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Different Faces of Inequality across Asia: Decomposition of Income Gaps across Demographic Groups

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March 8, 2017

Abstract

Economic inequality across Asia has been growing, but dimensions of this inequality and their development are unclear. This paper evaluates income inequality using household surveys from China, India, Japan, Korea, Russia and Taiwan. These countries may be viewed as jointly representative of Asia's population, covering countries with various income levels, inequality and demographic profiles. This study assesses income gaps between various demographic groups in regard to households' residence, administrative region, education, employment status and gender at various income quantiles, using unconditional quantile regressions. Gaps are decomposed into parts due to differentials in household endowments and due to differentials in returns to endowments. Rural/urban income gaps are evident across all evaluated countries, particularly in China, India and Russia, but have been falling in Russia and Taiwan. Inequality between disadvantaged and advantaged regions is high in China and India, followed by Taiwan. This gap stagnated in Taiwan and further deepened in Russia.

Keywords: Economic inequality; unconditional quantile regression; Blinder-Oaxaca decomposition; Asia; Luxembourg Income Study.

JEL Classification: D31, D63, N35

I. Motivation

Household income surveys have traditionally been used to evaluate income inequality, but the focus was limited to an aggregate measure of inequality or decomposition of inequality around the mean of the income distribution. Less is known about the distribution of incomes at lower and upper ends of countries' income distributions even in industrialized nations. Our knowledge is sparser yet in regard to developing countries. At the same time, understanding the income differentials among the bottom and top income households is important in all countries, because their influence on estimates of overall inequality, poverty and polarization is substantial. This is particularly important today given the calls for action in countries worldwide in response to inequality, social injustice, and polarization of societies. Evidence in upper- and middle-income countries around the world shows that the aggregate-income share of top-income households has risen significantly in recent years, that the middle class may be shrinking, and that low-income households have seen stagnation or deterioration in their living standards.

In the Asia-Pacific region including India, economic inequality has been found to be growing (UN ESCAP 2015), and some dimensions including rural-urban inequality are high and persistent (Imai and Malaeb 2016). Economic inequality is not limited to inequality in outcomes,

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but more worryingly extends to inequality in opportunities for proper nutrition, health, education, other human development, and access to public resources and markets. These inequalities jointly contribute to the observed inequality in economic outcomes, including that in income, consumption, wealth, life expectancy and life satisfaction. This is of particular concern in developing countries in Asia, where disadvantaged households are held in a perpetual deprivation trap by fragmented markets, lack of infrastructure, inapt or corrupt local governments, and households' lack of resources and information necessary for upward mobility.

In China, economic growth and integration into the world economy through the opening of trade and foreign direct investment have increased inequality. The role of economic privatization and market capitalization has become more important in driving inequality over time, while that of geographic and demographic factors has diminished (Wan 2004; Wan and Zhou 2004; Wan, Lu and Zhao 2007). Structural differences between regions has been found to persist, but regional inequality fell on account of improvements in factor mobility (Heshmati 2004). An important facet of inequality in China involves the ethnicity and residence registration (*hukou*) dimensions. Chinese non-Han ethnic groups have traditionally fared worse than the Han, due to poor backgrounds, limited opportunities and discrimination. Residents with agricultural *hukou* have been denied education, employment and residence opportunities outside of their region of registration. In a bid to preempt domestic instability and separatism, and to integrate regional factor markets, the Central Chinese government has in recent years aimed to remove *hukou*-based restrictions and to promote the welfare of ethnic minorities (Jeong and Hlasny 2016), but the efforts have been weak.

In Russia, cross-region inequality was rising until the 1990s due to natural and structural differences and shocks (Heshmati 2004), but recent evidence points to a decrease in inequality since then on account of local economic growth (Guriev and Vakulenko 2012). Nevertheless, the level of inter-regional inequality remains high (Mahler 2011; also refer to studies evaluated by Gluschenko 2010, 2011), suggesting that opportunities for labor mobility are improving only slowly, and that inadequate regional housing options, transportation infrastructure and social policy may play a role in it (Gluschenko 2010). These findings have implications for regional as well as national socio-economic policy.

In India, substantial inequality between urban and rural areas was identified as driving inter-regional disparities and their growth over time (Sachs *et al.* 2002; Heshmati 2004; Chamarbagwala 2010). Urban districts are richer and growing faster on account of strong performance of services and knowledge-intensive industries there, and inflow of skills and capital (Brar *et al.* 2014). Northern and urban districts also exhibit lower inequality in educational opportunities (Asadullah and Yalonetzky 2012). Trade expansion and liberalization of the services sector have had some effect on inequality growth, in part through their effect on inequality in returns to education (Kijima 2006), but employment reallocations for other reasons have played a greater role (Mehta and Hasan 2012).

In Japan, Korea and Taiwan, much lower degrees of income inequality were identified, but were found to be systematic and persistent (Kang and Yun 2008; Higashikata 2013). One dimension involves disparity between incomes of regular and irregular workers (Sato and Imai 2011; Tarohmaru 2014; Hlasny 2016b). In Korea, increases in inequality since the 1990s were blamed

on inequality in returns to skills (Kang and Yun 2008; Nahm 2008; Chang and England 2011), on demographic change – particularly ageing (Lee, Kim and Cin 2013), and on unionization (studies cited by Ghosh and Lee, 2016). In Japan it was observed that the return to skills stagnated or fell for lower- and middle-income workers while it rose for high-income male workers, contributing to gender gaps (Yokoyama, Kodama and Higuchi 2016). In both countries, structural factors in the economy – including labor market reforms and skill-biased technological change – effectively led to relegation of disadvantaged workers to lower quality industries and jobs (Kang and Yun 2008; Park and Mah 2011). In Taiwan, gender gaps are low, while rural-urban and educational gaps are responsible for much of inequality (Chang 2012; Chen 2014).

Persistent and systematic inequality is not only a fairness and social-justice concern but also a problem for countries' development. High inequality hampers economic growth and increases government costs for ensuring minimum levels of security (ECA, ILO, UNCTAD, UNDESA and UNICEF 2012). Above a certain threshold, inequality undermines sustainable growth and poverty alleviation efforts (Chambers and Krause 2010; Berg and Ostry 2011). Between-group inequality is particularly worrying as it may yield intergenerational transmission of inequality, poverty traps for entire social groups, polarization, social tension and political instability (Stewart and Langer 2007; Kabeer 2010; UNDP 2013). All these factors may yield social and political instability as well as outbreaks of conflict, as the events in the Middle East in 2011-2013, and recently in Latin America show.

Proper measurement, understanding and eradication of inter-group inequalities are thus priorities for regional organizations and policymakers. However, existing knowledge is limited and inconclusive with respect to inter-group comparisons for vulnerable demographic groups such as rural or uneducated households. Hence, this paper contributes to empirical literature on developing countries worldwide and particularly in Asia by measuring inter-group inequalities within six countries, decomposing the inequalities by source, and evaluating trends in the inequalities and their sources over time. Inequalities between different geographic areas and demographic groups are measured in order to estimate the effect of household endowments on overall inequality.

Contributions of this study

Inter-group inequality is thought to be driven by differences in households' human capital, demographic characteristics and geographic access to markets. Differences in households' endowments such as human capital, demographic characteristics, geographic location and residence are evaluated as main determinants explaining the income differentials between social groups. In particular, income differentials across rural/urban areas, disadvantaged/advantaged administrative regions, and households with less/more educated, non-employed/employed and female/male heads are evaluated using ten Asian household income surveys included in the Luxembourg Income Study database. The ten surveys are for six middle and high income countries from across Asia that were harmonized and made available by Luxembourg Income Study (LIS).

The six countries evaluated in this study differ significantly in the levels of income as well as in the within-country degree and form of inequality in incomes. India and China have the lowest

distribution of incomes, whose mean and median are less than one-tenth of the levels in the highest-income country in the sample, Japan (table 1). Korea's distribution of income is near Japan's level, while Taiwan is midway between the levels in China and India, and those in Japan. Russia has been making fast progress from income levels just twice as high as China's, to near Taiwan's.

Inequality gauged by the Gini index shows that Japan, Korea and Taiwan have modest inequality by world standards, at or below the world mean of national Ginis. Russia's Gini is 5 percentage points higher, or approximately one standard deviation above the world mean. Finally, China and India have Ginis 20 percentage points above the levels in Japan and Taiwan, in the high end of the worldwide distribution of Ginis. Correspondingly, income gaps, measured by the 75/25 and 90/10 percentile ratios of incomes, are lowest in Japan and Taiwan, closely followed by Korea, lagged somewhat by Russia, and highest in India and China. In China, incomes in the highest decile are more than 13 times as high as in the bottom decile (tables A1 and A2). The Lorenz curves for national income distributions indicate similar trends (figures A1 and A2). Japan, Taiwan and Korea have the lowest degree of inequality among the evaluated countries, while Russia, India, and China have the highest. In China, the gap that should be redistributed to achieve perfect equality across households is twice as large as in Japan. Income distribution across all six countries taken together startlingly yields a similar degree of inequality as that in China or India alone. In fact, these Ginis are just short of a back-of-the-envelope estimate of the Gini across Asia at large (55.8 using LIS data) or all middle and high income countries worldwide (54.6), and that is before these Ginis are corrected for various sampling and measurement issues that could lead to further adjustments upward by 3-7 percentage points (Hlasny and Verme 2015; Hlasny 2016a).[1]

This study offers several contributions to the existing literature on inequality in the developing world, and specifically in developing Asia. First, a recent estimation technique – unconditional quantile regression combined with the Blinder-Oaxaca decomposition – is used to estimate income gaps across demographic groups at various quantiles of national income distributions, and to explain them using differences in endowments as well as differences in the returns to those endowments. This approach has not been utilized adequately in decomposing inequality in developing Asian countries. The analysis was conducted in part on site at the LIS office in Luxembourg using offline access to LIS database. This allowed us to review all data carefully and use add-on statistical programs, which would have been cumbersome using online access (LISSY) alone.

The second contribution is that we use a novel set of household surveys that are harmonized across countries and time. The fact that these countries range from lower-middle income (India), through upper-middle income (China, Russia) and recently industrialized (Taiwan, Korea), to high income countries (Japan) is viewed as a strength. It allows us to comment on the socio-

[1] Using all most-recent data in LIS database – 967,746 household records in 41 national surveys – yields an estimate of the Gini in the middle- and high-income world of 69.6. The 41 surveys include: *at04*, *au10*, *be00*, *br11*, *ca10*, *ch04*, *cn02*, *co10*, *cz04*, *de10*, *dk10*, *ee10*, *es10*, *fi10*, *fr10*, *gr10*, *gt06*, *hu05*, *ie10*, *il10*, *in04*, *is10*, *it10*, *jp08*, *kr06*, *lu10*, *mx10*, *nl10*, *no10*, *pe04*, *pl10*, *ro97*, *ru10*, *se05*, *si10*, *sk10*, *tw10*, *uk10*, *us10*, *uy04*, *za10*. Incomes were converted to 2005 USD, and national samples were weighted by 15-64yo population in the corresponding world income bracket as of 2014 (World Bank 2015a, 2015b, 2015c). This sample of national surveys accounts for 65.9% of population in the middle and high income countries worldwide.

economic conditions in countries at different stages of development, allows robustness checks, and facilitates comparisons that can inform policymakers regarding prospects for countries on their respective growth paths. Moreover, income distributions in these six countries can be viewed as archetypes of income distributions across all of Asia in the mid-2000s, and their surveys can be viewed as jointly representative of the entire continent (subject to appropriate weighting), lending additional relevance to the results reached here regarding the degree and form of inequality in each country.

The third contribution is that this study assesses multiple, non-traditional dimensions of inequality. Beside income gaps between rural versus urban residential groups and between disadvantaged versus advantaged regions, this study assesses income gaps across households with less versus more educated, non-employed versus employed, and female versus male heads. Therefore, this study tells a different story than that in existing literature regarding the form and evolution of inequality in developing Asia.

The study is organized as follows. The next section reviews several methods commonly used in the empirical welfare-economic literature to decompose economic inequality by its dimensions. The following section presents the data and describes how variables were combined and formatted in the empirical analysis. Empirical results are presented next. Finally, section five concludes with a discussion of main lessons, their robustness and their implications for policymaking.

II. Methods

Existing literature relies on a variety of approaches to decompose inequality and analyze its determinants. One traditional method that has been used to identify the causes of between-group inequality is the regression-based Blinder-Oaxaca decomposition (Blinder 1973; Oaxaca 1973), which distinguishes the role of differentials in endowments, and differentials in the returns to those endowments between pairs of demographic groups. The endowment effect is the "explained" part of the differential associated with the difference in values of household characteristics between the two groups of households, such as age, education, employment of the head, residence and geographic region. The returns effect is the "unexplained" part of the differential – attributable to some latent form of segmentation, inefficiency, or discrimination in the market for human capital – interpreted as the effect of the difference in returns to individual characteristics between the two social groups, computed at values of characteristics possessed by the advantaged group.

This method has been advanced in a number of ways over the years. For instance, Juhn et al. (1993) proposed an advanced treatment of regression residuals between the two comparison groups. Bourguignon et al. (2007) allowed for occupational-structure differentials beside the returns and endowment differentials.

One limitation of the standard Blinder-Oaxaca decomposition is that it only estimates the mean effect of a given variable on the gap in economic outcomes. In fact, the effects of covariates typically differ systematically along the income (or expenditure or wage) distribution. To estimate these effects, conditional quantile regressions have been deployed, to estimate

differences in percentiles of income distributions conditional on values of treatment variables. This method also has important limitations with respect to its assumptions. One, individuals whose treatment variables undergo change in value are assumed to retain their ranking among their peers with the same new values as among their peers with the original values (same quantile of the conditional income distribution). The position and ranking of other individuals is also assumed unchanged. By implication, changes in the distribution of treatment variables in the population (e.g., urbanization rate among workers) are assumed to have no partial- or general-equilibrium effect on the conditional income distributions (among urban, and among rural workers), a limiting assumption.

DiNardo et al. (1996) used a nonparametric weighted-kernel approach to identify weights that would equate the moments of the two comparison-groups' distributions. Gosling et al. (2000), and Machado and Mata (2005) used semi-parametric approaches to estimate and integrate the entire conditional distribution of wages to impute their counterfactual unconditional distribution, and estimated the endowment and returns effects at various parts of this distribution.

A simpler parametric method addressing the shortcomings of conditional quantile regressions is the unconditional quantile regression (UQR) technique implemented by a recentered influence function (RIF) method (Firpo *et al.* 2009; Fortin *et al.* 2010). This method requires estimating the conditional distribution of income on covariates only at one point of the overall distribution. Nevertheless, RIF-OLS and RIF-logit estimators yield estimates very close to fully nonparametric estimators (Firpo et al. 2009). Fournier and Koske (2012) decomposed inequality between pairs of countries into the endowment and returns effects using both conditional and unconditional quantile regressions, and noted modest differences in estimates, lending some support to the latter technique in studies of partial-equilibrium effects of changes in demographic composition of a population.

This paper thus uses UQR decomposition to study income gaps across the entire population distribution and decompose them by source. The technique is used to estimate the impacts of explanatory variables on individual quantiles of the unconditional distribution of an outcome variable – annual disposable household income per adult-equivalent here. It measures how various quantiles of the income distribution are affected by changes in explanatory variables. Using the structure from the Blinder-Oaxaca decomposition, the income differential between any two social groups in any quantile of the income distribution is separated into the endowment effect and the returns effect.

RIF is a regression-based procedure facilitating decomposition of different distributional statistics across the unconditional distribution of total incomes per capita. The RIF is used in this paper to decompose the distribution of income by households' rural/urban residence and disadvantaged/advantaged region, and households with less/more educated, non-employed/employed, and female/male head. The method consists of two stages. The first stage entails estimating the UQR on log annual household income per capita of the two groups of interest,[2] then constructing a counterfactual distribution that would prevail if the disadvantaged group (e.g., rural households) received the returns that pertained to the privileged group (urban

[2] In our case: Rural/urban households, and households with female/male, uneducated/educated and non-employed/employed heads.

households). The comparison between the counterfactual and the empirical distribution allows us to estimate the part of the income gap attributable to differences in household characteristics (*endowment effect*) and the part attributable to differences in returns to these characteristics (*returns effect*). The endowment and returns effects are assigned to each of households' specific characteristics (e.g., age, or employment sector of the head).

The method can be expressed as using the following influence function recentered so that its mean corresponds to the θ^{th} quantile of *y*, log annual income per capita:

$$RIF(y, Q_\theta) = X\beta + \varepsilon \qquad (1)$$

$RIF(y, Q_\theta)$ is estimated by computing the sample quantile Q_θ and deriving the density of *y* at that point by Kernel method. *X* is a matrix of regressors that can be divided into five groups. The first group consists of household-head characteristics including age, age squared, gender and marital status. The second group consists of three binary indicators for the education level of the head. The third group includes binary indicators for the employment status and employment sector of the household head. The fourth group contains household characteristics including household size, and ratio of those below 14 years and those above 65 years of age in the household. Finally, the fifth group includes geographic location and residence indicators.

After estimating the RIF equation for individual deciles from the 10$^{\text{th}}$ percentile to the 90$^{\text{th}}$ percentile of the population, the predicted values for individual demographic groups are decomposed into the endowment and returns effects as follows:

$$\begin{aligned} \hat{Q}_\theta^i - \hat{Q}_\theta^j &= \{\hat{Q}_\theta^i - \hat{Q}_\theta^*\} + \{\hat{Q}_\theta^* - \hat{Q}_\theta^j\} \\ &= (\bar{X}^i - \bar{X}^j)\hat{\beta}_\theta^i + \bar{X}^j(\hat{\beta}_\theta^i - \hat{\beta}_\theta^j) \end{aligned} \qquad (2)$$

for i/j pairs: rural/urban, female/male head, uneducated/educated head, non-employed/employed head.
**= counterfactual values.*

Here $\hat{Q}_\theta$ is the θ^{th} unconditional quantile of log annual income per capita, $\bar{X}$ is the vector of the means of covariates and $\hat{\beta}_\theta^k$ is the estimate of the unconditional quantile partial effects of group *k*. $\hat{Q}_\theta^* = X^j\hat{\beta}^i$ is the θ^{th} quantile of the unconditional counterfactual distribution that would have prevailed for group *j* if they received group *i*'s returns to their characteristics.

The first term in equation 2, $(\bar{X}^i - \bar{X}^j)\hat{\beta}_\theta^i$, is the endowment effect. It is the contribution of the differences in distributions of household characteristics to inequality at the θ^{th} unconditional quantile. The second term, $\bar{X}^j(\hat{\beta}_\theta^i - \hat{\beta}_\theta^j)$, is the returns effect – the inequality due to differences in the returns to household characteristics at the θ^{th} unconditional quantile.

III. Data

Selection of national surveys

This study relies on ten household surveys for six countries from across Asia collected and harmonized by LIS.[3] Only the most recent waves of national surveys are used, to focus on inequality at its level in recent times, and to ensure comparability. The ten surveys are for years 2002–2010. For Russia and Taiwan, two older survey waves are used in order to evaluate robustness of results and comment on evolution over time.[4] The ten household- and individual-level surveys yielded high-quality samples with distributions of incomes and other demographic variables that are nationally-representative (possibly with the exception of China where not all regions were included in the sampling frame). The surveys jointly encompassed 130,000 household records. With respect to the statistical properties of their data, the surveys also perform on par with surveys worldwide, particularly considering the level of the countries' development.[5]

Russia is included among Asian countries evaluated here because 76.8 percent of its territory (13.1 mil. km.^{2}), 26.3 percent of population (37.6 mil.), and three of its eight federal districts (Ural, Siberian and Far Eastern) are in Asia.[6] Russia is also sometimes classified as a Central Asian (or Central Eurasian) economy, because Russian economy and households may be thought of as facing similar industrial, institutional and cultural conditions as those in surrounding central Asian countries around the Ural mountain range. Finally, Russia, India and China (and Brazil) are often compared as members of the BRIC club of large transitional economies. Even though Russia has recently made a transition from an upper-middle to a high income country, this transition did not occur until 2013 (World Bank 2013, 2015c), and so it is valuable to include the country along with China and India.[7]

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[3] As of October 2015, LIS offered public access to over 250 income distributions for nearly 50 countries, and additional surveys are being added several times a year. The datasets are harmonized and can be studied jointly both across years and across countries.

The original microdata for the ten surveys were provided by the Chinese Household Income Survey Project provided by the Beijing Inter-University Consortium for Political and Social Research, University of Michigan; India Human Development Survey, provided by the Data Sharing for Demographic Research – Carolina Population Center at the University of North Carolina - Chapel Hill; Japan Household Panel Survey run by the Keio University Joint Research Center for Panel Studies; Korean Household Income and Expenditure Survey and Farm Household Income and Expenditure Survey conducted by Statistics Korea; Russia Longitudinal Monitoring Survey run by Higher School of Economics and provided also by the Carolina Population Center; Taiwanese Survey of Family Income and Expenditure – Taiwan Area, administered by the Directorate General of Budget, Accounting and Statistics.

[4] LIS database additionally includes the year-2000 survey for Russia, and the 1981, 1986, 1991, 1995, 1997 and 2000 waves for Taiwan, but these are not evaluated here.

[5] While household nonresponse rates appear high (to the extent that this can be evaluated), at 20 percent in Korea and around 50 percent in the Japanese and Russian surveys (compared to a simple mean of 20.5 among surveys worldwide), this issue biases the Gini coefficients downward by only 1.1-7.1 percentage points in Russia and 4.4 percentage points in Japan (compared to 5.6 percentage points in a typical country, and 3 percentage points for a back-of-the-envelope estimate of the worldwide Gini) (Hlasny 2016a).

[6] These numbers are prior to the annexation of Crimea in 2014. Russian surveys in LIS database includes 8 regions: Moscow and St. Petersburg; Northern and North Western; Central and Central Black-Earth; Volgo-Vyatski and Volga Basin; North Caucasian; Ural; Western Siberia; Eastern Siberia and Far East. This differs slightly from Russia's federal districts, namely: Center (including Moscow/St. Petersburg); South; North West (including North); Far East; Siberia; Ural; Volga; Northern Caucasus.

[7] Israel, on the other hand, while available from the LIS database (*il79–il10*), is deemed to be less appropriate to evaluate in this study, and is excluded. Israel is unique in its demographics and economics (say, trade patterns with its neighbors), which limits its comparability not only to the Asian Arab region, but also to high-income countries in the rest of Asia.

Variables for the analysis

In the LIS database, we use information from both the household and the personal record files. Information on demographic characteristics and employment status of household heads is merged with information for households including their residence, administrative region and disposable income per capita.

