only subjects with European-sounding names were invited.[14]

A total of 300 undergraduate and postgraduate students participated in the experiment. The average age of the participants is 22 years. Table A1 presents summary statistics of our data. The Chinese participants varied in their exposure to Australian culture. The average participant had spent 27% of his or her life in Australia and received 39% of their education in Australia. Figure 1a presents a histogram of age at arrival. Some participants had only recently arrived while a small percentage was born in Australia (6.6% of the Chinese-ethnicity sample). The Chinese subject pool included both people with Australian citizenship or permanent residency (29%) and Chinese citizenship (71%).[15] The Australian subjects were slightly older, were less likely to be studying economics and more likely to report that they were religious than their Chinese counterparts. They also had more years of work experience.

2.2 Treatments

Since our research question is about the cultural convergence patterns of immigrants of Chinese ethnicity, our treatments differ by subject pool. In Treatment 1, we conducted six single-ethnicity sessions with subjects of Chinese ethnicity only (120 subjects in total). In Treatment 2, we conducted six mixed-ethnicity sessions with subjects of Chinese ethnicity and Australians of European descent (120 subjects in total). In each of these sessions, roughly 50% of the subjects were of Chinese ethnicity and the remaining were

[14] When registering their interest in participating in experiments, individuals are asked their name, citizenship status, country of birth, and the date of their arrival in Australia.

[15] Australian citizenship requires only four years of residence in Australia. A small number of the participants had New Zealand citizenship or permanent residency. New Zealand is similar to Australia culturally and attracts immigrants from the same pool.

Australians of European descent. In Treatment 3, we conducted two sessions with Australians of European descent only (a total of 60 subjects).

We purposefully did not engage in any priming. That is, the subjects were not told that they were participating in a single-ethnicity or a mixed-ethnicity session. The subjects could however observe the ethnic composition of the session in the time they spent outside of the experimental lab waiting for the session to start. We chose this approach because it is a realistic depiction of how individuals respond to ethnicity in the real world. The social psychology research suggests that ethnic identity priming, if anything, would make the results we observe below stronger by causing subjects to adopt behaviors that are consistent with the stereotypes associated with the ethnic identity.

2.3 Games

Subjects participated in a Dictator Game, a Trust game, a Risk Game, and a Competition Game. The experiment was conducted using paper and pen, and participants made their decisions on forms. Since we used games that are extensively researched in the experimental literature, we only provide brief descriptions here.

Dictator Game

The Dictator Game captures preferences for altruism and fairness. Participants in the game are randomly paired. In each pair, there is an Allocator, referred to as Player 1 in the experiment, and a Recipient, referred to as Player 2. The Allocator is given an endowment of $40 Australian dollars (AUD) and decides how much of it, in x whole dollars, to keep and how much of it to send to the Recipient.[16] The Recipient does not make a decision and simply receives the amount sent by the Allocator. The final payoffs for the Allocator and Recipient are $40 - x$ and x, respectively.

[16] At the time of the experiment, the exchange rate was approximately 1 AUD = 0.85 USD.

Each participant plays both the Allocator and Recipient roles. Therefore, each participant makes an allocation decision with one anonymous partner and is also the recipient of an allocation from a different anonymous partner. All participant pairings are pre-determined and anonymous, and no two participants are paired twice in the entire experiment to preserve the one-period nature of the game. Participants are informed of these conditions prior to playing the game.

Trust Game

Participants are paired randomly. In each pair, there is a Sender, referred to as Player A in the experiment, and a Receiver, referred to as Player B. The Sender is given an endowment, $20 AUD, and has the option of sending some amount, $x\ (0 \leq x \leq 20)$, to an anonymous Receiver. Any amount sent is tripled by the experimenter before it reaches the Receiver. The Receiver then has the opportunity to send some amount, $y\ (0 \leq y \leq 3x)$, back to the Sender. The payoffs are $20 - x + y$ to the Sender and $3x - y$ to the Receiver. The Sender's behavior in this game can be interpreted as an indicator of trust and the Receiver's behavior measures trustworthiness.

Each participant plays both the Sender and Receiver roles (Burks et. al., 2003; Chaudhuri and Gangadharan, 2007; Bonein and Serra, 2009).[17] Participants make decisions as Senders and then as Receivers. As in the Dictator Game, in order to preserve the one-period nature of the game and eliminate reputation-building, no two participants are paired twice during the experiment.

Risk Game

The Risk Game is similar to the one discussed in Gneezy et al. (2009). In this game, each participant is given $20 AUD and the choice to put any amount between 0 and the entire

[17] Hall (2009) compares subjects in role-reversal treatments and single-role treatments, and finds no role reversal effects in sending and receiving behavior in the Trust game.

endowment into an 'investment,' which yields triple the amount invested with 50% probability and 0 with 50% probability. The outcome is decided at the end of the experiment by the flip of a coin.

Competition Game

The task used for this game is from Niederle and Vesterlund (2007). Participants are asked to sum as many sets of five two-digit numbers as possible in five minutes. An example of a five two-digit sequence is shown to the subjects in the instructions. The numbers are randomly generated and presented in a row with a blank box at the end where participants write their answers.

22	17	83	61	49	

Participants are not allowed to use calculators. Scrap paper is provided for them to use. Before they participate in the task, they have to choose between two different payments schemes: (i) Piece-rate (referred to as Option 1 in the Experiment), which pays $1 for each sum correctly completed; or (ii) competitive rate (Option 2), which pays $2 for each sum correctly completed if the subject's total number of correct answers is greater than their paired participant, $0 if it is less, and $1 if there is a tie. Incorrect sums are not paid for, but neither is payment deducted. All participant pairings are pre-determined and anonymous.

Participants are asked two questions before performing the task, which relate to their beliefs about their absolute and relative performance. They are asked how many sums they believe they can successfully complete in five minutes, and what they think their ranking will be among the participants in the room (the options being well above average, above average, average, below average, and well below average).

After completing the four games, the participants completed a survey which collected information on their demographic and socio-economic characteristics, the number of years of education completed in Australia, and their attitudes towards trusting behavior.

2.4 Experimental Procedure

Participants were seated in a large room and were each given a unique ID number and a set of general instructions for the experiment. Situating all participants in one room has the advantage of reducing suspicion about pairings or the presence of a co-player, which could lead participants to act more strategically (Frohlich et. al. 2001). The experimenter read aloud all instructions to the participants whilst they read along.[18] We conducted 6 sessions and had 16, 20 or 24 participants in each session depending on how many subjects showed up for a particular session.

We used a within-subject design where all subjects made decisions in all four games. This allows us to control for individual-specific effects. The games were referred to as 'Task 1,' 'Task 2,' 'Task 3,' and 'Task 4'. At the start of the experiment, the participants were informed that they would play a few tasks, but they were not told specifically how many. Since we were concerned about order effects, we wanted to examine whether playing the Competition game before the Dictator and Trust Games induces participants to be less other-regarding. Hence, the games were played in two different sequences: (i) Dictator, Trust, Risk, Competition; and (ii) Competition, Dictator, Trust, Risk. Participants in sessions 1, 3 and 5 played according to the first sequence

[18] The instructions were in English. As all participants had either studied in Australia or qualified to study in Australia, it is unlikely that this presented any difficulties. No indication of language difficulties were identified by the experimenters. All participants answered control questions before each of the tasks to ensure that they understood the instructions.

while participants in sessions 2, 4 and 6 played according to the second sequence. Order effects were however found to be insignificant.[19]

In addition to the general instructions for the experiment, participants were given a set of specific instructions for each game and forms for recording their decisions, which were handed out in envelopes. The full set of instructions can be found in the appendix. After the instructions were read out aloud, participants completed the comprehension questions on their forms and recorded their decisions. For each game, once all participants completed their forms, the forms were collected and instructions for the next game were distributed. All forms were distributed and collected in envelopes so as to minimize self-presentation (face-saving) behavior that could be prevalent amongst subjects, particularly of Asian background (Bond and Hwang, 1995). After the last game was completed, the surveys were distributed and completed before the payments were made.

Participants were informed at the beginning of the experiment that they would be paid $10 as a show-up fee and $5 for completing the survey in addition to any money they earn during the experiment. They earned between $15 and $75 in total for the two-hour experiment. Participants were also informed that they would be paid for one of the four games played during the experiment, which was decided at the conclusion of the experiment using a dice. Only paying for one of the games reduces the incentives to use any one game to hedge against the outcome of another. There was no feedback between the games and subjects only received feedback for the game they were paid for. If either the Dictator Game or the Trust Game were picked for payment, a coin was thrown to determine which participants would be paid for their decisions as the Allocator/Sender.

[19] For this reason, we pool the data from the two sequences in the following analysis.

The remaining participants were paid for their part as the Recipient/Receiver.[20] Hence, neither the subjects nor the experimenter knew which game and role would be picked for payment until the end of the session.

3. Hypotheses

Our research question is whether Chinese immigrants in Australia display more Western values and patterns of behavior as their exposure to Western education increases. In order to establish whether we are able to discern such cultural integration in the data, we need to know how behavior differs between Western and Chinese subject pools.

