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Estimating the Effect of the One-Child Policy on Chinese Household Savings: Evidence from an Oaxaca Decomposition

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Estimating the Effect of the One-Child Policy on Chinese Household Savings: Evidence from an Oaxaca Decomposition

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Abstract: Researchers have long puzzled over China's high household savings rate. Some have hypothesized that the explanation lies with China's One-Child Policy (OCP). According to this hypothesis, faced with fewer children to support them in their old age, Chinese parents increased their savings to finance retirement. Previous research relied on empirical studies of the relationship between children and saving behavior. However, all of these studies based their analysis on data after the OCP was implemented. Their implicit counterfactual for China without an OCP was households with multiple children living in an OCP environment. In contrast, we compare Chinese people with people from regions that do not have restrictive population policies. These regions share many cultural, demographic and economic characteristics with China that suggest they can be used as a counterfactual for China. This approach enables us to employ a Blinder-Oaxaca decomposition procedure to identify the different channels by which children could affect savings. Our results suggest that the OCP decreased households' proclivity to save. The estimated effects are generally small, in the range of one to two percentage points. We find no evidence to indicate that the OCP can explain China's high saving rate. An implication of our findings is that they suggest that the recent relaxation of the OCP cannot be counted upon to substantially boost Chinese consumption.

Keywords: China, One-Child Policy, Savings rate, Demographics, Blinder-Oaxaca decomposition.

JEL Classifications: D14, E21, J13, J18, O10

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I. INTRODUCTION

The Chinese household savings rate, defined as overall household savings divided by disposable income, has increased dramatically over the last 60 years. In 1960, China's household savings rate was approximately 5%. In 2016, it was 36%, approximately six times higher than the OECD average (OCED National Accounts, 2016). Understanding why China's household savings rate is so high is important, as many believe that savings, via their effect on investment, have been the driving force behind China's economic growth. The connection is easy to make. In 2017, investment accounted for 44.41% of China's GDP, compared to a world average of 23% (CEIC, 2017). Accordingly, China's high savings rate has been the subject of much recent research (Binkaia & Rudaib, 2013; Li, Whalley & Zhao, 2013, 2015; Wang & Wen, 2012; Feng, He & Sato, 2011; Chu & Wen, 2017; Wei & Zhang, 2011; Chamon & Prasad, 2010; Chamon, Liu & Prasad 2013).

One explanation that has received considerable attention is the role of China's "One-Child Policy" (OCP), introduced in 1979. This policy limited the number of children parents could have. Since the implementation of the OCP, China's fertility rate, the average number of children born to a woman over her lifetime, has dropped from approximately 3.8 to 1.6 (World Bank, 2017).

Given the concurrence in the timing of the implementation of the OCP and the increase in China's savings rate, it is tempting to assume a causal link. This link has been supported by a number of studies. Banerjee, Meng & Qian (2010); Zhou (2014); Curtis, Lugauer, & Mark (2015); Choukhmane, Coeurdacier & Jin (2016); Ge, Yang & Zhang (2018); and Lugauer, Ni & Yin (2019) all conclude that the OCP has been a substantially contributing factor to China's high savings rate. These studies make two crucial assumptions: (i) the observed decrease in the number of children post-OCP is due to the OCP ("the endowment effect", and (ii) the relationship between children and saving is unaffected by the OCP ("the coefficient effect"). As we argue below, both assumptions are debatable at best.

Our study differs from these previous studies in two ways. For our counterfactual, we use saving behavior from other regions without the OCP. Further, we allow the impact

of the OCP to affect both the number of children (the "endowment effect"), and the relationship between number of children and savings (the "coefficient effect"). To disentangle these effects, we employ the Blinder-Oaxaca decomposition (Blinder, 1973; Oaxaca, 1973).

We are able to do this by merging data from the Gallup World Poll and the Global Findex database. This allows us to compare the saving behavior of people in China to the saving behavior of people in other Asian and developing regions without the OCP. Unlike most of the existing literature, we find little evidence to suggest that the OCP has had a major effect on savings in China.

The remainder of the paper is structured as follows: Section II discusses previous research and presents are counterfactual strategy. Section III discusses our data. Section IV presents our methodology. Section V discusses our empirical results and Section VI concludes.

II. EXPLANATIONS FOR THE INCREASE IN CHINA'S HOUSEHOLD SAVINGS RATE

Property prices. One approach to understanding China's high savings rate has focused on rising property prices. Since China's housing reform, housing prices in China have increased dramatically. Binkaia & Rudaib (2013) estimate the impact of the rise of housing prices on household savings rates in China using survey data for 2002 and 2007. They conclude that rising housing prices explain 47% of the rise in China's household savings rate. Wang & Wen (2012) used simulations with Chinese time-series data on household income, housing prices, and demographics. Contrary to Binkaia & Rudaib (2013), their analysis found that rising mortgage costs increased the aggregate savings rate by at most 2 to 4 percentage points. Li, Whalley, & Zhao (2013) also found little evidence linking housing prices to household saving behavior based on data from the Chinese household income project[1]. Finally, Chamon & Prasad (2010)

[1] The Chinese Household Income Project reports data about the distribution of personal income and related economic variables in both rural and urban areas of China. There are four rounds of the survey, 1988, 1995, 2002 and 2007. More information about the survey can be found on http://www.ciidbnu.org/.

estimated that saving behavior related to homeownership could account for only 3 percentage points of the increase in China's household savings rate.

Pension reform. Another strand of the literature has focused on pension reforms. Chamon, Liu, & Prasad (2013) calibrate a model of savings and conclude that a significant increase in household savings can be explained by the combination of rising income uncertainty and pension reforms. They estimate that, together, these account for two-thirds of the increase in China's urban household savings rate. In contrast, Feng, He & Sato (2011) estimated a smaller effect. They concluded that pension reform in China increased household savings by 6-9 percentage points for citizens aged 25-29, and 3 percentage points for people aged 50-59.

Sex imbalance. Others have investigated how sex imbalances affect the savings rate. Wei & Zhang (2011) point to the competitive saving motive as a possible explanation for the high Chinese household savings rate. According to this motive, Chinese parents with a son increase their savings to make their child a relatively more attractive marriage partner. It follows that the household savings rate will increase as the sex ratio (the ratio of male to female) increases. Wei & Zhang conclude that this factor can account for more than half of the increase in the household savings rate between 1990 and 2007.

The One Child Policy (OCP). The mixed findings from these previous studies leave ample room for alternative explanations. One explanation that has received much attention is the One-Child Policy (OCP). The OCP was introduced in 1979, and later modified in the 1980s to allow minority and rural parents to have a second child if their first child was a daughter. The policy was terminated in 2015 and has been credited with preventing approximately 400 million births (Whyte, Feng & Cai, 2015).

An often-made argument linking fewer children to greater saving relates to retirement. Children are commonly viewed as a source of old-age support. Parents have children when they are young in expectation that the children will make financial transfers to them when they are old. In this sense, children and saving are viewed as financial substitutes. Parents with more children can afford to save less for retirement. Parents with fewer children need to save more to ensure adequate retirement support. Thus,

faced with a restriction on the number of children they were allowed to have, parents may have chosen to save more (Choukhmane, Coeurdacier & Jin, 2016). Another explanation linking fewer children to higher savings relates to the high cost of raising children. Fewer children leaves greater financial resources for other things, such as savings.

Time series evidence relating China's household savings rate to the OCP. FIGURE 1 shows China's household savings rate between 1960 and 2016. Data between 1960 and 2000 are from Modiglini & Cao (2004), savings rate data between 2001 and 2016 are calculated as household savings divided by household income, based on flow-of-funds data from the Chinese Statistical Yearbook, as suggested by Cristadoro & Marconi (2012). [2] Given that the increase in Chinese household savings coincides with the introduction of the OCP, it is easy to understand why researchers have found this to be an appealing explanation.

Previous studies relating higher savings rate to the OCP. Lugauer, Ni, & Yin (2019) use data from 2011 and 2013 to regress households' savings rates on number of children. Endogeneity is a common concern in regressions of this sort. In particular, there is concern that households with higher incomes may both save more and have more children. Failure to control for all sources of income/wealth may positively bias estimates of the effect of children on savings. To address this concern, LN&Y use county-level birth rates as an instrument for children. They estimate that an additional child is associated with a 5.6 percentage point decrease in household savings. They speculate that the OCP was responsible for a decrease of two children per household, and thus calculate that it increased the household savings rate by approximately 11 percentage points.

Ge, Yang, & Zhang (2018) link household savings rates to number of dependent children, number of adult children, and number of siblings, for different age cohorts.

2 Due to data unavailability, Modiglini & Cao (2004) calculated household savings as Change in deposits + bonds + individual investment in fixed assets. However, in the recent Chinese Statistical Yearbook, data on household savings are available, so we calculated household savings rate using the savings data directly. We checked the overlapping years between the data in Modiglini & Cao (2004) and the Chinese Statistical Yearbook, and the associated household savings rates are very close.

To address possible endogeneity, they instrument these variables using provincial-level fines for violating the OCP. Across all age cohorts, children/siblings are negatively associated with household savings rates. Their "back of the envelope calculation" indicates that demographic changes were responsible for approximately three-fourths of the 7.37 percentage point increase in the household savings rate between 1990-2005. Accordingly, they conclude that increased household savings may have been an unanticipated consequence of the OCP. They also conclude that the relaxation of the OCP could serve to stimulate household consumption.

Banerjee, Meng & Qian (2010) examine 2008 data on Chinese households where the first child was born between 1966-1977. They set 1972 as the date of the first change in China's population control policy. They then examine the impact of fertility on savings for a sample of households whose first child was born within five years of this date. They estimate a negative relationship between household savings and number of children, with the effect strongest when the oldest child is a daughter. To address endogeneity, they instrument whether the first child was born after 1972. Based on their findings, they conclude that "family planning policy causes a significant increase in household savings."

Another paper that focuses on the gender of children is Zhou (2014). Holding constant number of siblings, she found that the number of brothers an individual has decreases their savings rate. The more brothers, the less the burden on each son to support his parents, and thus the less demand for each brother to save. Zhou estimated that an additional brother lowers an individual's savings rate by 5 percentage points. Consequently, she concludes that "population policies" were responsible for over one-third of the increase in the savings rate of urban households.

Choukhmane, Coeurdacier, & Jin (2014) develop a quantitative overlapping generation model and calibrate their model using Chinese data. As a supplementary exercise, they estimate the savings behavior of households with twins compared to households with only one child for the years 1986 and 1992-2009. They find the negative effect of twins on savings is greater for households where the children were

born after 1980. Based on their estimates, they conclude that approximately a third of the increase in China's saving rate is due to the OCP.

Finally, Curtis, Lugauer, & Mark (2015) use macro-level data to build a simulation model to investigate the effect of the OCP on the Chinese household savings rate over the period 1955-2009. They examine the effect of not only fewer children, but also the change in the age composition of the population resulting from decreased fertility. They conclude that "a large component of the increased saving rate can be attributed to the reduction in family size brought about through population control policies."

Two crucial assumptions in previous research. Two crucial assumptions underlie the studies above: (i) the observed decrease in the number of children post-OCP is due to the OCP, and (ii) the relationship between children and saving is unaffected by the OCP. Both of these assumptions deserve examination.

Zhang (2017) compared China's fertility rate with other developing countries that had high rates of fertility in the 1960s (South Korea, India, Thailand, and Mexico.) While he found some differences in fertility rates between China and other countries in the 1970s, these differences diminished over time. While the OCP initially contributed to reduced fertility in the 1970s, it didn't have lasting effects. He concluded that China would have achieved a low fertility rate even without the OCP.

Cai (2010) compared the fertility of China with 200 countries and regions and concluded that the OCP was not the dominant factor responsible for decreasing China's fertility rates. He determined that socioeconomic development and globalization played key roles in China's fertility decline.

Feng, Cai & Gu (2013) compared China's fertility rate to 16 regions that had similar birth rates pre-OCP, including South Korea, Malaysia, Thailand, and Brazil. They developed a counterfactual empirical model that predicted China's fertility rate based on the observed trend in China before the OCP, appended with fertility trends from other regions after the OCP. They concluded that China would have achieved its observed 2010 fertility rate even in the absence of the OCP. A similar conclusion was reached by Whyte, Feng, & Cai (2015) based on a counterfactual analysis using the same set of 16 regions.

Basten & Sobotka (2013) compared the fertility trajectory of a number of low fertility regions including Singapore, South Korea, Taiwan, Hong Kong, and Japan, and confirmed that the evolution of China's fertility rate was not that different from these other regions.

FIGURE 2 presents a time series graph of fertility rates for China and regions that previous studies have identified as appropriate comparisons. Consistent with the previously cited research, China's post-1980 decline in fertility is similar to a number of other countries, indicating that forces beyond the OCP may have been responsible for much of China's decline in fertility rate.