Specifically, the following variables are used to identify income inequality across demographic groups: disposable household income *dhi*, administrative region *region_c*, residence type *rural*, employment status *emp*, highest attended education level *educlev*, and *sex* of the member classified as household head.[8] Other variables used in the estimation include: *age*; industry classification *inda1*, farming activity status *farming*, cohabitation with partner *hpartner*; household composition *hhtype*; household size *nhhmem*; number of household members 13 or younger *nhhmem13*, and 65 or older *nhhmem65*; relationship to household head *relation*; and normalized household sampling weights *hwgt*. Finally, currency conversion rates and GDP deflators are adopted from the World Bank Development Indicators database (World Bank 2015a, 2015b).

Annual disposable household income per adult equivalent is used as our measure of economic outcome and welfare. Disposable income is also an appropriate outcome variable to our aim of measuring the real returns to households' endowments in the market for human capital. Square root of household size is used as the adult equivalent scale, following LIS practices. Table A1 presents selected summary statistics for the ten surveys.

Jointly, the six countries may arguably be viewed as representative of Asia's population in the mid-2000s, covering lower-middle, upper-middle and high income countries, countries with various measures of inequality, and various demographic profiles (refer to Table A1 and Figure A1). Understanding major forms of inequality across these six countries is a step toward understanding the composition of inequality in Asia at large.

Treatment versus control groups

Inequality in incomes within countries is decomposed into between-group components using several delineations of treatment versus control groups, namely households with rural versus urban residence, in disadvantaged versus advantaged administrative regions, and with heads who are less versus more educated, non-employed versus employed, and female versus male. Table A3 and A4 show that there are substantial differences in demographic composition of population across the six countries and that, perhaps more importantly, the composition differs very systematically across income-quantile groups in national populations.

[8] Household heads are identified by survey providers based on criteria that vary across countries. The classification may reflect the persons' economic or decision-making power, or other role in the household. In China and India, the status as household head is as declared by the respondent, and identifies a person who plays a decisive role in family affairs. In Japan and Russia, head is the family member who answered the household questionnaire, as a person who has the best knowledge of the affairs and concerns of the family and of its present income and expenditures. In Korea and Taiwan, head is the person in the household who earns the largest personal share of family income.

Rural versus urban residence: First we identify inequality between households with urban versus rural residence. In China, India, Japan and Russia, an appropriate indicator *rural* is used to this end. In Korea and Taiwan, however, identification problems arise. In the 2007 and 2010 waves of the Taiwanese survey, indicator for urban/rural residence – or any other subnational geographic indicator – is missing for all households. The closest variable that can be used to distinguish rural and urban households is *farming* (and an identical variable *farm* in 2007). In this study, Taiwanese households with *farming* set to "runs a farming activity" are classified as rural households, and those that do not run a farming activity are classified as urban households. Similarly, 3,074 households in the Korean survey have the residence indicator missing. The closest variable that can be used to distinguish rural and urban households is the industry classification – in this study, Korean households with residence indicator missing are classified as rural if their industry is agriculture (classification done for 2,745 households).[9] One potential problem with this classification in Taiwan and Korea is that only economically active household-heads may be classified as rural, while both active and inactive heads may be classified as urban. The results, however, do not appear to show any pro-rural bias.

Disadvantaged versus advantaged administrative regions: To decompose inequality within each country by geography, we use administrative-region disaggregation available in the LIS database. In China, we distinguish the predominantly agricultural northwest, west and southwest regions – including Anhui, Gansu, Guangxi, Guizhou, Hebei, Henan, Hubei, Hunan, Jiangxi, Shaanxi, Shanxi, Sichuan, Xinjiang and Yunnan provinces – from the industrialized east coast – including Beijing, Chongqing, Guangdong, Jiangsu, Jilin, Liaoning, Shandong and Zhejiang provinces.

In India, we distinguish the country's less developed states, mostly in India's interior and east – Andhra Pradesh, Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Jammu & Kashmir, Jharkhand, Karnataka, Madhya Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Orissa/Odisha, Rajasthan, Sikkim, Tripura, Uttar Pradesh, and West Bengal states – from the states in the industrialized and developed southwest and north – Chandigarh, Dadra & Nagar Haveli, Daman & Diu, Delhi, Goa, Pondicherry, Gujarat, Haryana, Himachal Pradesh, Kerala, Maharashtra, Punjab, Tamil Nadu, and Uttarakhand states. This classification also relies on categorization of regions according to economic development by Brar *et al.* (2014).

In Japan, regions are split between those on all but Honshu island (Hokkaido, Kyushu, Shikoku islands), and Honshu Island (Chubo, Chugoku, Kanto, Kinki, Tohoku regions). In Russia, we distinguish the mineral-extraction reliant Asian districts – Ural, Siberia and Far East – from the industrialized European regions – including Moscow and St. Petersburg, Northern and North Western, Central and Central Black-Earth, Volgo-Vyatski and Volga Basin, and North Caucasian regions. In Korea, for lack of more precise regional disaggregation, we distinguish non-capital area of the country (both urban and rural), and Seoul metropolitan area (all urban). Similarly, in Taiwan we distinguish Taiwan province and Kaohsiung municipality, as a disadvantaged region, from Taipei Municipality, the advantaged region.

[9] Another problem in Korea and Taiwan is that even for respondents with known residence and region indicators, inequality between rural versus urban residences, and that between disadvantaged versus advantaged regions, will be estimated imprecisely, because *Seoul metropolitan area* and *Taipei municipality* are entirely urban regions.

Decompositions are further performed for households with uneducated (less than complete secondary school) versus educated (complete secondary or higher) heads; not currently employed versus employed heads; and female versus male heads.

Other explanatory variables: Households' endowments

In regressions decomposing inequality across other, non-geographic dimensions, we account for households' residence in different regions as their endowment on which they receive returns. In India, we distinguish four regions: The most developed region (Chandigarh, Delhi, Goa, Pondicherry), the above-median region (Gujarat, Haryana, Himachal Pradesh, Kerala, Daman & Diu, Dadra & Nagar Haveli, Maharashtra, Punjab, Tamil Nadu, Uttarakhand), the median region (Andhra Pradesh, Chhattisgarh, Jammu & Kashmir, Karnataka, Orissa/Odisha, Rajasthan, West Bengal) and the least developed region (Madhya Pradesh, Sikkim, Arunachal Pradesh, Nagaland, Manipur, Mizoram, Tripura, Meghalaya, Assam, Jharkhand, Uttar Pradesh, Bihar). This again relies on categorization of regions according to economic development by Brar *et al.* (2014).

Additional endowments include household heads' age, age squared, gender, status as married, education status (illiterate, primary, lower secondary/preparatory, secondary, postsecondary through tertiary, bachelor's or higher), employment status and sector (agriculture, industry, services, undistinguishable), household size, dependents (proportion of persons below 14, proportion of persons above 65), specific household composition (one-person hhd., couple without children, couple with children, one parent with children, couple without children and relatives, head and other members), administrative region, and residence (rural/urban).

IV. Results

Tables 1–14 present the main results of this study. To provide an overall range of estimated log-incomes and income effects in the population, the tables report the statistics for the first, the fifth (median) and the ninth income deciles. Central results for other deciles are illustrated in figures A2 through A6 in the appendix.

The first two rows in these tables report the predicted values of log incomes for the two comparison groups – the treatment (or disadvantaged) group and the control (or advantaged) group, less the overall constant term. Because these statistics are not of central interest here, their discussion will be omitted to spare space. The third row reports on the composite income differential between the two groups, and rows 4 and 5 report the portions attributable to systematic differences in various endowments across the treatment and control groups, and the portion attributable to the differential returns to these endowments. For household endowments, we use all observable household characteristics that may have bearing on households' earning capacity or that may be valued by markets, with the exception of the characteristic defining the treatment versus control group. For instance, in the analysis of the rural/urban income differential, characteristics of household heads (age, age squared, gender, marriage, education and employment status, and sector of employment), household size and specific composition, and administrative region of residence are used. These characteristics may affect income directly if human-capital markets value them or offer allowances for them, or if they imply more working

people in the household. The effects of each of these (groups of) endowments on the income differential are shown in rows 6–10.

Row 5 reports on the portion of the income differential that cannot be explained by systematic endowment differences between the treatment and the control groups, and is thus attributed to the differential returns to all endowments, assuming that no important endowments were omitted from the analysis, in agreement with the tradition in the literature using this technique (Belhaj Hassine 2014; Ramadan *et al.* 2015). The last large block of rows, rows 11–15 in the lower half of tables 1–14, shows the effects of differential returns to individual (groups of) endowments on the income gaps. Finally, the bottom row of tables 1–14 shows the overall constant terms in the regressions.

Rural/urban income gap

The first two rows in tables 1–14 confirm that China and India are at the lower end among the evaluated countries in terms of income levels across each pair of comparison groups (rural/urban, disadvantaged/advantaged region, less/more educated, non-employed/employed, female/male), and across income quantiles, while Japan and Korea are in the upper end.

Tables 1–3 show the results for the rural/urban gap in each national survey. Row 3 confirms that China has substantial income differentials between rural and urban households, followed by India and Russia, and then by Taiwan and Korea, while such a differential is largely missing in Japan. In China, Russia and Korea, the rural/urban gap is largest among the poorest households, suggesting that rural poor are trapped in a desperate position. In India and Taiwan, the gap is similar across income quantiles, while in Japan the gap increases only in the highest income quantiles. Over time, the rural/urban gap in Russia has been gradually diminishing across all population quantiles, and in Taiwan there was a significant improvement in rural/urban inequality between 2005 and 2007.

Decomposing the composite income differential into endowment and returns effects, in rows 4–5 of tables 1–3, indicates that the endowment effect between rural and urban households is nearly non-existent in China, suggesting similar household characteristics, including education and household composition. Rural rich have slightly lower sets of endowments (demographics of household head, household composition and access to geographic markets) than the urban rich, while rural poor have even higher endowments (demographics of household head and employment) than their urban counterparts. The returns effect, however, is consistently negative and much larger, affecting particularly low-income rural households. The rural poor receive much lower returns on their endowments, including sector of employment and access to geographic markets, than similarly endowed urban households. This could be due to discrimination, to various barriers including state-regulated ones, as well as to market fragmentation under which employers and workers are not matched efficiently.

In India, a different pattern emerges. Both the endowment effect and the returns effect are consistently negative, but while the endowment effect is largest among richer households – suggesting a particular shortfall in education, employment sector and access to geographic markets among the rural rich – the returns effect is large among median and poor households –

suggesting discrimination or lack of market access among the rural poor that lowers their return to education. In Japan, some evidence exists of a shortfall in endowments (particularly education) among the rural poor, while rural rich are affected more by lower returns to their endowments (particularly household-head demographics) than their urban counterparts. In Korea, significant shortfalls in endowments including household-head demographics, education and employment are found among rural households, particularly among the rural poor, while rural households receive slightly higher returns on their endowments (demographics and employment sector), significant among households in the middle and the top of the income distribution.

In Russia (table 2), rural households have lower endowments than urban households, particularly in their educational achievement, employment sector, and access to geographic markets. Over time, this shortfall fluctuates for households in the middle and top, while it systematically grows in size among the poorest households. The returns effect is consistently strongly negative among rural households, and strongest among the poorest households, but it gradually abates over time. In Taiwan (table 3), rural households are systematically less educated than urban households, and the returns to education and other endowments are systematically lower among rural households, but the effects are insignificant in one half of all cases, and there are no clear patterns across income quantiles or over time.

In most of the surveys evaluated in tables 1–3, the endowment effect is as large as or larger than the returns effect, suggesting that rural households are less endowed with characteristics that are associated with higher earning capacity than urban households. Rural households may still receive lower returns on their stock of endowments than urban households. The policy priority, however, should be to increase the endowments of rural households because the lack of endowments such as marketable skills is a primary driver of the rural/urban income gap. Figures A2–A6 in the appendix illustrate these endowment and returns effects across all population deciles. The endowment and returns effects add up to the overall between-group gaps.

Disadvantaged/advantaged region gap

Regarding regional inequality, assessed in tables 4–5, the differential in row 3 appears smaller than the rural/urban gap, suggesting that in most countries spatial inequality is due more to gaps along the local rural/urban dimension than to gaps across larger national regions. In China and Russia the differential is greatest in the middle and top of the income distribution. In India, Japan and Taiwan (2005), all income quantiles see a similar level of regional inequality that cannot be ranked.[10] In Korea, the income differential is large only among the poorest decile of the population. Over time, surprisingly, regional inequality in Russia increases systematically across the three years and across all income quantiles. This calls into question reports in existing studies that regional incomes have been converging in Russia (Guriev and Vakulenko 2012), as the increases in regional gaps are very consistent.

Decomposing the gap into the endowment and returns effects in China, we find the endowment effect to be of the same size and similar magnitude as the returns effect. Households in disadvantaged western provinces tend to be less educated (most notably households in the upper

[10] Years other than ‘05 cannot be evaluated for Taiwan for lack of regional indicators in the respective survey waves.

half of the income distribution) and reside in rural areas, away from major centers of economic activity. They also receive significantly lower returns on their education, on their household composition and on their type of residence – particularly households in the lower half of the income distribution.

For most of the other evaluated surveys – specifically Japan, Russia and Taiwan (and to some degree India) – the decomposition suggests that the returns effects are more important to the regional income gaps than the endowment effects. In India, households in disadvantaged states are slightly less educated, work in inferior sectors, have a less advantageous household composition, and have an inferior access to urban markets compared to households in privileged states, limiting their earning potential. They receive substantially lower returns on their demographic characteristics such as age and marital status, education and economically advantageous household composition.

In Japan, Russia and Taiwan, the endowment effects are small, implying that across regions households are similarly endowed with characteristics that are associated with earning capacity. In disadvantaged regions, the income shortfall is thus due to unexplained factors such as a shortfall in returns to the available stock of endowments – the return to household heads' age and marital status in Japan and Russia.

In Korea, the endowment effect exceeds the returns effect which is around zero, suggesting that workers outside of Seoul have as good of an access to earning opportunities as workers in the capital, and same returns on this characteristics, but they lack important characteristics to be eligible for those opportunities, including education and favorable household composition. This in turn suggests the existence of inequality of opportunities for quality education, housing, and family planning.

To summarize, in disadvantaged regions in Japan, Russia and Taiwan (and to some degree in India), markets may not exist to utilize workers' skills efficiently, or workers face discrimination compared to relatively endowed workers from more advantaged regions. To promote equalization of living conditions across administrative regions, regulators at the regional and federal levels should strive to integrate markets better, and facilitate better matches between employers and workers. In China, development policy should strive both to improve skills of workers in disadvantaged regions as well as to afford them better access to markets and provide protection from discrimination.

Less/more educated gap

Tables 6–8 present the decomposition of income gaps between households with less versus more educated heads. Row 3 shows that income differentials between households with less than high-school education and those with completed high-school or more are very high across all countries. Perhaps surprisingly, even here we find that the gaps are larger in India and China (in that order), followed by Taiwan, Korea and Russia, and are smallest in Japan. This presumably reflects polarization of society in developing countries where skilled workers concentrate in cities, and rural population does not invest in education at all, perhaps in the face of barriers or in expectation of low returns. Over time, education gaps further significantly grow at the bottom of

the income distribution in Russia and Taiwan, while remaining similar at the high end. This disagrees with previous findings for urban India and for Japan that the returns to education in the 1990s increased mostly at the top of the income distribution while stagnating for lower-income households (Azam 2012; Azam and Bhatt 2016; Yokoyama, Kodama and Higuchi 2016).

Decomposing the education gap into the endowment and returns effects yields diverging results across countries. In China, Korea and the first waves of the Russian and Taiwanese surveys (2004 and 2005, respectively), the two effects are similar among the bottom income quantile groups. This suggests that the stock of non-education related endowments as well as the returns to them generate the income differential between less and more educated households. In China, the returns effect is limited among higher income-level groups, and the income gap becomes mostly due to the endowment effect (i.e., inferior non-education related characteristics among less educated households). In Japan, Korea and Taiwan, on the other hand, the endowment effect vanishes among the median and higher quantile households, and it is mostly the returns effect that explains education gaps. Among these households, highly educated households receive higher returns to non-education related characteristics than lower-educated households.

In Russia, a significant transformation occurs across the three survey waves. The endowment effect starts as large in 2004, disfavoring all less educated households, particularly in the top half of the income distribution. At the same time, the returns effect is evident only among non-top income households. Over time, the endowment effect rises gradually in magnitude among bottom-income households and shrinks among top-income households, so that by 2010 it is similar across all income quantiles. The returns effect, on the other hand, rises sharply in magnitude over time among bottom-income and top-income households, while remaining similar in the middle of the income distribution.

In China, households with less educated heads tend to be located further from urban market centers (significantly inferior geographic location), receive lower returns on their work in their economic sector, and significantly lower returns on their location of residence. In India, households with less educated heads are employed in inferior sectors, and reside further from urban market centers. They receive substantially higher returns on advantageous forms of household composition, and lower returns on their employment in the services and industry sectors. The return to their residence near markets disadvantages unskilled households in the bottom of the income distribution, while helping unskilled households in the middle and top of the income distribution.

In Japan and Korea, less educated workers have similar characteristics as more educated workers, although they work in somewhat inferior economic sectors. Their incomes are negatively affected by their lower return on their demographic characteristics, in the case of Japan, and lower return on their proximity to markets (or geographic location), in the case of Korea. Other endowment and returns effects do not have consistent signs or degrees of significance across income quantiles.

In Russia, the rising endowment effects among bottom-income less educated households are due to deteriorating employment status and residence among poor households with less educated heads relative to their more educated counterparts. The less educated poor households fell behind

during 2004–2007 and remained in that state until 2010. The shrinking endowment effects among top-income households have to do with the relative improvement of their employment status and proximity to markets compared to more educated households (diminution of the respective endowment effects).

Incomes of less educated Russian households also suffer from significant unexplained or returns effects. The returns to household-head characteristics, education, employment, household composition and residence have a mixed ranking across less- and more-educated households, across income quantiles and across years.

Finally, in Taiwan, education gaps are mostly due to large negative unexplained or returns effects, which increase with the households' income quantile (table 8 row 5). These returns effects persist across the years. Negative endowment effects are also observable among lower-income households, but vanish by the middle of the income distribution and turn positive among above-median income households. Less educated households in Taiwan thus appear to receive lower returns on some of their characteristics, but among the characteristics evaluated here, none of their returns effects are systematically strongly negative (bottom of table 8, rows 11–15). Nevertheless, large endowment effects are also found among the poorest households, attributable to inferior employment status and household composition among poor less educated households relative to their more educated peers. Less educated households also appear to reside further from economic centers, which adversely affects their earnings. This effect may be larger among higher-income households.

Non-employed/employed gap

Table 9 row 3 shows that the income gap due to the employment status of household heads is high in Korea and non-negligible in Japan, particularly in the lower half of the income distribution. In China and India, households with non-employed heads receive a premium, particularly in the lower half of the income distribution in China, and in the upper half of the income distribution in India. This is puzzling, but may reflect the significance of the shadow economy and informal resource markets across China and India, or high prevalence among households of relying on saved wealth and capital earnings rather than labor earnings for income. Another possible explanation has to do with the contributions or remittances from household members and relatives other than household head. To the extent that households with high flows of incomes from other household members have higher reported incomes and their heads may be less likely to work, this may explain the puzzle. This reaches to the highest echelons of society in both countries.[11]

In Russia and especially in Taiwan (tables 10 and 11), the employment gap is large negative, particularly among the poorest households. The non-employed poor are thus particularly disadvantaged relative to their employed peers. Across the three waves of Russian and Taiwanese surveys, the employment gap fluctuates over time, perhaps even slightly growing among the poorest households, and falling among the richest households.

[11] In fact, table A4 in the appendix shows that the employment rate in China, and slightly more weakly in India, is highest among the poorest households. The evidence for China in table 9 should thus be interpreted as comparing labor class (control group) versus leisure class (treatment group).

Decomposing the non-employment/employment gap into the endowment and returns effects also yields divergent trends across the ten surveys. In China and India, the non-employed households' income premium is almost entirely due to the high (positive) endowment effects, as non-employed household heads have more advantageous characteristics and geographic residence than their working peers, particularly among the first through fifth income-decile households. In India they also have more advantageous household composition, and these surpluses in endowments offset significant shortages in educational attainment among non-employed household heads. The returns effect is negative among households in the bottom three income-deciles, and vanishes to essentially zero among higher-decile groups. This suggests that non-employed households in China, particularly those in the bottom half of the income distribution have higher endowments than their employed counterparts. Even though these non-employed households also receive lower returns on their endowments than the employed households, in the composite the earnings of the non-employed group are higher.

Hence, the returns effects further favor non-employed median- and high-income households in China, while they favor working households in India, and working householders among the poor in China. Across individual household endowments and income quantiles, the returns effects are not consistent qualitatively or quantitatively. The most significant finding is that the return to geographic location favors non-working households among the poor, while it favors working households in the middle and upper half of the income distribution.

In Japan and Korea, both the endowment and returns effects have the expected negative signs, favoring households with working heads. The returns effects are consistently larger in absolute value than the endowment effects, and particularly large among the lowest income-quantile groups. The endowment effects are near zero – balancing the contrary signs of the differentials in the returns to householders' characteristics, and to education and household composition between working and non-working households – and only become significant at richer income quantiles in Korea. The strong negative composite effects are caused by the differentials in returns to householder characteristics, in the case of Japan, and by differentials in returns to various endowments, in the Korean case. In Japan, non-working households receive systematically lower returns on householder characteristics than their working counterparts, while in both countries non-working households appear to receive higher returns on education and household composition.

In Russia, the endowment component of the employment gap is positive among poor households, suggesting that poor non-employed households are more endowed with marketable characteristics than the working poor (most notably characteristics of household heads), while richer non-employed households are less endowed than their employed counterparts. The returns effects are significantly negative and larger in magnitude among lower-income households, exerting the greatest harm on poor non-working households. This is due to a differential in the returns to the proximity to markets between working and non-working households.

In Taiwan, the endowment component of the employment gap is largely nonexistent across the years and income quantiles, even though it is consistently positive among the lowest-decile group. Non-employed households appear to have heads with more favorable demographic

characteristics and more favorable household composition, but they are also less educated. On the balance, these endowment effects cancel out (except among the lowest decile). The returns component drives most of the employment gap in incomes. Non-working households appear to face lower returns on their demographic composition.

Female/male income gap

The final dimension along which we decompose inequality is gender of the household head. The third row in tables 12-14 shows that gender gap in favor of male households is high among the poorest households in India, Korea and Taiwan, and much smaller (but still favoring male households) among households with median or high incomes. In China, like with the employment gap, gender gap is very high positive, meaning that female households receive a large premium compared to male-headed households. Once again this could be explained by the existence of remittances from partners or ex-husbands who are not present in the household but contribute to household income (Ramadan *et al.* 2015). This pro-female income differential in China is high across all income quantiles, particularly among low and median income groups, suggesting that while the unusual arrangements are widespread even among the richest households, perhaps they are most prevalent among business-owning families in the middle class, and among poor rural households with migrant bread-winners living temporarily in cities.