China is a Communist state. Although it has relatively recently embraced markets (operating in conjunction with large state-owned enterprises), Chinese society remains heavily influenced by Confucian and Buddhist collectivist philosophy. In contrast, Western society is influenced by capitalist and individualist philosophy. The differences between individualism and collectivism have attracted a lot of scholarly attention and these two constructs have been extensively used as the basis of comparison between cultures (see, e.g., Gorodnichenko and Roland, 2011a; Greif, 1994; Hofstede, 2001; Triandis, 1995). Collectivist societies are characterized by a subordination of individual goals to the goals of a collective while social behavior is primarily determined by personal goals in individualistic societies. Individuals in collectivist societies often place greater importance on relationships, nurturing them with more care (Triandis, 1989 and 1995; Chen et al. 1998; Hofstede 1980a and 1980b). Thus, one may expect people from collectivist societies to behave more pro-socially, for example by acting in a more

[20] For any toss of the coin, half of the participants were paid for their role as Allocator/Sender, say ID numbers 1-10, while the other half were paid for their role as Recipient/Receiver, say ID numbers 11-20.

altruistic, more trusting, and more trust-worthy way.[21] The emphasis on attaining individual goals in individualistic societies also leads to a greater emphasis being put on independence, self-reliance, competition, and personal achievement (Triandis, 1995). For example, Leibbrandt et al. (2013) find that fishermen from individualistic societies are far more competitive than fishermen from collectivistic societies. The emphasis on personal achievement also provides a higher return for risk-taking and differentiating one's self from the crowd. Gorodnichenko and Roland (2011b) and Li et al. (2013) report that individualism has a positive and significant effect on innovation and corporate risk-taking, respectively.[22]

The literature on individualism and collectivism also suggests that there may be a link between cultural integration and in-group-out-group bias. A commonly observed phenomenon in the social sciences, in-group-out-group bias refers to the tendency to treat members of one's own group more favorably than members of other groups.[23] While individuals in collectivist societies tend to have strong and stable ties with those in their in-groups, defined as social groups with which an individual identifies, such as family, tribe, co-workers, etc., the difference between in-group and out-group is reduced in individualistic societies. People drop those in-groups which conflict with their personal goals and form new in-groups instead. Hence, in-groups can be more transient while

[21] Greater altruism in collectivist societies could also arise from the desire to maximise the welfare of the group, under the standard assumption of concavity of utility functions with respect to consumption. We thank an anonymous referee for pointing this out.

[22] Li et al. (2013) give two possible explanations for why we may expect individualistic managers to make more risky decisions. First, they may be more motivated to stand out from other managers and demonstrate their unique self-image. Second, they may underestimate the level of uncertainty in risky projects due to their self-enhancing beliefs that they are more skilled and have a higher level of outcome control than other managers.

[23] For examples from the economics literature, see Buchan et al. (2006), Chen and Li (2009), Etang et al. (2011), Fershtman and Gneezy (2001), and Hoffman et al. (1996).

individuals are more comfortable with meeting outsiders (Triandis et al., 1988).[24] Huff and Kelley (2003) test this empirically and find significantly greater in-group bias amongst individuals from Asian nations than amongst individuals from the United States. Thus, in our context, cultural integration may cause in-group bias to decrease and out-group trust to increase (e.g., individuals to become more altruistic towards or trusting of outsiders). The reason for this change in behavior may be the adoption of the norms of a more individualistic society (where in-groups are less important) and/or a change in group identity (i.e., a change in the way individuals define their "in-group" and "out-group" as they identify less with other Chinese and more with Australians).

Based on these observations and findings, in the context of our study, we would expect the share of Western education an individual receives to have a negative impact on altruism, trust towards members of one's own ethnicity, and trustworthiness, and a positive impact on out-group trust, risk-taking, and competitiveness:

Hypothesis 1: Greater exposure to Western culture leads to a decrease in altruism.

Hypothesis 2: Greater exposure to Western culture leads to a decrease in trust towards members of own ethnicity and an increase in trust towards members of other ethnicities.

Hypothesis 3: Greater exposure to Western culture leads to a decrease in trustworthiness.

Hypothesis 4: Greater exposure to Western education leads to an increase in risk-taking behavior.

[24] Consistent with these observations, Fukuyama (1995) argues that people in the U.S. have a higher degree of generalized trust (i.e., out-group trust) and spontaneous sociability than people in China, for example. Chen et al. (2010) show that while ethnic identity priming causes Asians to exhibit significantly more in-group cooperation and out-group discrimination, Caucasians are not responsive to ethnic priming.

Hypothesis 5: Greater exposure to Western education leads to an increase in competitiveness.

These hypotheses are generally in line with a comparison of data we have from a sample of Beijing residents in China (collected by the authors as part of a different study using the same games and procedure) and Australians of European ethnicity in Melbourne (Treatment 3). We find that Chinese subjects in Beijing send 40.7% and 46.6% of their endowment in the Dictator and Trust games, respectively (Cameron et al., 2013).[25] They return 28.9% in the Trust game. In comparison, Australians of European descent in Melbourne send substantially less in the Dictator game (33.1%), return substantially less in the Trust game (16.3%), and send marginally less in the Trust game (45.4%).[26]

The differences in the Risk game are also in line with what one would expect based on the differences between individualistic and collectivist societies. On average, Australians of European descent in Melbourne invest substantially more in the risky option than the Chinese subjects in Beijing (62.6% vs. 55.6%). However, in the Competition game, Chinese participants are as likely as Australians of European descent to choose the competitive option over the piece rate option (42.3% vs. 42.4%).

[25] As part of another project (Cameron et al, 2103), we conducted experiments with approximately 100 participants in Beijing. The subjects were all tertiary educated, but they were 26 years old, so they were slightly older than the subject pool in the current paper. (The Chinese ethnicity sample used in this paper ranges from 18 to 37 years of age, with a mean of 22.) The age difference is however unlikely to be driving the observed differences in behaviour. We conducted the same experiments with a similar subject pool in Beijing who were 29 years old. Behavior did not change markedly with age (comparing 29 year olds with 26 year olds). The only exception was in the Risk game where the younger cohort took less risk (60.2% versus 55.6%). This suggests that we would expect to find an even greater difference between the risk preferences of the Western and Chinese subject pools if they were the same age.

[26] Similarly, Chaudhuri and Gangadharan (2007) found, using the same methodology, that Australian students at the University of Melbourne on average send 43% of their endowment. Although the cited differences in the sending behaviour in the trust game of the Chinese and Australian subjects are in the expected direction, they are quite small. This may reflect the fact that trusting in the trust game involves taking a risk and to the extent that Chinese participants are less willing to take risks, this would offset the pure trust effect. It also may reflect differences in subject pools. The subjects in Beijing were recruited off the street while the subjects in Melbourne were all from the same university. This could have led them to feel closer to each other socially.

4 Results

To analyze the convergence patterns of individuals of Chinese ethnicity, we take the following steps. First, we consider how exposure to Western education affects behavior towards members of their own ethnicity by focusing on the single-ethnicity sessions (Treatment 1). Second, we explore the link between cultural integration and in-group-out-group bias by comparing behavior in the single-ethnicity and mixed-ethnicity sessions (Treatments 1 and 2). Third, we analyze whether full integration is possible for those individuals of Chinese ethnicity who receive all of their education in the West by using the data from all three treatments.

4.1 Own-ethnicity effects

We first investigate how behavior in the Chinese-ethnicity sessions changes with exposure to Western education. Figure 1b reports the fraction of Western education received by the participants and shows the varying degree of exposure to Western culture in our sample. This variable is strongly correlated with how strongly people identify themselves as being Australian (ρ=0.80), the percentage of the person's lifetime that has been spent in Australia (ρ=0.90) and the age at which one came to Australia (ρ=0.90).[27] However, it is a slightly stronger determinant of behavior in the experiments than all these alternative variables, suggesting that education has an impact on preferences beyond merely spending time in a country. This is not surprising since immigrants get more direct exposure to the cultural traits of the host country through education. Education also provides an opportunity to actively engage with the citizens of the host country.

[27] Participants were categorised as identifying as being Australian if they reported that they "agree" or "strongly agree" with the following statement: "In many ways I think of myself as Australian." Table A2 shows that 25.8% of participants strongly identify as Australian and 27.5% identify as Australian in Treatment 1. (Across all Chinese-ethnicity participants in both Treatments 1 and 2, the values are 25% and 33.3%, respectively.)

Figure 2 presents non-parametric regressions for Treatment 1 of indicators of behavior in the games on the share of the participant's education that was gained in Australia. It shows every data point and the fitted lines are from locally-weighted regressions. It reveals that receiving more of one's education in Australia is associated with giving less in the Dictator Game. The amount sent and returned in the Trust game differs in the same way. In the Risk game, the differences in the amounts invested in the risky option is also consistent with our hypotheses. That is, the more exposure a subject has to Western education, the greater the risk-taking behavior. For the Competition game, Figure 2e shows a relatively strong inverted U-relationship between willingness to compete and share of Western education. The willingness to compete increases from around 10% for those with very little Western education (less than one tenth of their total education) up to about 46% for those with a 40% Western education share. It then drops to about 30% for those who are 100% Western educated.

To summarize, Figure 2 shows the direction of change with greater exposure to Western education to be as hypothesized for all of the games, except for the Competition game. We now turn to regression models that include several controls for determinants of behavior and use a continuous variable to examine the impact of the share of Western education.

Table 1 reports the results of regression analysis of the behavior in each of the games. All specifications control for the age, gender, and religion of the individual. We also control for whether the individual is an economics major as this has been shown to explain behavior in previous research. Finally, we control for the years of work force experience as exposure to the "real world" may affect behavior by influencing the cultural integration process. Some specifications include additional controls which will be

discussed below. The main variable of interest in the regressions is Western education share, which captures the extent of exposure to Western culture. Some specifications include its square. Unless otherwise noted, we report coefficients from tobit estimations for continuous variables censored at 0 and 100. Marginal effects from probit estimation are reported for dichotomous dependent variables. Ordered probits are estimated for categorical variables.[28]

Column (1) shows that Western education is strongly negatively associated with the amount given in the Dictator game. This is consistent with our first hypothesis. Each additional 10% of education that is received in Australia is associated with a 1.87 percentage point decrease in the amount given. Hence, an individual who received all of his or her education in China gives on average approximately 19% more of the endowment than an individual who received all of his or her education in Australia. The only other variables that are significant in the regression are the variables indicating whether the individual is male and the number of years of work experience. Consistent with findings in the literature, men on average give 16.6% less of the endowment away. An extra year of work experience is associated with sending 3.1% more of the endowment. This may be an income effect.