FIGURE 3 highlights the concern with inferring causation from OCP to higher savings rate just because the increase in the household savings rate coincided with China's OCP. In this figure, the time series for Taiwan's household savings rate is superimposed on China's time series. Taiwan's increase in household savings behavior was also quite impressive. While Taiwan's rise began a little earlier and started a little higher, the two time series are strikingly similar. In 1970, Taiwan's household savings rate was 8.0%. China's was 2.0%. In 1998, Taiwan's household savings rate was 26.0%. China's was 25.9%. The two trends show much similarity. Yet Taiwan did not have an OCP.[3]

The second assumption underlying previous analyses is that savings functions estimated from Chinese, post-OCP data represent what Chinese saving behavior would have been in the absence of the OCP. The studies above estimate variations of the following savings function:

(1) $$savings\ rate = \alpha + \beta \cdot children + controls + \varepsilon.$$

Given an assumption about the impact of the OCP on number of children, they estimate the effect of the OCP by $\beta \cdot \Delta children$. In doing so, they implicitly assume that the counterfactual for China with an OCP is post-OCP Chinese households with

[3] Taiwan did implement a series of family population controls in the 1960s. However, its birth rate had been dropping dramatically since at least 1950. (SOURCE: https://www.macrotrends.net/countries/TWN/taiwan/birth-rate).

more than one child. They are forced to assume this counterfactual because Chinese household-level savings data for the pre-OCP period is unavailable.

However, it is not unreasonable to question whether the OCP could have changed how people spend money on children. If so, using estimated saving functions from the post-OCP period to determine the effect of children on savings will lead to erroneous conclusions.

A different counterfactual strategy. To estimate the impact of the OCP on savings, one would like to compare savings of Chinese households under the OCP to what savings would have been without the OCP. The ideal counterfactual would be an imaginary China identical in every respect to the China we currently observe except that no OCP would have been implemented. Of course, the ideal counterfactual doesn't exist, which is why researchers have to use imperfect counterfactuals. As noted above, previous studies use Chinese households with more than one child as representative of China without an OCP.

We adopt a different counterfactual strategy. We use households from selected regions outside of China to represent how Chinese households would save in the absence of an OCP. In this, we follow the precedent established by the fertility literature. TABLE 1 reports the regions that other studies have used to serve as counterfactuals for Chinese fertility behavior under the OCP. In our analysis, we looked for regions that either had a sizeable Chinese population, a similar culture to China, or a similar standard of living (as measured by GDP per capita). We selected the following regions: Taiwan, Hong Kong, Singapore, Malaysia, Japan, South Korea, Brazil, Thailand, Russia, Indonesia, and Mexico. Almost all of these have previously been used to estimate the effect of the OCP on Chinese fertility behavior (see TABLE 1).

Taiwan and Hong Kong are amongst the most widely used comparisons to China based on culture and demographics. Singapore and Malaysia both have sizeable Chinese populations. In addition, China and Malaysia have similar GDPs per capita. Japan and South Korea have related cultures and share many common values. Both countries also experienced high savings rate during their economic "takeoff" periods. Japan's

national savings rate was greater than 40% in the 1960s and 1970s, and is still relatively high today at 20% to 30%. South Korea's experience is similar to China's in that it experienced a dramatic increase in its savings rate in the 1980s. Today, South Korea's national savings rate is virtually identical to China's. Finally, we included Brazil, Thailand, Russia, Indonesia, and Mexico because these countries have elsewhere been used as comparison regions for China. They are similar in economic development, with comparable GDPs per capita.

As we discuss below, a major advantage of our approach is that we allow the savings function to be different for post-OCP China and its counterfactuals. In this way the "endowment effect" (the impact of the OCP on the number of children) and the "coefficient effect" (the impact of OCP on how children affect savings) can both be estimated. Previous studies ignored the latter effect.

We readily acknowledge that our counterfactual strategy is imperfect. It assumes that, upon controlling for the influence of other variables, remaining differences between China and the counterfactuals regions are due to the OCP. Nevertheless, as we have pointed out, previous counterfactual strategies have had to make arguably more problematic assumptions.

III. Data

The data used in this study are from the 2014 Gallup World Poll database and 2014 Global Findex database. The Gallup World Poll database is a yearly survey that includes individual-level data of more than 160 countries and regions worldwide. Data are gathered using face-to-face interviews or telephone surveys.

The typical survey includes approximately 1,000 people per country, though regions with large populations are allocated larger survey samples. In the 2014 Gallup World Poll database, 4,696 Chinese individuals were interviewed. The database includes detailed information on individuals' family size, number of children under the age of 15, income, ethnicity, employment status, gender, educational status, and other household, financial, and employment characteristics.

The Global Findex survey has been conducted every three years since 2011. It is designed to allow merging with the Gallup World Poll through individual-specific IDs.

With respect to saving behavior, it asks respondents, “In the past 12 months, have you, personally, saved or set aside any money for any reason?”. Respondents’ answers have four options: “Yes, No, Don’t know, Refuse to answer”. Our analysis uses a binary version of this question equaling 1 if the respondent chose Yes, and 0 otherwise (including the small share of respondents that answer don’t know or refuse to answer).

While the above question allows us to analyze differences in saving behavior between China and the counterfactuals, it does not measure the household savings rate, the share of income saved by the household. Instead, it focuses on factors that affect the likelihood that a person saves.

The survey does have one question that addresses the amount of a person’s savings. It asks “Now, imagine that you have an emergency and you need to pay the amount of 1/20 of GNI per capita. How possible is it that you could come up with this amount within the next month? Is it very possible, somewhat possible, not very possible, or not at all possible?“[4]

This is followed by the question “What would be the main source of money that you would use to come up with 1/20 of GNI per capita within the next month?”. If participants choose “savings”, this indicates that they have substantial financial reserves. We use this pair of questions to create a binary variable indicating that the individual has a “meaningful” amount of savings.

Respondents were also asked about the motives of their savings, specifically, “In the past 12 months, have you, personally saved or set aside any money for any of the following reasons? A: To start, operate, or grow a business or farm. B: For old age. C: For education or school fees.” These questions allow us to separately examine the reasons why people save.

Summarizing, while the questions do not allow us to estimate the share of income going to savings, they do allow us to compare the likelihood a Chinese household saves to the likelihood of saving for a household from other regions. We relate this

[4] 1/20 of GNI per capita for China would be approximately 5866 RMB in 2014.

difference in saving behavior to various household characteristics, including the number of children under 15 in the household.

The merged 2014 Gallup World Poll and 2014 Global Findex databases contain 146,688 individual observations from 142 countries and regions. Descriptive statistics for China and the counterfactual regions are shown in TABLE 2 (for saving behavior) and TABLE 3 (for number of children under 15).[5] In addition to individual country data, we also report average statistics for all the counterfactuals together ("All excl. China") and a world average using all the data at hand ("World").

One observation immediately apparent from these tables is that China is not that different from the counterfactuals. For example, 69% of the participants in China reported having saved in the past 12 months, while the average for the counterfactual respondents is 64%. This compares to a World average of 54%. With respect to "Meaningful savings", 46% of the Chinese sample reported having meaningful savings, compared to 36% for the counterfactuals ("All excl. China"). The World average is 27%.

This pattern is also evident in the various saving motives. Chinese people's saving behavior is similar to other counterfactuals in terms of saving for old age, education, and business. Counterfactual data shows that 36% of the counterfactual respondents indicated that they were saving for old age, compared to 40% of Chinese respondents. 19% of counterfactual respondents saved for education, compared to 25% of Chinese respondents. Finally, 13% of counterfactual respondents saved for business, while the figure for Chinese respondents was 15%.

Similarities between China and the counterfactual regions are also evident with respect to number of children under 15 (cf. TABLE 3). The average number of children under 15 per household in China is 0.56, compared to 0.64 for the counterfactuals (cf. "All excl. China"). These numbers are consistent with the low fertility rates in the macro-level data. The average number of children born to a woman over her lifetime

[5] Descriptive statistics for the control variables used in our analysis are provided in TABLES A1 and A2 in the Appendix.

in China is 1.68. This compares with 1.12 for Hong Kong, 1.16 for Singapore, 1.43 for Japan, 1.89 for South Korea (The World Bank, 2017).

The relative similarity of savings behavior between China and its counterfactuals may seem surprising given China's exceptionally high household savings rate, which is based on macro-level data. While it is true that most of the counterfactual regions have lower national savings rates, there are exceptions. Though household savings rate data for Singapore are not available, Singapore's gross savings rate (Gross savings to GDP ratio) was 45.3% in 2017, compared to 46.6% for China. Hong Kong's gross savings rate in 2017 was 26.7% (World Bank, 2017). For the other counterfactuals where we have household savings rate data, most have lower household savings rates. For example, Taiwan's household savings rate in 2016 was 20.3% compared to 36.1% for China; though both countries had very similar savings rates up through 1998, after which they started to diverge (see FIGURE 3).

Thus, while our analysis is not well-suited for analyzing the determinants of macro-level, national savings rates, it does allow us to compare the proclivity to save at the micro-level. If our counterfactuals provide a reliable approximation of the relationship between children and micro-level saving behavior for China in the absence of the OCP, then our analysis can provide insights into how the OCP affected the Chinese proclivity to save. The fertility rate literature provides support for this counterfactual strategy.

IV. METHODOLOGY

The starting point of our analysis is a linear savings function similar to those commonly employed in the literature. To understand how the OCP affects saving behavior, we evaluate both the effect that number of children has on saving behavior (the "endowment effect") and the effect of each child ("the coefficient effect"). Blinder-Oaxaca decomposition (Blinder, 1973; Oaxaca, 1973; Jann, 2008) enables us to decompose the total difference in saving behavior into these components, while also controlling for the effect of other variables that affect saving behavior.

In keeping with the previous literature, the general specification of our savings function is given by

$$(2) \qquad Saving\ Decision = \alpha + \beta \cdot Children + Controls + \varepsilon.$$

where $Saving\ Decision$ is a dummy variable taking the value 1 if the respondent had saved in the past 12 months, $Children$ is number of children under 15 in the respondent's household., and $Controls$ includes a wide variety of individual and household characteristics including income, gender, age, and education.[6]

Blinder-Oaxaca decomposition is designed to decompose differences between two groups. It divides the outcome variable into a component associated with group differences in the sample means of the explanatory variables, and another component associated with group differences in the variable coefficients.

Let the difference between the means of a given outcome variable Y for two groups *A* and *B* be represented by Δ:

(3) $$\Delta = E(Y_A) - E(Y_B).$$

Further, let Y for each of the groups be a function of explanatory variables X according to the following linear models,

(4) $$\begin{matrix} Y_{Ai} = X_{Ai}'\beta_A + \varepsilon_{Ai},\ E(\varepsilon_A) = 0 \\ Y_{Bi} = X_{Bi}'\beta_B + \varepsilon_{Bi}, E(\varepsilon_B) = 0 \end{matrix}'$$

where X is a vector of variables including a constant term, β is the associated vector of coefficients, and ε is the error term.

It follows that the difference in the means of the outcome variable for the two groups can be expressed as:

(5) $$\Delta = E(Y_A) - E(Y_B) = E(X_A)'\beta_A - E(X_B)'\beta_B.$$

By adding and subtracting terms, we represent this difference by a threefold decomposition:

(6) $$\Delta = [E(X_A) - E(X_B)]'\beta_B + E(X_B)'(\beta_A - \beta_B) + [E(X_A) - E(X_B)]'(\beta_A - \beta_B).$$

[6] Definitions and descriptive statistics for the control variables used in this analysis are reported in TABLES A1 and A2 of the Appendix. Control variables include income, gender, age, educational status, marital status, whether the participant gave or received any financial help, and participants' living situation.

The first term on the right-hand side, $[E(X_A) - E(X_B)]'\beta_B$ is the component due to the difference in the means of the explanatory variables evaluated at the coefficients for group *B.* This is the "endowment effect". The second term, $E(X_B)'(\beta_A - \beta_B)$ is the component due to the difference in the coefficients across the two groups evaluated at the sample means for group *B.* This is the "coefficient effect". The third term, $[E(X_A) - E(X_B)]'(\beta_A - \beta_B)$ is an interaction term that collects the remainder of the difference as the simultaneous difference of both means and coefficients of the two groups.

While the Blinder-Oaxaca decomposition (BOD) is designed to "explain" the difference in the mean values of a dependent variable as a function of differences in the mean values of all the explanatory variables and estimated coefficients, we can use it to isolate the contributory effect of number of children. In the notation above, *A* and *B* represent China and a given counterfactual region. Δ is the observed difference in the average probability of saving between China and its counterfactual. The BOD will allow us to calculate how much of this difference can be attributed to number of children, holding other factors constant.