In Japan and Russia, the gap is relatively small across the board, and statistically significant only among richer households.[12] Over time, gender gap gradually increases in Russia, while it stays unchanged in Taiwan.

Decomposing this gender gap into the endowment and the returns effects, we also find divergent results across the six countries. In China, the pro-female gap is due equally to a large positive endowment effect and a large positive returns effect (except for a large negative returns effect among the poorest decile). Female households appear to have higher education, and more advantageous geographic location. They also receive higher returns to their employment, to the characteristics of their household head and possibly to their education than male households.

In India, the pro-male gender gap is apparently due to the endowment effects among poor and rich households, while at the center of the income distribution, the returns effect dominates and drives the pro-male gap. Female Indian households are less educated, have an inferior employment status and inferior demographic characteristics than male households, even though they have a superior location or access to markets. Female households receive higher returns to their demographic characteristics and to education, while they receive lower returns to their employment status and location. On the balance, these returns effects essentially cancel out, for a low insignificant composite returns effect.

[12] The results for Japan and Korea provide an interesting picture about the manifestation of gender gaps across the income distribution – while Korea has significantly graver gender gaps overall, these gaps fall below those in Japan in the upper tail of the income distribution. This possibly corroborates evidence by Youm and Yamaguchi (2016) that glass-ceiling discrimination against female managers is high in Japan, and that by mid-2000s this problem has reached similar levels in Korea.

In Japan, the pro-male gap is driven by the endowment effects, as female households are less educated and have poorer geographic access to markets. The returns effects contribute only among the highest deciles, through a lower return to demographic characteristics earned by female heads relative to males. In Korea, both the endowment and returns effects work to harm female households, particularly in the lower half of the income distribution. Female households have less desirable demographic characteristics and employment status, and lower education than male households. Female heads also receive a lower return on their employment status (significant), although higher-income female heads may receive higher returns on their demographic characteristics and education.

In Russia, the overall gender gap rose substantially between 2004 and 2010, especially among poorer households. In 2004, the endowment effect was essentially nonexistent, with female households having very similar characteristics as male households across all income quantiles. The returns effect was actually positive in the lowest decile group, thanks to a higher return to education (and to household composition) among poor female-led households relative to poor male households. Female households received lower returns on their employment status and geographic residence, but these were counteracted by higher returns on demographic characteristics among richer female households. By 2007, the composite endowment effect became consistently negative for all income groups (significant only at the top), and the returns effect became negative significant among the middle and high income groups, leading to an overall pro-male gap among households in the middle and top of the income distribution. Female households are now found to reside in significantly inferior locations relative to male households, affecting their earning capacity. At the same time, female households receive a lower return on their employment status and on their demographic characteristics, which trumps small premiums in their returns to household composition and geographic location.

Finally, in 2010, the composite endowment effects became negative significant across all income quantiles, and the returns effect turned more negative and significant. The differentials in individual endowments and returns to them still carry the same signs as in 2007 but are larger and more significant. Hence, female households are hurt by deterioration in their endowment of marketable characteristics as well as by deterioration in the market valuation of their characteristics relative to men's. Whether these trends are due to deprivation traps, corrosion of social welfare nets, market discrimination or other structural marginalization of female workers is unclear, but clearly public policy should tackle the degradation of the living conditions of female-led households on both fronts.

In Taiwan, the gender gap has been larger among poorer households, and has stagnated at the year-2005 levels to 2010. The gap has been made up approximately equally of the endowment and returns effects, with the exception of the richest quantile, where a pro-female returns effect has inexplicably been offsetting nearly two-thirds of the pro-male endowment effect.

Female household heads attain slightly lower education than their male counterparts in Taiwan, and have slightly less market-desirable demographic characteristics. They earn lower returns on their employment status, but higher returns on their demographics. A divergence is apparent in the returns effects between poorer and richer households. While poorer female households receive lower returns on their education and household composition than their poor male

counterparts, richer female households receive a premium in their return to these attributes. This is what drives the pro-female composite returns effect and what makes the overall gender gap small at the top of the income distribution. The precise source of this phenomenon is unclear and deserves future scrutiny.

Growth incidence

The availability of multiple waves of Russian and Taiwanese surveys allows us to estimate growth incidence curves and decompose growth at each income quantile into the part due to changes in households' observable endowments and that effectively due to changes in returns to their endowments and other factors, the unexplained part (figure A7). In Russia, growth during 2004–2007 favored the middle class, and to a smaller degree the bottom three and top two income decile groups. During 2007–2010, on the other hand, growth was strongly pro-poor, favoring the bottom three decile groups significantly more than the rest of the distribution. These patterns of growth cannot be explained by jumps or redistribution in the stock of household characteristics valued by markets (including education, employment status and sector, demographics and household composition, and residence). Instead, we conclude that the growth patterns were on account of other factors and developments that effectively changed the returns that poor, middle-income and rich households earned on their endowments. Skill-biased industrial change, opening up to world markets in selected sectors – particularly sectors where middle-income workers (2004–2007) and low-income workers (2007–2010) were employed – are candidate explanations. Differential region-level development favoring poorer – Asian and less metropolitan – regions in terms of industrial development or export expansion is another possibility.

Taiwan shows very different patterns of growth. Years 2005–2007 saw an economic contraction under which all income groups except for the highest decile experienced declining incomes, albeit by small amounts. The situation stabilized in the following years (2007–2010) for the middle-income groups. Households above the 40th percentile to top deciles saw stagnating incomes, while households in the bottom three deciles saw their incomes retreat further, particularly among the bottom-most income groups. These contracting incomes cannot be attributed to changes in households' skills or other characteristics valued by markets. In fact, the endowment effects are positive across all income groups, suggesting that over time all households were gradually acquiring more of valuable endowments. However, the returns to these endowments effectively fell. The negative returns effects were particularly large among the poorest households (deciles 1–2 during 2005–2007; deciles 1–3 during 2007–2010) and among the near-richest households (deciles 7–8 during 2005–2007; deciles 8–9 during 2007–2010).

V. Concluding thoughts

This study has used ten national household surveys to investigate the level, composition and evolution of income inequality among six countries across Asia in different stages of development – China, India, Japan, Korea, Russia and Taiwan. To estimate the effects of various household characteristics and the returns to them on household income at different income

quantiles, we have used advanced methods including the Blinder-Oaxaca decomposition and the unconditional quantile regressions estimated using a recentered influence function procedure.[13]

The results indicate that Japan, Taiwan and Korea have very low degrees of income inequality, while India and China have very high levels, followed by Russia. There is evidence of rural/urban and regional income gaps across all of the evaluated countries, but they are particularly high in India, China and Russia, and account for a large portion of the overall inequality. While the rural/urban gap has been going away in Russia and Taiwan, regional gaps remain strong in Taiwan and appear to further grow in Russia, disagreeing with recent claims that Russian factor markets have become more integrated and that the level of economic development has been converging across Russian regions. We find support for the premise that the extent and form of inequality are relatively stagnant within countries while they vary substantially across countries with vastly different economic and institutional conditions (Li, Squire and Zou 1998).

Education gap is an important component in overall inequality across most countries. Some evidence exists of polarization of societies whereby a small group of households accumulate large stocks of education and non-education endowments, and concentrate near markets – in cities and advantaged regions – to receive high returns on all these endowments. The rest of national population, most notably in India, lacks resources to invest in the various endowments and falls behind.

Urban/rural gap is due to education and employment status of urban versus rural households, and because rural households receive a significantly lower return on their education. This points to a lack of employment opportunities in rural areas, particularly for skilled workers. Education gap is due in part to the fact that less educated workers have a harder time to find employment. Workers who are less formally educated receive lower credit for their other endowments – such as residence closer to main labor markets – and are not given a chance to prove themselves. Female-headed households are less educated and are viewed in the market as having inferior personal characteristics (age, marital status), leading to a lower propensity to be employed. Even when employed, they work in irregular positions or are self-employed, and suffer a substantial reduction in earnings, interpreted as a penalty for inconvenience that female workers cause to employers.

[13] As a robustness check of results to model specifications, Blinder-Oaxaca decompositions were performed to compare the estimated quantile effects using the recently advanced unconditional quantile regressions to mean effects estimated using the classical method. This robustness check was performed for Taiwan 2010, due to its large sample size and recent date. Reassuringly, across all four decomposition analyses – rural/urban, non-educated/educated, non-employed/employed, female/male – the coefficients and standard errors estimated using the standard Blinder-Oaxaca method at the mean are very similar to those estimated using the UQR method at the median (table A6). The two sets of coefficients are within each other's confidence intervals, and the Blinder-Oaxaca mean effects are between those estimated for the lowest and highest deciles using the UQR method, helping to verify that the effects vary systematically across the income distribution and that it is important to evaluate the effects at various population quantiles. Finally, standard errors on the UQR coefficients are just slightly higher than those in the Blinder-Oaxaca models, and the vast majority of UQR coefficients retain their statistical significance from the Blinder-Oaxaca regressions. Hence, UQRs not only have better consistency properties by differentiating decomposition at various population quantiles, but they attain these improvements without sacrificing efficiency.

Overall, education and the return to it, geographic location and household composition play important roles in driving economic inequality – and suggest viable ways to control it – across demographic groups. These findings have important implications for public policy in developing Asia. For one, education reform and better welfare nets are needed to provide basic opportunities for workers to improve their skills. Family planning and residence support programs, such as public housing or relaxation of national-registration laws (i.e., *hukou*), could help ameliorate regional and rural/urban inequality. Empowering authorities and organizations in disadvantaged regions to support workers, and to help them acquire skills and be matched to quality employment would also work to loosen the grip of a deprivation trap.

Interestingly, in China and India there is a large group of households without working heads, or female-led households, who out-earn the counterpart working and male households. This occurs among all income-quantile groups. Among top-income households, this may correspond to a leisure class of residents who live off of wealth or remittances. At lower-income groups, the far more likely picture is that of poor rural households with their breadwinners working temporarily or seasonally in cities. Those may be the female, unemployed-headed households whose breadwinners have no decent earning opportunities in their home region, for various reasons. The increase in income in these households comes at a high cost to the breadwinners of living away from their family, or living in poor conditions as migrant workers in the shadow of the law. The role of public policy should be to open opportunities to workers in all regions and circumstances, and to facilitate quality matches between workers and employers.

The endowment and returns effects are found to vary substantially across quantiles of the income distributions, suggesting that quantile regressions are necessary. A similar Blinder-Oaxaca decomposition performed at the conditional mean yields similar results as the median UQR effect (table A6), but these effects are significantly different from UQR effects at other quantiles. The comparison of conditional and unconditional quantile regressions (table A7 and figure A8) yields qualitatively similar estimates of the endowment and returns effects, with some quantitative differences notable particularly for the rural-urban and female-male decompositions. These second-order differences may reflect broader economy-wide adjustments, given that we are interested in the effects of population changes on gaps between demographic groups. In our undertaking, then, unconditional regressions appear more appropriate than conditional regressions.

Finally worth noting, this study has argued that the six countries evaluated here are jointly representative of Asia at large, and that the degrees and forms of income inequality identified in each country have their importance as archetype components of pan-Asian inequality. However, across the various analyses performed in this study, Japan, Korea and Taiwan could be said to represent an entirely different continent in terms of the level, the distribution as well as the decomposition of incomes, from India and China, and even Russia. The latter countries should aspire to adopt the development model – the market policies, welfare state and institutions – used in Korea and Taiwan since the 1990s. There is hope that appropriate policy reforms will not only increase the aggregate level of wealth, but will bring more equal prosperity to all corners of their societies. Convergence across all of Asia is an aim that international organizations should find worth pursuing.

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Table 1: Quantile decomposition for China 2002, India 2004, Japan 2008 and Korea 2006 by rural/urban residence

		China 02			India 04			Japan 08			Korea 06		
		10th pctile	50th pctile	90th pctile	10th pctile	50th pctile	90th pctile	10th pctile	50th pctile	90th pctile	10th pctile	50th pctile	90th pctile
	Treatment group	5.858***	6.915***	7.833***	5.845***	6.847***	8.015***	9.406***	10.140***	10.700***	8.857***	9.864***	10.560***
		(0.018)	(0.009)	(0.013)	(0.010)	(0.006)	(0.010)	(0.111)	(0.032)	(0.051)	(0.0221)	(0.011)	(0.015)
	Control group	7.650***	8.381***	9.106***	6.613***	7.652***	8.729***	9.496***	10.220***	10.860***	9.263***	10.050***	10.660**
		(0.011)	(0.008)	(0.013)	(0.011)	(0.009)	(0.013)	(0.021)	(0.012)	(0.017)	(0.0131)	(0.007)	(0.008)
	Overall Gap	-1.792***	-1.466***	-1.274***	-0.768***	-0.805***	-0.714***	-0.090	-0.076**	-0.156***	-0.406***	-0.182***	-0.101***
		(0.021)	(0.012)	(0.018)	(0.015)	(0.011)	(0.016)	(0.113)	(0.034)	(0.054)	(0.0256)	(0.013)	(0.017)
	Endowment	0.200***	0.004	-0.121***	-0.286***	-0.343***	-0.580***	-0.136**	-0.055***	-0.051*	-0.419***	-0.243***	-0.166***
		(0.046)	(0.023)	(0.032)	(0.017)	(0.010)	(0.017)	(0.064)	(0.020)	(0.029)	(0.0241)	(0.012)	(0.017)
	Returns	-1.992***	-1.470***	-1.152***	-0.482***	-0.462***	-0.135***	0.046	-0.022	-0.106*	0.0125	0.061***	0.065***
		(0.050)	(0.025)	(0.036)	(0.022)	(0.013)	(0.021)	(0.118)	(0.033)	(0.056)	(0.0323)	(0.015)	(0.023)
Endowment Effects (Explained)	Characteristics of hhd. head	0.158***	0.049***	-0.033*	0.009***	0.013***	0.022***	-0.042	-0.011	0.004	-0.065***	-0.000	0.029**
		(0.029)	(0.014)	(0.020)	(0.002)	(0.002)	(0.003)	(0.039)	(0.009)	(0.015)	(0.020)	(0.009)	(0.014)
	Head education	-0.013	-0.032**	0.014	-0.045***	-0.123***	-0.330***	-0.111**	-0.027**	-0.039**	-0.119***	-0.105***	-0.119***
		(0.026)	(0.013)	(0.018)	(0.008)	(0.005)	(0.010)	(0.044)	(0.012)	(0.019)	(0.017)	(0.008)	(0.013)
	Head employment	0.080***	0.055***	0.013	-0.180***	-0.152***	-0.153***	0.008	-0.006	-0.006	-0.249***	-0.102***	-0.049***
		(0.022)	(0.011)	(0.015)	(0.011)	(0.006)	(0.010)	(0.024)	(0.007)	(0.009)	(0.022)	(0.010)	(0.015)
	Household composition	0.013	-0.018*	-0.029**	-0.016***	-0.010***	-0.000	0.024	0.014	0.014	0.0028	-0.041***	-0.030**
		(0.019)	(0.009)	(0.013)	(0.005)	(0.003)	(0.004)	(0.034)	(0.011)	(0.017)	(0.017)	(0.008)	(0.013)
	Administr. region	-0.040***	-0.051***	-0.086***	-0.053***	-0.071***	-0.119***	-0.015	-0.025***	-0.023	0.010**	0.004**	0.004**
		(0.009)	(0.005)	(0.007)	(0.011)	(0.006)	(0.011)	(0.031)	(0.009)	(0.014)	(0.0049)	(0.002)	(0.002)
Returns Effects (Unexplained)	Characteristics of hhd. head	0.250	-0.397	-0.366	0.002	0.034	0.022	-1.818	-0.097	-0.409	1.076**	0.607***	0.113
		(0.631)	(0.335)	(0.498)	(0.311)	(0.209)	(0.319)	(1.315)	(0.376)	(0.629)	(0.491)	(0.235)	(0.347)
	Head education	0.184**	0.221***	0.451***	-0.175***	-0.235***	0.166***	0.727**	0.112	0.125	-0.407***	0.003	0.052
		(0.086)	(0.044)	(0.063)	(0.029)	(0.020)	(0.030)	(0.355)	(0.103)	(0.172)	(0.136)	(0.067)	(0.094)
	Head employment	-0.250***	-0.080**	-0.059	0.160***	0.094***	0.034	0.076	-0.076	-0.019	-0.115*	0.068**	0.062
		(0.068)	(0.036)	(0.052)	(0.040)	(0.026)	(0.040)	(0.213)	(0.061)	(0.101)	(0.069)	(0.033)	(0.049)
	Household composition	0.127	0.016	-0.079	0.179*	0.144**	0.346***	0.002	0.268**	-0.140	0.484	-0.133	0.043
		(0.106)	(0.058)	(0.087)	(0.095)	(0.063)	(0.097)	(0.397)	(0.114)	(0.190)	(0.333)	(0.159)	(0.236)
	Administr. region	-0.160***	-0.093***	0.021	-0.040	0.064***	0.202***	0.141	0.091	0.124	-0.431***	-0.188***	-0.194***
		(0.035)	(0.019)	(0.030)	(0.024)	(0.016)	(0.025)	(0.224)	(0.065)	(0.109)	(0.055)	(0.026)	(0.040)
	Constant	-2.143***	-1.137***	-1.120**	-0.608*	-0.563**	-0.904***	0.919	-0.319	0.214	-0.595	-0.296	-0.010
		(0.658)	(0.349)	(0.518)	(0.325)	(0.219)	(0.334)	(1.440)	(0.412)	(0.690)	(0.416)	(0.199)	(0.294)
	Observations		17,029			41,004			3,318			15,081	

Notes: Standard errors computed using the delta method are in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table 2: Quantile decomposition for Russia 2004, 2007 and 2010 by rural/urban residence

		Russia 04			Russia 07			Russia 10		
		10th pctile	50th pctile	90th pctile	10th pctile	50th pctile	90th pctile	10th pctile	50th pctile	90th pctile
	Treatment group	6.978***	8.040***	8.990***	7.513***	8.650***	9.558***	8.196***	9.171***	9.998***
		(0.083)	(0.034)	(0.050)	(0.075)	(0.037)	(0.035)	(0.060)	(0.019)	(0.029)
	Control group	7.676***	8.543***	9.449***	8.186***	9.125***	9.901***	8.742***	9.513***	10.280***
		(0.028)	(0.019)	(0.026)	(0.024)	(0.018)	(0.020)	(0.018)	(0.012)	(0.016)
	Overall Gap	-0.698***	-0.503***	-0.459***	-0.673***	-0.475***	-0.343***	-0.547***	-0.342***	-0.280***
		(0.087)	(0.039)	(0.057)	(0.079)	(0.041)	(0.040)	(0.062)	(0.023)	(0.033)
	Endowment	0.112	-0.068*	-0.151**	-0.185**	-0.186***	-0.173***	-0.243***	-0.127***	-0.055*
		(0.099)	(0.041)	(0.060)	(0.080)	(0.039)	(0.037)	(0.062)	(0.021)	(0.030)
	Returns	-0.810***	-0.436***	-0.309***	-0.488***	-0.288***	-0.170***	-0.303***	-0.215***	-0.225***
		(0.126)	(0.053)	(0.079)	(0.105)	(0.051)	(0.052)	(0.082)	(0.027)	(0.042)
Endowment Effects (Explained)	Characteristics of hhd. head	0.041	0.026**	0.0117	0.036	0.031**	0.019	0.002	0.018**	0.004
		(0.031)	(0.013)	(0.017)	(0.029)	(0.016)	(0.014)	(0.028)	(0.009)	(0.014)
	Head education	-0.006	-0.042**	-0.040	-0.102**	-0.118***	-0.079***	-0.138***	-0.085***	-0.068***
		(0.046)	(0.019)	(0.029)	(0.042)	(0.022)	(0.021)	(0.032)	(0.011)	(0.015)
	Head employment	0.058	-0.041*	-0.027	-0.061	-0.056**	-0.084***	-0.079**	-0.023**	0.001
		(0.058)	(0.024)	(0.036)	(0.048)	(0.023)	(0.023)	(0.035)	(0.010)	(0.016)
	Household composition	0.087**	0.036**	0.040*	-0.017	-0.014	-0.002	-0.021	0.004	0.058***
		(0.041)	(0.017)	(0.024)	(0.035)	(0.016)	(0.013)	(0.032)	(0.011)	(0.016)
	Administr. region	-0.068	-0.047*	-0.136***	-0.042	-0.030	-0.027	-0.007	-0.041***	-0.051***
		(0.069)	(0.028)	(0.042)	(0.041)	(0.021)	(0.019)	(0.034)	(0.011)	(0.017)
Returns Effects (Unexplained)	Characteristics of hhd. head	0.611	0.458	0.839	0.291	-0.175	0.797	0.652	0.505**	1.095***
		(1.055)	(0.450)	(0.680)	(0.910)	(0.447)	(0.464)	(0.738)	(0.246)	(0.381)
	Head education	-0.323	-0.090	0.134	-0.155	0.323	0.319	-0.082	0.113	0.362
		(0.410)	(0.188)	(0.284)	(0.448)	(0.237)	(0.258)	(0.411)	(0.165)	(0.249)
	Head employment	-0.223	-0.049	0.057	0.192	-0.030	0.001	0.407***	-0.072**	-0.029
		(0.148)	(0.064)	(0.096)	(0.124)	(0.061)	(0.064)	(0.099)	(0.034)	(0.053)
	Household composition	0.401	-0.010	-0.122	-0.243	0.066	-0.040	0.013	0.145**	0.218**
		(0.272)	(0.118)	(0.178)	(0.236)	(0.118)	(0.123)	(0.18)	(0.062)	(0.095)
	Administr. region	0.363**	0.073	0.068	0.563***	0.217***	0.050	0.121	0.118***	0.121*
		(0.175)	(0.076)	(0.115)	(0.157)	(0.079)	(0.083)	(0.125)	(0.044)	(0.067)
	Constant	-1.639	-0.818*	-1.285*	-1.136	-0.690	-1.299**	-1.415*	-1.024***	-1.992***
		(1.158)	(0.497)	(0.750)	(1.024)	(0.509)	(0.533)	(0.831)	(0.291)	(0.446)
	Observations		3,086			3,370			5,713	

Notes: Standard errors computed using the delta method are in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table 3: Quantile decomposition for Taiwan 2005, 2007 and 2010 by rural/urban residence