Column (2) shows the results for sending in the Trust game, where Western education share is again negative and statistically significant. Consistent with our second

[28] The marginal effects are calculated at the mean of all variables. Standard errors of the marginal effects are calculated using the delta method. We estimated a quadratic relationship with Western education share for all the games, but it was only statistically significant in the Competition game. We also examined the extensive and intensive margins separately. The results are similar, but the sample size is much lower when we condition for the first decision, making the estimates less precise. Table A3 presents an analogous set of results using share of life lived in Australia as the measure of exposure to Western culture and compares the results from using this measure with the results from using Western education share. The results are very similar, but in most cases Western education share is a stronger predictor of behavior. One may be concerned that the parents of participants who were born here may be fully integrated culturally and so these participants may differ substantially from those who arrived soon after birth. Table A4 shows that our results are also robust to dropping the 12 participants who were born in Australia.

hypothesis, a 10% increase in Western education share is associated with giving 3.5% less of the endowment. Column (3) examines this result more closely. It includes controls for the amount sent in the Dictator game and the amount invested in the Risk game. It thus decomposes the total effect. The results show that the more that is sent in the Dictator game, the more that is sent in the Trust game. Similarly, the more risk one takes in the Risk game (and hence the more risk-loving one is), the more risk that is taken – in terms of sending more – in the Trust game, although this is not statistically significant (p=0.13). Western education share remains significant once we control for altruism and risk-aversion. Hence, it appears that having a Western education makes one less trusting, even after controlling for the effects of altruism and risk-aversion.[29]

Column (4) examines the returning behavior in the Trust game. Similarly, Western education is negatively related to the amount returned. The coefficient is marginally significant (p=0.06). A 10 percentage points increase in the share of education received in the West corresponds to an average decrease of 2.5 percentage points in the amount of the endowment returned. Subjects reciprocate in the sense that the more that is given to them, the more they return. Every extra percent of the endowment sent is on average reciprocated with an extra 0.7% being sent back.[30] This decision is similar in nature to the decision in the Dictator game, and Column (5) shows that Dictator game behavior is a marginally significant predictor (p=0.07) of reciprocity in the Trust game.[31] Once altruism is controlled for, Western education share is no longer significant, which

[29] This result is specifically about trust towards members of own (Chinese) ethnicity since we are analysing Treatment 1. In fact, as we show in the next section, it is important to differentiate between trust towards members of own ethnicity and trust towards members of other ethnicities since share of Western education has opposite impacts on the two.

[30] A 1% increase in the amount sent is a $0.20 increase. Player B then receives three times this amount which is $0.60. 0.6 times the coefficient on the amount received (1.16) is 0.696. We also examined whether reciprocity differs with Western education share and found that it did not.

[31] This finding is consistent with those in Holm and Danielson (2005), and Chaudhuri and Gangadharan (2007).

suggests that to the extent that Western education share affects trustworthiness, it is through its effect on altruism.

Column (6) shows the results for the Risk game. The point estimate on Western education share is positive but insignificant. Being male and majoring in economics are both associated with taking more risk. Figure 3 presents the data separately by gender for each game and shows that the effect of Western education share follows a different pattern by gender in the Risk game. In most cases, the same pattern is evident for men and women. It is only in the Risk game, and to a lesser extent in the Competition game, where the genders differ. Panel D of Figure 3 shows that women become more risk-loving, the more education they receive in the West. In contrast, men's behavior does not change markedly.

Columns (7) and (8) in Table 1 present results separately for men and women in the Risk game. Again no relationship is found for men. For women, Western education share is positively and significantly related to taking more risk. Hence, Hypothesis 4 stated in section 3 holds for women, but not men. A female participant with no exposure to Western education on average invests 24.0% less of the endowment in the risky option than a female participant who has received her entire education in the West. It is not clear why men's behavior does not evolve towards that of the host country with regard to risk-taking.[32] The change in women's behavior implies that amongst our respondents who have received most of their education in the West, there is very little gender difference.

[32] A possible explanation is that women are more likely to respond to social and environmental cues than men (Croson and Gneezy 2009). Women may thus respond more strongly to the higher risk-taking they observe in Australia than men.

This is puzzling as in the West, it is well-established that men take more risk than women.[33]

Column (9) presents the results for the Competition game. We estimate probits of the decision of whether to compete, and report marginal effects. The results show a statistically significant inverted-U shape with the maximum participation in competition taking place among those who received 47% of their education in the West.[34] Men were 17.3% more likely to compete than women (p=0.09). Although confidence in one's ability to complete the task is a factor in the decision to participate in the competition, Western education share continues to be marginally significant (at the 10% level) once we control for individuals' expectations about their performance, as shown in Column (10). Including differences in risk attitudes also does not explain away the relationship, as seen in Column (11).

The results for the Competition game also exhibit gender differences, as can be seen from Figure 3e. The figure shows that moderate exposure to the West is associated with increases in competitive behavior for both men and women. However, for women, additional exposure (beyond 50% of education) is associated with a decline in competitiveness.

Table 2 presents the regression results for the Competition game separately by gender and shows that the coefficient on Western education share is being driven by women.[35] Columns (1) through (4) in Table 2 reveal that there is no relationship between

[33] Croson and Gneezy (2009) point out in their recent review of gender differences in preferences that "most lab and field studies indicate that women are more risk-averse than men" (p. 467). Booth and Nolen (2012) find that the gender difference in risk-taking is socio-culturally determined. Girls at coeducational schools in the U.K. take less risk than boys, but girls in a single-sex educational environment take just as much risk as boys.

[34] This number is the maximum of the quadratic estimated in column (9).

[35] Gender differences are a well-established phenomenon in the literature on preferences for competition in the West. See, for example, Niederle and Vesterlund (2007).

Western education share and competitiveness for men. However, an inverted-U relationship exists for women, as described above. The extent of competitiveness is being driven by their beliefs in their abilities which, as Column (8) shows, also have an inverted-U shape with Western education share. Figure 4 presents a non-parametric regression of individuals' beliefs in their maths abilities by gender.[36] It is relatively flat for men. For women, it has a strong inverted-U shape. Confidence may increase initially as immigrants realize they are better skilled than locals in mathematics. However, receiving more than about one third of one's education in Australia is associated with a decline in one's belief about one's maths ability for women.

One question is whether the change in women's confidence levels is accompanied by a similar change in their performance levels. As shown in Panel B of Figure 4, the number of sums completed correctly decreases with Western education share for women. Men's performance also decreases with greater Western education share, although not to the same extent. However, their confidence does not.

For participants with very little Western education (less than 5%), there is no gender gap in the number of sums completed correctly. If anything, women with very little Western education in our sample perform slightly better than their male counterparts. It is only with Western education that the gender gap opens up.[37] Mathematical achievement has been found to be strongly determined by socio-cultural factors (Hyde and Mertz, 2009). Women's mathematical ability in Australia may suffer

[36] In the figure, we use the following coding: 5=well above average, 4=above average, 3=average, 2=below average, and 1=well below average.

[37] Women completed an average of 13.3 sums correctly across our entire sample and men completed an average of 14.9 sums correctly.

as a result of a loss of confidence induced by their cultural surrounds. Australian girls on average perform at lower levels than Australian boys in standardized math tests.[38]

4.2 Cross-ethnicity Effects: An Analysis of In-group-out-group Bias

The results in section 4.1 were based on sessions with subjects of Chinese ethnicity only. We next consider the interaction between cultural integration and in-group-out-group bias by comparing behavior in the Chinese ethnicity and mixed ethnicity sessions (Treatments 1 and 2). Can behavior, especially in the dictator and trust games, depend on who the subjects think they are interacting with? If so, how does this group with which one identifies change with cultural integration?

If in-group-out-group bias is playing a role, we would expect Western education share to affect behavior differently in the mixed-ethnicity and Chinese-ethnicity sessions. Table 3 compares the results from the mixed-ethnicity sessions with the original results from the Chinese-ethnicity sessions for all the games. The coefficients in the ethnically mixed sessions are estimated with much less precision, in part due to the significantly smaller sample size in these sessions.[39] Nevertheless, a clear pattern emerges. The relationship between Western education share and behavior in the games in the mixed-ethnicity sessions is very similar to that found in section 4.1, except for sending behavior in the trust game. Unlike the results in the Chinese-ethnicity sessions, where the percentage sent decreased with exposure to the West, the percentage sent in the mixed-ethnicity sessions *increases* with Western exposure. This result is the only one that differs significantly from the behavior observed in the Chinese-ethnicity sessions ($p=0.05$), and it is consistent with the subjects of Chinese ethnicity experiencing a change in who they view as being in their in-group as they spend more time in the West.

[38] See "Numbers point to maths 'gap'" in *The Age*, May 2, 2011.
[39] Although there were 120 subjects in the mixed ethnicity sessions, only half of these were participants of Chinese ethnicity, so we have only 60 observations.

Tables 4A and 4B examine this more closely. Participants in the mixed-ethnicity sessions were asked to estimate with what probability they think the person they were paired with had the "same ethnicity or cultural background" as themselves. They were asked to select from 0-25%, 26-50%, 51-75%, and 75-100%.[40] We converted this information to a variable from 1 (0-25%) to 4 (75-100%). Table 4A presents results from a regression which includes this new variable (*same ethnic*) and its interaction with Western education share. The dependent variable is percentage sent in the Trust game. Even in our small sample, Western education share and its interaction with the ethnicity variable are statistically significant at the 10% level (p=0.06 and 0.10 respectively).

Table 4B presents a mapping of how the percentage sent in the Trust game varies with these two variables. Figure 5 graphs these percentages. It shows a pattern consistent with the conjecture above. That is, for those Chinese participants who estimate that it is highly likely that they are paired with someone of Chinese ethnicity, the amount they send decreases with Western education share. In contrast, for those Chinese participants who estimate that they are more likely to be paired with an Australian participant (less likely to be matched with someone of Chinese ethnicity), they become more trusting as Western education share increases. Thus, what we seem to be observing with respect to trust is cultural integration decreasing immigrants' trust towards members of own ethnicity and increasing their trust in Australians. Note that these results could be attributed to a change in group identity (i.e., a change in the way individuals define their in-group and out-group) and/or to the adoption of the norms of a more individualistic society (where in-groups are less important). Our data do not allow us to determine the relative weight of each mechanism. However, the high correlation we find between share

[40] 18% of the sample reported that they estimated the probability of being paired with someone of the same ethnicity to be 0-25%; 31% reported as 26-50%; 16% reported as 51-75%; and 6.5% reported as 76-100%.

of Western education and identifying oneself as Australian (ρ=0.80) provides strong support for the existence of the first mechanism.[41]

4.3 Degree of Cultural Integration

The next issue we consider is whether obtaining all of one's education in the West results in full integration. That is, we analyze whether the behavior of those subjects with Chinese ethnicity who obtain all of their education in the West converges fully to Western patterns of behavior.