If we think of China and a counterfactual region as representing China with and without the OCP, then the difference in savings behavior associated with number of children can be taken as a measure of the impact of the OCP on China's savings behavior. An attractive feature of BOD is that it allows us to separate this impact into endowment, coefficient, and interaction effects.

The methodology described above assumes a linear relationship between the probability of saving and its explanatory variables. As a robustness check, we will also apply a nonlinear decomposition approach employing the logit model.[7]

[7] Derivation of the decomposition for a nonlinear model such as the logit is not as straightforward as shown above because $E(Y_A)$ and $E(Y_B)$ cannot be easily decomposed into additive components (cf. Sinning, Hahn & Bauer, 2008). Our analysis uses the "logit" option in Stata's ***oaxaca*** command (cf. Yun, 2004).

V. EMPIRICAL RESULTS

Baseline regressions. Our baseline regressions estimate Equation (2) using OLS for each of the regions. These estimates will be used in the subsequent BOD. Our first series of regressions focuses on factors that affect the likelihood that respondents personally saved or set aside any money for any reason ("Save"). Given the large number of regions, we divide the counterfactuals into two sets and spread the results across two tables (TABLES 4A and 4B).

In the first column of both tables we report results for China. An additional child in China is associated with a 3 percentage-point reduction in the probability that an individual has saved in the past 12 months. The associated estimate is significant at the 1 percent level. This finding is consistent with what previous studies of China's saving behavior have reported. If we were to interpret this estimate as other studies have done, and if we were to assume that the OCP was responsible for an average decline of two children per household, these results would lead us to conclude that the OCP caused/was associated with a six percentage-point increase in the probability of saving. As we note below, this interpretation focuses solely on the endowment effect and ignores the coefficient effect.

Interestingly, none of the counterfactual regions show a significant negative relationship between children and saving. The associated estimates are generally small and insignificant. Three regions (Japan, Singapore, and Mexico) even show positive and significant coefficients. This suggests that the relationship between savings and children is different for China and the counterfactuals, possibly due to the OCP.

Blinder-Oaxaca decomposition (BOD) results for total savings. TABLE 5 uses the results above in conjunction with Equation (6) to perform a BOD, where the difference in the probability of saving between China and a given counterfactual due to number of children is separated into three components ("Endowments", "Coefficients", and "Interaction"). The table is divided into two halves according to the two sets of

counterfactual regions. The top half reports decomposition results for China, on the one hand, and Taiwan, Hong Kong, Japan, Singapore, Malaysia, and South Korea on the other. The bottom half uses counterfactuals Brazil, Thailand, Russia, Indonesia, Mexico, and a pooled sample of all counterfactuals ("All Excl. China").

Rows (1) and (2) of the table report the average probability of saving for respondents from China and the given counterfactual. Row (3) reports the difference, with positive (negative) numbers indicating that the probability is larger (smaller) for Chinese respondents.

Rows (4)-(6) decompose the overall difference in Row (3) using only one explanatory variable: number of children. The individual rows correspond to the endowment, coefficient, and interaction effects associated with the impact of number of children on saving. Row (7) sums these individual components.[8] Of particular interest are the endowment and coefficient effects (Rows 4 and 5).

The endowment component identifies how much counterfactuals' probabilities of saving would change if counterfactual respondents had the same number of children (under 15), on average, as Chinese respondents. For example, the endowment component for Hong Kong is 0.003. This indicates that the percentage of Hong Kong respondents who save would increase by 0.3 percentage points if Hong Kong households had the same number of children, on average, as Chinese households.[9]

If we think of this in terms of the OCP and take Hong Kong as representing China without the OCP, this suggests that the OCP is responsible for a 0.3 percentage point increase in the probability of saving due to the endowment effect. This is a very small effect. Looking across the estimated endowment effects for the other counterfactual

[8] Note that the total difference "explained" by number of children through the three effects will generally differ from the overall difference reported in Row (3). By construction, Row (7) will only equal Row (3) when the decomposition uses all the variables included in the corresponding baseline regression.

[9] Respondents from Hong Kong have an average of 0.44 children per household compared to an average of 0.56 children for China (cf. TABLE 3).

regions, we find similar small effects, ranging from -0.7 percentage points (Mexico) to 0.8 percentage points (Japan).

The coefficient component quantifies the change in the predicted percentage of counterfactuals who would save if their relationship between children and saving was the same as China's, as represented by the estimated coefficient on the number of children in China's baseline regression. The coefficient effect is generally larger in absolute value than the endowment effect across the counterfactual regions. Across all counterfactual regions, we estimate coefficient effects ranging from -4.9 percentage points (Mexico) to -0.2 percentage points (Thailand). This indicates that the counterfactual regions would decrease their probability of saving between 0.2 and 4.9 percentage points if their saving behavior was governed by China's savings function. Rephrased in terms of the OCP, it suggests that the OCP is responsible for a decrease in Chinese households' probability of saving between 0.2 and 4.9 percentage points via the coefficient effect.

The last component, the interaction effect, measures the simultaneous effect of differences in endowments and coefficients. It is generally small in size across the respective counterfactual regions.

The main takeaway from TABLE 5 is this: If the counterfactuals can be taken as representative of China without an OCP, these results suggest that the OCP decreased the average probability of saving in China between 0.5 and 4.1 percentage points. That being said, in the context of an average Chinese saving probability of 68.6%, this effect is relatively small.

A consistent finding of our analysis is that most of the overall effect of children on savings is through the coefficient effect. As noted above, previous studies implicitly assumed the coefficient effect was zero. That is, they assumed that China's saving function, the relationship between savings and number of children, was unaffected by the OCP. Our results indicate that, in fact, this is where the OCP has had its largest impact. Further, it is precisely the negative coefficient on the number of children

variable in China's baseline regression (cf. TABLES 4A and 4B), the same finding that other studies have found, that drives this result.

The preceding analysis focused on whether respondents had "saved or set aside any money for any reason" in the preceding 12 months. We next focus on "meaningful savings", measured as 1/20 of GNI per capita. This is arguably a better measure of the kind of saving behavior that would be impacted by the OCP since it omits casual, insubstantial savings.

TABLE 6 reports the results of a BOD analysis of "Meaningful Savings" using the same procedures we followed in TABLE 5. As before, we focus on Row (7) in the top and bottom halves of the table. This provides an estimate of the total effect of children on savings summed over the three component effects (endowment, coefficient, and interaction). The overall results are similar to what we found in TABLE 5.

Excepting Hong Kong, the estimates range from -0.024 (Taiwan) to 0.006 (Mexico). Hong Kong is something of an outlier at -0.048. Following the usual caveat about the suitability of our counterfactuals, these results suggest that the impact of the OCP was generally small, decreasing the average probability of Chinese households having "meaningful savings" in the range of one to two percentage points. At the extreme, if we use Hong Kong as our counterfactual, the estimated decrease is only 4.8 percentage points.

Summarizing, the results from TABLES 6 and 7, all of our estimates with one exception indicate that China's OCP had a small, negative impact on Chinese saving behavior. The one exception occurs with Hong Kong when we estimate the determinants of "Meaningful Savings". These results indicate the OCP may have had a somewhat larger negative impact. Even in this case, the impact can at best be interpreted as moderate when compared to an average probability of 46% for Chinese respondents having "meaningful savings".

Using Blinder-Oaxaca decomposition to analyze the components of savings. TABLES 7-9 show the decomposition results for people's decision to save for old age, education, and business respectively.

TABLE 7 focuses on the decision to save for old age. Children are sometimes viewed as a source of old-age support, as one possible motive to raise children is to provide parents financial support when they get older. The OCP could push people to save more for their old age because they have fewer children to rely on.

An inspection of Rows (4)-(6) in both the top and bottom halves of TABLE 7 indicate that to the extent we find that children matter, the impact comes primarily through the coefficient effect. For example, the BOD estimates indicate that there would be a decrease of 3.3 percentage points among Taiwanese respondents saving for old age if Chinese saving behavior and characteristics were applied to them. The coefficient effect alone accounts for a decrease of 3.2 percentage points. This dominance of the coefficient effect is a consistent pattern we will see in all the subsequent BOD analyses.

Based on the overall estimates reported in Rows (7), our analysis indicates that the OCP decreased the probability of Chinese respondents saving for old age anywhere from 1.1 (using Russia as a counterfactual) to 4.3 percentage points (using South Korea as a counterfactual). This compares to an average probability of saving for old age of 39.7% for the Chinese respondents in our sample.

TABLE 8 reports decomposition results for people's decision to save for education. Education is one of the largest expenditures in raising a child. Further, with fewer children, Chinese families may invest more in education so that their one child will be better able to support them in their old age. As a result, one might expect the OCP to have a substantial impact on respondents' decision to save for education. Rows (7) in the table report the total estimated effects of children on household saving for education.

The estimates range from -0.042 (Japan) to 0.027 (Russia). The pooled estimate from combining all the counterfactuals is -0.009 ("All excl China"). Some of these effects could be considered moderate in absolute value given that the average probability of saving for education among Chinese respondents is 0.253. Unfortunately, the range of estimates and the fact that there are both positive and negative estimates of moderate size prevents us from drawing any firm conclusions. Unlike in previous

analyses, the BOD for "Saving for Education" does not provide much insight about the impact of the OCP on households' proclivity to save for education.

The last component of savings that we examine is the probability of "saving for business". As a point of comparison, the average probability among the Chinese respondents of saving for this purpose is 14.7%. Rows (7) in TABLE 9 report the results of the BOD analysis. With three exceptions, the analyses all indicate negligible impacts of children, with estimated impacts less than one percentage point. The three exceptions are Taiwan, Japan, and Thailand. Using these for counterfactuals indicates that OCP decreased the probability of Chinese saving for business by 2.8, 1.9, and 1.5 percentage points, respectively. If instead we pool all counterfactuals, the BOD analysis produces an estimated OCP impact of 0.7 percentage points. None of these estimates is large. In summary, our BOD analysis of the OCP's effect on the probability of saving for business indicates a range of estimates from very small to moderate.

Decomposition results of the control variables. In the above analysis, we focused on the effect of the OCP, and found that the OCP does not seem to have an economically important impact on people's savings behavior. If the number of children can explain only a relatively small part of the difference, what other factors have contributed to the difference in people's saving behavior?

We report detailed BOD results using combined data for all the counterfactual regions for "Save" and "Meaningful savings" in TABLE 10. The left and right panels show BOD results for "Save" and "Meaningful savings", respectively. In terms of "Save", the overall endowment effect is -0.066. Across all variables, education accounts for much of the difference with estimates for "secondary" and "college" equal to -0.035 and -0.031. The overall coefficient effect is opposite signed and larger in absolute value. The results are more difficult to interpret since some of the variables contribute positively, and others negatively, to the overall effect. The interaction effects are in all cases small compared to the endowment and the coefficient effects.

The results for "Meaningful savings" are generally similar, with the endowment effect contributing negatively to the difference in saving proclivities between China and its counterfactuals, and the coefficient effect contributing positively. Once again, the two

education variables account for the bulk of the endowment effect. Age, via its quadratic effect, is a major contributor to the coefficient effect. One noteworthy difference between the "Save" and "Meaningful savings" results is that the interaction effect is economically important in the latter results. Unfortunately, this does not have a straightforward interpretation like the endowment and coefficient effect. The main takeaway from TABLE 10 is that many variables contribute to differences in saving proclivities between China and its counterfactuals. Relative to these other factors, number of children plays only a minor role.

Robustness check: Using a non-linear BOD. Up to this point, our empirical analysis has relied on a linear decomposition of the difference in average saving probabilities. However, as our dependent variable is binary, it may be more appropriate to use a non-linear model. Accordingly, we repeat our BOD analysis using a logit rather than a linear probability model. In the interests of space we only report results for our two measures of total savings, "Save" and "Meaningful Savings". As the results, with one exception, are very similar to the linear decompositions, we relegate them to the Appendix (cf. TABLES A3 and A4).

The one exception is the BOD that uses Singapore as a counterfactual for "Meaningful Savings". The results suggest that the OCP reduced Chinese households' probability of having meaningful savings by 11.6 percentage points. In contrast to previous estimates, most of the impact was due to the endowment effect. While the size of the effect is much larger than our other estimates, the sign is consistent with our general conclusion that the OCP cannot explain China's high savings rate.