		Taiwan 05			Taiwan 07			Taiwan 10		
		10^{th} pctile	50^{th} pctile	90^{th} pctile	10^{th} pctile	50^{th} pctile	90^{th} pctile	10^{th} pctile	50^{th} pctile	90^{th} pctile
	Treatment	8.390***	9.045***	9.692***	8.585***	9.244***	9.921***	8.534***	9.273***	9.955***
	group	(0.050)	(0.040)	(0.035)	(0.029)	(0.019)	(0.031)	(0.029)	(0.020)	(0.031)
	Control group	8.853***	9.517***	10.210***	8.808***	9.498***	10.220***	8.749***	9.503***	10.220***
		(0.009)	(0.006)	(0.008)	(0.010)	(0.006)	(0.009)	(0.010)	(0.006)	(0.008)
	Overall Gap	-0.463***	-0.472***	-0.521***	-0.223***	-0.254***	-0.298***	-0.215***	-0.230***	-0.265***
		(0.051)	(0.041)	(0.036)	(0.030)	(0.020)	(0.032)	(0.031)	(0.021)	(0.032)
	Endowment	-0.233	-0.363**	-0.171	-0.082	-0.124*	-0.295***	0.016	-0.064	-0.203**
		(0.181)	(0.151)	(0.143)	(0.099)	(0.063)	(0.109)	(0.079)	(0.052)	(0.084)
	Returns	-0.230	-0.109	-0.351**	-0.141	-0.130**	-0.003	-0.230***	-0.167***	-0.062
		(0.184)	(0.154)	(0.147)	(0.102)	(0.065)	(0.112)	(0.083)	(0.054)	(0.088)
Endowment Effects (Explained)	Characteristics	0.041	0.069**	0.0126	0.035	0.066*	0.091	0.050	0.011	0.087**
	of hhd. head	(0.033)	(0.029)	(0.026)	(0.056)	(0.036)	(0.061)	(0.041)	(0.027)	(0.044)
	Head	-0.123	-0.276*	-0.140	-0.033	-0.118***	-0.295***	-0.050*	-0.114***	-0.277***
	education	(0.175)	(0.147)	(0.139)	(0.028)	(0.019)	(0.033)	(0.027)	(0.019)	(0.031)
	Head	-0.083	-0.105**	-0.010	-0.061	-0.038	-0.055	0.055	-0.014	-0.035
	employment	(0.057)	(0.048)	(0.045)	(0.096)	(0.061)	(0.106)	(0.074)	(0.049)	(0.079)
	Household	-0.068*	-0.052	-0.033	-0.023	-0.034	-0.035	-0.040	0.054*	0.021
	composition	(0.038)	(0.033)	(0.027)	(0.056)	(0.036)	(0.061)	(0.042)	(0.029)	(0.045)
Returns Effects (Unexplained)	Characteristics	2.079*	-0.345	-1.645*	-0.354	-0.423	0.245	0.098	-0.697*	-0.232
	of hhd. head	(1.090)	(0.900)	(0.880)	(0.661)	(0.419)	(0.715)	(0.621)	(0.399)	(0.644)
	Head	-0.424*	0.373*	-0.105	-0.795***	-0.047	0.456***	-1.011***	-0.062	0.076
	education	(0.237)	(0.197)	(0.190)	(0.124)	(0.078)	(0.133)	(0.163)	(0.105)	(0.171)
	Head	-0.779***	0.211	-0.138	-0.257	-0.018	-0.112	0.439	-0.171	-0.210
	employment	(0.174)	(0.144)	(0.140)	(0.823)	(0.523)	(0.902)	(0.560)	(0.368)	(0.598)
	Household	-0.431	0.835	0.520	-0.204	0.083	0.270	0.154	0.602*	0.665
	composition	(0.974)	(0.804)	(0.787)	(0.525)	(0.333)	(0.566)	(0.498)	(0.318)	(0.512)
	Constant	-0.675	-1.182**	1.018**	1.467	0.275	-0.863	0.091	0.161	-0.361
		(0.639)	(0.530)	(0.513)	(1.037)	(0.659)	(1.135)	(0.793)	(0.519)	(0.844)
	Observations		13,679			13,774			14,843	

Notes: Standard errors computed using the delta method are in parentheses. *** p<0.01, ** p<0.05, * p<0.1. Residence unavailable.

Table 4: Quantile decomposition for China 2002, India 2004, Japan 2008 and Korea 2006 by disadvantaged/advantaged admin. region

		China 02			India 04			Japan 08			Korea 06		
		10th pctile	50th pctile	90th pctile	10th pctile	50th pctile	90th pctile	10th pctile	50th pctile	90th pctile	10th pctile	50th pctile	90th pctile
	Treatment group	6.047***	7.172***	8.434***	5.894***	6.911***	8.156***	9.390***	10.080***	10.690***	9.122***	10.000***	10.650***
		(0.016)	(0.012)	(0.012)	(0.010)	(0.007)	(0.011)	(0.041)	(0.025)	(0.037)	(0.014)	(0.006)	(0.007)
	Control group	6.300***	7.899***	9.021***	6.222***	7.348***	8.514***	9.530***	10.240***	10.870***	9.327***	10.060***	10.690***
		(0.027)	(0.019)	(0.016)	(0.014)	(0.010)	(0.012)	(0.024)	(0.012)	(0.018)	(0.031)	(0.016)	(0.021)
	Overall Gap	-0.253***	-0.727***	-0.587***	-0.328***	-0.437***	-0.358***	-0.140***	-0.163***	-0.178***	-0.205***	-0.056***	-0.049**
		(0.032)	(0.023)	(0.020)	(0.017)	(0.012)	(0.016)	(0.048)	(0.028)	(0.041)	(0.034)	(0.017)	(0.022)
	Endowment	-0.137***	-0.331***	-0.264***	-0.087***	-0.171***	-0.238***	-0.021	-0.041***	-0.043**	-0.128***	-0.071***	-0.063***
		(0.011)	(0.014)	(0.013)	(0.007)	(0.006)	(0.010)	(0.021)	(0.014)	(0.018)	(0.018)	(0.007)	(0.007)
	Returns	-0.116***	-0.396***	-0.323***	-0.241***	-0.266***	-0.120***	-0.119**	-0.122***	-0.135***	-0.077**	0.015	0.015
		(0.031)	(0.018)	(0.019)	(0.017)	(0.011)	(0.016)	(0.048)	(0.028)	(0.041)	(0.031)	(0.016)	(0.021)
Endowment Effects (Explained)	Characteristics of hhd. head	0.016***	0.005	-0.033***	0.005**	-0.006***	-0.017***	-0.016	-0.012	-0.008	0.007	0.017***	0.018***
		(0.005)	(0.003)	(0.004)	(0.002)	(0.002)	(0.003)	(0.016)	(0.009)	(0.013)	(0.007)	(0.004)	(0.005)
	Head education	-0.001	-0.015***	-0.064***	-0.010***	-0.051***	-0.103***	-0.016	-0.012**	-0.016**	-0.075***	-0.060***	-0.064***
		(0.005)	(0.003)	(0.007)	(0.003)	(0.003)	(0.007)	(0.012)	(0.006)	(0.008)	(0.008)	(0.006)	(0.006)
	Head employment	0.035***	0.008**	-0.007*	-0.014***	-0.017***	-0.006**	-0.006	-0.004	0.001	-0.015	-0.004	-0.003
		(0.007)	(0.004)	(0.004)	(0.003)	(0.002)	(0.003)	(0.011)	(0.006)	(0.008)	(0.009)	(0.002)	(0.002)
	Household composition	-0.006	-0.025***	-0.006	-0.024***	-0.023***	-0.019***	0.021	-0.001	-0.013	-0.046***	-0.024***	-0.014***
		(0.007)	(0.005)	(0.005)	(0.004)	(0.003)	(0.004)	(0.018)	(0.013)	(0.016)	(0.008)	(0.004)	(0.005)
	Urban/rural residence	-0.182***	-0.304***	-0.153***	-0.044***	-0.074***	-0.093***	-0.003	-0.012**	-0.008	--	--	--
		(0.012)	(0.013)	(0.009)	(0.004)	(0.003)	(0.005)	(0.007)	(0.005)	(0.007)			
Returns Effects (Unexplained)	Characteristics of hhd. head	1.078	-1.042**	0.398	-1.209***	-0.292	-0.184	-1.110**	-0.352	-1.027**	0.445	0.756**	0.939**
		(0.874)	(0.473)	(0.514)	(0.331)	(0.213)	(0.297)	(0.561)	(0.329)	(0.485)	(0.584)	(0.298)	(0.404)
	Head education	-0.622**	-0.520***	0.006	-0.212***	-0.073***	0.153***	0.330**	0.104	0.136	-0.0415	-0.0799	-0.098
		(0.260)	(0.138)	(0.150)	(0.028)	(0.018)	(0.025)	(0.160)	(0.093)	(0.137)	(0.262)	(0.136)	(0.184)
	Head employment	-0.018	0.005	-0.159***	0.052	-0.013	0.073*	0.036	-0.028	0.024	0.132	-0.030	0.025
		(0.092)	(0.050)	(0.054)	(0.043)	(0.028)	(0.039)	(0.086)	(0.050)	(0.074)	(0.095)	(0.049)	(0.066)
	Household composition	-0.203	-0.041	-0.273***	-0.163	-0.176***	-0.074	0.171	-0.055	-0.244*	0.112	-0.182	-0.452*
		(0.137)	(0.075)	(0.081)	(0.104)	(0.067)	(0.094)	(0.166)	(0.097)	(0.143)	(0.359)	(0.183)	(0.248)
	Urban/rural residence	-0.378***	-0.242***	0.156***	-0.004	0.019*	0.130***	0.0357	0.125*	0.0155	--	--	--
		(0.044)	(0.024)	(0.026)	(0.015)	(0.010)	(0.014)	(0.126)	(0.072)	(0.106)			
	Constant	0.027	1.445***	-0.452	1.296***	0.270	-0.217	0.418	0.084	0.960*	-0.724	-0.450*	-0.399
		(0.924)	(0.499)	(0.542)	(0.346)	(0.223)	(0.310)	(0.626)	(0.367)	(0.541)	(0.503)	(0.256)	(0.348)
	Observations		17,029			41,004			3,318			15,448	

Notes: Standard errors computed using the delta method are in parentheses. *** p<0.01, ** p<0.05, * p<0.1. -- variables unavailable.

Table 5: Quantile decomposition for Russia 2004, 2007 and 2010, and Taiwan 2005 by disadvantaged/advantaged administrative region

		Russia 04			Russia 07			Russia 10			Taiwan 05		
		10th pctile	50th pctile	90th pctile	10th pctile	50th pctile	90th pctile	10th pctile	50th pctile	90th pctile	10th pctile	50th pctile	90th pctile
	Treatment group	7.438***	8.325***	9.247***	7.931***	8.892***	9.665***	8.465***	9.305***	10.050***	8.788***	9.457***	10.120***
		(0.049)	(0.025)	(0.036)	(0.049)	(0.024)	(0.028)	(0.046)	(0.015)	(0.024)	(0.010)	(0.006)	(0.008)
	Control group	7.478***	8.454***	9.403***	8.054***	9.060***	9.888***	8.640***	9.485***	10.280***	9.278***	9.956***	10.560***
		(0.035)	(0.022)	(0.029)	(0.028)	(0.020)	(0.022)	(0.022)	(0.014)	(0.018)	(0.020)	(0.016)	(0.017)
	Overall Gap	-0.040	-0.130***	-0.156***	-0.123**	-0.169***	-0.222***	-0.175***	-0.180***	-0.231***	-0.490***	-0.499***	-0.437***
		(0.061)	(0.034)	(0.046)	(0.056)	(0.031)	(0.035)	(0.051)	(0.021)	(0.030)	(0.023)	(0.016)	(0.019)
	Endowment	-0.060**	0.014	0.004	-0.071***	-0.049***	-0.020	-0.075***	-0.040***	-0.018	-0.072***	-0.133***	-0.224***
		(0.030)	(0.017)	(0.016)	(0.026)	(0.016)	(0.012)	(0.025)	(0.010)	(0.011)	(0.017)	(0.008)	(0.012)
	Returns	0.021	-0.144***	-0.159***	-0.052	-0.119***	-0.203***	-0.100**	-0.140***	-0.213***	-0.418***	-0.366***	-0.214***
		(0.059)	(0.031)	(0.047)	(0.055)	(0.029)	(0.035)	(0.051)	(0.019)	(0.030)	(0.022)	(0.015)	(0.020)
Endowment Effects (Explained)	Characteristics of hhd. head	-0.007	-0.023	-0.013	-0.021	0.008	0.025	-0.080**	-0.008	-0.005	-0.054**	0.006	-0.014
		(0.036)	(0.019)	(0.027)	(0.026)	(0.010)	(0.026)	(0.034)	(0.008)	(0.012)	(0.023)	(0.013)	(0.020)
	Head education	0.0006	0.000	-0.001	-0.021*	-0.016**	-0.010*	-0.018*	-0.008*	-0.009*	-0.094***	-0.123***	-0.198***
		(0.008)	(0.006)	(0.007)	(0.011)	(0.006)	(0.006)	(0.011)	(0.005)	(0.005)	(0.007)	(0.006)	(0.011)
	Head employment	0.029**	0.015**	0.008	-0.005	-0.007	-0.003	0.016	0.005	0.003	0.019	-0.014***	-0.011**
		(0.013)	(0.007)	(0.005)	(0.011)	(0.008)	(0.006)	(0.011)	(0.004)	(0.004)	(0.014)	(0.004)	(0.005)
	Household composition	-0.038	0.041	0.019	0.010	-0.019*	-0.025	0.020	-0.023**	-0.002	0.058**	-0.002	-0.001
		(0.043)	(0.025)	(0.034)	(0.031)	(0.011)	(0.025)	(0.039)	(0.009)	(0.015)	(0.023)	(0.013)	(0.020)
	Urban/rural residence	-0.045***	-0.019***	-0.008*	-0.033**	-0.016***	-0.007*	-0.013*	-0.006*	-0.005*	--	--	--
		(0.017)	(0.007)	(0.005)	(0.013)	(0.006)	(0.004)	(0.008)	(0.003)	(0.003)			
Returns Effects (Unexplained)	Characteristics of hhd. head	-1.075	-0.526	-1.277*	0.266	-0.579	1.224**	-1.424**	-0.019	-0.020	-0.447	0.352	-0.225
		(0.986)	(0.507)	(0.771)	(0.826)	(0.430)	(0.530)	(0.726)	(0.271)	(0.428)	(0.592)	(0.429)	(0.538)
	Head education	-0.078	0.064	0.165	-0.438	-0.056	0.132	0.109	0.112	-0.004	0.0515	0.113	0.237
		(0.335)	(0.174)	(0.263)	(0.383)	(0.201)	(0.247)	(0.493)	(0.177)	(0.284)	(0.182)	(0.135)	(0.165)
	Head employment	0.285***	0.057	-0.034	-0.053	-0.031	0.022	0.062	-0.049*	-0.028	0.810***	-0.051	0.037
		(0.090)	(0.047)	(0.071)	(0.083)	(0.043)	(0.053)	(0.076)	(0.029)	(0.046)	(0.083)	(0.059)	(0.075)
	Household composition	0.079	0.159	1.338**	0.704	0.227	-0.927**	1.291**	0.011	0.315	0.764	-0.598	-0.112
		(0.812)	(0.409)	(0.629)	(0.643)	(0.329)	(0.408)	(0.555)	(0.201)	(0.321)	(0.541)	(0.391)	(0.492)
	Urban/rural residence	0.193*	-0.024	-0.105	0.211**	-0.002	-0.009	0.163*	0.006	0.026	--	--	--
		(0.101)	(0.053)	(0.080)	(0.095)	(0.050)	(0.061)	(0.086)	(0.033)	(0.051)			
	Constant	0.616	0.127	-0.246	-0.742	0.322	-0.644	-0.300	-0.201	-0.502	-1.596***	-0.182	-0.151
		(0.706)	(0.372)	(0.558)	(0.682)	(0.359)	(0.441)	(0.682)	(0.255)	(0.403)	(0.353)	(0.258)	(0.321)
	Observations		3,086			3,370			5,713			13,679	

Notes: Standard errors computed using the delta method are in parentheses. *** p<0.01, ** p<0.05, * p<0.1. -- variables unavailable.

Table 6: Quantile decomposition for China 2002, India 2004, Japan 2008 and Korea 2006 by less/more educated household head

		China 02			India 04			Japan 08			Korea 06		
		10th pctile	50th pctile	90th pctile	10th pctile	50th pctile	90th pctile	10th pctile	50th pctile	90th pctile	10th pctile	50th pctile	90th pctile
	Treatment group	6.002***	7.127***	8.353***	5.937***	6.961***	8.101***	9.212***	10.040***	10.670***	8.720***	9.689***	10.440***
		(0.017)	(0.011)	(0.015)	(0.009)	(0.006)	(0.008)	(0.050)	(0.029)	(0.032)	(0.017)	(0.011)	(0.012)
	Control group	6.493***	8.137***	9.043***	6.517***	8.056***	9.061***	9.548***	10.240***	10.870***	9.403***	10.100***	10.710***
		(0.031)	(0.015)	(0.015)	(0.030)	(0.015)	(0.020)	(0.023)	(0.012)	(0.017)	(0.011)	(0.006)	(0.009)
	Overall Gap	-0.491***	-1.009***	-0.690***	-0.580***	-1.095***	-0.959***	-0.336***	-0.198***	-0.201***	-0.682***	-0.409***	-0.272***
		(0.036)	(0.019)	(0.021)	(0.031)	(0.016)	(0.021)	(0.055)	(0.031)	(0.036)	(0.020)	(0.013)	(0.015)
	Endowment	-0.322***	-0.613***	-0.770***	-0.244***	-0.273***	-0.245***	-0.077***	-0.046***	-0.022	-0.190***	-0.002	0.037*
		(0.021)	(0.015)	(0.021)	(0.010)	(0.008)	(0.010)	(0.029)	(0.017)	(0.017)	(0.031)	(0.019)	(0.021)
	Returns	-0.169***	-0.396***	0.080***	-0.337***	-0.822***	-0.714***	-0.259***	-0.152***	-0.179***	-0.493***	-0.407***	-0.309***
		(0.040)	(0.019)	(0.025)	(0.031)	(0.015)	(0.022)	(0.056)	(0.032)	(0.037)	(0.036)	(0.022)	(0.026)
Endowment Effects (Explained)	Characteristics of hhd. head	0.008	-0.006	-0.032***	-0.029***	-0.005	0.030***	-0.061*	-0.015	0.034*	-0.058	0.059**	-0.040
		(0.011)	(0.006)	(0.009)	(0.011)	(0.007)	(0.010)	(0.032)	(0.016)	(0.019)	(0.041)	(0.024)	(0.028)
	Head education	--	--	--	--	--	--	--	--	--	--	--	--
	Head employment	0.049***	-0.016*	-0.028**	-0.140***	-0.127***	-0.094***	-0.013	-0.017**	-0.024**	-0.073**	-0.104***	-0.051**
		(0.015)	(0.008)	(0.011)	(0.007)	(0.005)	(0.006)	(0.014)	(0.008)	(0.010)	(0.031)	(0.018)	(0.021)
	Household composition	0.019**	-0.014***	0.021***	0.009	0.011	-0.003	0.002	-0.014	-0.020	-0.002	0.022	0.073***
		(0.010)	(0.005)	(0.007)	(0.011)	(0.007)	(0.010)	(0.025)	(0.016)	(0.017)	(0.034)	(0.021)	(0.024)
	Region & urban/rural	-0.397***	-0.576***	-0.731***	-0.083***	-0.151***	-0.178***	-0.005	-0.001	-0.012*	-0.056*	0.021	0.054***
		(0.024)	(0.016)	(0.021)	(0.008)	(0.006)	(0.008)	(0.013)	(0.008)	(0.007)	(0.030)	(0.018)	(0.021)
Returns Effects (Unexplained)	Characteristics of hhd. head	0.607	0.183	0.447	1.147	-0.396	-0.933	-1.160*	-0.735**	-1.161***	0.748*	0.623***	-0.440
		(0.989)	(0.432)	(0.559)	(0.872)	(0.417)	(0.611)	(0.628)	(0.352)	(0.421)	(0.396)	(0.238)	(0.293)
	Head education	--	--	--	--	--	--	--	--	--	--	--	--
	Head employment	-0.237**	-0.079*	-0.028	-0.364***	-0.134***	-0.043	-0.199**	-0.036	0.119*	-0.086	0.147***	-0.025
		(0.107)	(0.047)	(0.062)	(0.090)	(0.043)	(0.064)	(0.097)	(0.054)	(0.065)	(0.056)	(0.034)	(0.043)
	Household composition	0.055	0.066	-0.119	0.379**	0.261***	0.576***	-0.088	0.213*	0.040	0.589***	0.211*	-0.034
		(0.160)	(0.070)	(0.091)	(0.176)	(0.085)	(0.126)	(0.197)	(0.111)	(0.132)	(0.189)	(0.114)	(0.142)
	Region & urban/rural	-1.135***	-0.188***	0.735***	-0.171***	0.077***	0.145***	0.279	0.019	0.133	-0.331	-0.355**	-0.168
		(0.083)	(0.037)	(0.048)	(0.058)	(0.028)	(0.041)	(0.273)	(0.152)	(0.184)	(0.276)	(0.167)	(0.214)
	Constant	0.541	-0.380	-0.956*	-1.327	-0.630	-0.459	0.910	0.387	0.690	-1.413***	-1.033***	0.357
		(1.005)	(0.439)	(0.569)	(0.882)	(0.421)	(0.617)	(0.733)	(0.411)	(0.491)	(0.470)	(0.284)	(0.351)
	Observations		17,006			40,840			3,318			15,081	

Notes: Standard errors computed using the delta method are in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table 7: Quantile decomposition for Russia 2004, 2007 and 2010 by less/more educated household head