In Columns 1-7 of Table 5, we pool the data from the Chinese subjects in the Chinese-only sessions with the data from the Australian subjects (Treatments 1 and 3). We then estimate the following equation:

$$y_i = \beta_0 + \beta_1 Chinese_i + \beta_2 Chinese_i * west\ edu\ share_i + \beta_3 X_i + \varepsilon_i$$

where y_i is the behavioral outcome variable for observation *i*, *Chinese* takes a value of 1 for participants of Chinese ethnicity and 0 otherwise, and *Chinese * west edu share* is the share of the Chinese participants' education obtained in the West. If the behavior of participants of Chinese ethnicity who obtain all of their education in the West is indistinguishable from that of the "Australian" participants, then we would expect $\widehat{\beta_1} = -\widehat{\beta_2}$. That is, the effect of obtaining all of one's education in the West fully offsets the effect of being ethnically Chinese.[42]

The p-values from this test are displayed at the bottom of Table 5. They show that full integration is attained in terms of altruism, trust worthiness, risk taking for women, and competition. For trusting behavior, Chinese subjects educated in the West end up displaying less trust than Australians. Note that this likely reflects in-group-out-group

[41] We are thankful to an anonymous referee for making this point.
[42] The competition game regressions includes the square of Western education share, so in this context we test whether $\beta^{\text{Chinese*west edu share}} + \beta^{\text{Chinese*west edu share squared}} = -\beta^{\text{Chinese}}$.

effects, as discussed above. As in-group-out-group bias has been shown to play a role, a better test of full integration of trusting behavior is to examine whether we observe full integration in the mixed ethnicity sessions. Column 8 in Table 5 presents the results for trust in the mixed-ethnicity sessions. Consistent with full integration, when Chinese and Australian participants are faced with the same subject pool (i.e., a mixed ethnicity subject pool), the trusting behavior of Chinese subjects who acquired all of their education in the West is not significantly different from that of Australian subjects.

5. Selection Effects

Selection bias is always a concern in studies of migrants as migrants are likely to differ in unobserved ways from the general population. This is less of a concern in this paper since all of our Chinese subjects are migrants and we are interested in differences within this subject pool in terms of their exposure to Western culture. However, one could be concerned that those that obtained more of their education in Australia (largely individuals whose family migrated to Australia permanently, in most cases after the birth of the participant) may differ from those who obtained less of their education in Australia (for example, foreign students who have migrated, possibly temporarily, to gain an education). It is possible that fundamental differences between these two groups are driving our results as the "type of migrant" is correlated with Western education share.[43]

To examine this issue, we divided our sample into those who emigrated before the age of 16, as these people would have come as part of a family unit, and those who came

[43] For example, people who came with their families are more likely to have migrated with the intention of staying in Australia than those who arrive to undertake tertiary education. The families may have decided to migrate because their social norms are more in line with those of Australians. An intention to stay may also give them a greater interest in integrating with the new culture. These two groups may also differ in terms of their financial resources. This appears not to be the case though, as the correlation between having a tertiary educated father (a proxy for the family's financial resources) and Western education share is low (0.075). Further, this variable is not a significant determinant of behaviour in the games, and its inclusion as an explanatory variable does not affect the coefficients on Western education share.

to Australia at age 16 or older. Of those who came before the age of 16, the mean share of education obtained in Australia is 84%. Of the group that came at an older age, the mean share of education obtained in Australia is 21%. Table 6 presents the coefficients on the education share variables for these two groups within the Chinese-ethnicity sessions (Treatment 1).[44] It also presents tests of equality of coefficients across the two groups. The statistical significance of the coefficient estimates is reduced because of the smaller sample sizes. However, the point estimates in the two sets of regressions are always of the same sign and of similar magnitude.[45] Tests of equality of the coefficients cannot reject the finding that the coefficients are insignificantly different from one another. Hence, it seems that the same process is at work in both sub-samples. We conclude that it is unlikely that our results are being driven by fundamental differences in behavior between the two groups.

6. Conclusion

We have investigated the cultural integration patterns of individuals of Chinese ethnicity in Australia. Our results reveal that exposure to Western culture has a significant impact on social preferences, preferences for competition, and risk attitudes. Specifically, it has a strong negative impact on altruism, trust towards members of one's own ethnicity, and trustworthiness, and a strong positive impact on trust towards Australians of European descent. While it increases the risk-taking behavior of women, it has no impact on the risk attitudes of men. Finally, for women, greater exposure to Western education initially increases and then decreases their willingness to participate in competitive tasks. This seems to be driven by a decline in their confidence in their ability to perform and may be

[44] We also estimate the coefficients including the data for the Chinese subjects in the mixed-ethnicity sessions (Treatment 2). The results are very similar.

[45] One exception is the coefficients on the square term in the Competition game regression where both coefficients are small and insignificant, but one is positive and one is negative.

particular to the task employed here, which draws on simple mathematical ability. There is no impact on the competitiveness of men. As a robustness check, we have shown that the results do not differ by migrant type and therefore do not seem to be influenced by selection.

The finding that more exposure to Western culture generally leads to an absorption of Western social norms has implications for the policy debate surrounding cultural diversity and immigration. An important question that policy makers face is whether it is better to promote cultural uniformity or diversity.[46] Education is a potential policy instrument in this respect. Our results suggest that immigrants' behavior evolves towards that of the host country naturally as a result of engaging with the institutions of the host country.

Cultural integration may of course vary across destinations and groups. In future research, it would be useful to determine to what extent our results generalize to other locations and ethnicities.

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[46] As an example of this debate, see Vertovec and Wessendorf (2010). Australian immigration policy does not actively seek to assimilate immigrants. Rather, it aims to promote multiculturalism. See http://www.immi.gov.au/media/publications/multicultural/pdf_doc/people-of-australia-multicultural-policy-booklet.pdf.

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Figure 1a: Chinese Participants' Age at Arrival in Australia

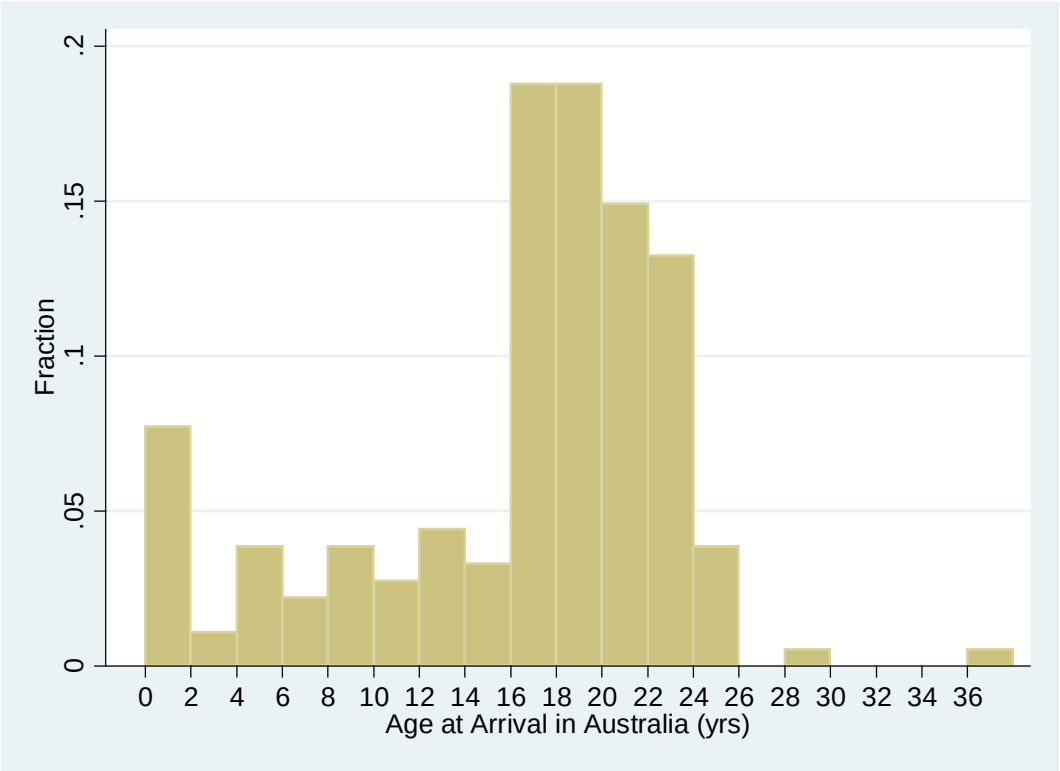


Figure 1b: Western Education Share (Treatment 1)

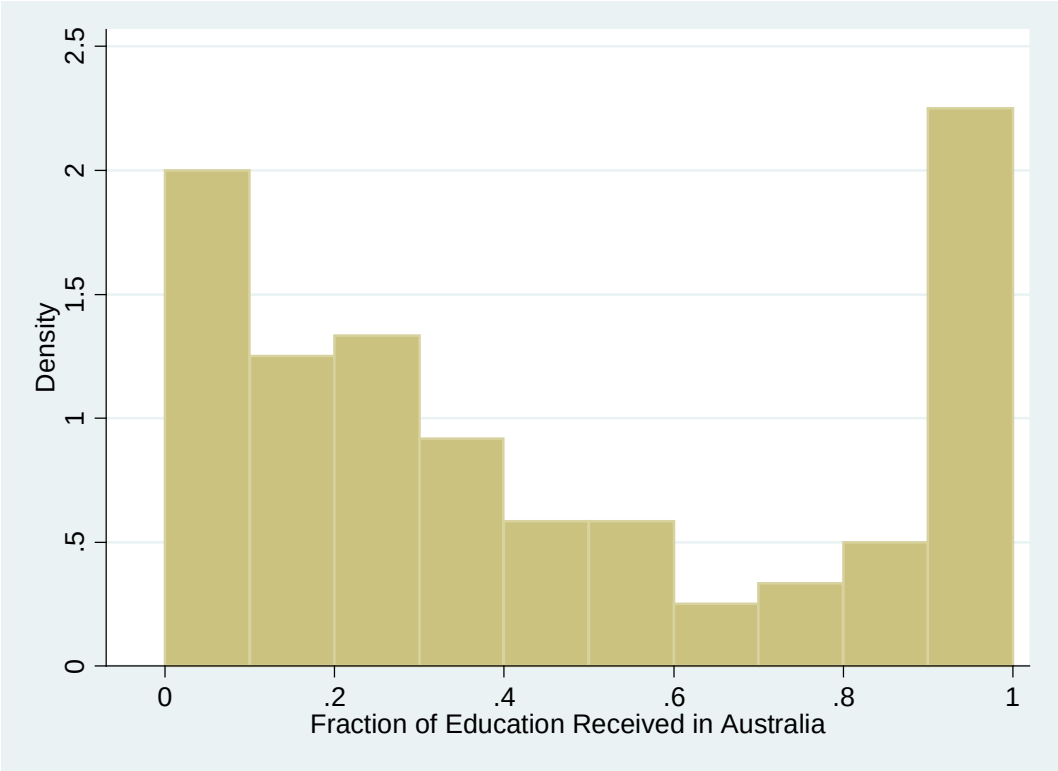


Figure 2: Non-Parametric Regressions (Treatment 1)