Additional robustness checks. We also conducted a variety of additional robustness checks. In one set of checks, we omitted all respondents below the age of 23. This age bracket includes many individuals still living with their families. In another robustness check, we excluded all respondents over 40 as the number of children under 15 is more likely to be close to the actual number of children for younger respondents. Another robustness check combined the Asian regions of Taiwan, Hong Kong, Japan, Singapore, Malaysia and South Korea. These regions are geographically close to China. Some have sizeable Chinese population and similar cultures. Finally, we redid the

analysis using data for 2017, for which a smaller number of counterfactual countries was available. The overall picture from these robustness checks are qualitatively similar to those discussed above. While not reported here, the results are available upon request.

VI. CONCLUSION

China's high savings rate has been a longstanding puzzle for researchers. High savings can have multiple effects on the economy. In addition to weakening the potential demand for goods and services, high savings are commonly associated with high levels of risks to the economy. An excess amount of savings can put downward pressure on interest rates, encouraging excess investments, capital outflows decreases in exchange rates.

One of the most prominent explanations for this puzzle relates China's savings rate to the One-Child Policy (OCP), introduced in 1979. With fewer children to support them in their old age, it is hypothesized that parents responded by increasing their savings to finance retirement. This explanation has much appeal, especially since the increase in China's savings rate occurred at about the same time as the implementation of the OCP. In support of the OCP hypothesis, previous studies report a substantial negative relationship between savings and children.

However, a closer examination raises doubts. Many other reforms were happening in China during the heady reform period of the early 1980s. And previous studies finding a relationship between children and saving have made two crucial assumptions. First, they assume that the post-OCP reduction in number of children was due to the OCP. In contrast, many studies conclude that the OCP had, at best, a minor effect on Chinese fertility (Zhang, 2017; Cai, 2010; Feng, Cai, & Gu, 2012; Whyte, Feng, & Cai, 2015; Basten, Sobotka, & Zeman, 2014).

Second, they assume that the estimated relationship between household savings and children observed in the post-OCP period represents the relationship that would have existed in the absence of the OCP. Practically, that means that these studies have assumed that the counterfactual of Chinese saving behavior under the OCP is

represented by the post-OCP saving behavior of Chinese households that have more than one child. As we show, both of these assumptions can be challenged.

Our study makes two methodological innovations in examining the OCP hypothesis. First, we employ a different counterfactual strategy to understand the effect of the OCP. We follow the fertility literature in comparing the saving behavior of China with the saving behavior of other Asian and developing regions. We are able to do this by combining data from two sources: the Gallup World Poll and the Global Findex database. These micro-datasets allow us to match a large number of personal characteristics, including the number of children under the age of 15, income, gender, age, education status, etc., with saving behavior.

Second, we use the Blinder-Oaxaca decomposition procedure to separate the "endowment" from the "coefficient" effect of children on saving. This is of interest because the OCP could affect saving directly, by restricting the number of children households have (the "endowment effect"); or indirectly, by changing the nature of the empirical relationship between children and saving (the "coefficient effect").

Previous studies have been forced to assume that there is no coefficient effect. They had to assume this because the only data available are for households in the post-OCP period. In contrast, our approach allows the empirical relationship between children and saving to differ between China and the counterfactual regions.

Our results suggest that the OCP did not increase households' proclivity to save. The effects we estimate are generally small, in the range of one to two percentage points. In none of our analyses do we find evidence that the OCP would have had a large positive effect on savings.

Consistent with studies that conclude that the OCP increased China's savings rate, we estimate that children are negatively and significantly associated with savings in China. However, in our counterfactual regions, children either have an insignificant or positive effect on the probability of saving. If the counterfactual regions are taken as representative of China without a OCP, then the implication is that the OCP changed the nature of the relationship between saving and children. By assuming that the OCP had no effect on the household saving-children relationship, previous studies have

ignored an important consequence of the OCP and overestimated the effect of OCP on Chinese savings.

Our analysis also allows us to estimate the "endowment effect" of number of children on savings. Previous studies have assumed that the OCP was responsible for observed decreases in the number of children per household over time. However, number of children per household also decreased over time for our counterfactual regions. Once one accounts for this, number of children is unable to explain differences in China's and the counterfactual regions saving behavior.

Our findings are important in light of the current debates about how China can switch from an investment-based economy to a consumption-based economy. Our results suggest the relaxation of the OCP will not have a major effect on people's savings, and hence is unlikely to have a major effect on people's consumption. Other changes such as reducing government consumption, the appreciation of the real effective exchange rates, correcting factor market distortions, or adopting policies that facilitate economic growth (Huang, Chang & Yang, 2013; Lardy, 2007), may have a more significant effect in rebalancing the Chinese economy.

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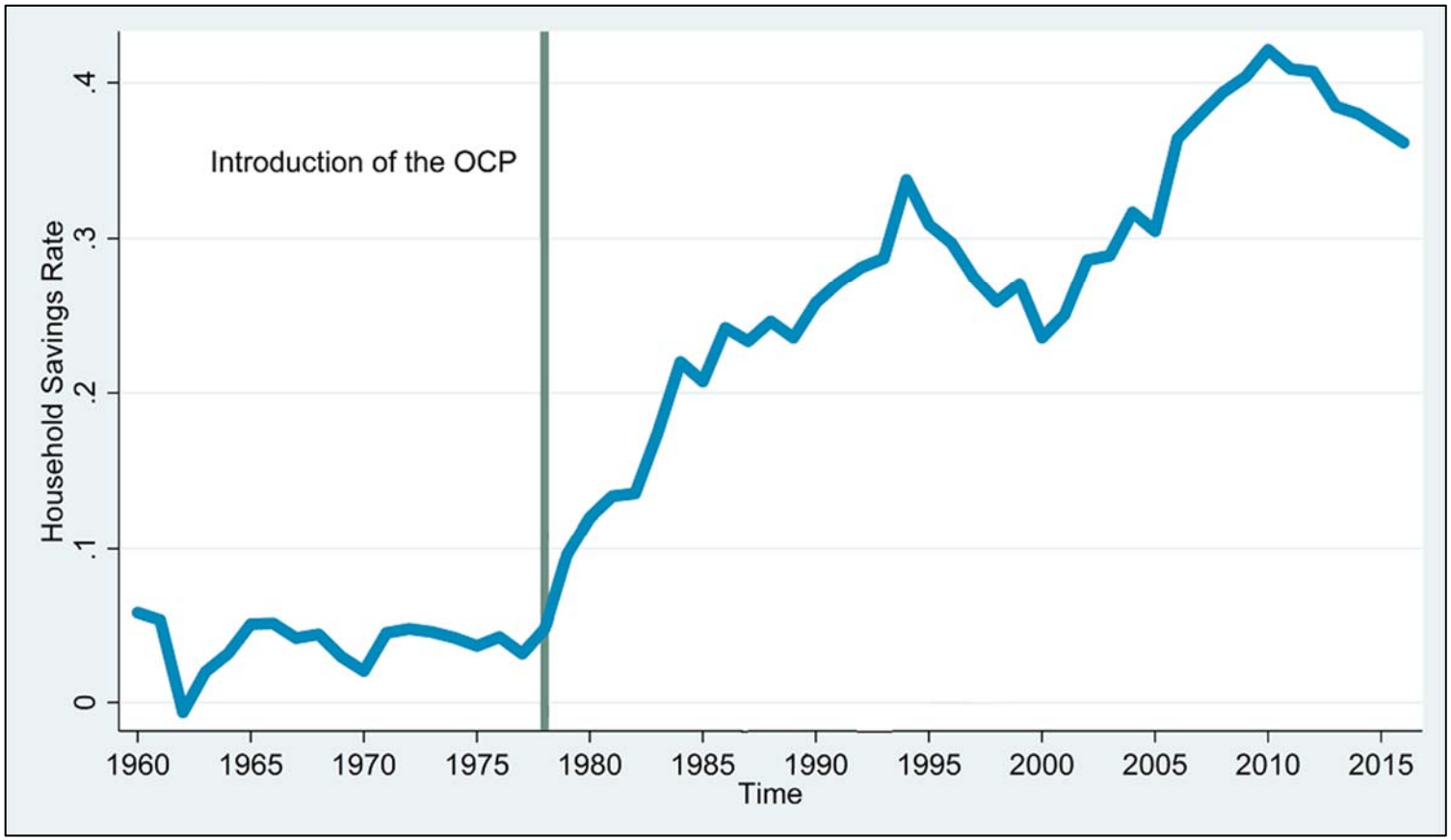

FIGURE 1: CHINA'S SAVINGS RATE, 1955-2015 (SOURCE: MODIGLIANI & CAO (2004), CHINA STATISTICAL YEARBOOK (2002-2018))

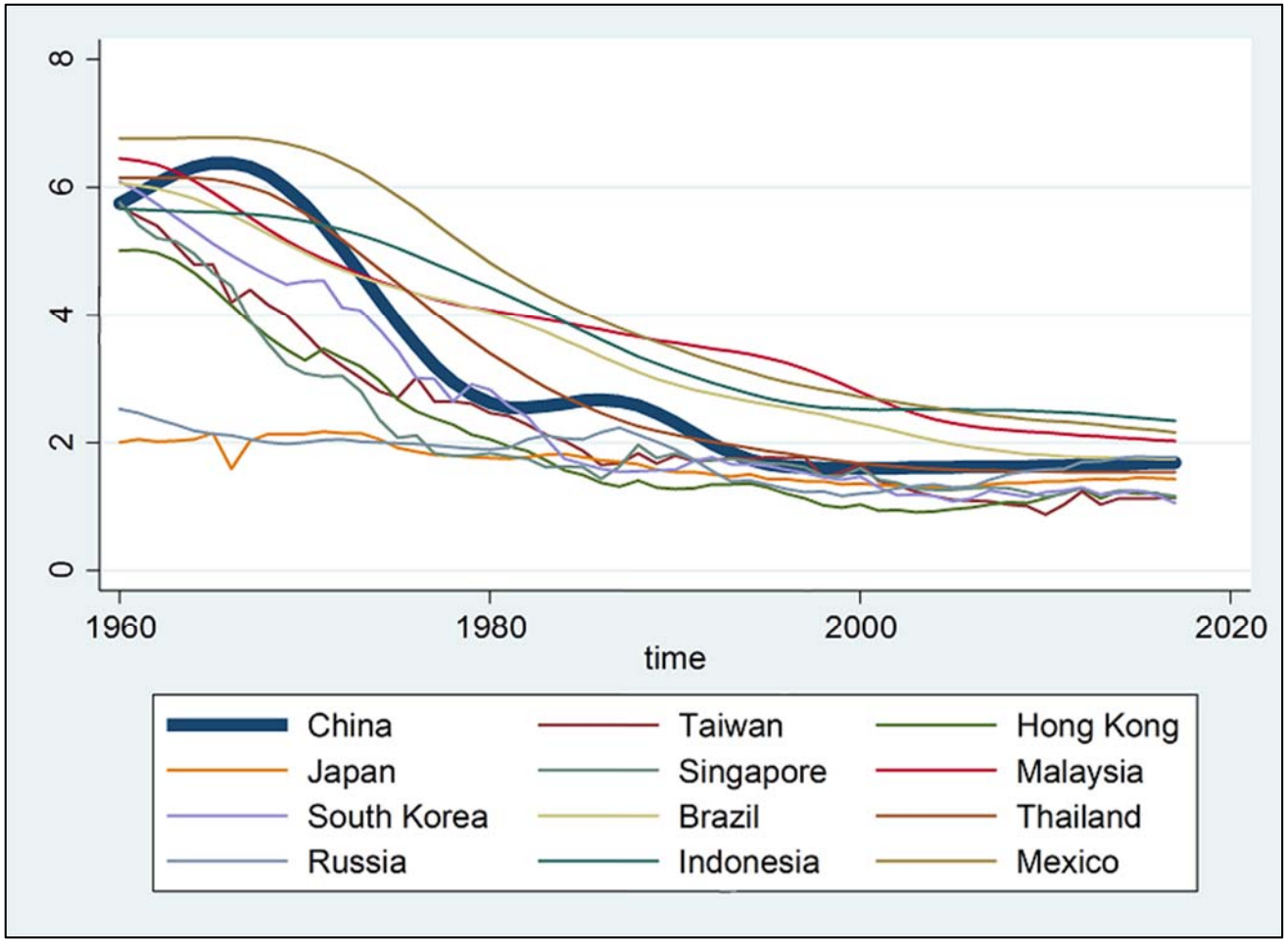

FIGURE 2: FERTILITY RATE OF CHINA AND OTHER REGIONS: 1960-2017 (SOURCE: THE WORLD BANK, 2017)

