Five decades of household change across Asian societies

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Background

Asian households have experienced substantial transformations over the last decades, reflected by the dynamic household size, alteration in household composition, as well as varying household types and living arrangements (Albert Esteve et al., 2018; Dommaraju & Tan, 2014; Jones & Yeung, 2014). Such transitions have prompted scholars to examine the patterns of household change across Asian societies and investigate the extent of convergence to small and nuclear households due to the global expansion of industrialization (Bongaarts, 2001; Goode, 1963). On the cultural side, the *Second Demographic Transition* (SDT) *Theory* emphasizes the effect of self-realization and individualization in marriage formation, childbearing, and living arrangements, characterized by late marriage, extramarital births, diverse cohabitation, and low fertility (Lesthaeghe, 2020; van de Kaa, 1987). Although this ideological shift initially happened in Europe, it could also extend to other continents, especially with the application of communication technology and the spread of mass media (Lesthaeghe, 2010).

The extent to which these assumptions fit the Asian case has not been sufficiently scrutinized and is subject to continued debate. Asian societies are complex and heterogeneous regarding the organization of households and living arrangements. Such heterogeneity is connected to diverse levels of socio-economic development, various cultural and religious backgrounds, unequal colonial and political history, and distinctive family systems (Chen & Li, 2014; Yeung et al., 2018). Moreover, most available studies focus on specific countries, including China, South Korea, India, and Singapore (Breton, 2021; Jones et al., 2012; Yasuda et al., 2011). Comparative studies focus on specific subregions such as East Asia or Southeast Asia (Anderson & Kohler, 2013; Atoh et al., 2004). This results in a fragmented perspective, leaving a gap in our understanding of the broader landscape of Asian households. Moreover, the dearth of comprehensive studies, largely stemming from limited data for cross-country and regional comparisons, has left the intricacies and transitions within Asian households underexplored. Thus, this paper aims to fill this gap in the current literature by conducting a holistic analysis of the transformation in Asian households over the past five decades. We explore answers to the following questions: 1) How have Asian households changed over the last decades regarding size and household composition?; 2) What is the universality and heterogeneity between countries, and which determinants contributed to them?; and 3) Is there evidence of convergence to the small and nuclear Western household pattern?

Data and Research Methods

This study uses data compiled in the CORESIDENCE database (CoDB) through filtering for Asian countries following the definition of the UN Geoscheme[1]. Data for Asia is sourced from the International Integrated Public Use Microdata Series (IPUMS-I), the Demographic Health Surveys (DHS), the Multiple Indicator Cluster Surveys (MICS), the Household Income and Expenditure Survey for South Korea (HIES), and the China Family Panel Studies (CFPS). Among them, IPUMS and DHS are major sources in this study, covering **81.4** percent of data, followed by MICS. The final applied data includes **163** samples from **35** countries, **5** subcontinents, from **1970** to **2021**. The main indicators consist of *average household size*, *distribution of different household sizes, aging structure in the household, the distribution of household type and the distribution of household members*. Among them, the *distribution of different household sizes* is used to investigate the dynamics of different-sized households, which is created by dividing household size into eleven categories from *one-person households* to *more than eleven-person households*. As for the *aging structure in the household*, we use *people less than 4 years old in the household* and *people more than 65 years old in the household* to calculate the *youth-elderly ratio*. Also, we group households into four types: *unipersonal households, nuclear-family households, stem-family households*, and *other-family households* to distinguish the variation of household types. Furthermore, to further examine household internal change, we apply variables to household members according to their relationships with the head, including *children, spouses, relatives, and non-relatives*. Considering the socioeconomic, geographic, and cultural disparities, nine representative countries with relative long-term data covering every subcontinent are selected for in-depth analysis. They are Bangladesh, China, India, Indonesia, Jordan, Kazakhstan, the Philippines, South Korea and Turkey.

Findings

Households has been shrinking and aging across Asian societies in the past decades

Figure 1 shows the average household size of Asian countries using the last data available (after the 2000s) included in the CoDB. Generally, the average household size ranges from 2.33 in Japan to 8.11 in Afghanistan. Most countries have an average household size between 3 to 6 people. Only 3 countries have an average household size of less than 3, they are Japan, South Korea, and Thailand, while 6 countries have an average household size exceeding 6, they are Afghanistan, Oman, Pakistan, Yemen, Iraq, and Tajikistan. Besides, geographical agglomeration and differentiation could also be observed. Overall, East Asia and Southeast Asia (ESEA) have a relatively lower average household size compared to the other three sub-continents, especially