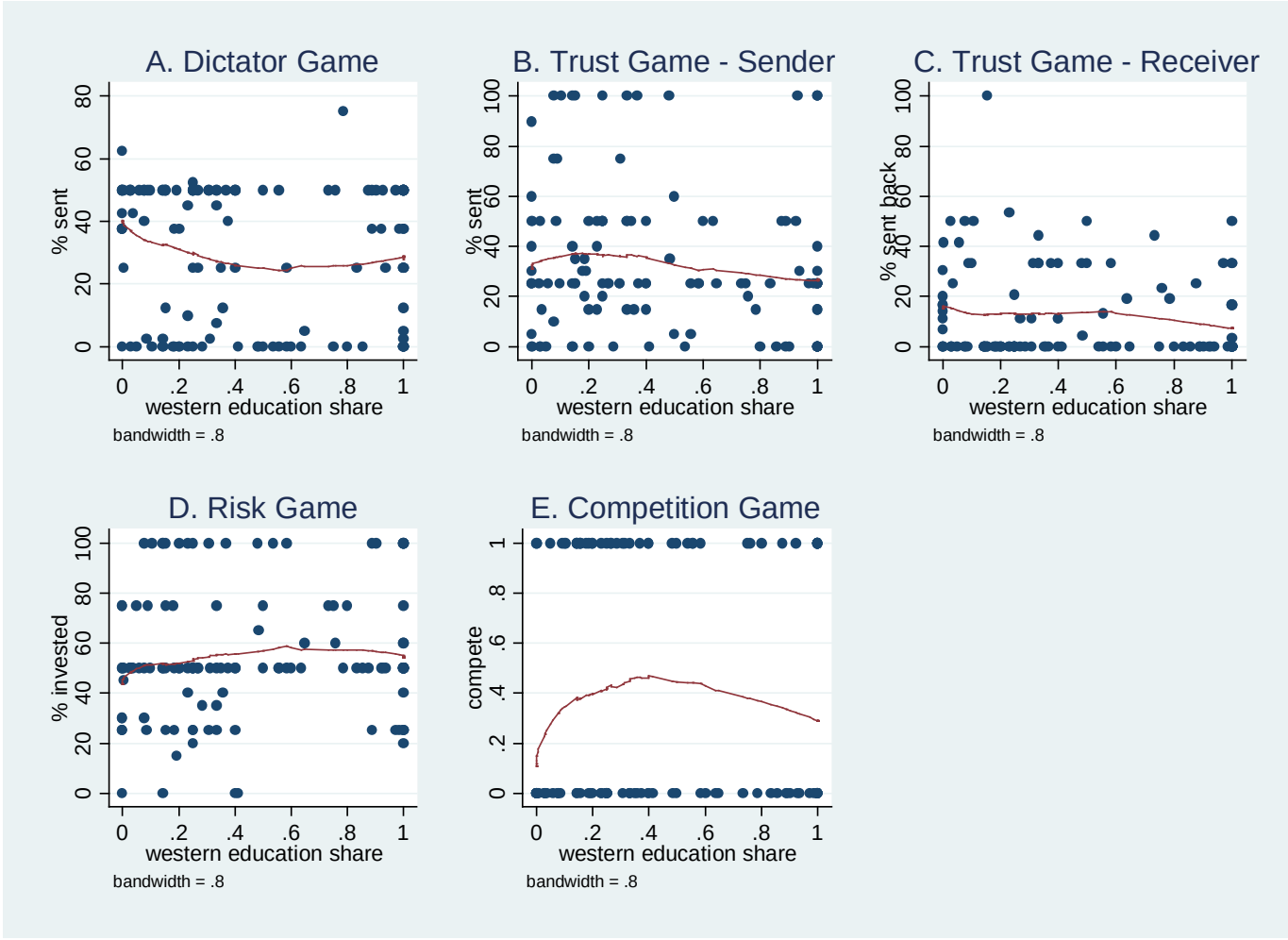
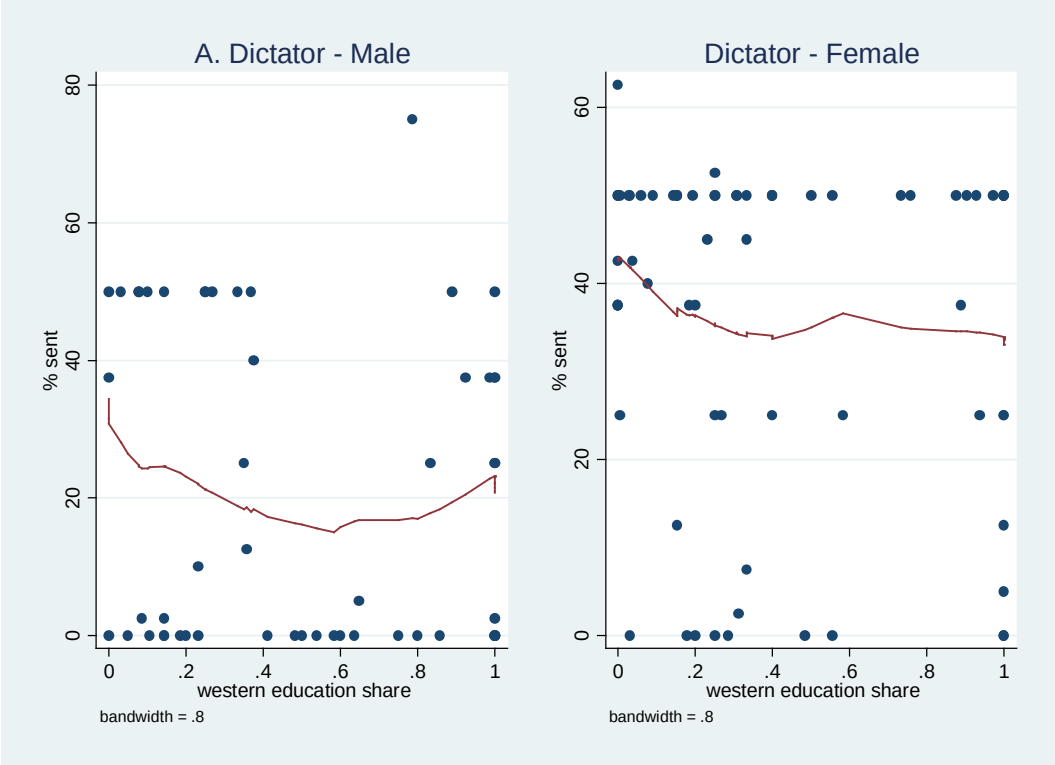
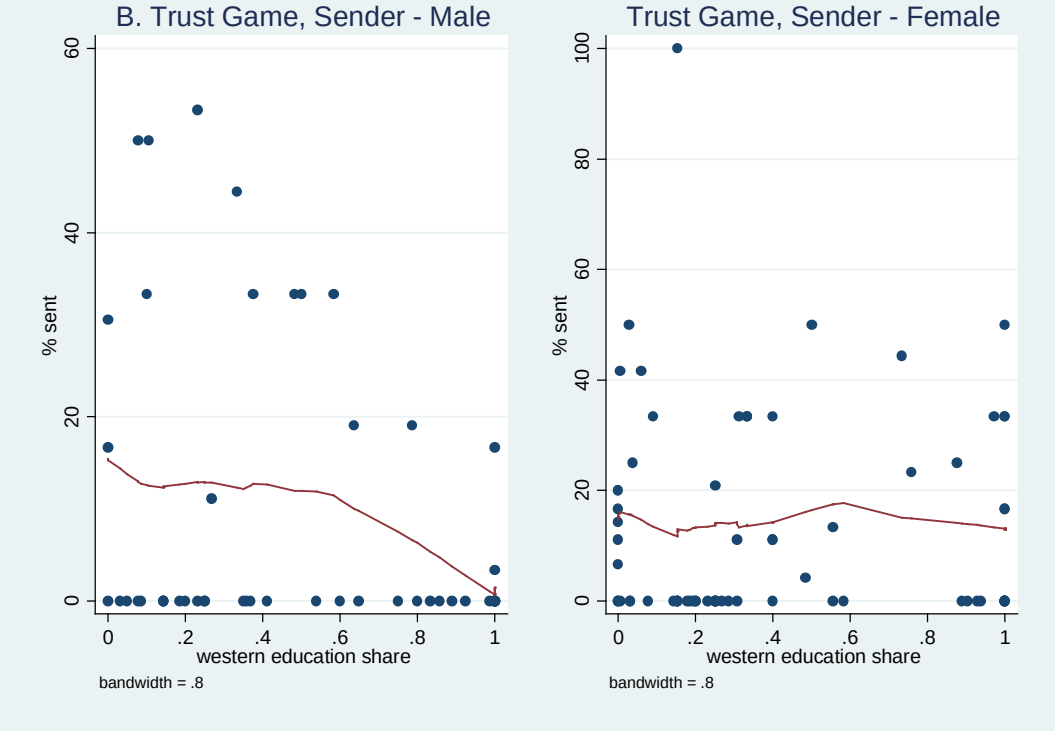
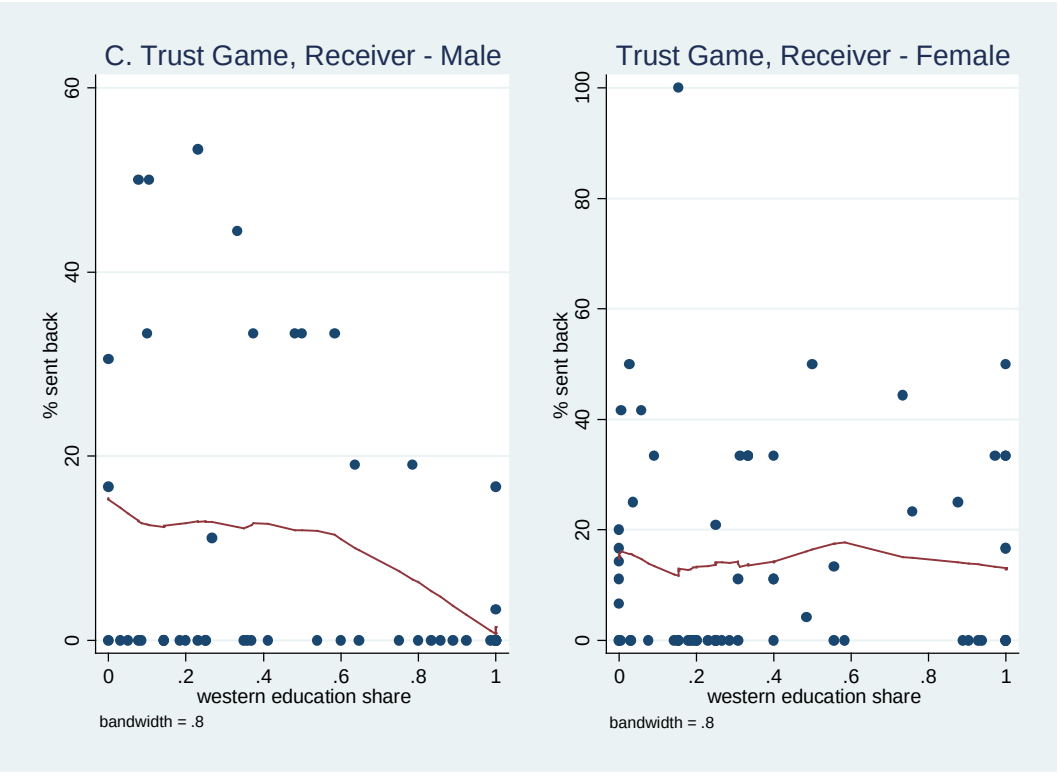
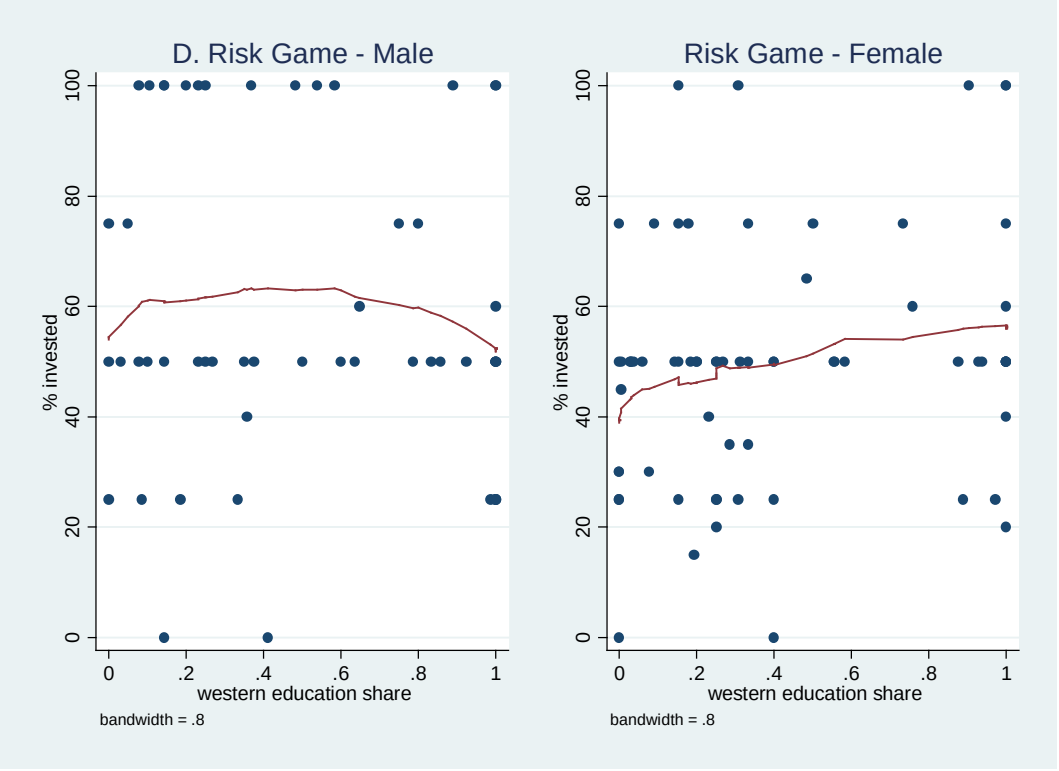