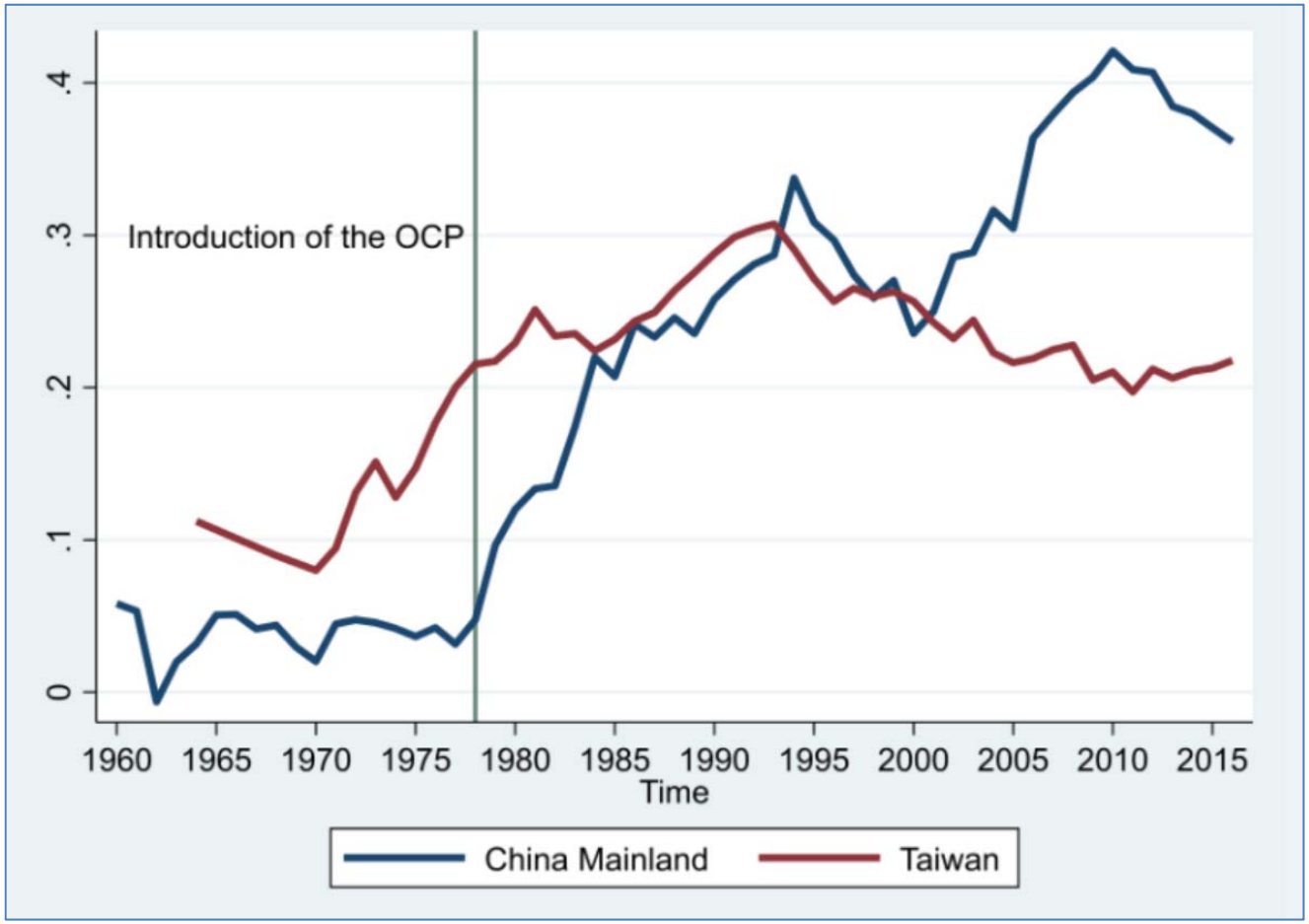

FIGURE 3: HOUSEHOLD SAVINGS RATE, 1955-2015: CHINA VS. TAIWAN

TABLE 1
Fertility Rate Studies that Use Other Countries and Regions as Counterfactuals for China Under the OCP

Authors	Years of Data	Countries and regions used to do the comparison
Zhang (2017)	1960-2010	Multiple countries including South Korea, Thailand, and Mexico
Cai (2010)	1975 and 2005	200 countries and regions
Feng, Cai & Gu (2012)	1970, 1980 and 1990	16 countries including South Korea, Malaysia, Thailand, and Brazil
Whyte, Feng, & Cai (2015)	1970 to 2010	16 countries including South Korea, Malaysia, Thailand, and Brazil
Basten, Sobotka, & Zeman (2014)	1940s to 2010	41 low fertility regions, including Singapore, South Korea, Taiwan, Hong Kong, Japan, and Russia

TABLE 2

Descriptive Statistics for Saving Behavior by Country

"Save"	**Statistic**	**China**	**Taiwan**	**Hong Kong**	**Japan**	**Singapore**	**Malaysia**	**South Korea**
	Obs.	4184	1000	1007	1006	1000	1000	1000
	Mean	0.69	0.74	0.67	0.73	0.73	0.83	0.74
	Std. Dev.	0.46	0.44	0.47	0.44	0.44	0.38	0.44
	Min	0	0	0	0	0	0	0
	Max	1	1	1	1	1	1	1
	Statistic	**Brazil**	**Thailand**	**Russia**	**Indonesia**	**Mexico**	**All excl. China**	**World**
	Obs.	1007	1000	2000	1000	1017	12037	146688
	Mean	0.26	0.82	0.43	0.72	0.62	0.64	0.54
	Std. Dev.	0.26	0.38	0.50	0.45	0.49	0.48	0.50
	Min	0	0	0	0	0	0	0
	Max	1	1	1	1	1	1	1
"Meaningful savings"	**Statistic**	**China**	**Taiwan**	**Hong Kong**	**Japan**	**Singapore**	**Malaysia**	**South Korea**
	Obs.	4184	1000	1007	1006	1000	1000	1000
	Mean	0.46	0.50	0.59	0.77	0.52	0.33	0.45
	Std. Dev.	0.50	0.50	0.49	0.42	0.50	0.47	0.50
	Min	0	0	0	0	0	0	0
	Max	1	1	1	1	1	1	1
	Statistic	**Brazil**	**Thailand**	**Russia**	**Indonesia**	**Mexico**	**All excl. China**	**World**
	Obs.	1007	1000	2000	1000	1017	12037	146688
	Mean	0.09	0.24	0.23	0.23	0.20	0.36	0.27
	Std. Dev.	0.28	0.42	0.42	0.42	0.40	0.48	0.44
	Min	0	0	0	0	0	0	0
	Max	1	1	1	1	1	1	1

	Statistic	China	Taiwan	Hong Kong	Japan	Singapore	Malaysia	South Korea
"Saving for old age"	Obs.	4184	1000	1007	1006	1000	1000	1000
	Mean	0.40	0.46	0.39	0.46	0.48	0.58	0.45
	Std. Dev.	0.49	0.50	0.49	0.50	0.50	0.49	0.50
	Min	0	0	0	0	0	0	0
	Max	1	1	1	1	1	1	1
	Statistic	**Brazil**	**Thailand**	**Russia**	**Indonesia**	**Mexico**	**All excl. China**	**World**
	Obs.	1007	1000	2000	1000	1017	12037	146688
	Mean	0.04	0.65	0.16	0.31	0.24	0.36	0.20
	Std. Dev.	0.20	0.48	0.36	0.46	0.43	0.48	0.40
	Min	0	0	0	0	0	0	0
	Max	1	1	1	1	1	1	1
"Saving for education"	**Statistic**	**China**	**Taiwan**	**Hong Kong**	**Japan**	**Singapore**	**Malaysia**	**South Korea**
	Obs.	4184	1000	1007	1006	1000	1000	1000
	Mean	0.25	0.35	0.27	0.25	0.32	0.51	0.30
	Std. Dev.	0.43	0.48	0.44	0.43	0.47	0.50	0.46
	Min	0	0	0	0	0	0	0
	Max	1	1	1	1	1	1	1
	Statistic	**Brazil**	**Thailand**	**Russia**	**Indonesia**	**Mexico**	**All excl. China**	**World**
	1007	1000	2000	1000	1017	12037	146688	1007
	0.05	0.21	0.07	0.39	0.29	0.26	0.19	0.05
	0.22	0.41	0.26	0.49	0.45	0.44	0.39	0.22
	0	0	0	0	0	0	0	0
	1	1	1	1	1	1	1	1

	Statistic	China	Taiwan	Hong Kong	Japan	Singapore	Malaysia	South Korea
"Saving for business"	Obs.	4184	1000	1007	1006	1000	1000	1000
	Mean	0.15	0.19	0.09	0.04	0.11	0.20	0.27
	Std. Dev.	0.35	0.39	0.29	0.20	0.31	0.39	0.44
	Min	0	0	0	0	0	0	0
	Max	1	1	1	1	1	1	1
	Statistic	**Brazil**	**Thailand**	**Russia**	**Indonesia**	**Mexico**	**All excl. China**	**World**
	Obs.	1007	1000	2000	1000	1017	12037	146688
	Mean	0.06	0.17	0.04	0.25	0.15	0.13	0.12
	Std. Dev.	0.25	0.37	0.19	0.43	0.36	0.34	0.39
	Min	0	0	0	0	0	0	0
	Max	1	1	1	1	1	1	1

SOURCE: Authors' calculations based on the Gallup World Poll and Global Findex database.

TABLE 3
Descriptive Statistics for Number of Children in the Household by Country

Statistic	China	Taiwan	Hong Kong	Japan	Singapore	Malaysia	South Korea
Obs.	4184	1000	1007	1006	1000	1000	1000
Mean	0.56	0.55	0.44	0.41	0.44	1.49	0.31
Std. Dev.	0.84	0.93	0.8	0.83	0.79	1.9	0.7
Min	0	0	0	0	0	0	0
Max	8	6	6	4	5	30	5
Statistic	**Brazil**	**Thailand**	**Russia**	**Indonesia**	**Mexico**	**All excl. China**	**World**
Obs.	1007	1000	2000	1000	1017	12037	146688
Mean	0.71	0.47	0.45	1.11	0.80	0.64	1.19
Std. Dev.	1.09	0.80	0.72	1.02	1.07	1.05	1.68
Min	0	0	0	0	0	0	0
Max	13	5	6	6	12	30	34

SOURCE: Authors' calculations based on the Gallup World Poll and Global Findex database.

TABLE 4A
Determinants of "Save": China and First Set of Counterfactuals

Variable	China	Taiwan	Hong Kong	Japan	Singapore	Malaysia	South Korea
childnum	-0.030*** (0.009)	0.013 (0.015)	0.023 (0.018)	0.056*** (0.017)	0.040** (0.018)	0.002 (0.006)	-0.013 (0.018)
businessown	0.077*** (0.019)	0.122*** (0.035)	0.004 (0.045)	0.002 (0.044)	0.173*** (0.042)	0.042 (0.027)	0.045 (0.031)
income	0.011* (0.006)	0.005 (0.011)	0.002** (0.028)	0.014*** (0.005)	0.010* (0.005)	0.007** (0.003)	0.055*** (0.009)
gender	0.064*** (0.014)	-0.002 (0.026)	0.033 (0.028)	-0.040 (0.030)	0.026 (0.028)	-0.046* (0.023)	0.006 (0.027)
age	0.003 (0.002)	-0.007 (0.005)	-0.002 (0.005)	0.008 (0.006)	0.002 (0.005)	0.001 (0.004)	0.012** (0.005)
agesq	-0.000*** (0.000)	0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000*** (0.000)
help	0.163*** (0.019)	0.140*** (0.026)	0.120*** (0.029)	0.036 (0.039)	0.075** (0.037)	0.101*** (0.023)	0.088*** (0.025)
urban	0.083*** (0.018)	-0.058** (0.027)	0.036 (0.055)	0.017 (0.028)	----	0.028 (0.024)	-0.023 (0.041)
sector	0.006 (0.014)	0.056** (0.026)	0.004 (0.028)	-0.012 (0.037)	0.048* (0.029)	-0.011 (0.026)	-0.023 (0.025)