		Russia 04			Russia 07			Russia 10		
		10th pctile	50th pctile	90th pctile	10th pctile	50th pctile	90th pctile	10th pctile	50th pctile	90th pctile
	Treatment group	7.270***	8.109***	9.068***	7.617***	8.561***	9.505***	8.122***	9.139***	9.985***
		(0.044)	(0.025)	(0.042)	(0.093)	(0.031)	(0.047)	(0.069)	(0.022)	(0.029)
	Control group	7.566***	8.525***	9.419***	8.145***	9.106***	9.878***	8.682***	9.477***	10.250***
		(0.034)	(0.020)	(0.027)	(0.027)	(0.018)	(0.020)	(0.018)	(0.011)	(0.016)
	Overall Gap	-0.296***	-0.417***	-0.351***	-0.528***	-0.545***	-0.373***	-0.560***	-0.339***	-0.268***
		(0.055)	(0.032)	(0.050)	(0.097)	(0.036)	(0.051)	(0.071)	(0.025)	(0.033)
	Endowment	-0.102**	-0.237***	-0.346***	-0.110	-0.237***	-0.217***	-0.137*	-0.134***	-0.107***
		(0.047)	(0.028)	(0.046)	(0.092)	(0.031)	(0.046)	(0.073)	(0.023)	(0.031)
	Returns	-0.194***	-0.180***	-0.005	-0.417***	-0.308***	-0.156**	-0.423***	-0.205***	-0.160***
		(0.068)	(0.037)	(0.061)	(0.121)	(0.040)	(0.061)	(0.094)	(0.030)	(0.042)
Endowment Effects (Explained)	Characteristics of hhd. head	0.119*	0.069*	0.070	-0.058	0.016	-0.203**	0.458***	0.089***	-0.023
		(0.068)	(0.037)	(0.063)	(0.129)	(0.040)	(0.082)	(0.101)	(0.028)	(0.038)
	Head education	--	--	--	--	--	--	--	--	--
	Head employment	-0.138***	-0.147***	-0.246***	-0.387***	-0.156***	-0.086**	-0.351***	-0.096***	-0.060**
		(0.042)	(0.024)	(0.041)	(0.084)	(0.027)	(0.041)	(0.065)	(0.020)	(0.027)
	Household composition	0.055	-0.069*	-0.074	0.539***	0.001	0.178**	-0.076	-0.031	0.032
		(0.064)	(0.037)	(0.060)	(0.128)	(0.039)	(0.077)	(0.095)	(0.028)	(0.037)
	Region & urban/rural	-0.138***	-0.091***	-0.097***	-0.204***	-0.098***	-0.107***	-0.169***	-0.097***	-0.057***
		(0.024)	(0.014)	(0.024)	(0.043)	(0.016)	(0.025)	(0.036)	(0.013)	(0.017)
Returns Effects (Unexplained)	Characteristics of hhd. head	1.764**	0.384	-1.505**	2.756**	0.334	2.175***	-1.437	-0.086	1.396***
		(0.776)	(0.422)	(0.672)	(1.265)	(0.465)	(0.674)	(0.990)	(0.326)	(0.458)
	Head education	--	--	--	--	--	--	--	--	--
	Head employment	-0.025	0.060	0.362***	0.391**	-0.002	-0.015	0.383***	-0.045	0.007
		(0.097)	(0.053)	(0.085)	(0.161)	(0.056)	(0.084)	(0.119)	(0.040)	(0.055)
	Household composition	0.247	0.676**	1.455***	-1.798**	0.116	-1.765***	1.761**	0.611***	-0.393
		(0.521)	(0.283)	(0.449)	(0.841)	(0.324)	(0.458)	(0.686)	(0.227)	(0.319)
	Region & urban/rural	-0.257*	-0.089	-0.026	0.388	0.038	0.306**	-0.073	0.031	-0.069
		(0.138)	(0.075)	(0.120)	(0.238)	(0.085)	(0.125)	(0.179)	(0.060)	(0.084)
	Constant	-1.923***	-1.211***	-0.291	-2.154*	-0.793**	-0.857	-1.057	-0.716***	-1.101***
		(0.647)	(0.351)	(0.564)	(1.158)	(0.401)	(0.601)	(0.795)	(0.263)	(0.369)
	Observations		3,086			3,370			5,713	

Notes: Standard errors computed using the delta method are in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table 8: Quantile decomposition for Taiwan 2005, 2007 and 2010 by less/more educated household head

		Taiwan 05			Taiwan 07			Taiwan 10		
		10th pctile	50th pctile	90th pctile	10th pctile	50th pctile	90th pctile	10th pctile	50th pctile	90th pctile
	Treatment group	8.578***	9.298***	9.928***	8.519***	9.276***	9.930***	8.417***	9.242***	9.888***
		(0.015)	(0.008)	(0.011)	(0.014)	(0.009)	(0.012)	(0.017)	(0.010)	(0.011)
	Control group	9.052***	9.636***	10.320***	8.997***	9.593***	10.310***	8.933***	9.587***	10.290***
		(0.009)	(0.007)	(0.010)	(0.009)	(0.007)	(0.010)	(0.009)	(0.007)	(0.009)
	Overall Gap	-0.474***	-0.338***	-0.396***	-0.477***	-0.316***	-0.375***	-0.515***	-0.344***	-0.401***
		(0.017)	(0.011)	(0.015)	(0.016)	(0.011)	(0.015)	(0.019)	(0.012)	(0.014)
	Endowment	-0.226***	-0.029***	0.011	-0.155***	-0.003	0.071***	-0.209***	-0.009	0.055***
		(0.016)	(0.009)	(0.012)	(0.014)	(0.009)	(0.012)	(0.019)	(0.012)	(0.013)
	Returns	-0.248***	-0.310***	-0.407***	-0.322***	-0.313***	-0.447***	-0.307***	-0.335***	-0.456***
		(0.020)	(0.012)	(0.018)	(0.019)	(0.012)	(0.018)	(0.024)	(0.015)	(0.019)
Endowment Effects (Explained)	Characteristics of hhd. head	0.022	0.068***	0.138***	0.034**	0.103***	0.161***	0.039	0.123***	0.157***
		(0.020)	(0.011)	(0.017)	(0.016)	(0.010)	(0.014)	(0.025)	(0.015)	(0.018)
	Head education	--	--	--	--	--	--	--	--	--
	Head employment	-0.190***	-0.072***	-0.055***	-0.142***	-0.067***	-0.050***	-0.209***	-0.110***	-0.054***
		(0.012)	(0.005)	(0.007)	(0.011)	(0.006)	(0.008)	(0.014)	(0.007)	(0.008)
	Household composition	-0.018	0.005	-0.022*	-0.045***	-0.030***	-0.027***	-0.031*	-0.013	-0.044***
		(0.016)	(0.009)	(0.014)	(0.011)	(0.007)	(0.010)	(0.018)	(0.011)	(0.013)
	Region & urban/rural	-0.040***	-0.030***	-0.050***	-0.002	-0.009***	-0.012***	-0.008	-0.009***	-0.004
		(0.006)	(0.003)	(0.005)	(0.005)	(0.003)	(0.004)	(0.005)	(0.003)	(0.004)
Returns Effects (Unexplained)	Characteristics of hhd. head	-0.999**	-0.013	0.370	-0.709*	0.486*	0.124	0.272	0.948***	0.494
		(0.468)	(0.317)	(0.468)	(0.394)	(0.274)	(0.401)	(0.491)	(0.316)	(0.419)
	Head education	--	--	--	--	--	--	--	--	--
	Head employment	0.705***	0.025	-0.212***	0.551***	0.125***	-0.040	0.553***	0.142***	-0.183***
		(0.067)	(0.046)	(0.068)	(0.066)	(0.047)	(0.068)	(0.071)	(0.046)	(0.061)
	Household composition	0.493	0.393	0.012	0.142	0.039	0.602*	-0.670	-0.164	-0.133
		(0.427)	(0.294)	(0.434)	(0.344)	(0.244)	(0.356)	(0.434)	(0.282)	(0.377)
	Region & urban/rural	-0.106	-0.063	-0.114	-0.133**	-0.047	0.116*	-0.003	-0.017	-0.087
		(0.110)	(0.081)	(0.120)	(0.064)	(0.045)	(0.065)	(0.073)	(0.046)	(0.061)
	Constant	-0.341	-0.651***	-0.464*	-0.173	-0.916***	-1.249***	-0.459	-1.244***	-0.548**
		(0.265)	(0.173)	(0.256)	(0.255)	(0.170)	(0.250)	(0.304)	(0.189)	(0.244)
	Observations		13,679			13,774			14,843	

Notes: Standard errors computed using the delta method are in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table 9: Quantile decomposition for China 2002, India 2004, Japan 2008 and Korea 2006 by non-employed/employed household head

		China 02			India 04			Japan 08			Korea 06		
		10^{th} pctile	50^{th} pctile	90^{th} pctile	10^{th} pctile	50^{th} pctile	90^{th} pctile	10^{th} pctile	50^{th} pctile	90^{th} pctile	10^{th} pctile	50^{th} pctile	90^{th} pctile
	Treatment group	6.589***	8.138***	8.949***	5.871***	7.293***	8.473***	9.269***	10.060***	10.750***	8.360***	9.420***	10.45***
		(0.046)	(0.020)	(0.020)	(0.031)	(0.015)	(0.023)	(0.038)	(0.020)	(0.037)	(0.039)	(0.019)	(0.031)
	Control group	6.082***	7.293***	8.661***	5.985***	7.008***	8.270***	9.593***	10.270***	10.870***	9.351***	10.060***	10.670***
		(0.014)	(0.012)	(0.012)	(0.008)	(0.006)	(0.009)	(0.021)	(0.013)	(0.019)	(0.009)	(0.006)	(0.007)
	Overall Gap	0.507***	0.845***	0.288***	-0.114***	0.285***	0.203***	-0.325***	-0.212***	-0.122***	-0.991***	-0.640***	-0.216***
		(0.048)	(0.023)	(0.023)	(0.032)	(0.016)	(0.024)	(0.044)	(0.023)	(0.042)	(0.040)	(0.019)	(0.032)
	Endowment	1.214***	0.650***	0.214***	0.433***	0.285***	0.380***	0.040	-0.009	-0.014	-0.055	-0.219***	-0.126***
		(0.065)	(0.028)	(0.029)	(0.046)	(0.022)	(0.033)	(0.044)	(0.023)	(0.043)	(0.052)	(0.025)	(0.041)
	Returns	-0.707***	0.195***	0.074**	-0.546***	-0.000	-0.177***	-0.365***	-0.203***	-0.108*	-0.936***	-0.421***	-0.090*
		(0.072)	(0.031)	(0.035)	(0.054)	(0.025)	(0.039)	(0.061)	(0.031)	(0.058)	(0.065)	(0.029)	(0.050)
Endowment Effects (Explained)	Characteristics of hhd. head	-0.043	0.217***	0.137***	0.051	0.130***	0.237***	0.125**	0.080***	0.136***	0.405**	-0.206**	0.311**
		(0.075)	(0.031)	(0.036)	(0.092)	(0.042)	(0.065)	(0.053)	(0.027)	(0.050)	(0.186)	(0.083)	(0.144)
	Head education	0.003	0.0002	0.006	-0.016***	-0.029***	-0.025***	-0.046***	-0.010	-0.038**	-0.098***	-0.188***	-0.201***
		(0.006)	(0.005)	(0.006)	(0.005)	(0.005)	(0.008)	(0.016)	(0.008)	(0.015)	(0.028)	(0.014)	(0.023)
	Head employment	--	--	--	--	--	--	--	--	--	--	--	--
	Household composition	0.001	0.007	-0.025	0.313***	0.094**	0.107*	-0.039	-0.077***	-0.112***	-0.360*	0.175**	-0.232
		(0.051)	(0.021)	(0.024)	(0.085)	(0.038)	(0.060)	(0.031)	(0.017)	(0.031)	(0.184)	(0.082)	(0.142)
	Region & urban/rural	1.253***	0.425***	0.096***	0.085***	0.089***	0.062***	-0.000	-0.001	0.000	-0.003	-0.001	-0.004*
		(0.057)	(0.023)	(0.024)	(0.011)	(0.006)	(0.008)	(0.005)	(0.003)	(0.003)	(0.003)	(0.001)	(0.002)
Returns Effects (Unexplained)	Characteristics of hhd. head	-2.344**	1.809***	0.528	1.323**	-0.160	0.404	-1.127**	-0.774***	-0.147	-0.680	0.755**	0.437
		(1.010)	(0.481)	(0.559)	(0.590)	(0.280)	(0.437)	(0.522)	(0.272)	(0.494)	(0.700)	(0.318)	(0.542)
	Head education	-0.019	0.368***	0.057	0.038	0.120***	0.043	0.015	-0.115	0.024	-0.150	0.458***	0.302**
		(0.224)	(0.107)	(0.124)	(0.045)	(0.021)	(0.033)	(0.144)	(0.076)	(0.134)	(0.165)	(0.078)	(0.129)
	Head employment	--	--	--	--	--	--	--	--	--	--	--	--
	Household composition	-0.028	0.071	0.253**	0.669***	0.102	0.173	-0.030	0.153*	0.276*	1.486***	-0.341	0.921**
		(0.187)	(0.086)	(0.099)	(0.201)	(0.094)	(0.147)	(0.162)	(0.084)	(0.154)	(0.515)	(0.232)	(0.398)
	Region & urban/rural	0.815***	-0.154***	-0.235***	0.039	-0.009	-0.110***	0.116	0.009	0.020	0.062	0.032	0.153**
		(0.075)	(0.034)	(0.039)	(0.048)	(0.023)	(0.035)	(0.161)	(0.084)	(0.153)	(0.080)	(0.036)	(0.062)
	Constant	0.870	-1.898***	-0.529	-2.615***	-0.052	-0.687	0.662	0.523*	-0.280	-1.654***	-1.325***	-1.904***
		(1.068)	(0.506)	(0.587)	(0.636)	(0.301)	(0.469)	(0.598)	(0.311)	(0.566)	(0.538)	(0.247)	(0.417)
	Observations		17,029			41,004			3,318			15,081	

Notes: Standard errors computed using the delta method are in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table 10: Quantile decomposition for Russia 2004, 2007 and 2010 by non-employed/employed household head

		Russia 04			Russia 07			Russia 10		
		10th pctile	50th pctile	90th pctile	10th pctile	50th pctile	90th pctile	10th pctile	50th pctile	90th pctile
	Treatment group	7.330***	8.121***	9.066***	7.785***	8.659***	9.576***	8.317***	9.232***	10.010***
		(0.039)	(0.019)	(0.033)	(0.042)	(0.025)	(0.027)	(0.035)	(0.013)	(0.024)
	Control group	7.565***	8.587***	9.465***	8.234***	9.196***	9.933***	8.721***	9.558***	10.290***
		(0.040)	(0.023)	(0.030)	(0.035)	(0.019)	(0.023)	(0.021)	(0.013)	(0.018)
	Overall Gap	-0.235***	-0.467***	-0.399***	-0.448***	-0.537***	-0.358***	-0.404***	-0.327***	-0.280***
		(0.056)	(0.030)	(0.045)	(0.054)	(0.032)	(0.035)	(0.041)	(0.019)	(0.030)
	Endowment	0.097**	-0.128***	-0.272***	0.063	-0.133***	-0.103***	0.227***	-0.015	-0.109***
		(0.047)	(0.023)	(0.039)	(0.049)	(0.030)	(0.032)	(0.040)	(0.015)	(0.027)
	Returns	-0.332***	-0.339***	-0.127**	-0.512***	-0.404***	-0.255***	-0.631***	-0.311***	-0.171***
		(0.069)	(0.033)	(0.055)	(0.069)	(0.039)	(0.044)	(0.053)	(0.021)	(0.037)
Endowment Effects (Explained)	Characteristics of hhd. head	0.119	0.078**	-0.226***	-0.069	0.028	-0.249***	0.240***	0.094***	-0.005
		(0.087)	(0.039)	(0.077)	(0.122)	(0.070)	(0.083)	(0.081)	(0.028)	(0.055)
	Head education	-0.072***	-0.069***	-0.078***	-0.090***	-0.081***	-0.076***	-0.083***	-0.058***	-0.092***
		(0.028)	(0.013)	(0.023)	(0.027)	(0.016)	(0.017)	(0.021)	(0.007)	(0.014)
	Head employment	--	--	--	--	--	--	--	--	--
	Household composition	0.091	-0.111***	0.062	0.274**	-0.054	0.226***	0.099	-0.037	-0.007
		(0.077)	(0.035)	(0.068)	(0.115)	(0.066)	(0.079)	(0.073)	(0.026)	(0.049)
	Region & urban/rural	-0.042***	-0.027***	-0.031**	-0.051***	-0.026***	-0.004	-0.029***	-0.015***	-0.005
		(0.014)	(0.008)	(0.013)	(0.016)	(0.010)	(0.011)	(0.010)	(0.005)	(0.009)
Returns Effects (Unexplained)	Characteristics of hhd. head	1.370	0.585	1.767***	1.229	-0.824	0.877	1.339**	0.194	0.660
		(0.878)	(0.446)	(0.683)	(0.920)	(0.509)	(0.589)	(0.631)	(0.270)	(0.452)
	Head education	0.189	-0.505	0.003	0.486	-0.146	0.528	0.070	1.059	0.277
		(0.796)	(0.431)	(0.602)	(2.439)	(1.269)	(1.575)	(1.945)	(1.183)	(1.648)
	Head employment	--	--	--	--	--	--	--	--	--
	Household composition	0.323	-0.208	-0.349	-0.657	0.489	-0.603	-0.553	0.529***	0.127
		(0.583)	(0.292)	(0.457)	(0.712)	(0.400)	(0.456)	(0.503)	(0.199)	(0.350)
	Region & urban/rural	-0.252*	-0.181***	-0.112	-0.184	-0.148*	-0.159*	-0.045	-0.033	-0.064
		(0.138)	(0.069)	(0.108)	(0.139)	(0.077)	(0.089)	(0.102)	(0.044)	(0.074)
	Constant	-1.962*	-0.030	-1.437*	-1.385	0.224	-0.899	-1.441	-2.060*	-1.170
		(1.024)	(0.542)	(0.783)	(2.508)	(1.309)	(1.619)	(1.980)	(1.194)	(1.670)
	Observations		3,086			3,370			5,713	

Notes: Standard errors computed using the delta method are in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table 11: Quantile decomposition for Taiwan 2005, 2007 and 2010 by non-employed/employed household head

		Taiwan 05			Taiwan 07			Taiwan 10		
		10th pctile	50th pctile	90th pctile	10th pctile	50th pctile	90th pctile	10th pctile	50th pctile	90th pctile
	Treatment group	8.086***	8.788***	9.759***	8.108***	8.853***	9.814***	7.934***	8.824***	9.880***
		(0.021)	(0.016)	(0.022)	(0.021)	(0.018)	(0.023)	(0.025)	(0.018)	(0.023)
	Control group	8.967***	9.549***	10.230***	8.904***	9.512***	10.220***	8.874***	9.527***	10.220***
		(0.007)	(0.006)	(0.008)	(0.008)	(0.006)	(0.009)	(0.008)	(0.006)	(0.009)
	Overall Gap	-0.881***	-0.762***	-0.470***	-0.796***	-0.659***	-0.405***	-0.940***	-0.703***	-0.343***
		(0.022)	(0.017)	(0.024)	(0.022)	(0.019)	(0.024)	(0.026)	(0.019)	(0.024)
	Endowment	0.241***	0.055	-0.045	0.081	-0.122*	0.023	0.221**	-0.019	-0.027
		(0.056)	(0.039)	(0.055)	(0.088)	(0.068)	(0.089)	(0.090)	(0.059)	(0.077)
	Returns	-1.122***	-0.817***	-0.425***	-0.877***	-0.537***	-0.428***	-1.161***	-0.685***	-0.315***
		(0.060)	(0.041)	(0.058)	(0.090)	(0.069)	(0.091)	(0.094)	(0.061)	(0.079)
Endowment Effects (Explained)	Characteristics of hhd. head	0.149*	0.236***	0.021	0.267***	0.326***	0.242***	0.014	0.134*	-0.179*
		(0.089)	(0.061)	(0.085)	(0.063)	(0.049)	(0.063)	(0.105)	(0.069)	(0.097)
	Head education	-0.078***	-0.190***	-0.170***	-0.145***	-0.242***	-0.183***	-0.110***	-0.284***	-0.239***
		(0.018)	(0.014)	(0.020)	(0.019)	(0.017)	(0.021)	(0.022)	(0.017)	(0.021)
	Head employment	--	--	--	--	--	--	--	--	--
	Household composition	0.155*	-0.015	0.078	0.003	-0.202***	-0.051	0.342***	0.091	0.376***
		(0.084)	(0.058)	(0.081)	(0.058)	(0.045)	(0.058)	(0.098)	(0.064)	(0.092)
	Region & urban/rural	0.014***	0.024***	0.026***	-0.044	-0.004	0.015	-0.025	0.040	0.015
		(0.004)	(0.005)	(0.006)	(0.066)	(0.051)	(0.066)	(0.056)	(0.036)	(0.047)
Returns Effects (Unexplained)	Characteristics of hhd. head	0.167	-0.312	0.967	-0.063	0.768**	0.842**	-1.365	0.675	3.181***
		(0.744)	(0.515)	(0.730)	(0.397)	(0.303)	(0.403)	(0.832)	(0.543)	(0.722)
	Head education	-0.212***	0.186***	0.003	0.026	0.455***	0.035	-0.267**	0.548***	0.142
		(0.077)	(0.055)	(0.080)	(0.079)	(0.058)	(0.084)	(0.115)	(0.077)	(0.113)
	Head employment	--	--	--	--	--	--	--	--	--
	Household composition	-0.946	0.258	-0.237	-0.122	0.230*	0.448**	-0.789	-1.008**	-2.984***
		(0.663)	(0.459)	(0.651)	(0.180)	(0.138)	(0.181)	(0.704)	(0.460)	(0.613)
	Region & urban/rural	-0.337**	0.125	0.044	-0.714	-0.202	0.062	-0.513	0.280	0.050
		(0.133)	(0.092)	(0.131)	(0.662)	(0.510)	(0.664)	(0.597)	(0.388)	(0.506)
	Constant	0.207	-1.073***	-1.201***	-0.003	-1.788***	-1.815**	1.773**	-1.180**	-0.703
		(0.432)	(0.299)	(0.424)	(0.856)	(0.657)	(0.861)	(0.851)	(0.554)	(0.728)
	Observations		13,679			13,774			14,843	

Notes: Standard errors computed using the delta method are in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table 12: Quantile decomposition for China 2002, India 2004, Japan 2008 and Korea 2006 by female/male household head