Figure 3: Nonparametric Regressions by Gender






C. Trust Game, Receiver - Male
% sent back
0
20
40
60
0
.2
.4
.6
.8
1
western education share
bandwidth = .8
Trust Game, Receiver - Female
% sent back
0
20
40
60
80
100
0
.2
.4
.6
.8
1
western education share
bandwidth = .8


D. Risk Game - Male
% invested
0
20
40
60
80
100
0
.2
.4
.6
.8
1
western education share
bandwidth = .8
Risk Game - Female
% invested
0
20
40
60
80
100
0
.2
.4
.6
.8
1
western education share
bandwidth = .8

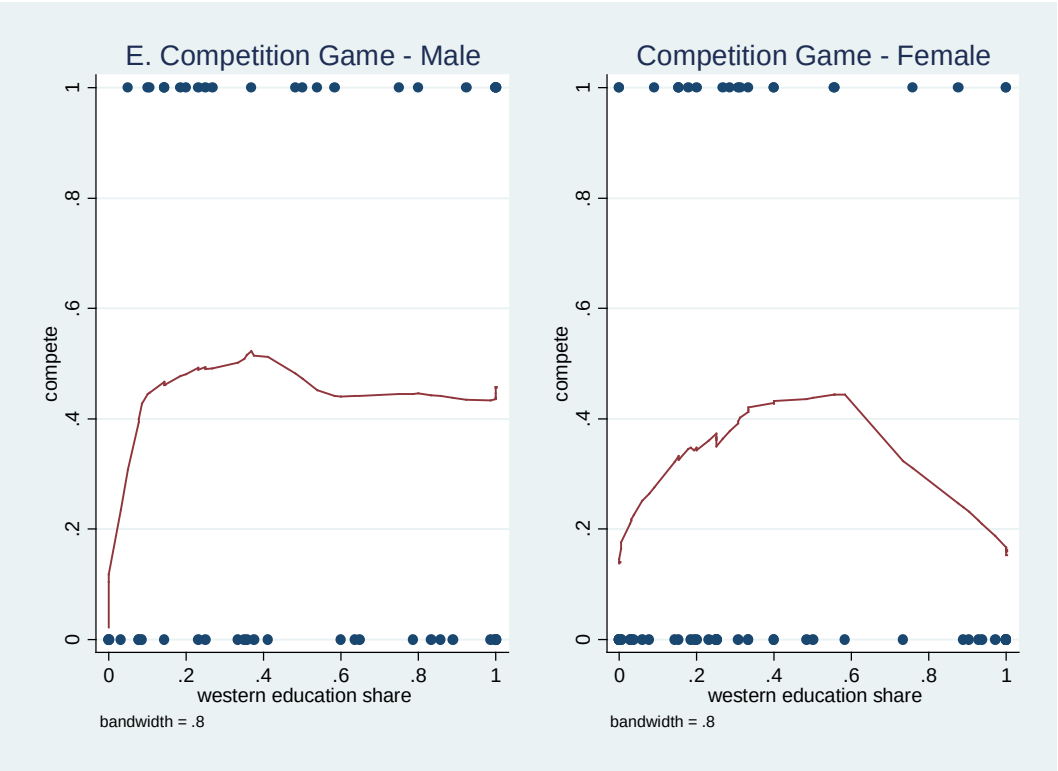
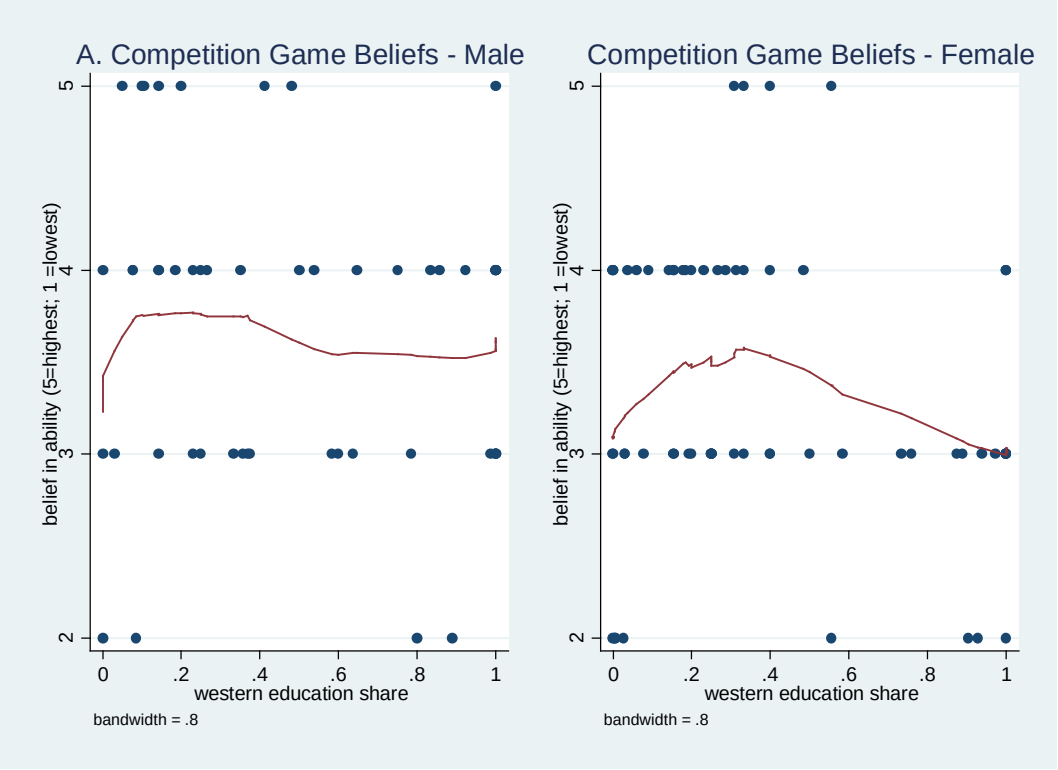