Variable	China	Taiwan	Hong Kong	Japan	Singapore	Malaysia	South Korea
food	0.015 (0.028)	0.169*** (0.043)	0.175*** (0.061)	0.183** (0.072)	0.327*** (0.090)	0.079** (0.033)	0.128*** (0.037)
shelter	0.069*** (0.022)	-0.058 (0.045)	0.013 (0.049)	0.035 (0.071)	-0.107 (0.112)	0.019 (0.029)	0.063** (0.031)
receivemoney	-0.002 (0.022)	-0.053 (0.085)	0.020 (0.041)	0.076 (0.067)	0.007 (0.044)	-0.008 (0.030)	0.004 (0.038)
secondary	0.102*** (0.017)	0.165*** (0.048)	0.138*** (0.048)	0.177*** (0.050)	0.129*** (0.044)	0.118*** (0.042)	0.127** (0.052)
college	0.112*** (0.028)	0.270*** (0.050)	0.273*** (0.052)	0.239*** (0.054)	0.107** (0.052)	0.161*** (0.044)	0.179*** (0.058)
married	0.102*** (0.021)	0.021 (0.040)	0.007 (0.036)	0.109*** (0.033)	-0.007 (0.036)	0.009 (0.031)	0.103*** (0.038)
borrowed	0.021 (0.015)	0.006 (0.028)	0.023 (0.030)	0.023 (0.034)	0.113*** (0.031)	0.100*** (0.026)	0.057** (0.025)
welfare	0.031 (0.020)	0.031 (0.042)	0.022 (0.039)	-0.002 (0.040)	0.030 (0.031)	0.018 (0.025)	0.011 (0.034)
_cons	0.412*** (0.062)	0.638*** (0.106)	0.433*** (0.136)	0.074 (0.166)	0.313** (0.125)	0.542*** (0.093)	0.116 (0.119)
Obs.	4184	1000	1007	1006	1000	1000	1000
R-squared	0.085	0.166	0.192	0.120	0.095	0.109	0.220

NOTE: Standard errors are in parentheses. *** p<.01, ** p<.05, * p<.1

TABLE 4B
Determinants of "Save": China and Second Set of Counterfactuals

Variable	China	Brazil	Thailand	Russia	Indonesia	Mexico	All excl. China
childnum	-0.030*** (0.009)	0.014 (-0.013)	-0.027 (0.017)	-0.021 (-0.017)	-0.011 (-0.014)	0.031** (-0.013)	0.002 (-0.004)
businessown	0.077*** (0.019)	0.140*** (-0.046)	0.083*** (-0.025)	0.188*** (-0.053)	0.136*** (-0.028)	0.104*** (-0.035)	0.137***- (0.011)
income	0.011* (0.006)	0.239*** (-0.036)	0.032*** (-0.01)	0.035** (-0.017)	0.259*** (-0.083)	0.044 (-0.031)	0.007** (-0.003)
gender	0.064*** (0.014)	0.018 (-0.028)	0.024 (-0.024)	-0.026 (-0.023)	-0.033 (-0.027)	0.075*** (-0.028)	0.015* (-0.008)
age	0.003 (0.002)	0.000 (-0.004)	0.004 (-0.005)	-0.011***- (0.004)	0.007 (-0.006)	0.017*** (-0.005)	0 (-0.001)
agesq	-0.000*** (0.000)	0.000 (0.000)	0.000 (0.000)	0.000*** (0.000)	0.000 (0.000)	-0.000*** (0.000)	0.000 (0.000)
help	0.163*** (0.019)	0.185*** (-0.049)	- -	0.266*** (-0.034)	0.075** (-0.034)	0.103*** (-0.038)	0.154*** (-0.01)
urban	0.083*** (0.018)	-0.033 (-0.028)	-0.082** (-0.035)	0.02 (-0.022)	0.049* (-0.029)	0.093*** (-0.028)	0.008 (-0.009)
sector	0.006 (0.014)	-0.004 (-0.027)	-0.026 (-0.032)	-0.079***- (0.023)	0.014 (-0.027)	-0.025 (-0.035)	-0.059***- (0.009)

Variable	China	Brazil	Thailand	Russia	Indonesia	Mexico	All excl. China
food	0.015 (0.028)	0.046 (-0.036)	0.062 (-0.042)	0.124*** (-0.033)	0.065* (-0.038)	0.053 (-0.033)	0.087***- (0.013)
shelter	0.069*** (0.022)	0.012 (-0.042)	-0.105** (-0.052)	0.013 (-0.028)	-0.032 (-0.048)	0.119*** (-0.035)	0.041***- (0.013)
receivemoney	-0.002 (0.022)	0.022 (-0.053)	- -	-0.066* (-0.037)	0.02 (-0.033)	0.012 (-0.037)	-0.013 (-0.013)
secondary	0.102*** (0.017)	0.097*** (-0.031)	0.086*** (-0.028)	0.046 (-0.04)	0.188*** (-0.034)	0.063* (-0.037)	0.128*** (-0.012)
college	0.112*** (0.028)	0.308*** (-0.084)	0.157*** (-0.04)	0.139*** (-0.044)	0.352*** (-0.039)	0.081 (-0.049)	0.199*** (-0.014)
married	0.102*** (0.021)	-0.065** (-0.026)	0.082** (-0.033)	0.069*** (-0.023)	0.04 (-0.035)	0.003 (-0.03)	0.071*** (-0.01)
borrowed	0.021 (0.015)	0.152*** (-0.035)	0.090*** (-0.027)	0.075*** (-0.024)	0.088*** (-0.03)	0.301*** (-0.03)	0.121*** (-0.009)
welfare	0.031 (0.020)	0.018 (-0.035)	0.017 (-0.03)	0.075*** (-0.027)	0.112*** (-0.033)	0.070* (-0.037)	0.052*** (-0.01)
_cons	0.412*** (0.062)	0.032 (-0.098)	0.639*** -0.106	0.303*** (-0.083)	0.252** (-0.121)	-0.175* (-0.099)	0.321*** (-0.033)
Obs.	4184	1007	1000	2000	1000	1017	12037
R-squared	0.085	0.183	0.077	0.094	0.155	0.207	0.113

NOTE: Standard errors are in parentheses. *** p<.01, ** p<.05, * p<.10. The specification for “All excl. China” also includes country fixed effects.

TABLE 5
DECOMPOSITION RESULTS: "SAVE/CHILDREN"

	TAIWAN	HONG KONG	JAPAN	SINGAPORE	MALAYSIA	SOUTH KOREA
			Overall Difference – "Save"			
1) China	0.686	0.686	0.686	0.686	0.686	0.686
2) Counterfactual	0.743	0.670	0.732	0.730	0.828	0.743
3) *DIFFERENCE*	***-0.057***	***0.016***	***-0.045***	***-0.044***	***-0.142***	***-0.057***
			Decomposition – Effect Of Children On "Save"			
4) Endowments	0.000	0.003	0.008***	0.005*	-0.002	-0.003
5) Coefficients	-0.024**	-0.024***	-0.036***	-0.031***	-0.048***	-0.005
6) Interaction	0.000	-0.007**	-0.013***	-0.008***	0.030**	-0.004
7) *TOTAL*	***-0.024***	***-0.028***	***-0.041***	***-0.034***	***-0.020***	***-0.012***
			Observations			
China	4184	4184	4184	4184	4184	4184
Counterfactual	1000	1007	1006	1000	1000	1000
	BRAZIL	**THAILAND**	**RUSSIA**	**INDONESIA**	**MEXICO**	**ALL EXCL. CHINA**
			Overall Difference – "Save"			
1) China	0.686	0.686	0.686	0.686	0.686	0.686
2) Counterfactual	0.263	0.824	0.433	0.723	0.618	0.645
3) *DIFFERENCE*	***0.423***	***-0.138***	***-0.045***	***-0.037***	***0.068***	***0.042***

	Brazil	Thailand	Russia	Indonesia	Mexico	All excl. China
Decomposition – Effect Of Children On "Save"						
4) Endowments	-0.002	-0.003	-0.002	0.006	-0.007**	-0.000
5) Coefficients	-0.031***	-0.002	-0.004	-0.022	-0.049***	-0.020***
6) Interaction	0.006**	-0.000	-0.001	0.011	0.015***	0.002***
7) *TOTAL*	***-0.027***	***-0.005***	***-0.007***	***-0.005***	***-0.041***	***-0.018***
Observations						
China	4184	4184	4184	4184	4184	4184
Counterfactual	1007	1000	2000	1000	1017	12037

TABLE 6
DECOMPOSITION RESULTS: "MEANINGFUL SAVINGS /CHILDREN"

	TAIWAN	HONG KONG	JAPAN	SINGAPORE	MALAYSIA	SOUTH KOREA
Overall Difference – "Meaningful Savings"						
1) China	0.460	0.460	0.460	0.460	0.460	0.460
2) Counterfactual	0.505	0.590	0.772	0.523	0.330	0.451
3) *DIFFERENCE*	***-0.045***	***-0.130***	***-0.312***	***-0.063***	***0.130***	***0.009***
Decomposition – Effect Of Children On "Meaningful Savings"						
4) Endowments	0.000	0.001	0.003	0.005*	0.003	-0.002
5) Coefficients	-0.026**	-0.013	-0.016**	-0.027***	-0.021	-0.003
6) Interaction	-0.001	-0.036	-0.006*	-0.007**	0.013	-0.003
7) *TOTAL*	***-0.024***	***-0.048***	***-0.019***	***-0.029***	***-0.005***	***-0.008***
Observations						
China	4184	4184	4184	4184	4184	4184
Counterfactual	1000	1007	1006	1000	1000	1000
	BRAZIL	**THAILAND**	**RUSSIA**	**INDONESIA**	**MEXICO**	**ALL EXCL. CHINA**
Overall Difference – "Meaningful Savings"						
1) China	0.460	0.460	0.460	0.460	0.460	0.460
2) Counterfactual	0.096	0.235	0.225	0.225	0.200	0.364
3) *DIFFERENCE*	***0.364***	***0.225***	***0.235***	***0.235***	***0.260***	***0.096***

	Brazil	Thailand	Russia	Indonesia	Mexico	All excl. China
Decomposition – Effect Of Children On "Meaningful Savings"						
4) Endowments	-0.001	0.002	0.002	-0.002	0.005*	0.000
5) Coefficients	-0.018**	-0.017*	-0.016**	-0.023	0.002	-0.010
6) Interaction	0.004*	-0.003	-0.004*	0.011	-0.001	0.001
7) *TOTAL*	***-0.015***	***-0.018***	***-0.018***	***-0.014***	***0.006***	***-0.009***
Observations						
China	4184	4184	4184	4184	4184	4184
Counterfactual	1007	1000	2000	1000	1017	12037

TABLE 7
DECOMPOSITION RESULTS: "SAVING FOR OLD AGE/CHILDREN"

	TAIWAN	HONG KONG	JAPAN	SINGAPORE	MALAYSIA	SOUTH KOREA
			Overall Difference – "Saving For Old Age"			
1) China	0.397	0.397	0.397	0.397	0.397	0.397
2) Counterfactual	0.457	0.387	0.462	0.485	0.580	0.449
3) *DIFFERENCE*	***-0.059***	***0.010***	***-0.065***	***-0.087***	***-0.182***	***-0.051***
			Decomposition – Effect Of Children On "Saving For Old Age"			
4) Endowments	0.000	0.001	-0.003	0.002	-0.006	0.001*
5) Coefficients	-0.032***	-0.02**	-0.007	-0.025**	-0.067***	-0.024**
6) Interaction	-0.001	-0.006*	-0.002	-0.007**	0.041***	-0.02***
7) *TOTAL*	***-0.033***	***-0.025***	***-0.012***	***-0.030***	***-0.032***	***-0.043***
			Observations			
China	4184	4184	4184	4184	4184	4184
Counterfactual	1000	1007	1006	1000	1000	1000
	BRAZIL	**THAILAND**	**RUSSIA**	**INDONESIA**	**MEXICO**	**ALL EXCL. CHINA**
			Overall Difference – "Saving For Old Age"			
1) China	0.397	0.397	0.397	0.397	0.397	0.397
2) Counterfactual	0.044	0.645	0.157	0.314	0.237	0.364
3) *DIFFERENCE*	***0.353***	***-0.248***	***0.240***	***0.084***	***0.160***	***0.033***

	Brazil	Thailand	Russia	Indonesia	Mexico	All excl. China
Decomposition – Effect Of Children On "Saving For Old Age"						
4) Endowments	-0.002**	-0.000	-0.003*	-0.006	0.001	-0.000
5) Coefficients	-0.039***	-0.017*	-0.006	-0.055***	-0.027**	-0.027***
6) Interaction	0.008	-0.003	-0.002	0.027***	0.008**	0.003***
7) *TOTAL*	***-0.033***	***-0.020***	***-0.011***	***-0.034***	***-0.018***	***-0.024***
Observations						
China	4184	4184	4184	4184	4184	4184
Counterfactual	1007	1000	2000	1000	1017	12037

TABLE 8
DECOMPOSITION RESULTS: "SAVING FOR EDUCATION/CHILDREN"