[1] You can use this document to quote (https://www.emiw.org/fileadmin/emiw/UserActivityDocs/Geograph.Representation/Geographic-Representation-Appendix_1.pdf)

in East Asia where the recent average household sizes in all countries are below 4-person every household. Timor-Leste, Laos, and Cambodia have the highest average household size in the ESEA region, which countries also have the most underdeveloped economic status. Comparatively, South Asia, West Asia, and Central Asia have higher household sizes compared to the ESEA region; Except for several exceptions including Kazakhstan, Iran, Georgia, Armenia, Turkey, and Sri Lanka, the other countries in these three subcontinents have household sizes from 4.5 to 8 people in a household. **Figure 2** examines the time trend of average household size. Almost all countries have undergone a constant downtrend in their average household sizes during the past decades. Based on the data available, most countries have relatively high average household size in the oldest year, for example, 6.8 in Pakistan in 1990, 5.1 in India in 1983, and 5.7 in Thailand in 1970. During these five decades, the decreasing speed of average household size is remarkable. Thailand kept decreasing the household size and reached 2.8 persons per household in 2019, which means the households have shrunk a half during the past five decades. Similarly, Bangladesh fell from 5.7 persons in their households in 1993 to 4.3 in 2019, with a decreasing speed of nearly 0.5-person per decade. Interestingly, this 0.5-per-decade decreasing pattern is common in plenty of countries even though the initial household size and the available data vary, such as China, Turkey, Jordan and Tajikistan, etc. Meanwhile, some countries have experienced faster transitions. For example, South Korea had 4.9 persons in every household in 1975, then turned to nearly 2.5 persons in every household in 2010, with the average household size nearly decreasing by 2.5 during 35 years. Maldives transformed household size from 6.4 to 5.5 in only 7 years. Also, the variations in some countries are mild, such as Yemen and Israel, or fluctuate, such as Pakistan and Mongolia.

Figure 3 illustrates the distribution of different household sizes between the oldest and the most recent years in nine representative countries. On the whole, the different household sizes were widely redistributed in all representative countries over previous decades. We define a household with 6 and more than 6 people as a large household, and a household with less than 6 people as a small household. It is apparent that all representatives have seen a decline in large households and an increase in small households during the past decades. However, the extent of changes varies and could be concluded in different countries, even though the starting points in every country are distinct. Intuitively, China and South Korea have experienced the most distinctive shift from large households to small households. In the most recent year, these two countries have a very small proportion of large households, especially in South Korea, with less than 2% of large households; At the same time, small households have kept increasing, majorly distributed in 1-3-person households. Specifically, the rise of unipersonal households in South Korea is prominent, from 5% in 1975 to 25% in 2010. By contrast, the transition of different household sizes in India and Philippines is much slower, even though 2-4-person households all

see a rise in these two countries, but the rise is limited during their 27- and 36-year periods, and still with a high proportion of large households. Notably, even though Bangladesh has a shorter period of data than India, the transition in the former is more obvious, which could be reasoned by the family policy in Bangladesh, aligned with previous studies (Cleland et al., 1994; Yeung et al., 2018).

On the other side, Asia has undergone not just a decrease in average household size, but also an apparent transition in the age structure in their household. We use the *youth-elderly ratio* to reflect the average aging situation in households in every society. When the *youth-elderly ratio* decreases, the age structure is more disadvantageous as more elderly people should be supported by society, and the labor pool is getting smaller. Most countries have seen decline in the *youth-elderly ratio* during the past decades (**Figure 4)**. Several countries now have a *youth-elderly ratio* of less than 1, including South Korea, China, Armenia, Kazakhstan, Israel, and Azerbaijan, and the ratio is especially close to 0 in South Korea, which now is experiencing very rapid aging and low fertility (Hyun et al., 2016; Park, 2020). Azerbaijan though is not a very developed society compared to other countries, and still with a very low *youth-elderly ratio*. The ratio in Turkey, Vietnam, and Thailand, albeit is not yet 1, but close. Meanwhile, some countries see a very fast decline, such as Turkmenistan, Kyrgyz Republic and Timor-Leste. Nevertheless, slow change or recent increase could also be observed in some societies, such as Nepal, India, Palestine, and Iran.

Household types and household members varies but with continuity

We also scrutinize the transition of household composition in terms of household types and household members. Five types of households have been defined based on the relationship between household members, including *unipersonal households, nuclear-family households, stem-family households, other-family households*, and *non-family households*. Due to the *non-family household* taking a small part in Asia and nearly unchanged during the past decades, this study stresses the other four types of households (**Figure 5**). Overall, *nuclear-family households* have been keeping as a major part of all household types across almost all Asian societies during the past decades, from 40 percent in Maldives in 2016 to 88 percent in Syria in 2006. Stem-family households keep the second highest household type, majorly accounting for 10 percent to 40 percent of all household types. The unipersonal households and other-family households normally take a small share, but the difference is that the former generally see an obvious increasing trend, but the latter barely change. However, except for Jordan as a special case, it has been increasing the share of nuclear-family households and until 2017, had 84% nuclear households, convergence is not always the pattern in Asia. In fact, some countries have seen a decrease in nuclear households in recent years. For example, South Korea decreased the

percentage of *nuclear-family households* from 0.68 in 2000 to 0.60 in 2010, similar change also could be observed in China, Turkey, and Philippines. India and Indonesia though have increased the percentage of *nuclear-family households* in the first decades and then see stagnation or fall both based on IPUMS and DHS sources. Through comparison, two assumptions about the recent decline of nuclear households could be included. For South Korea, China, Turkey, and Philippines, the increase of *unipersonal households* squeezes the proportion of *nuclear-family* households, while for India and Indonesia, the slight increase of *stem-family households* affects the whole distribution.