E. Competition Game - Male
compete
0
.2
.4
.6
.8
1
0
.2
.4
.6
.8
1
western education share
bandwidth = .8
Competition Game - Female
compete
0
.2
.4
.6
.8
1
0
.2
.4
.6
.8
1
western education share
bandwidth = .8

Figure 4: Beliefs and Performance in the Competition Game by Gender



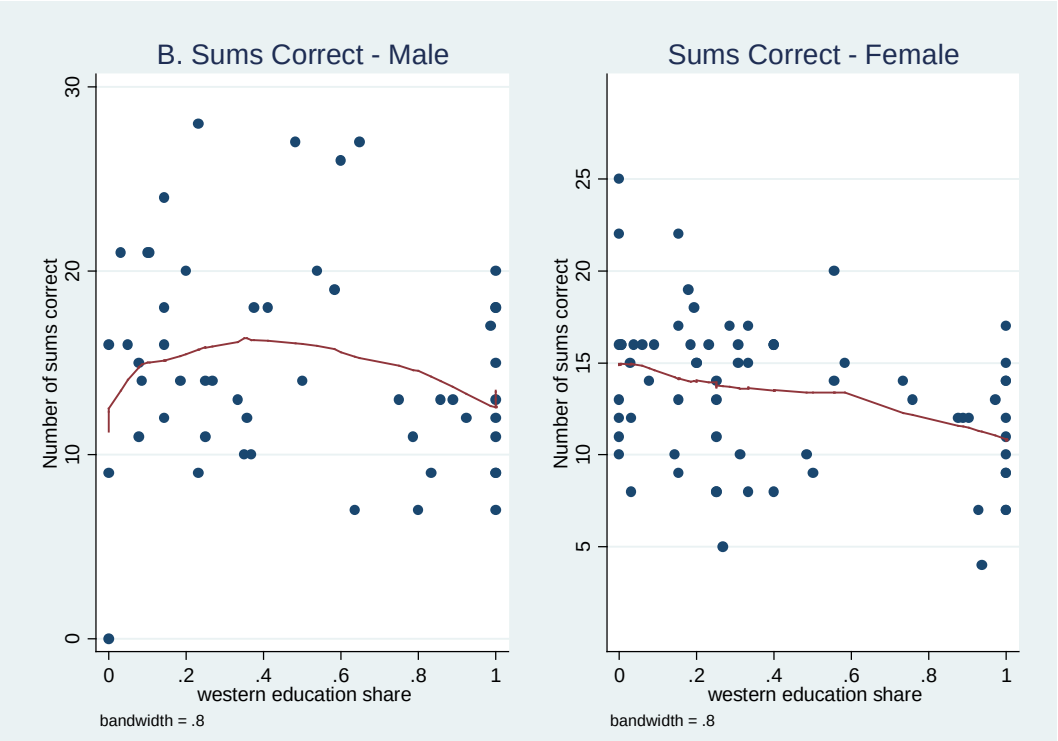


Figure 5: The Predicted % Sent in the Trust Game by Perceived Ethnic Homogeneity

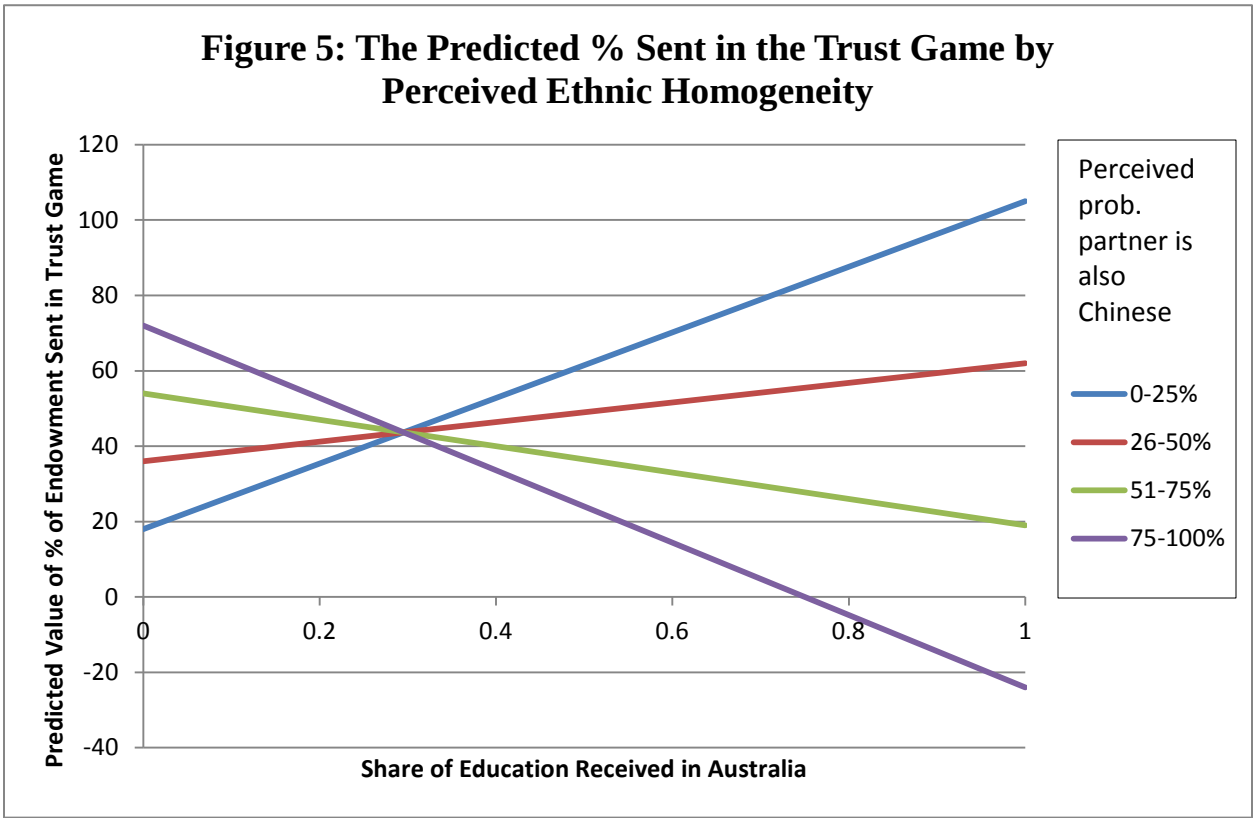


Table 1: Regression Results using Western Education Share

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	Dictator % sent	Trust % sent	Trust % sent	Trust % return	Trust % return	Risk % invest	Risk % invest Men	Risk % invest Women	Compete	Compete	Compete
Western educ sh	-18.72**	-35.48**	-28.39**	-24.72*	-18.10	9.084	-22.82	24.02**	1.034*	0.998*	0.888
	[9.159]	[14.19]	[13.94]	[12.73]	[12.98]	[10.08]	[21.12]	[10.26]	[0.573]	[0.598]	[0.607]
(West. educ sh)^2									-1.091**	-0.999*	-0.925*
									[0.518]	[0.537]	[0.545]
Age	-0.218	-1.304	-1.109	0.742	0.790	-0.547	-4.49	1.45	-0.0241	-0.0245	-0.0226
	[1.338]	[2.022]	[1.943]	[1.887]	[1.879]	[1.47]	[2.90]	[1.60]	[0.0248]	[0.0256]	[0.0263]
Male	-16.6***	5.089	9.435	-1.858	1.428	11.97**			0.173*	0.105	0.0674
	[5.406]	[8.195]	[8.239]	[7.466]	[7.570]	[5.93]			[0.0998]	[0.105]	[0.107]
Economics	-0.887	1.913	0.334	-7.210	-8.118	10.16*	13.75	6.68	0.137	0.168*	0.144
	[5.131]	[7.818]	[7.610]	[7.315]	[7.287]	[5.65]	[10.76]	[6.03]	[0.0923]	[0.0936]	[0.0969]
Religious	7.581	9.662	7.775	14.85	13.36	-9.52	-5.236	-11.10	-0.195*	-0.171	-0.134
	[7.074]	[10.79]	[10.46]	[9.965]	[9.849]	[7.80]	[14.43]	[8.72]	[0.111]	[0.118]	[0.127]
Work exp. (yrs)	3.134**	4.109*	2.625	1.435	0.270	0.309	3.945	-1.18	0.0280	0.0418	0.0415
	[1.508]	[2.334]	[2.281]	[2.054]	[2.127]	[1.66]	[3.898]	[1.60]	[0.0285]	[0.0284]	[0.0287]
% sent in DG			0.57***		0.334*						
			[0.185]		[0.180]						
% invested in RG			1.177								0.019**
			[0.769]								[0.0096]
Amt received TG				1.16***	1.22***						
				[0.230]	[0.236]						
Self-rank in CG										0.23***	0.24***
										[0.0666]	[0.0675]
Constant	39.65	62.10	27.05	-35.38	-49.63	52.45	158.1**	9.39			
	[28.95]	[43.75]	[43.22]	[41.62]	[42.49]	[31.70]	[67.0]	[33.92]			
Observations	115	115	115	114	114	115	49	66	115	115	115

Standard errors in brackets. *** p<0.01, ** p<0.05, * p<0.1. Columns (1)-(8) report coefficients from tobit estimations. Columns (9)-(11) report marginal effects from probit estimation.