	TAIWAN	HONG KONG	JAPAN	SINGAPORE	MALAYSIA	SOUTH KOREA
			Overall Difference – "Saving For Education"			
1) China	0.253	0.253	0.253	0.253	0.253	0.253
2) Counterfactual	0.354	0.268	0.247	0.323	0.506	0.299
3) *DIFFERENCE*	***-0.101***	***-0.015***	***0.007***	***-0.070***	***-0.253***	***-0.046***
			Decomposition – Effect Of Children On "Saving For Education"			
4) Endowments	0.000	0.008***	0.026***	0.017***	-0.040***	0.028***
5) Coefficients	0.016	-0.004	-0.05***	-0.038***	0.016	-0.018**
6) Interaction	0.000	-0.001	-0.018***	-0.011***	-0.001	-0.015**
7) *TOTAL*	***0.016***	***0.003***	***-0.042***	***-0.032***	***-0.025***	***-0.005***
			Observations			
China	4184	4184	4184	4184	4184	4184
Counterfactual	1007	1000	2000	1000	1017	12037
	BRAZIL	**THAILAND**	**RUSSIA**	**INDONESIA**	**MEXICO**	**ALL EXCL. CHINA**
			Overall Difference – "Saving For Education"			
1) China	0.253	0.253	0.253	0.253	0.253	0.253
2) Counterfactual	0.052	0.216	0.073	0.389	0.291	0.257
3) *DIFFERENCE*	***0.201***	***0.037***	***0.180***	***-0.136***	***-0.038***	***-0.004***

	Brazil	Thailand	Russia	Indonesia	Mexico	All excl. China
Decomposition – Effect Of Children On "Saving For Education"						
4) Endowments	-0.002**	0.007***	0.01	-0.019**	-0.009***	-0.005***
5) Coefficients	0.027***	-0.010	0.021***	0.023	0.013	-0.005
6) Interaction	-0.005***	-0.002	0.005***	-0.011	-0.004	0.001
7) *TOTAL*	***0.020***	***-0.005***	***0.027***	***-0.007***	***0.000***	***-0.009***
Observations						
China	4184	4184	4184	4184	4184	4184
Counterfactual	1007	1000	2000	1000	1017	12037

TABLE 9
DECOMPOSITION RESULTS: "SAVING FOR BUSINESS/CHILDREN"

	TAIWAN	HONG KONG	JAPAN	SINGAPORE	MALAYSIA	SOUTH KOREA
			Overall Difference – "Saving For Business"			
1) China	0.147	0.147	0.147	0.147	0.147	0.147
2) Counterfactual	0.192	0.093	0.043	0.113	0.196	0.266
3) *DIFFERENCE*	***-0.045***	***0.054***	***0.104***	***0.034***	***-0.049***	***-0.119***
			Decomposition – Effect Of Children On "Saving For Business"			
4) Endowments	0.001	0.001	0.005***	0.001	0.001	-0.000
5) Coefficients	-0.028***	-0.005	-0.018***	-0.008	-0.01	-0.002
6) Interaction	-0.001	-0.002	-0.006***	-0.002	0.006	-0.002
7) *TOTAL*	***-0.028***	***-0.006***	***-0.019***	***-0.009***	***-0.003***	***-0.004***
			Observations			
China	4184	4184	4184	4184	4184	4184
Counterfactual	1000	1007	1006	1000	1000	1000
	BRAZIL	**THAILAND**	**RUSSIA**	**INDONESIA**	**MEXICO**	**ALL EXCL. CHINA**
			Overall Difference – "Saving For Business"			
1) China	0.147	0.147	0.147	0.147	0.147	0.147
2) Counterfactual	0.065	0.168	0.037	0.253	0.149	0.134
3) *DIFFERENCE*	***0.083***	***-0.021***	***0.110***	***-0.106***	***-0.002***	***0.013***

	Brazil	Thailand	Russia	Indonesia	Mexico	All excl. China
Decomposition – Effect Of Children On "Saving For Business"						
4) Endowments	-0.000	0.002	0.001	0.002	-0.001	-0.000
5) Coefficients	-0.006	-0.014*	-0.007*	-0.005	-0.011	-0.008*
6) Interaction	0.001	-0.003*	-0.002	0.002	0.003	0.001*
7) *TOTAL*	***-0.005***	***-0.015***	***-0.008***	***-0.001***	***-0.009***	***-0.007***
Observations						
China	4184	4184	4184	4184	4184	4184
Counterfactual	1007	1000	2000	1000	1017	12037

TABLE 10
DETAILED DECOMPOSITION RESULTS, SAVE AND MEANINGFUL SAVINGS, ALL EXCL. CHINA

	Save			Meaningful Savings		
Variable	**Endowment**	**Coefficient**	**Interaction**	**Endowment**	**Coefficient**	**Interaction**
Total	-0.066*** (0.006)	0.104*** (0.012)	0.003 (0.010)	-0.097*** (0.006)	0.096*** (0.012)	0.097*** (0.011)
childnum	-0.000 (0.000)	-0.020*** (0.006)	0.002*** (0.001)	0.000 (0.000)	-0.010 (0.006)	0.001 (0.001)
businessown	-0.000 (0.001)	-0.009** (0.003)	0.000 (0.000)	-0.000 (0.000)	0.015*** (0.004)	0.000 (0.001)
income	-0.004*** (0.001)	0.004 (0.005)	-0.002 (0.002)	-0.008*** (0.001)	-0.011 (0.006)	0.005 (0.002)
gender	0.000 (0.000)	0.022*** (0.007)	0.001 (0.000)	0.000 (0.000)	-0.001 (0.008)	-0.000 (0.000)
age	-0.001 (0.003)	0.155 (0.117)	0.009 (0.007)	0.016*** (0.004)	0.070 (0.122)	0.004 (0.007)
agesq	-0.003 (0.003)	-0.116* (0.06)	-0.011** (0.006)	-0.006 (0.003)	-0.228*** (0.062)	-0.021*** (0.006)
help	-0.007*** (0.001)	0.002 (0.005)	0.000 (0.001)	-0.007*** (0.001)	0.001 (0.005)	-0.000 (0.001)

	Save			Meaningful Savings		
Variable	**Endowment**	**Coefficient**	**Interaction**	**Endowment**	**Coefficient**	**Interaction**
urban	-0.002 (0.002)	0.042*** (0.011)	-0.021*** (0.006)	-0.021*** (0.002)	-0.063*** (0.012)	0.031*** (0.006)
sector	0.000 (0.001)	0.025*** (0.006)	-0.000 (0.001)	0.000 (0.001)	0.031*** (0.007)	-0.001 (0.001)
food	0.008*** (0.001)	-0.059** (0.025)	-0.007** (0.003)	0.014*** (0.001)	-0.084*** (0.026)	-0.010*** (0.003)
shelter	0.001* (0.000)	0.023 (0.02)	0.000 (0.000)	0.001* (0.000)	0.028 (0.021)	0.000 (0.000)
receivemoney	-0.000 (0.000)	0.001 (0.003)	0.000 (0.001)	-0.002*** (0.001)	0.005 (0.003)	0.001 (0.001)
secondary	-0.035*** (0.003)	-0.014 (0.012)	0.007 (0.006)	-0.054*** (0.003)	-0.064*** (0.012)	0.032*** (0.006)
college	-0.031*** (0.002)	-0.020** (0.008)	0.014** (0.005)	-0.047*** (0.003)	-0.049*** (0.008)	0.033*** (0.006)
married	0.015*** (0.002)	0.018 (0.013)	0.007 (0.005)	0.013*** (0.002)	0.045*** (0.014)	0.016*** (0.005)
borrowed	-0.005*** (0.001)	-0.037*** (0.007)	0.004*** (0.001)	0.002*** (0.001)	-0.032*** (0.007)	0.003*** (0.001)

	Save			Meaningful Savings		
Variable	**Endowment**	**Coefficient**	**Interaction**	**Endowment**	**Coefficient**	**Interaction**
welfare	-0.002*** (0.001)	-0.004 (0.004)	0.001 (0.001)	-0.001 (0.000)	-0.008* (0.005)	0.002 (0.001)

NOTE: Standard errors are in parentheses. *** p<.01, ** p<.05, * p<.1

APPENDIX

TABLE A1

Definitions and Descriptive Statistics for Control Variables by Country: First Set of Counterfactuals

Statistic	China	Taiwan	Hong Kong	Japan	Singapore	Malaysia	South Korea
***businessown*: If the person is a business owner: Yes = 1, No = 0**							
Obs.	4,184	1,000	1,007	1,006	1,000	1,000	1,000
Mean	0.69	0.74	0.67	0.73	0.73	0.83	0.74
Std. Dev.	0.46	0.44	0.47	0.44	0.44	0.38	0.44
Min	0	0	0	0	0	0	0
Max	1	1	1	1	1	1	1
***income*: Per capita annual income in international dollars Unit: 10000$**							
Obs.	4,184	1,000	1,007	1,006	1,000	1,000	1,000
Mean	0,661	1,572	2,8679	1,864	1,470	1.057	1.515
Std. Dev.	16,623	16,618	82182	26,007	21,352	23719	12,767
Min	0	0	0	532	0	0	398
Max	482,814	223,496	1,958,872	532,085	376,945	376,324	132,525
***gender*: Participant's gender: Male = 1, Female = 0**							
Obs.	4,184	1,000	1,007	1,006	1,000	1,000	1,000
Mean	0.46	0.48	0.45	0.43	0.50	0.57	0.52
Std. Dev.	0.5	0.5	0.5	0.5	0.5	0.49	0.5
Min	0	0	0	0	0	0	0
Max	1	1	1	1	1	1	1

Statistic	China	Taiwan	Hong Kong	Japan	Singapore	Malaysia	South Korea
***age*: Participant's age**							
Obs.	4,184	1,000	1,007	1,006	1,000	1,000	1,000
Mean	47.00	43.84	45.30	56.96	41.80	36.64	50.61
Std. Dev.	16.95	17.12	17.94	15.87	17.03	14.02	19.71
Min	15	15	15	15	15	15	15
Max	92	95	90	91	90	82	92
***help*: If the household sent financial help to others last year: Yes = 1, No = 0**							
Obs.	4,184	1,000	1,007	1,006	1,000	1,000	1,000
Mean	0.15	0.41	0.29	0.14	0.16	0.30	0.35
Std. Dev.	0.35	0.49	0.46	0.35	0.36	0.46	0.48
Min	0	0	0	0	0	0	0
Max	1	1	1	1	1	1	1
***urban*: If the participant is from a large city: Yes = 1, No = 0**							
Obs.	4,184	1,000	1,007	1,006	1,000	1,000	1,000
Mean	0.29	0.64	0.93	0.39	1	0.53	0.84
Std. Dev.	0.45	0.48	0.25	0.49	0	0.50	0.37
Min	0	0	0	0	0	0	0
Max	1	1	1	1	1	1	1

Statistic	China	Taiwan	Hong Kong	Japan	Singapore	Malaysia	South Korea
***sector*: If the participant works in a public sector: Yes = 1, No = 0**							
Obs.	4,184	1,000	1,007	1,006	1,000	1,000	1,000
Mean	0.38	0.47	0.47	0.16	0.34	0.34	0.47
Std. Dev.	0.49	0.50	0.50	0.37	0.48	0.47	0.50
Min	0	0	0	0	0	0	0
Max	1	1	1	1	1	1	1
***food*: If the household had enough money for food last 12 months: Yes = 1, No = 0**							
Obs.	4,184	1,000	1,007	1,006	1,000	1,000	1,000
Mean	0.92	0.84	0.93	0.93	0.92	0.75	0.78
Std. Dev.	0.27	0.37	0.25	0.25	0.27	0.43	0.42
Min	0	0	0	0	0	0	0
Max	1	1	1	1	1	1	1
***shelter*: If the household had enough money for shelter last 12 months: Yes = 1, No = 0**							
Obs.	4,184	1,000	1,007	1,006	1,000	1,000	1,000
Mean	0.85	0.89	0.91	0.94	0.95	0.71	0.73
Std. Dev.	0.36	0.32	0.29	0.24	0.22	0.45	0.44
Min	0	0	0	0	0	0	0
Max	1	1	1	1	1	1	1

Statistic	China	Taiwan	Hong Kong	Japan	Singapore	Malaysia	South Korea
***receivemoney*: If the household received help in the form of money or food in the past 12 months: Yes = 1 No = 0**							
Obs.	4,184	1,000	1,007	1,006	1,000	1,000	1,000
Mean	0.14	0.03	0.13	0.03	0.11	0.18	0.14
Std. Dev.	0.34	0.17	0.34	0.17	0.32	0.38	0.35
Min	0	0	0	0	0	0	0
Max	1	1	1	1	1	1	1
***secondary*: If the participant completed secondary education (9-15 years of education): Yes = 1, No = 0**							
Obs.	4,184	1,000	1,007	1,006	1,000	1,000	1,000
Mean	0.27	0.46	0.62	0.61	0.59	0.54	0.48
Std. Dev.	0.44	0.50	0.49	0.49	0.49	0.50	0.50
Min	0	0	0	0	0	0	0
Max	1	1	1	1	1	1	1
***college*: If the participant has a college degree: Yes = 1, No = 0**							
Obs.	4,184	1,000	1,007	1,006	1,000	1,000	1,000
Mean	0.07	0.40	0.23	0.26	0.21	0.31	0.38
Std. Dev.	0.26	0.49	0.42	0.44	0.4	0.46	0.49
Min	0	0	0	0	0	0	0
Max	1	1	1	1	1	1	1