		China 02			India 04			Japan 08			Korea 06		
		10th pctile	50th pctile	90th pctile	10th pctile	50th pctile	90th pctile	10th pctile	50th pctile	90th pctile	10th pctile	50th pctile	90th pctile
	Treatment group	6.957***	8.345***	9.141***	5.622***	6.935***	8.212***	9.406***	10.140***	10.700***	8.807***	9.747***	10.550***
		(0.058)	(0.016)	(0.025)	(0.032)	(0.020)	(0.024)	(0.111)	(0.032)	(0.051)	(0.023)	(0.014)	(0.016)
	Control group	6.074***	7.256***	8.589***	6.005***	7.051***	8.318***	9.496***	10.220***	10.860***	9.282***	10.060***	10.670***
		(0.014)	(0.011)	(0.012)	(0.008)	(0.006)	(0.009)	(0.021)	(0.012)	(0.017)	(0.012)	(0.006)	(0.008)
	Overall Gap	0.883***	1.089***	0.553***	-0.383***	-0.116***	-0.106***	-0.090	-0.076**	-0.156***	-0.475***	-0.311***	-0.120***
		(0.060)	(0.019)	(0.028)	(0.033)	(0.021)	(0.025)	(0.113)	(0.034)	(0.054)	(0.026)	(0.015)	(0.018)
	Endowment	3.324***	0.497***	0.293***	-0.662***	0.060	-0.126	-0.136**	-0.055***	-0.051*	-0.190***	-0.141***	-0.079***
		(0.089)	(0.026)	(0.044)	(0.187)	(0.108)	(0.131)	(0.064)	(0.020)	(0.029)	(0.042)	(0.026)	(0.030)
	Returns	-2.441***	0.592***	0.259***	0.279	-0.176	0.020	0.046	-0.022	-0.106*	-0.285***	-0.170***	-0.041
		(0.089)	(0.029)	(0.050)	(0.189)	(0.109)	(0.133)	(0.118)	(0.033)	(0.056)	(0.047)	(0.029)	(0.034)
Endowment Effects (Explained)	Characteristics of hhd. head	-0.037	-0.060***	-0.038	-0.764	-0.367	-0.849	-0.042	-0.011	0.004	-0.273	0.024	-0.339**
		(0.053)	(0.017)	(0.030)	(1.270)	(0.733)	(0.891)	(0.039)	(0.009)	(0.015)	(0.223)	(0.136)	(0.160)
	Head education	0.0084	0.105***	0.103***	-0.117***	-0.207***	-0.383***	-0.111**	-0.027**	-0.039**	-0.055***	-0.142***	-0.163***
		(0.028)	(0.010)	(0.016)	(0.028)	(0.017)	(0.022)	(0.044)	(0.012)	(0.019)	(0.018)	(0.012)	(0.014)
	Head employment	-0.054	-0.037**	-0.050	-0.139***	-0.002	-0.017	0.008	-0.006	-0.006	-0.101***	-0.044***	0.025
		(0.054)	(0.018)	(0.031)	(0.025)	(0.015)	(0.018)	(0.024)	(0.007)	(0.009)	(0.021)	(0.013)	(0.015)
	Household composition	0.084	0.021	0.025	0.336	0.612	1.114	0.024	0.014	0.014	0.226	0.038	0.395**
		(0.071)	(0.023)	(0.041)	(1.249)	(0.722)	(0.877)	(0.034)	(0.011)	(0.017)	(0.221)	(0.135)	(0.159)
	Region & urban/rural	3.323***	0.469***	0.253***	0.021***	0.024***	0.010**	-0.015	-0.025***	-0.023	0.014	-0.016	0.003
		(0.106)	(0.031)	(0.055)	(0.006)	(0.005)	(0.004)	(0.031)	(0.009)	(0.014)	(0.016)	(0.010)	(0.011)
Returns Effects (Unexplained)	Characteristics of hhd. head	0.359	0.976**	0.174	2.517*	0.979	0.622	-1.818	-0.097	-0.409	0.519	0.308	0.687**
		(0.991)	(0.403)	(0.612)	(1.407)	(0.816)	(1.001)	(1.315)	(0.376)	(0.629)	(0.478)	(0.277)	(0.338)
	Head education	0.447	0.300***	-0.034	0.118**	0.139***	0.286***	0.727**	0.112	0.125	-0.327**	0.264***	0.186*
		(0.274)	(0.104)	(0.165)	(0.051)	(0.030)	(0.037)	(0.355)	(0.103)	(0.172)	(0.138)	(0.077)	(0.097)
	Head employment	0.140	0.141***	0.196**	-0.017	-0.108***	-0.082	0.076	-0.076	-0.019	-0.759***	-0.095**	-0.164***
		(0.128)	(0.049)	(0.078)	(0.067)	(0.040)	(0.050)	(0.213)	(0.061)	(0.101)	(0.067)	(0.038)	(0.047)
	Household composition	-0.389	0.058	-0.019	0.074	-0.120	-0.780	0.0024	0.268**	-0.140	-0.473	0.327	-0.136
		(0.242)	(0.086)	(0.143)	(1.277)	(0.738)	(0.897)	(0.397)	(0.114)	(0.190)	(0.370)	(0.216)	(0.263)
	Region & urban/rural	1.514***	-0.126***	-0.240***	-0.155***	-0.011	-0.046	0.141	0.091	0.124	-0.262	-0.306	0.364
		(0.092)	(0.032)	(0.053)	(0.050)	(0.029)	(0.036)	(0.224)	(0.065)	(0.109)	(0.343)	(0.200)	(0.243)
	Constant	-4.511***	-0.756*	0.182	-2.259***	-1.055***	0.019	0.919	-0.319	0.214	1.018**	-0.670**	-0.977***
		(1.073)	(0.429)	(0.658)	(0.561)	(0.334)	(0.430)	(1.440)	(0.412)	(0.690)	(0.500)	(0.288)	(0.353)
	Observations		17,029			41,004			3,318			15,081	

Notes: Standard errors computed using the delta method are in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table 13: Quantile decomposition for Russia 2004, 2007 and 2010 by female/male household head

		Russia 04			Russia 07			Russia 10		
		10th pctile	50th pctile	90th pctile	10th pctile	50th pctile	90th pctile	10th pctile	50th pctile	90th pctile
	Treatment group	7.484***	8.406***	9.341***	8.006***	8.992***	9.808***	8.561***	9.404***	10.200***
		(0.029)	(0.019)	(0.022)	(0.026)	(0.017)	(0.019)	(0.022)	(0.011)	(0.014)
	Control group	7.281***	8.423***	9.411***	8.039***	9.0****96***	9.943***	8.689***	9.517***	10.390***
		(0.092)	(0.057)	(0.074)	(0.059)	(0.066)	(0.043)	(0.049)	(0.034)	(0.056)
	Overall Gap	0.203**	-0.017	-0.070	-0.033	-0.104	-0.135***	-0.128**	-0.113***	-0.187***
		(0.096)	(0.060)	(0.077)	(0.064)	(0.068)	(0.047)	(0.054)	(0.036)	(0.057)
	Endowment	0.028	0.045	-0.028	-0.036	-0.004	-0.048*	-0.067**	-0.037**	-0.058***
		(0.037)	(0.032)	(0.030)	(0.033)	(0.028)	(0.027)	(0.026)	(0.017)	(0.019)
	Returns	0.176*	-0.061	-0.041	0.003	-0.100*	-0.088*	-0.061	-0.076**	-0.129**
		(0.095)	(0.055)	(0.075)	(0.064)	(0.059)	(0.046)	(0.054)	(0.033)	(0.054)
Endowment Effects (Explained)	Characteristics of hhd. head	-0.007	-0.012	0.017	-0.006	-0.006	0.005	-0.016	-0.018***	-0.011
		(0.011)	(0.009)	(0.026)	(0.020)	(0.015)	(0.009)	(0.012)	(0.007)	(0.007)
	Head education	-0.003	0.020*	0.012	0.005	-0.007	-0.008	0.010	0.0015	-0.008
		(0.012)	(0.011)	(0.008)	(0.013)	(0.008)	(0.009)	(0.010)	(0.006)	(0.006)
	Head employment	0.012	-0.007	-0.027*	0.024	-0.003	-0.002	-0.020	-0.013*	-0.008
		(0.018)	(0.013)	(0.014)	(0.016)	(0.012)	(0.010)	(0.015)	(0.007)	(0.007)
	Household composition	0.000	0.053***	-0.018	-0.026	0.054***	0.013	-0.037**	0.014	0.008
		(0.023)	(0.020)	(0.026)	(0.018)	(0.015)	(0.012)	(0.015)	(0.009)	(0.009)
	Region & urban/rural	0.025	-0.010	-0.012	-0.033**	-0.042***	-0.056***	-0.004	-0.022**	-0.039***
		(0.021)	(0.017)	(0.017)	(0.017)	(0.015)	(0.018)	(0.012)	(0.010)	(0.013)
Returns Effects (Unexplained)	Characteristics of hhd. head	-0.341	1.471**	1.291	-0.603	-0.604	0.131	-0.723	-0.364	2.317***
		(1.200)	(0.692)	(0.943)	(0.599)	(0.525)	(0.438)	(0.787)	(0.480)	(0.810)
	Head education	0.841*	-0.109	-0.102	0.458	-0.072	0.024	0.328	0.226	-0.720**
		(0.454)	(0.261)	(0.356)	(0.372)	(0.325)	(0.272)	(0.362)	(0.215)	(0.357)
	Head employment	-0.318*	-0.292***	-0.375***	-0.121	-0.524***	-0.064	-0.124	-0.217***	-0.320***
		(0.169)	(0.098)	(0.133)	(0.096)	(0.088)	(0.070)	(0.089)	(0.054)	(0.090)
	Household composition	0.523	-0.737	-0.713	0.263	0.420*	-0.101	0.431	0.334	-1.533**
		(0.878)	(0.506)	(0.690)	(0.260)	(0.232)	(0.190)	(0.693)	(0.427)	(0.725)
	Region & urban/rural	-0.284	-0.160	-0.053	0.377**	0.054	0.033	0.366***	0.089	0.095
		(0.286)	(0.164)	(0.225)	(0.164)	(0.147)	(0.120)	(0.142)	(0.086)	(0.145)
	Constant	-0.246	-0.234	-0.089	-0.371	0.626	-0.112	-0.339	-0.143	0.032
		(1.053)	(0.607)	(0.827)	(0.668)	(0.581)	(0.488)	(0.562)	(0.332)	(0.552)
	Observations		3,086			3,370			5,713	

Notes: Standard errors computed using the delta method are in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table 14: Quantile decomposition for Taiwan 2005, 2007 and 2010 by female/male household head

		Taiwan 05			Taiwan 07			Taiwan 10		
		10th pctile	50th pctile	90th pctile	10th pctile	50th pctile	90th pctile	10th pctile	50th pctile	90th pctile
	Treatment group	8.654***	9.415***	10.180***	8.595***	9.365***	10.170***	8.567***	9.390***	10.180***
		(0.019)	(0.013)	(0.017)	(0.018)	(0.013)	(0.021)	(0.018)	(0.013)	(0.016)
	Control group	8.886***	9.522***	10.210***	8.834***	9.499***	10.210***	8.791***	9.504***	10.210***
		(0.010)	(0.006)	(0.009)	(0.010)	(0.006)	(0.009)	(0.011)	(0.006)	(0.009)
	Overall Gap	-0.232***	-0.107***	-0.029	-0.239***	-0.135***	-0.043*	-0.224***	-0.115***	-0.024
		(0.022)	(0.015)	(0.019)	(0.020)	(0.014)	(0.023)	(0.021)	(0.014)	(0.019)
	Endowment	-0.122***	-0.054***	-0.076***	-0.124***	-0.097***	-0.131***	-0.077***	-0.059***	-0.116***
		(0.022)	(0.016)	(0.020)	(0.021)	(0.016)	(0.025)	(0.021)	(0.015)	(0.018)
	Returns	-0.110***	-0.054***	0.047*	-0.115***	-0.037**	0.088***	-0.148***	-0.056***	0.092***
		(0.026)	(0.018)	(0.025)	(0.026)	(0.019)	(0.031)	(0.026)	(0.018)	(0.024)
Endowment Effects (Explained)	Characteristics of hhd. head	-0.099***	-0.012	-0.043	-0.091	-0.164	0.130	-0.095**	-0.021	0.009
		(0.035)	(0.025)	(0.035)	(0.182)	(0.132)	(0.221)	(0.045)	(0.032)	(0.042)
	Head education	-0.038***	-0.013*	-0.000	-0.035***	-0.008	-0.005	-0.020***	-0.002	0.003
		(0.007)	(0.007)	(0.008)	(0.007)	(0.007)	(0.011)	(0.007)	(0.007)	(0.008)
	Head employment	-0.087***	0.015**	0.001	-0.037***	0.007	0.002	-0.049***	0.000	0.006
		(0.014)	(0.007)	(0.009)	(0.010)	(0.007)	(0.010)	(0.012)	(0.007)	(0.009)
	Household composition	0.088**	-0.061**	-0.055	0.051	0.067	-0.263	0.084*	-0.046	-0.142***
		(0.035)	(0.025)	(0.034)	(0.183)	(0.133)	(0.223)	(0.044)	(0.031)	(0.040)
	Region & urban/rural	0.013***	0.017***	0.022***	-0.012***	0.001	0.005	0.003	0.010***	0.009**
		(0.003)	(0.003)	(0.004)	(0.004)	(0.003)	(0.005)	(0.004)	(0.003)	(0.004)
Returns Effects (Unexplained)	Characteristics of hhd. head	0.488**	0.619***	-0.097	1.043**	1.147***	-0.261	0.726***	0.730***	0.221
		(0.236)	(0.163)	(0.231)	(0.469)	(0.327)	(0.541)	(0.256)	(0.171)	(0.238)
	Head education	-0.308***	0.194***	0.070	-0.086	0.179***	0.250**	-0.570***	0.208***	0.115
		(0.088)	(0.061)	(0.086)	(0.091)	(0.063)	(0.104)	(0.120)	(0.078)	(0.112)
	Head employment	0.139**	-0.033	-0.219***	-0.247***	-0.066	-0.078	-0.167**	0.051	-0.154**
		(0.069)	(0.047)	(0.067)	(0.071)	(0.050)	(0.082)	(0.072)	(0.047)	(0.067)
	Household composition	-0.217***	0.116**	0.196***	-0.562	0.001	1.095**	-0.158	0.073	0.321***
		(0.076)	(0.053)	(0.075)	(0.434)	(0.302)	(0.500)	(0.104)	(0.071)	(0.097)
	Region & urban/rural	-0.000	0.078	-0.093	-0.292***	-0.102	0.082	0.050	0.133**	0.095
		(0.139)	(0.098)	(0.137)	(0.089)	(0.063)	(0.105)	(0.096)	(0.066)	(0.089)
	Constant	-0.212	-1.028***	0.190	0.028	-1.196***	-1.000***	-0.028	-1.250***	-0.506*
		(0.280)	(0.194)	(0.275)	(0.274)	(0.192)	(0.317)	(0.295)	(0.196)	(0.274)
	Observations		13,679			13,774			14,843	

Notes: Standard errors computed using the delta method are in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Appendix

Table A1. Distribution of real income (2005 US$)

Country	Income ref. year	LIS dname	Curr= 2005US$1	Net/mixed /gross	Sample size	Avg. inc. ($)	Median inc. ($)	Gini (LIS)[a]	Gini[b]	75/25% Ratio	90/10% Ratio
China	2002	cn02	2.898cny	M: tax., contr. insuf. captured	17,124	2,706*	1,646	50.32 (0.25)	50.72 (0.28)	4.41	13.49
India	2004	in04	11.531inr	N: tax, contrib. not collected	41,554	1,905**	1,144	48.56 (0.20)	50.84 (0.43)	3.39	10.32
Japan	2008	jp08	108.300jpy	G: tax, contrib. imputed	4,022	30,730	27,199	30.18 (0.52)	30.18 (0.52)	1.98	3.94
Korea	2006	kr06	749.176krw	G: taxes, contrib. fully captured	15,532	24,894	22,319	30.96 (0.26)	31.02 (0.27)	2.12	4.46
Russia	2004	ru04	13.216rub	N: taxes, contrib. not collected	3,394	5,912*	4,474	40.31 (0.59)	40.45 (0.63)	2.75	6.60
	2007	ru07	13.216rub		3,933	9,752*	8,090	37.05 (0.51)	37.05 (0.51)	2.75	6.15
	2010	ru10	14.372rub		6,323	15,111*	12,252	35.26 (0.45)	35.71 (0.59)	2.30	5.14
Taiwan	2005	tw05	31.022twd	G: taxes, contrib. fully captured	13,681	15,826	13,437	30.52 (0.2*5)	30.53 (0.25)	2.00	3.96
	2007	tw07	31.030twd	G: taxes, contrib. collected	13,776	15,385	13,069	30.97 (0.23)	31.03 (0.25)	2.03	4.16
	2010	tw10	29.263twd		14,853	15,395	13,150	31.78 (0.24)	31.80 (0.24)	2.09	4.37
Asia[c]	2002–2008	--	--	Mixed	93,298	11,920	7,346	57.21 (0.17)	57.23 (0.17)	11.72	45.65

Source: Author's analysis of LIS data; USD GDP deflators, currency conversion rates and income-status from World Bank (2015a, 2015b, 2015c).

* – classified by LIS as upper-middle; ** – lower-middle; rest – high income country.

[a] Gini (LIS) is computed using LIS method: Keep only nonzero disposable incomes and weights; censor small disposable incomes per capita at 0.01×mean disposable income per capita; censor high disposable household incomes at 10×median disposable household income, prior to dividing by adult equivalence scale; Adult equivalence scale is square root of household members; for analytical weight, count of household members is used. Results may differ from statistics reported by LIS because an older version of data may have been used.

[b] LIS method is partly adopted: Keep only disposable incomes of $1 or greater, and positive weights; no top/bottom coding is performed; Adult equivalence scale is square root of household members; for analytical weight, count of household members is used. For clarity, Ginis and their jack-knife estimated standard errors are multiplied by 100.

[c] 33 countries. This is taken to be represented by cn02, in04, jp08, kr06, ru07 (Asian regions; sample size 1,290), and tw07, weighted using population sampling weights and rates of representation of the population of all Asian countries, using countries' 2014 working-age (15–64) population (World Bank 2015c). Based on countries' average disposable income and partially their Gini coefficients, Chinese income distribution is taken to represent adequately those in Mongolia, Maldives, Vietnam, Thailand; India represents Afghanistan, Bangladesh, Bhutan, Cambodia, Indonesia, Laos, Myanmar, Nepal, North Korea, Pakistan, Philippines, Sri Lanka, Tajikistan and Timor-Leste; Japan represents Singapore; Korea represents Brunei and Hong Kong; Russia represents Kazakhstan, Kyrgyzstan, Turkmenistan and Uzbekistan; and Taiwan represents Macau and Malaysia. The six countries are thus assigned subsampling rates of 0.897, 0.598, 0.951, 0.867, 0.403 and 0.421, respectively. The overall subsampling rate in the surveyed countries from Asia's population (pop. 2.01 and 2.76 trillion, respectively) is thus 0.727. These numbers notably exclude countries in the Middle East, the Caucasus and the Pacific islands.

Table A2: Mean disposable household income per capita and share of aggregate income, by quintile (2005 USD, [%])

Quintile	*cn02*	*in04*	*jp08*	*kr06*	*ru04*	*ru07*	*ru10*	*tw05*	*tw07*	*tw10*
1	488	391	11,957	7,317	1,471	2,489	4,652	5,815	5,533	5,187
	[3.19]	[3.88]	[7.90]	[7.12]	[5.38]	[5.68]	[6.42]	[8.22]	[8.05]	[7.59]
2	1,137	807	20,224	14,340	2,818	4,756	8,521	9,562	9,207	9,036
	[7.03]	[7.77]	[13.39]	[13.17]	[10.38]	[10.97]	[11.88]	[13.11]	[12.96]	[12.83]
3	2,114	1,304	26,714	20,699	4,073	7,222	11,527	12,887	12,523	12,613
	[12.41]	[12.13]	[17.65]	[17.94]	[15.23]	[16.72]	[16.41]	[17.04]	[17.00]	[17.15]
4	3,681	2,259	34,807	28,260	6,166	10,770	16,169	17,514	17,069	17,236
	[23.25]	[20.51]	[22.88]	[23.63]	[22.98]	[24.17]	[22.99]	[229.62]	[22.58]	[22.81]
5	7,830	5,942	58,427	46,748	12,816	19,619	30,354	30,709	30,236	30,416
	[54.13]	[55.71]	[38.18]	[38.15]	[46.03]	[42.46]	[42.31]	[39.00]	[39.40]	[39.62]

Notes: Currency conversion rates and GDP deflators from World Bank (2015a, 2015b). Summary statistics account for household sampling weights and household size.

Table A3. Means of explanatory variables of interest (% of households with binary variable=1)

	cn02	*in04*	*jp08*	*kr06*	*ru04*	*ru07*	*ru10*	*tw05*	*tw07*	*tw10*
Urban	46.44	35.23	90.27	80.79	74.55	74.90	74.96	97.16	92.09	92.85
Advantaged region	38.49	37.49	81.04	13.07	66.26	67.19	66.37	14.62	--	--
Household head characteristics										
Cohabiting	95.03	85.51	72.98	73.07	54.31	53.78	55.59	69.41	68.10	64.29
Employed	85.15	85.71	68.97	83.15	55.37	55.16	57.85	82.86	83.31	81.45
Complete upper secondary educat.	36.75	13.34	87.14	60.83	72.54	75.58	80.06	57.44	59.02	64.07
Male	83.68	90.26	48.51	77.11	12.46	12.00	13.23	77.93	76.44	73.44
Prime working-age (30-50yo)	63.11	56.30	35.95	49.02	40.52	37.78	37.39	52.67	51.49	48.93
Industry classification										
Service	34.31	35.34	13.51	51.39	70.86	71.90	75.21	55.50	56.53	55.88
Industry	28.88	19.61	65.38	27.01	23.68	24.09	20.37	36.64	36.13	37.11
Agriculture	33.32	45.07	21.96	21.60	5.46	4.01	4.42	7.87	7.34	7.02

Note: In *tw07* and *tw10*, urban is inferred from "not running a farming activity." Cohabiting entails "head living with partner," "married couple," or "non-married cohabiting couple" as opposed to "head not living with partner." Age ranges from 16 to 104.

Some differences across surveys stem from different classifications of household head by survey providers. The classification may reflect the persons' economic or decision-making power, or other role in the household. In China and India, the status as household head is as declared by the respondent, and identifies a person who plays a decisive role in family affairs. In Japan and Russia, head is the family member who answered the household questionnaire, as a person who has the best knowledge of the affairs and concerns of the family and of its present income and expenditures. In Korea and Taiwan, head is the person in the household who earns the largest personal share of family income.