Table 2: Competition Game Results by Gender

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Compete (0/1) Male	Compete (0/1) Male	Compete (0/1) Male	Quintile Belief Male	Compete (0/1) Female	Compete (0/1) Female	Compete (0/1) Female	Quintile Belief Female
Western educ share	0.814	1.206	1.158	-0.682	1.392*	1.028	0.794	4.098**
	[0.933]	[1.040]	[1.073]	[1.916]	[0.720]	[0.736]	[0.747]	[1.731]
(West. educ share)^2	-0.985	-1.288	-1.196	0.137	-1.426**	-1.041	-0.906	-3.933**
	[0.862]	[0.952]	[0.987]	[1.759]	[0.650]	[0.665]	[0.667]	[1.557]
Self-ranking in CG		0.244**	0.243**			0.189**	0.209**	
		[0.106]	[0.108]			[0.0869]	[0.0881]	
Age	-0.0479	-0.0393	-0.0303	-0.0642	0.00265	-0.00780	-0.0132	0.0579
	[0.0409]	[0.0425]	[0.0444]	[0.0849]	[0.0326]	[0.0340]	[0.0348]	[0.0758]
Studied economics	0.322**	0.351**	0.335**	0.0533	-0.00899	0.0327	0.00836	-0.204
	[0.140]	[0.145]	[0.151]	[0.319]	[0.120]	[0.121]	[0.125]	[0.283]
Religious	-0.102	-0.0708	-0.0507	-0.257	-0.276**	-0.237*	-0.182	-0.385
	[0.201]	[0.214]	[0.221]	[0.430]	[0.110]	[0.123]	[0.149]	[0.410]
Work exp. (yrs)	0.0860	0.0963*	0.0885	-0.0230	0.00333	0.0197	0.0252	-0.136*
	[0.0566]	[0.0574]	[0.0586]	[0.116]	[0.0340]	[0.0330]	[0.0335]	[0.0768]
% invested in RG			0.0171				0.0214	
			[0.0143]				[0.0137]	
Observations	49	49	49	49	66	66	66	66

Standard errors in brackets; *** p<0.01, ** p<0.05, * p<0.1. Columns (1)-(3) and (5)-(7) report marginal effects from probit estimation. Columns (4) and (8) report coefficients from ordered probit estimation.

Table 3: Comparison with Mixed Ethnicity Sessions

	(1) Dictator % sent	(2) Trust % sent	(3) Trust % return	(4) Risk % invest Men	(5) Risk % invest Women	(6) Compete (0/1) Men	(7) Compete (0/1) Women
Mixed-Ethnicity Sessions:							
Western educ. share	-24.95	32.69	-10.01	-11.47	28.64	2.817	0.535
	[22.03]	[34.30]	[17.30]	[55.36]	[24.72]	[2.296]	[1.751]
(Western educ share)^2						-3.808	-0.768
						[4.469]	[2.233]
Observations	56	56	45	23	37	22	36
Chinese-Ethnicity Sessions:							
Western educ. share	-18.72**	-35.48**	-24.72*	-22.82	24.02**	0.814	1.392*
	[9.159]	[14.19]	[12.73]	[21.12]	[10.26]	[0.933]	[0.720]
(Western educ share)^2						-0.985	-1.426
						[0.862]	[0.650]
Observations	115	115	114	49	66	49	66
P-value of t-test of significant difference:	0.81	0.049**	0.60	0.79	0.86	0.52	0.36

Standard errors in brackets. *** p<0.01, ** p<0.05, * p<0.1. All regressions also included controls for the participant's age, gender, whether they were an economics major, whether they were religious, and years of work experience.

Table 4A: Relationship between Trust and Western Education Share in the Mixed-Ethnicity Sessions

	Percentage Sent in Trust Game
Same Ethnic	18.14
	[13.64]
Same Ethnic x Western Education Share	-61.28*
	[36.69]
Western Education Share	148.4*
	[77.76]
Constant	29.03
	[70.56]
Observations	56

Standard errors in brackets. *** p<0.01, ** p<0.05, * p<0.1 The regression also included the controls used in Table 1.

Table 4B: Relationship between Trust, Western Education Share and Shared Ethnicity

	Percentage Sent in Trust Game			
	Estimate of % of Participants of your Ethnicity			
	0-25%	26-50%	51-75%	76-100%
Western Education Share:				
0	18	36	54	72
0.25	39.75	42.5	45.25	48
0.50	83.25	55.5	27.75	0
1	105	62	19	-24

These figures are calculated from the estimated coefficients in Table 4A. That is, 18.14*SameEthnic - 61.28*western education share*SameEthnic +148.4*Western Education Share.

Table 5 – Testing for Full Cultural Integration

	(1) Dictator % sent	(2) Trust % sent	(3) Trust % return	(4) Risk % invest Men	(5) Risk % invest Women	(6) Compete Men	(7) Compete Women	(8) Trust % sent
				Within Ethnicity				Mixed Ethnicity
Chinese * Western educ sh	-15.74**	-26.70**	-22.58**	-18.22	21.51**	0.699	1.324*	54.47
	[7.290]	[11.89]	[9.366]	[18.95]	[9.510]	[0.914]	[0.716]	[37.9]
Chinese * (West educ. Sh)^2						-0.607	-1.394**	
						[0.826]	[0.662]	
Chinese	13.29*	2.379	20.16**	-10.56	-26.60***	-0.372	-0.173	-38.28**
	[6.869]	[11.25]	[9.223]	[18.41]	[8.934]	[0.228]	[0.199]	[18.13]
Age	-0.741	-0.957	-0.556	-4.088**	1.843**	-0.00564	0.0111	5.10***
	[0.639]	[1.048]	[0.901]	[1.767]	[0.910]	[0.0229]	[0.0158]	[1.79]
Male	-15.38***	4.074	-7.140					-16.78
	[4.185]	[6.788]	[5.345]					[12.13]
Economics	-6.410	-2.848	-8.367	18.18	10.80*	0.254*	0.0343	-2.36
	[4.634]	[7.445]	[5.996]	[11.68]	[5.991]	[0.135]	[0.113]	[13.67]
Religious	5.240	5.405	16.46***	-11.27	-5.153	-0.0285	0.0349	12.41
	[5.059]	[8.248]	[6.294]	[12.68]	[6.547]	[0.154]	[0.123]	[16.03]
Work exp. (yrs)	1.726**	1.326	0.541	3.269	-0.333	-0.0134	0.00466	-5.35**
	[0.665]	[1.110]	[0.890]	[1.963]	[0.968]	[0.0218]	[0.0175]	[2.23]
Amt received TG			1.078***					
			[0.156]					
Constant	26.62*	61.43***	-27.43	158.3***	23.95			-33.52
	[13.55]	[22.09]	[20.16]	[34.94]	[19.73]			[34.80]
p-value of test of full integration:	0.69	0.02**	0.69	0.06*	0.52	0.13	0.17	0.59
Observations	169	165	157	71	103	70	103	103

Standard errors in brackets. *** p<0.01, ** p<0.05, * p<0.1

Table 6: Selection Effects: Marginal Effects of Western Education Share

(X=western education share)

	Arrived age<=15 years		Arrived >15 years		t-test (p-value)
	Coefficient on:		Coefficient on:		
Game:	X	X^2	X	X^2	
Dictator Game	-18**	-	-24	-	0.69
Trust Game - Sender	-35**	-	-23	-	0.59
Trust Game - Receiver	-25**	-	-32	-	0.72
Risk Game	9.07	-	17.3	-	0.61
- Male	-24.5	-	-9.17	-	0.57
- Female	24.7**	-	37.7	-	0.51
Competition Game	0.67	-0.77	0.35	0.45	0.28
- Male	0.19	0.80	-0.60	0.83	0.39
- Female	2.24*	-2.14*	2.38	-4.70	0.40
N	46		73		

*** p<0.01, ** p<0.05, * p<0.1

Table A1: Summary Statistics

	N	Mean	Std. Dev.	Min.	Max.
Chinese Participants:					
Age	180	21.8	2.6	18	37
Male	180	42.0	0.49	0	1
Economics student	180	51.7	0.50	0	1
Religious	180	14.4	0.35	0	1
Years of work experience	175	1.95	2.42	0	20
Share of education in the West	180	0.39	0.33	0	1
Age moved to Australia	180	16.1	7.0	0	37
Share of life lived in Australia	180	0.27	0.29	0	1
Australian Participants of European Descent:					
Age	118	23.4	6.8	18	62
Male	118	45.7	0.50	0	1
Economics student	117	12.8	0.34	0	1
Religious	117	28.2	0.45	0	1
Years of work experience	115	6.18	6.07	0	37

Table A2: Extent to which agree with: "*In many ways I think of myself as Australian*."

	N	%
Strongly Agree	31	25.8
Agree	33	27.5
Neutral	18	15.0
Disagree	21	17.5
Strongly Disagree	17	14.2

Table A3: Comparison of Results for Western Education Share and Percentage of Life in Australia

	(1) Dictator % sent	(2) Trust % sent	(3) Trust % return	(4) Risk % invest Men	(5) Risk % invest Women	(6) Compete Men	(7) Compete Women
Western educ sh	-18.7**	-35.5**	-24.7*	-22.8	24.0**	0.81	1.39*
	[-2.04]	[-2.50]	[-1.94]	[21.1]	[10.3]	[0.93]	[0.72]
(Western educ sh)^2						-0.99	-1.43**
						[0.86]	[0.65]
Share Life in Australia	-18.2*	-32.4**	-21.6	-32.2	30.2***	0.11	0.92
	[-1.81]	[-2.11]	[-1.51]	[21.0]	[11.3]	[0.99]	[0.74]
(Share Life in Australia)^2						-0.80	-1.14
						[0.92]	[0.76]
Observations	115	115	114	49	66	49	66

t-statistics in brackets. *** p<0.01, ** p<0.05, * p<0.1. All regressions also controlled for the participant's age, gender, field of study, whether they are religious, and years of work experience. In addition, columns (5) and (6) control for the amount received from the Sender in the trust game.

Table A4: Dropping Participants Who were Born in Australia

	(1) Dictator % sent	(2) Trust % sent	(3) Trust % return	(4) Risk % invest Men	(5) Risk % invest Women	(6) Compete Men	(7) Compete Women
Western educ share	-16.34*	-24.85*	-25.43*	-25.78	17.81*	0.774	1.337*
	[-1.683]	[-1.678]	[-1.853]	[-1.048]	[1.687]	[0.776]	[1.722]
(Western educ share)^2						-0.739	-1.439**
						[-0.775]	[-1.975]
Observations	103	103	102	42	61	42	61

t-statistics in brackets. *** p<0.01, ** p<0.05, * p<0.1. All regressions also controlled for the participant's age, gender, field of study, whether they are religious, and years of work experience. In addition, column (3) controls for the amount received from the Sender in the trust game.