Statistic	China	Taiwan	Hong Kong	Japan	Singapore	Malaysia	South Korea
***married*: If the participant is married: Yes = 1, No = 0**							
Obs.	4,184	1,000	1,007	1,006	1,000	1,000	1,000
Mean	0.8	0.64	0.56	0.68	0.6	0.58	0.62
Std. Dev.	0.4	0.48	0.5	0.47	0.49	0.49	0.48
Min	0	0	0	0	0	0	0
Max	1	1	1	1	1	1	1
***borrowed*: If the participant borrowed any money during the past 12 months: Yes = 1, No = 0**							
Obs.	4,184	1,000	1,007	1,006	1,000	1,000	1,000
Mean	0.33	0.29	0.26	0.20	0.20	0.60	0.39
Std. Dev.	0.47	0.45	0.44	0.40	0.40	0.49	0.49
Min	0	0	0	0	0	0	0
Max	1	1	1	1	1	1	1
***welfare*: If the participant received any transfers from the government in the past 12 months: Yes = 1, No = 0**							
Obs.	4,184	1,000	1,007	1,006	1,000	1,000	1,000
Mean	0.16	0.11	0.17	0.11	0.28	0.31	0.20
Std. Dev.	0.37	0.31	0.37	0.32	0.45	0.46	0.40
Min	0	0	0	0	0	0	0
Max	1	1	1	1	1	1	1

TABLE A2

Definitions and Descriptive Statistics for Control Variables by Country: Second Set of Counterfactuals

Statistic	Brazil	Thailand	Russia	Indonesia	Mexico	All excl. China	World
***businessown*: If the person is a business owner: Yes = 1, No = 0**							
Obs.	1007	1000	2000	1000	1017	12037	146,688
Mean	0.127	0.27	0.04	0.33	0.15	0.15	0.16
Std. Dev.	0.33	0.45	0.20	0.47	0.36	0.35	0.36
Min	0	0	0	0	0	0	0
Max	1	1	1	1	1	1	1
***income*: Per capita annual income in international dollars Unit: 10000$**							
Obs.	1007	1000	2000	1000	1017	12037	146,688
Mean	0.40	0.53	1.02	0.16	0.29	1.15	0.85
Std. Dev.	0.42	0.74	0.68	0.15	0.50	2.85	19.27
Min	0	0	0	0	0	0	0
Max	5.18	9.28	7.26	1.59	7.63	195.89	72,85.98
***gender*: Participant's gender: Male = 1, Female = 0**							
Obs.	1007	1000	2000	1000	1017	12037	146,688
Mean	0.40	0.35	0.32	0.47	0.47	0.44	0.47
Std. Dev.	0.49	0.48	0.47	0.50	0.50	0.50	0.5
Min	0	0	0	0	0	0	0
Max	1	1	1	1	1	1	1

Statistic	Brazil	Thailand	Russia	Indonesia	Mexico	All excl. China	World
***age*: Participant's age**							
Obs.	1007	1000	2000	1000	1017	12037	146,688
Mean	45.15	45.24	44.31	39.64	39.45	44.48	41.74
Std. Dev.	18.03	15.70	17.67	14.12	15.91	17.64	17.88
Min	15	15	15	15	15	15	15
Max	93	89	92	86	90	100	99
***help*: If the household sent financial help to others last year: Yes = 1, No = 0**							
Obs.	1007	1000	2000	1000	1017	12037	146,688
Mean	0.10	0	0.12	0.18	0.16	0.19	0.22
Std. Dev.	0.30	0	0.33	0.38	0.37	0.40	0.41
Min	0	0	0	0	0	0	0
Max	1	0	1	1	1	1	1
***urban*: If the participant is from a large city: Yes = 1, No = 0**							
Obs.	1007	1000	2000	1000	1017	12037	146,688
Mean	0.38	0.21	0.60	0.29	0.40	0.57	0.39
Std. Dev.	0.49	0.41	0.49	0.47	0.49	0.50	0.49
Min	0	0	0	0	0	0	0
Max	1	1	1	1	1	1	1

Statistic	Brazil	Thailand	Russia	Indonesia	Mexico	All excl. China	World
***sector*: If the participant works in a public sector: Yes = 1, No = 0**							
Obs.	1007	1000	2000	1000	1017	12037	146,688
Mean	0.39	0.22	0.58	0.44	0.23	0.39	0.38
Std. Dev.	0.49	0.42	0.49	0.50	0.42	0.49	0.48
Min	0	0	0	0	0	0	0
Max	1	1	1	1	1	1	1
***food*: If the household had enough money for food last 12 months: Yes = 1, No = 0**							
Obs.	1007	1000	2000	1000	1017	12037	146,688
Mean	0.81	0.78	0.87	0.78	0.59	0.82	0.68
Std. Dev.	0.39	0.41	0.34	0.41	0.49	0.38	0.47
Min	0	0	0	0	0	0	0
Max	1	1	1	1	1	1	1
***shelter*: If the household had enough money for shelter last 12 months: Yes = 1, No = 0**							
Obs.	1007	1000	2000	1000	1017	12037	146,688
Mean	0.87	0.87	0.80	0.90	0.70	0.84	0.77
Std. Dev.	0.33	0.33	0.40	0.30	0.46	0.37	0.42
Min	0	0	0	0	0	0	0
Max	1	1	1	1	1	1	1

Statistic	Brazil	Thailand	Russia	Indonesia	Mexico	All excl. China	World
***receivemoney*: If the household received help in the form of money or food in the past 12 months: Yes = 1 No = 0**							
Obs.	1007	1000	2000	1000	1017	12037	146,688
Mean	0.07	0	0.11	0.26	0.20	0.11	0.21
Std. Dev.	0.25	0	0.31	0.44	0.40	0.32	0.41
Min	0	0	0	0	0	0	0
Max	1	0	1	1	1	1	1
***secondary*: If the participant completed secondary education (9-15 years of education): Yes = 1, No = 0**							
Obs.	1007	1000	2000	1000	1017	12037	146,688
Mean	0.45	0.43	0.57	0.63	0.60	0.54	0.50
Std. Dev.	0.50	0.49	0.50	0.48	0.49	0.50	0.50
Min	0	0	0	0	0	0	0
Max	1	1	1	1	1	1	1
***college*: If the participant has a college degree: Yes = 1, No = 0**							
Obs.	1007	1000	2000	1000	1017	12037	146,688
Mean	0.04	0.07	0.34	0.04	0.13	0.23	0.16
Std. Dev.	0.19	0.25	0.47	0.20	0.34	0.42	0.37
Min	0	0	0	0	0	0	0
Max	1	1	1	1	1	1	1

Statistic	Brazil	Thailand	Russia	Indonesia	Mexico	All excl. China	World
***married*: If the participant is married: Yes = 1, No = 0**							
Obs.	1007	1000	2000	1000	1017	12037	146,688
Mean	0.44	0.74	0.50	0.73	0.50	0.60	0.52
Std. Dev.	0.50	0.44	0,50	0.44	0.50	0.49	0.5
Min	0	0	0	0	0	0	0
Max	1	1	1	1	1	1	1
***borrowed*: If the participant borrowed any money during the past 12 months: Yes = 1, No = 0**							
Obs.	1007	1000	2000	1000	1017	12037	146,688
Mean	0.22	0.49	0.32	0.57	0.53	0.37	0.43
Std. Dev.	0.41	0.50	0.47	0.50	0.50	0.48	0.49
Min	0	0	0	0	0	0	0
Max	1	1	1	1	1	1	1
***welfare*: If the participant received any transfers from the government in the past 12 months: Yes = 1, No = 0**							
Obs.	1007	1000	2000	1000	1017	12037	146,688
Mean	0.17	0.23	0.23	0.20	0.18	0.20	0.15
Std. Dev.	0.38	0.42	0.42	0.40	0.38	0.40	0.35
Min	0	0	0	0	0	0	0
Max	1	1	1	1	1	1	1

TABLE A3
DECOMPOSITION RESULTS: "SAVE/CHILDREN", LOGIT MODEL

	TAIWAN	HONG KONG	JAPAN	SINGAPORE	MALAYSIA	SOUTH KOREA
			Overall Difference – "Save"			
1) China	0.686	0.686	0.686	0.686	0.686	0.686
2) Counterfactual	0.743	0.670	0.732	0.730	0.828	0.743
3) *DIFFERENCE*	***-0.057***	***0.016***	***-0.045***	***-0.044***	***-0.142***	***-0.057***
			Decomposition – Effect Of Children On "Save"			
4) Endowments	0.000	0.003	0.012***	0.015*	-0.003	-0.002
5) Coefficients	-0.017*	-0.015**	-0.038**	-0.030***	-0.027**	-0.006
6) Interaction	0.000	0.001	-0.020	-0.007**	0.014	-0.005
7) *TOTAL*	***-0.017***	***-0.011***	***-0.046***	***-0.022***	***-0.016***	***-0.013***
			Observations			
China	4184	4184	4184	4184	4184	4184
Counterfactual	1000	1007	1006	1000	1000	1000
	BRAZIL	**THAILAND**	**RUSSIA**	**INDONESIA**	**MEXICO**	**ALL EXCL. CHINA**
			Overall Difference – "Save"			
1) China	0.686	0.686	0.686	0.686	0.686	0.686
2) Counterfactual	0.263	0.824	0.433	0.723	0.618	0.645
3) *DIFFERENCE*	***0.423***	***-0.138***	***0.253***	***-0.037***	***0.068***	***0.042***

	Brazil	Thailand	Russia	Indonesia	Mexico	All excl. China
			Decomposition – Effect Of Children On "Save"			
4) Endowments	-0.002	-0.002	-0.003	-0.001	-0.008**	-0.001**
5) Coefficients	-0.037***	0.002	-0.002	0.074	-0.056***	-0.018***
6) Interaction	0.001	0.000	-0.001	0.007	0.013***	-0.000
7) *TOTAL*	***-0.038***	***0.000***	***-0.006***	***0.080***	***-0.051***	***-0.019***
			Observations			
China	4184	4184	4184	4184	4184	4184
Counterfactual	1007	1000	2000	1000	1017	12037

TABLE A4
DECOMPOSITION RESULTS: "MEANINGFUL SAVINGS /CHILDREN", LOGIT MODEL

	TAIWAN	HONG KONG	JAPAN	SINGAPORE	MALAYSIA	SOUTH KOREA
Overall Difference – "Meaningful Savings"						
1) China	0.460	0.460	0.460	0.460	0.460	0.460
2) Counterfactual	0.505	0.590	0.772	0.523	0.330	0.451
3) *DIFFERENCE*	***-0.045***	***-0.130***	***-0.312***	***-0.063***	***0.130***	***0.009***
Decomposition – Effect Of Children On "Meaningful Savings"						
4) Endowments	0.000	0.002	0.003	-0.088	0.005	-0.003
5) Coefficients	-0.027**	-0.014*	-0.015	-0.032***	-0.019	-0.004
6) Interaction	-0.001	-0.004	-0.005	0.004	0.013	-0.003
7) *TOTAL*	***-0.028***	***-0.016***	***-0.017***	***-0.116***	***-0.001***	***-0.010***
Observations						
China	4184	4184	4184	4184	4184	4184
Counterfactual	1000	1007	1006	1000	1000	1000
	BRAZIL	**THAILAND**	**RUSSIA**	**INDONESIA**	**MEXICO**	**ALL EXCL. CHINA**
Overall Difference – "Meaningful Savings"						
1) China	0.460	0.460	0.460	0.460	0.460	0.460
2) Counterfactual	0.096	0.235	0.225	0.225	0.200	0.364
3) *DIFFERENCE*	***0.364***	***0.225***	***0.235***	***0.235***	***0.260***	***0.096***

	Brazil	Thailand	Russia	Indonesia	Mexico	All excl. China
Decomposition – Effect Of Children On "Meaningful Savings"						
4) Endowments	-0.001	0.001	0.003	0.000	0.002	-0.000
5) Coefficients	-0.015	-0.017*	-0.019**	-0.016	0.016	-0.015**
6) Interaction	-0.002	-0.000	-0.005*	0.005	-0.010	0.002**
7) *TOTAL*	***-0.018***	***-0.016***	***-0.021***	***-0.011***	***0.008***	***-0.013***
Observations						
China	4184	4184	4184	4184	4184	4184
Counterfactual	1007	1000	2000	1000	1017	12037