Table A4. Summary statistics by income quintile (% of households)

Quintile	*cn02*	*in04*	*jp08*	*kr06*	*ru04*	*ru07*	*ru10*	*tw05*	*tw07*	*tw10*
Urban										
1	0.67	12.29	88.39	53.97	54.05	59.70	59.23	92.29	85.92	88.14
2	8.92	21.03	88.84	63.57	70.81	70.77	70.78	96.89	89.73	90.33
3	46.13	34.15	89.73	67.97	75.85	74.78	78.28	98.28	92.81	93.26
4	82.34	47.18	91.07	71.60	82.79	83.23	80.55	98.72	95.35	95.49
5	94.16	61.53	93.3	73.66	89.3	86.05	85.99	99.63	96.66	97.00
Advantaged region										
1	31.57	24.38	75.15	6.99	66.18	62.22	61.33	3.47	--	--
2	32.35	30.70	78.42	10.16	64.03	65.43	61.07	7.02	--	--
3	34.04	39.28	79.91	10.58	62.88	63.06	64.83	11.62	--	--
4	38.26	45.87	85.27	12.17	66.23	68.69	68.29	17.54	--	--
5	56.25	47.22	86.46	12.52	71.96	76.56	76.36	33.46	--	--
Complete upper secondary education										
1	17.43	3.73	68.90	31.91	55.34	56.44	67.98	23.14	24.28	31.19
2	19.15	3.91	80.95	53.62	65.00	68.25	73.84	47.88	52.45	57.33
3	28.46	6.51	83.04	64.82	72.29	78.04	81.29	60.42	61.89	67.65
4	50.25	13.31	87.35	73.98	82.95	84.27	87.74	70.54	71.80	76.05
5	68.64	39.41	88.39	78.83	87.84	91.25	91.24	85.27	84.71	88.21
Employed										
1	93.78	85.04	54.72	56.67	39.12	28.49	42.64	47.00	52.09	48.37
2	92.60	90.22	63.83	83.79	35.00	35.76	43.31	86.84	86.32	84.94
3	86.14	87.56	69.72	90.36	54.46	57.27	53.10	92.36	92.56	89.82
4	78.12	84.16	78.36	92.98	70.94	71.66	71.67	92.80	91.54	92.12
5	74.91	82.45	81.79	93.56	81.36	80.56	79.68	95.36	94.12	92.28
Male										
1	95.45	86.49	44.35	60.55	14.56	10.37	11.02	68.27	66.72	63.99
2	95.01	90.70	48.96	73.46	10.32	10.39	10.59	77.56	74.41	71.47
3	87.18	91.11	49.55	80.29	11.67	10.53	12.76	80.74	79.46	77.80
4	75.03	91.04	51.34	85.47	11.36	10.68	13.50	81.80	80.87	77.43
5	65.59	92.16	53.27	86.05	13.94	15.43	16.20	81.28	80.76	76.45

Note: In *tw07* and *tw10*, urban is inferred from "not running a farming activity."
Some differences across surveys stem from different classifications of household head by survey providers. The classification may reflect the persons' economic or decision-making power, or other role in the household. In China and India, the status as household head is as declared by the respondent, and identifies a person who plays a decisive role in family affairs. In Japan and Russia, head is the family member who answered the household questionnaire, as a person who has the best knowledge of the affairs and concerns of the family and of its present income and expenditures. In Korea and Taiwan, head is the person in the household who earns the largest personal share of family income.

Table A5. Mean disposable household income per capita by demographic group

	cn02	*in04*	*jp08*	*kr06*	*ru04*	*ru07*	*ru10*	*tw05*	*tw07*	*tw10*
Urban	5,181	3,050	31,013	25,650	6,657	10,702	16,378	15,972	15,673	15,685
Rural	1,319	1,496	28,084	21,786	3,989	7,167	11,716	9,670	12,205	11,963
Advantaged region	3,826	2,408	31,594	26,014	6,211	10,317	16,086	23,344	--	--
Disadvantaged	2,016	1,663	26,980	24,827	5,321	8,535	13,107	14,820	--	--
Employed	2,518	1,849	32,335	26,112	6,748	11,300	16,689	16,511	15,990	16,069
Non-employed	3,975	2,259	26,467	16,773	4,534	7,325	12,357	9,015	9,443	9,545
Complete upper secondary educat.	4,223	4,303	31,767	27,212	6,429	10,544	15,935	18,111	17,397	17,197
Less educated	1,919	1,612	23,167	18,644	4,334	6,925	11,399	12,325	12,018	11,580
Male	2,351	1,925	31,307	25,958	6,196	10,913	17,755	16,056	15,665	15,674
Female	4,937	1,654	30,168	20,347	5,879	9,633	14,786	14,711	14,163	14,382

Note: Currency conversion rates and GDP deflators from World Bank (2015a, 2015b). Summary statistics account for household sampling weights and household size.

Table A6. Blinder-Oaxaca decomposition, Taiwan 2010

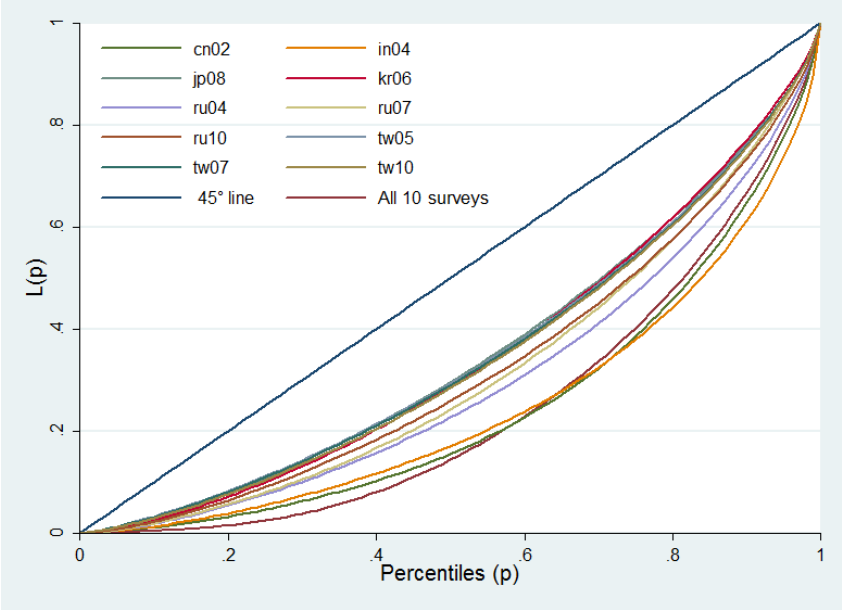
		Rural/urban	Non-educated/educated	Non-employed/employed	Female/male
	Treatment group	9.240***	8.850***	9.191***	9.370***
		(0.018)	(0.016)	(0.008)	(0.010)
	Control group	9.484***	9.536***	9.594***	9.491***
		(0.005)	(0.005)	(0.006)	(0.006)
	Overall Gap	-0.244***	-0.686***	-0.403***	-0.121***
		(0.018)	(0.016)	(0.010)	(0.012)
	Endowment	-0.093**	0.173***	-0.043***	-0.068***
		(0.045)	(0.051)	(0.009)	(0.012)
	Returns	-0.151***	-0.859***	-0.361***	-0.053***
		(0.046)	(0.052)	(0.012)	(0.013)
Endowment Effects (Explained)	Characteristics of hhd. head	0.0461**	0.030	0.114***	-0.010
		(0.023)	(0.061)	(0.012)	(0.023)
	Head education	-0.129***	-0.244***	--	-0.006
		(0.016)	(0.015)		(0.006)
	Head employment	-0.023	--	-0.125***	-0.015**
		(0.042)		(0.007)	(0.006)
	Household composition	0.014	0.351***	-0.023***	-0.044**
		(0.024)	(0.057)	(0.009)	(0.022)
	Urban/rural residence	--	0.036	-0.008***	0.007***
			(0.031)	(0.002)	(0.002)
Returns Effects (Unexplained)	Characteristics of hhd. head	-0.363	0.863*	0.766***	0.606***
		(0.338)	(0.462)	(0.256)	(0.129)
	Head education	-0.257***	0.249***	--	-0.018
		(0.090)	(0.064)		(0.060)
	Head employment	-0.157	--	0.002	-0.125***
		(0.313)		(0.037)	(0.036)
	Household composition	0.478*	-1.755***	-0.313	0.109**
		(0.269)	(0.391)	(0.230)	(0.053)
	Urban/rural residence	--	0.204	-0.007	0.077
			(0.332)	(0.037)	(0.049)
	Constant	0.148	-0.419	-0.808***	-0.702***
		(0.441)	(0.473)	(0.149)	(0.149)
	Observations		14,843		

Table A7. Conditional quantile regression decomposition, Taiwan 2010

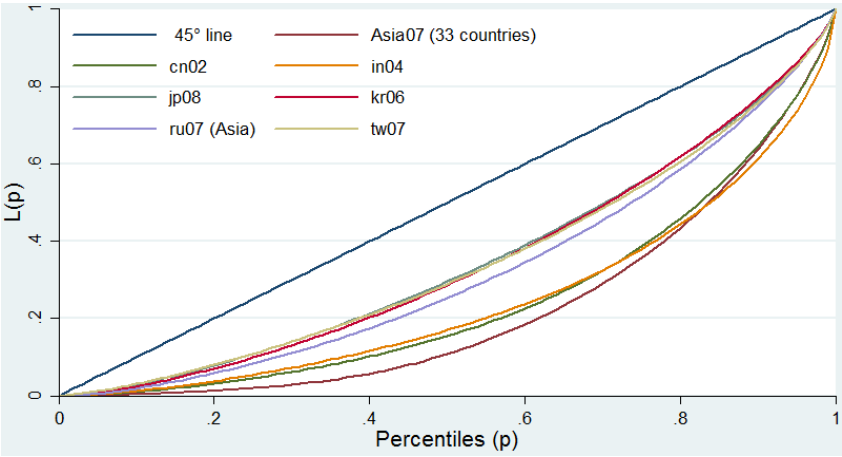
	10th pctile	50th pctile	90th pctile	10th pctile	50th pctile	90th pctile
	Rural vs. urban			Non-employed vs. employed		
Overall Gap	0.219***	0.229***	0.287***	-0.951***	-0.704***	-0.331***
	(0.010)	(0.007)	(0.009)	(0.006)	(0.006)	(0.009)
Endowment	0.057**	0.093***	0.126***	0.378***	-0.009	0.045*
	(0.042)	(0.025)	(0.033)	(0.176)	(0.081)	(0.073)
Returns	0.161***	0.137***	0.161***	-1.329***	-0.695***	-0.376***
	(0.025)	(0.022)	(0.021)	(0.020)	(0.018)	(0.025)
	Less vs. more educated			Female vs. male		
Overall Gap	-0.509***	-0.350***	-0.400***	-0.228***	-0.109***	-0.037***
	(0.009)	(0.006)	(0.009)	(0.009)	(0.004)	(0.008)
Endowment	-0.198***	0.003	0.043***	-0.072***	-0.057***	-0.055***
	(0.020)	(0.010)	(0.014)	(0.027)	(0.019)	(0.022)
Returns	-0.311***	-0.352***	-0.442***	-0.156***	-0.052***	0.018
	(0.018)	(0.009)	(0.013)	(0.013)	(0.012)	(0.015)

Notes: Model specifications in these conditional quantile regressions are identical to those in unconditional quantile regressions presented in tables 3, 8, 11 and 14. Coefficients of individual covariates are available on request. Bootstrap standard errors with 100 replications are in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Figure A1. Lorenz concentration curves



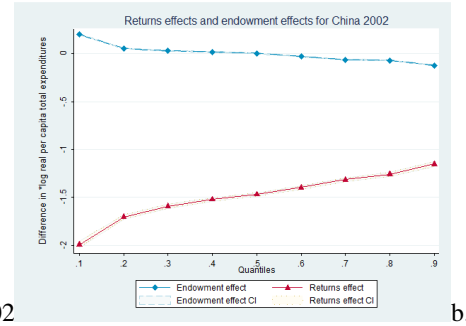
a. By national survey, non-weighted by country size



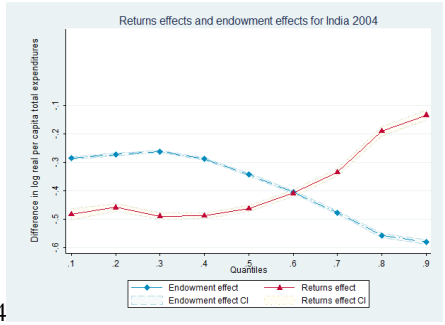
b. For Asia 2007 (33 countries), weighted by country size and share of Asia's population

Notes: Households' analytical weights used, accounting for household size.
Asia is taken to consist of cn02, in04, jp08, kr06, ru07 (Asian regions; sample size 1,290), and tw07, weighted using population sampling weights and rates of representation of the population of all Asian countries, using countries' 2007 working-age (15–64) population (World Bank 2015c). Based on countries' average disposable income and partially their Gini coefficients, Chinese income distribution is taken to represent adequately those in Mongolia, Maldives, Vietnam, Thailand; India represents Afghanistan, Bangladesh, Bhutan, Cambodia, Indonesia, Laos, Myanmar, Nepal, North Korea, Pakistan, Philippines, Sri Lanka, Tajikistan and Timor-Leste; Japan represents Singapore; Korea represents Brunei and Hong Kong; Russia represents Kazakhstan, Kyrgyzstan, Turkmenistan and Uzbekistan; and Taiwan represents Macau and Malaysia. The six countries are thus assigned subsampling rates of 0.901, 0.599, 0.962, 0.866, 0.439 and 0.460, respectively. The overall subsampling rate in the surveyed countries from Asia's population (pop. 1.87 and 2.54 trillion, respectively) is thus 0.738. These numbers notably exclude countries in the Middle East, the Caucasus and the Pacific islands.
2007 incomes are estimated by adjusting base-year incomes for countries' growth rates of real gross national income per capita (World Bank 2015c): multiplication by one plus 70.74% for cn02, 24.16% for in04, 1.58% for jp08 (i.e., negative growth), and 5.05% for kr06.

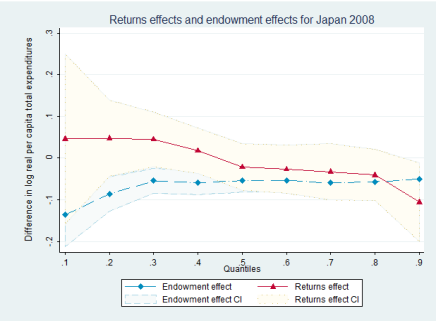
Figure A2. Endowment and returns effects: rural vs. urban residence (% differences in income)



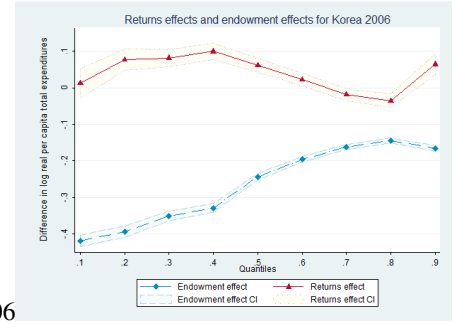
a. China 02



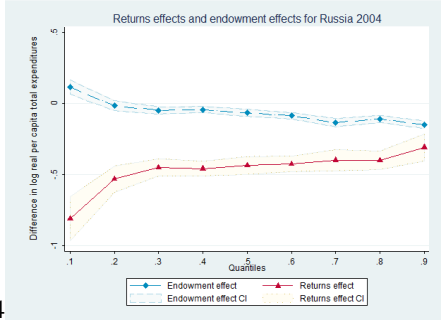
b. India 04



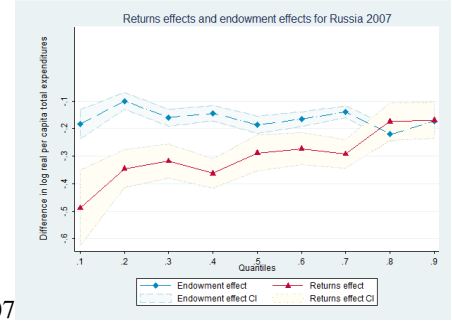
c. Japan 08



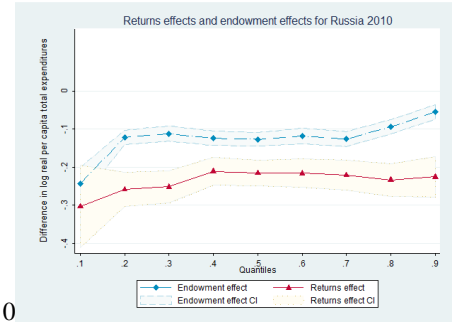
d. Korea 06



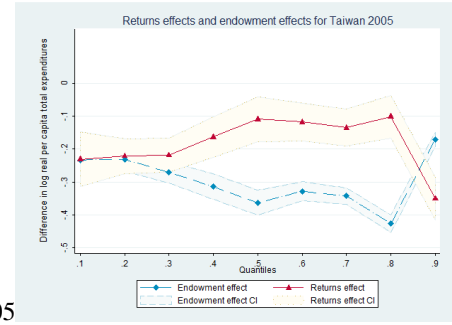
e. Russia 04



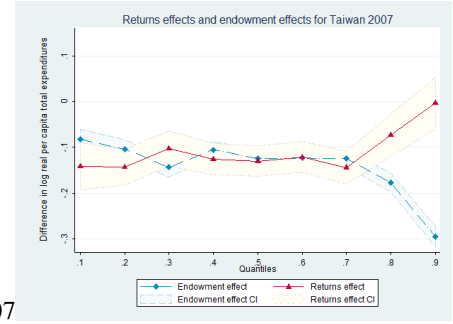
f. Russia 07



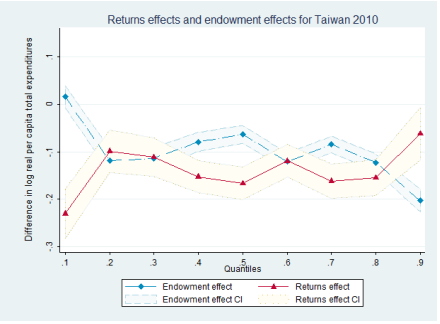
g. Russia 10



h. Taiwan 05

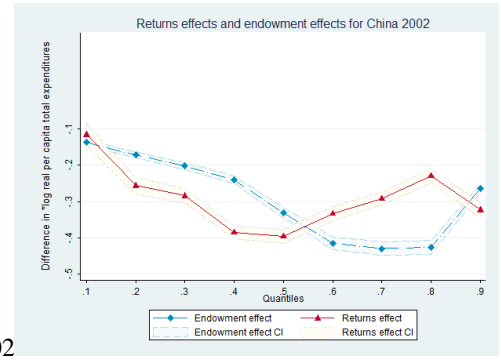


i. Taiwan 07

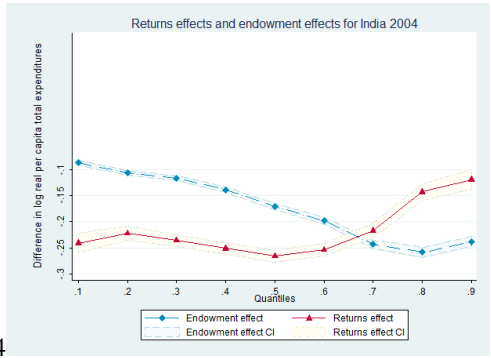


j. Taiwan 10

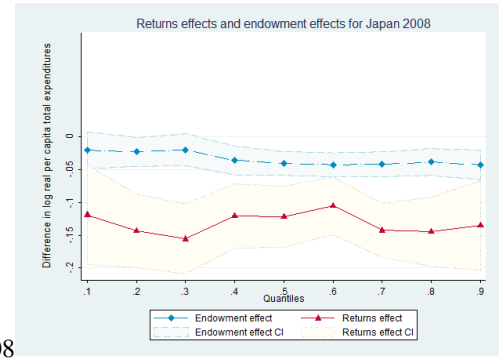
Figure A3. Endowment & returns effects: disadvantaged/advantaged region (% diff. in income)



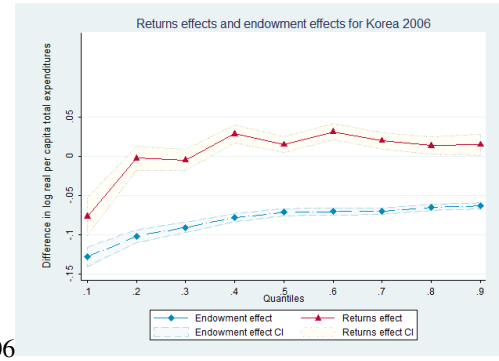
a. China 02



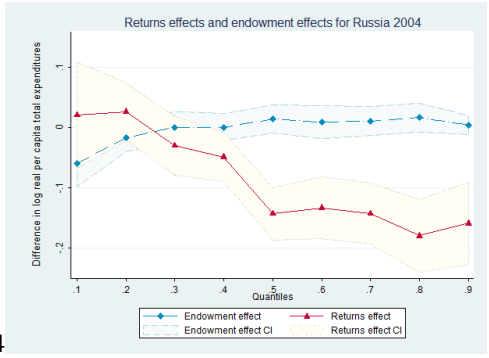
b. India 04



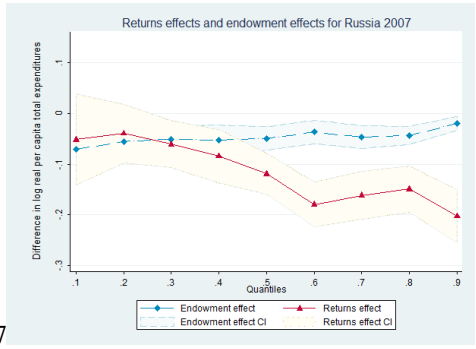
c. Japan 08



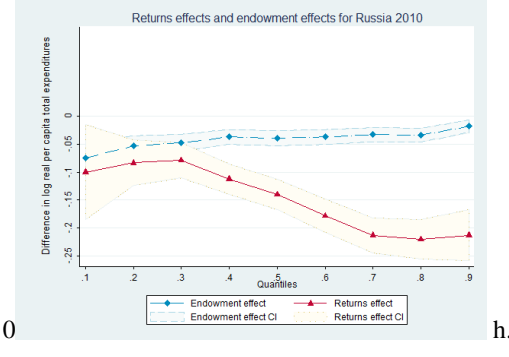
d. Korea 06



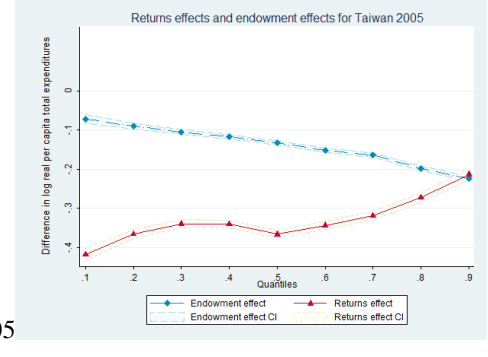
e. Russia 04



f. Russia 07

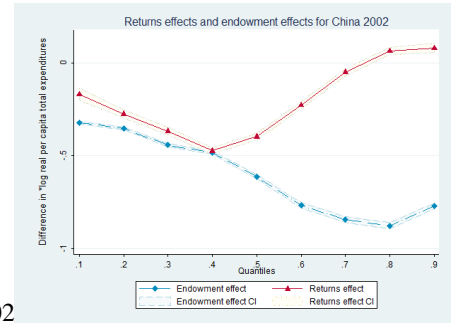


g. Russia 10

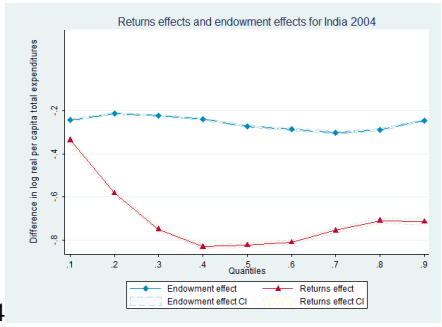


h. Taiwan 05

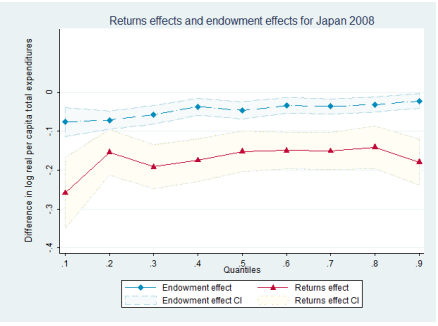
Figure A4. Endowment & returns effects: less/more educated household head (% diff. in income)



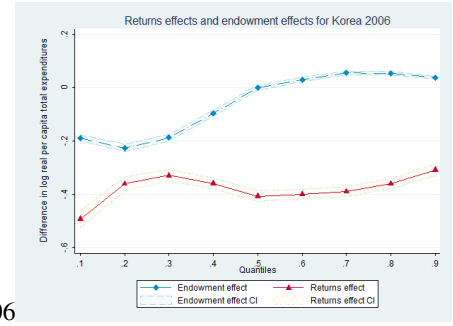
a. China 02



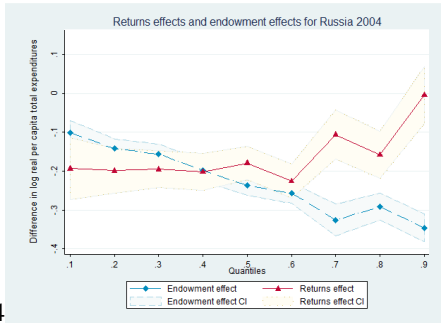
b. India 04



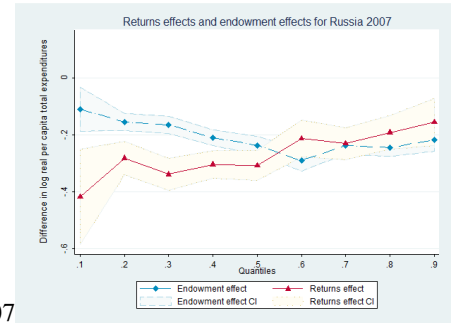
c. Japan 08



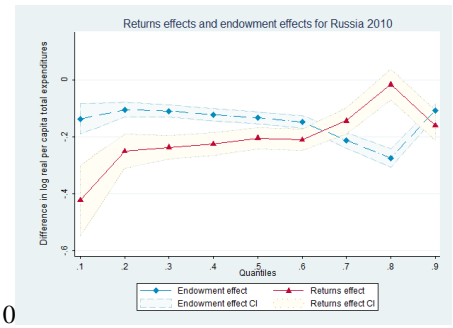
d. Korea 06



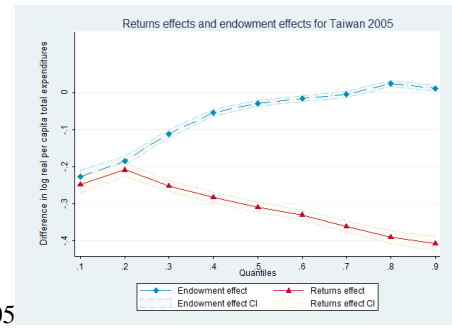
e. Russia 04



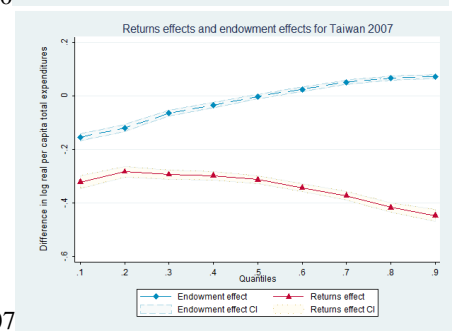
f. Russia 07



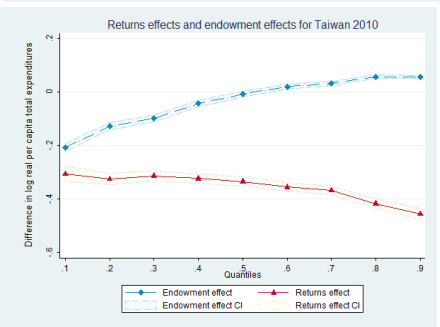
g. Russia 10



h. Taiwan 05

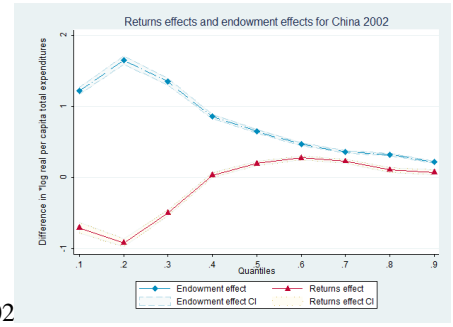


i. Taiwan 07

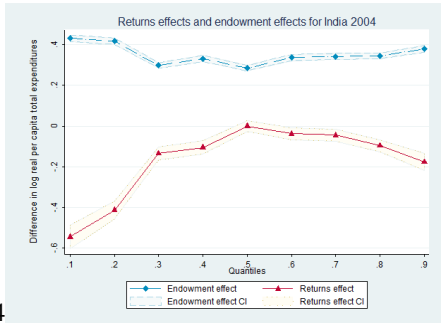


j. Taiwan 10

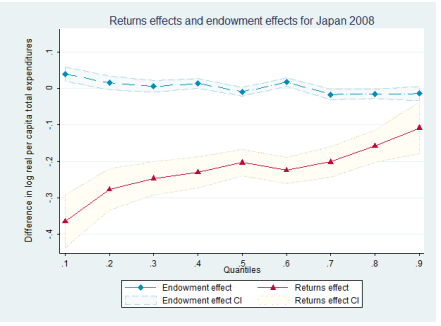
Figure A5. Endowment and returns effects: non-employed vs. employed head (% diff. in income)



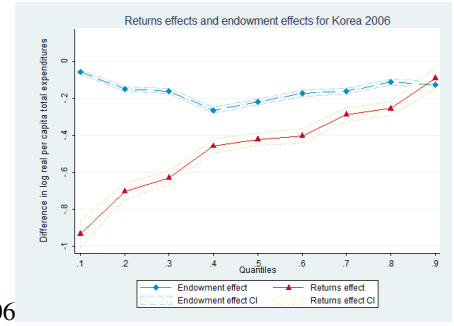
a. China 02



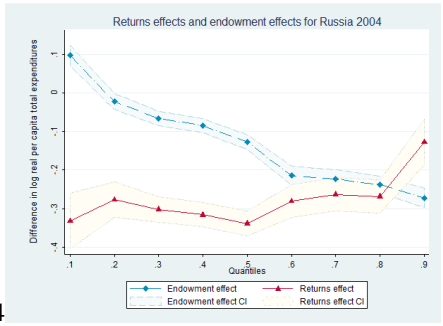
b. India 04



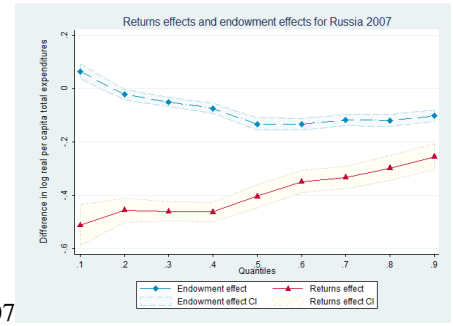
c. Japan 08



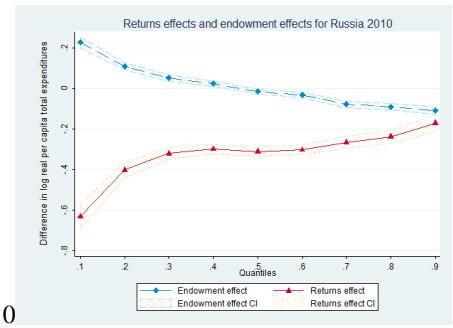
d. Korea 06



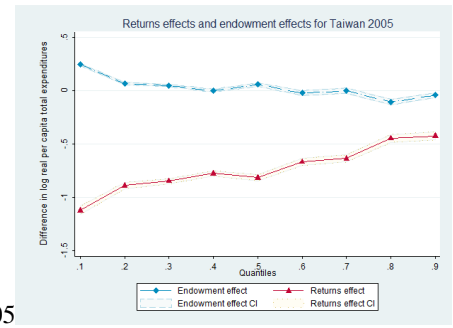
e. Russia 04



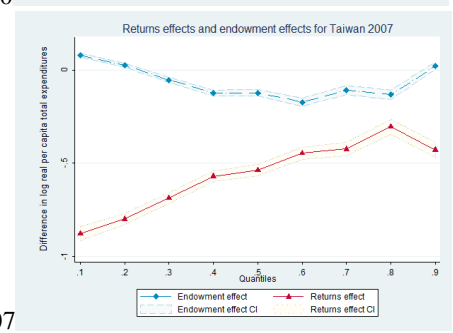
f. Russia 07



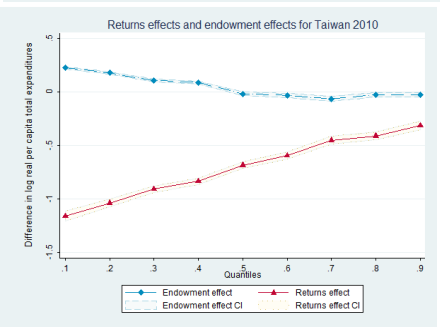
g. Russia 10



h. Taiwan 05

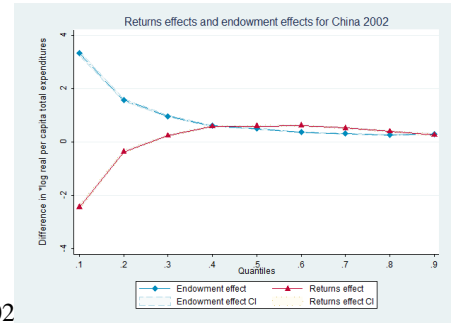


i. Taiwan 07

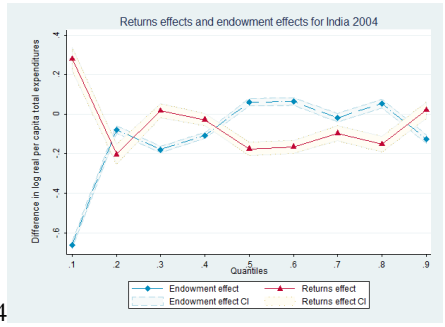


j. Taiwan 10

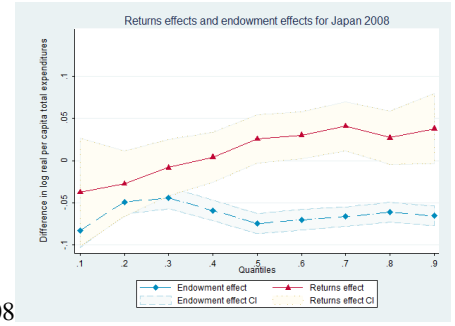
Figure A6. Endowment and returns effects: female vs. male household head (% diff. in income)



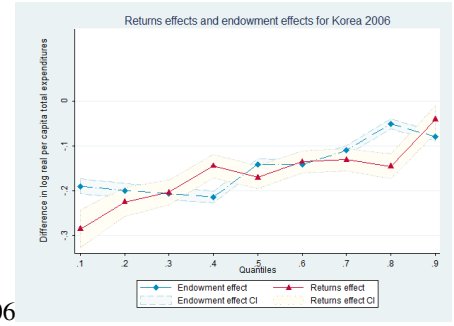
a. China 02



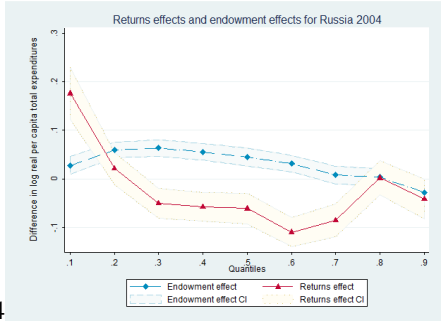
b. India 04



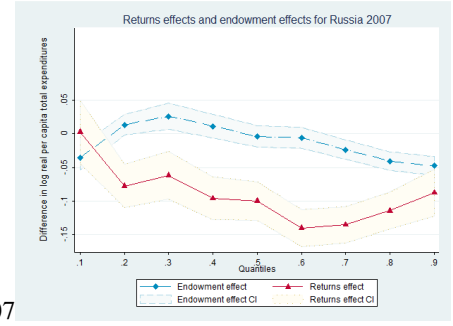
c. Japan 08



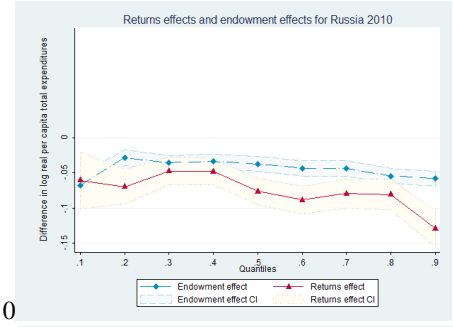
d. Korea 06



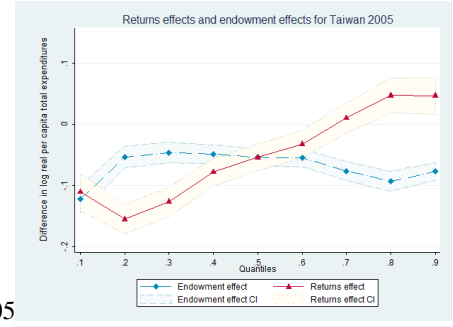
e. Russia 04



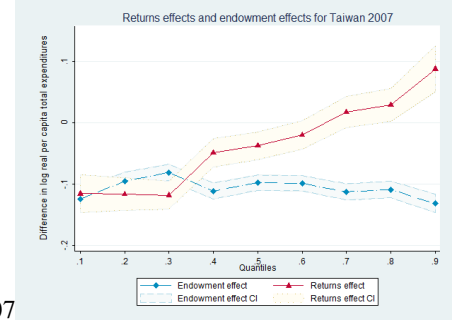
f. Russia 07



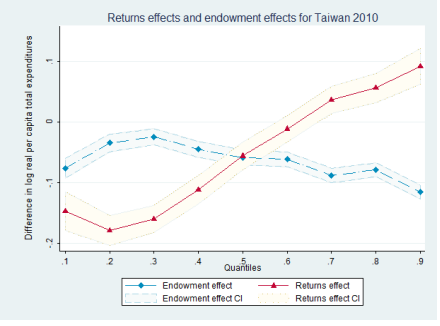
g. Russia 10



h. Taiwan 05

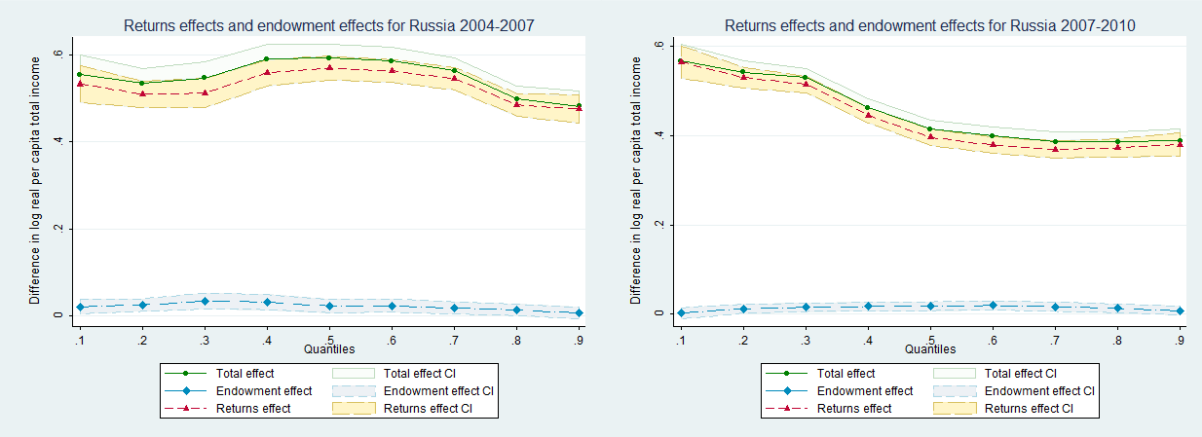


i. Taiwan 07



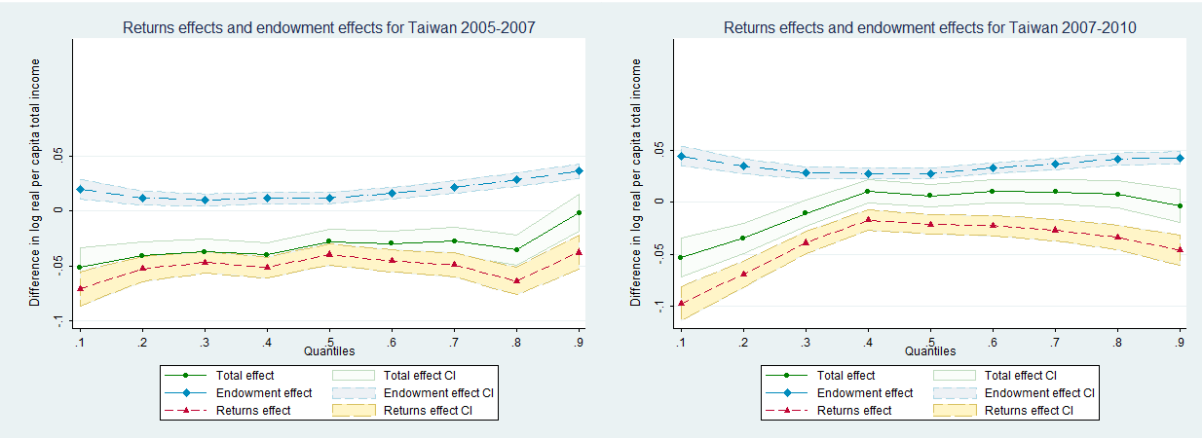
j. Taiwan 10

Figure A7. Growth incidence curve and decomposition into endowment vs. returns effects



a. Russia 2004–2007

b. Russia 2007–2010

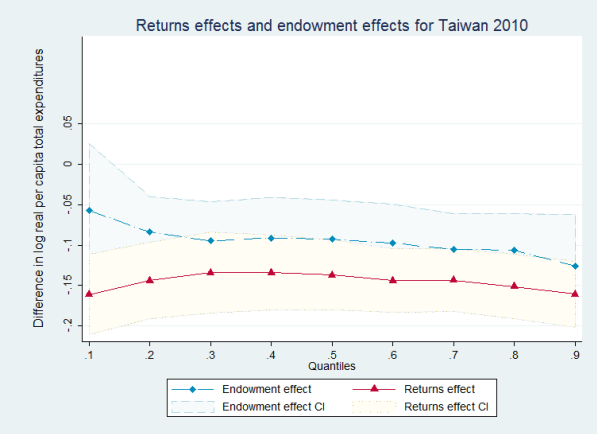


c. Taiwan 2005–2007

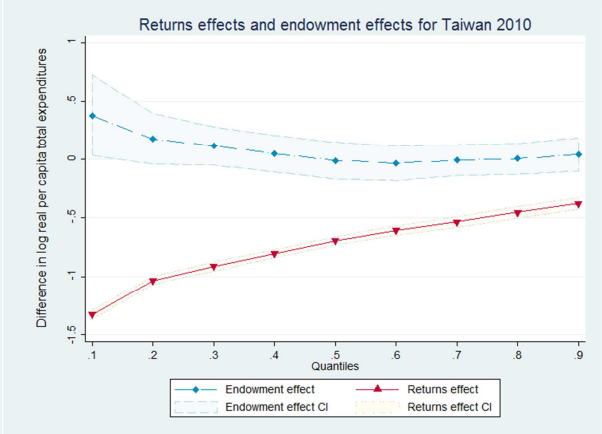
d. Taiwan 2007–2010

Note: Total effect has the interpretation as growth incidence at a particular unconditional income quantile.

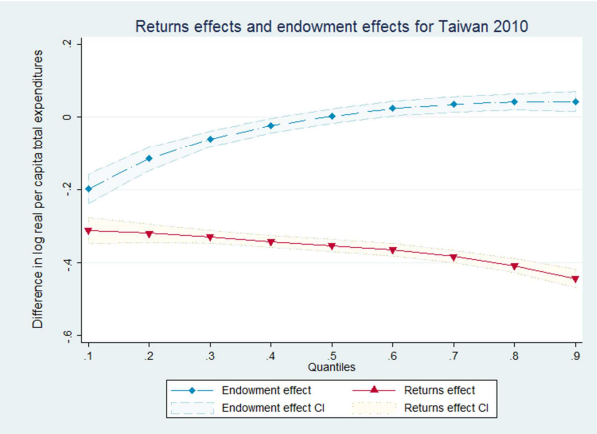
Figure A8. Endowment and returns effects from conditional quantile regressions, Taiwan 2010



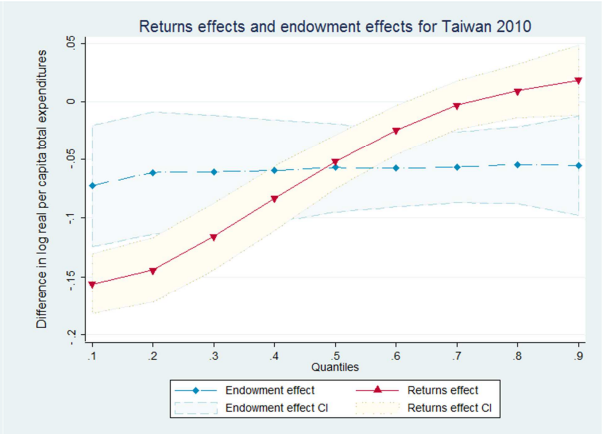
a. Rural vs. urban



b. Non-employed vs. employed



c. Less vs. more educated



d. Female vs. male