Figure 6 depicts the change in household members. As a whole, children always take a big amount compared to other family members in a household in Asian societies. In the representative samples, Jordan has the highest number of children in the households, even in 2017 has more than 2.5 children per household. South Korea and China are the opposite, with less than 1 child per household in 2010. However, the decrease in children is universal in all societies and the decreasing speed is aligned, except China and South Korea are faster than other countries. India has a recent slight increase of children, which could also explain its recent rise in average household size and young-elderly ratio. Regarding the number of Spouses, it is very interesting to observe the nearly opposite trend with *unipersonal households*. Some countries have an apparent decline in their spouses, such as South Korea, China, Kazakhstan, and Philippines. That means the relative rise of *unipersonal households* could be partly because of the absolute decline in the number of spouses. Regarding other relatives in the households, two countries from South Asia generally have a relatively high proportion of other relatives compared to other representatives, especially for India, even fluctuated, having more than 15 percent relatives in their households. Oppositely, South Korea, China, and Jordan have a small percentage of relatives, which is aligned with the result of household types. Besides, it is obvious that living with non-relatives has not been common in Asian societies.

Conclusion

Households in Asian countries have undergone significant and widespread transformations during the last five decades. These changes encompass shifts in average household sizes, the distribution of different household sizes, aging structure in the households, and the variations of household types and household members. Wholly, household change exhibits variations across each country, manifesting in unique rhythms and specific characteristics in various aspects. Certain aspects of household change in Asian countries align with the *Second Demographic Transition*, such as an increase in unipersonal households and a decrease in the presence of children in households. Yet, previous complex household structures and living arrangements remain over time, also *nuclear-family households have* recently stagnated or declined in some

societies, which confirms that the convergence to the nuclear family is not always present in Asia.

Figure 1. The distribution of average household size in Asian societies after 2000[2].

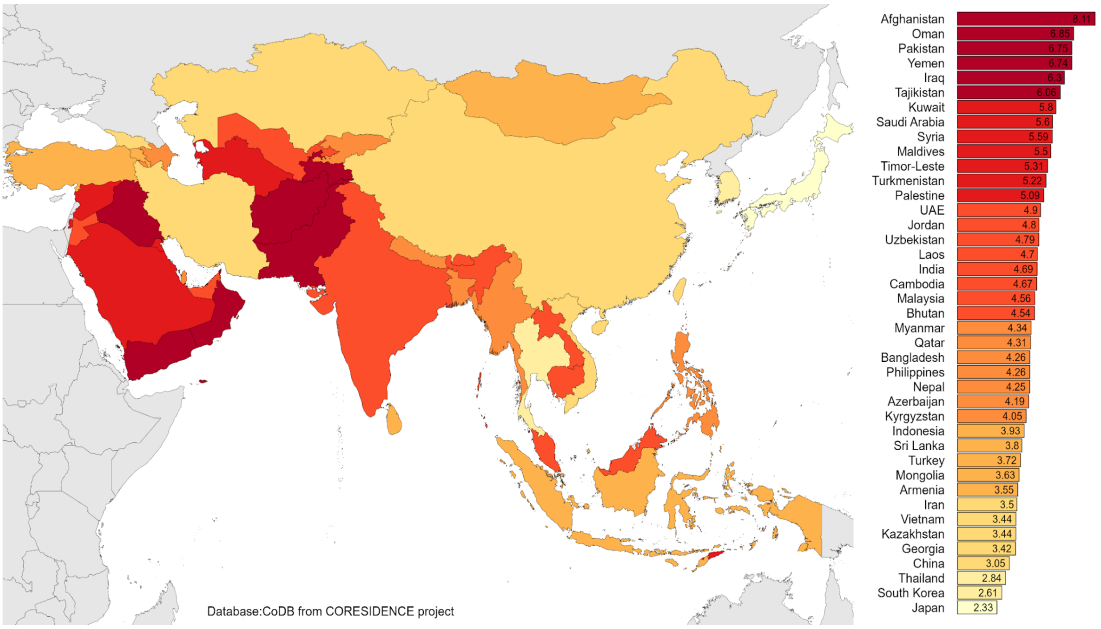
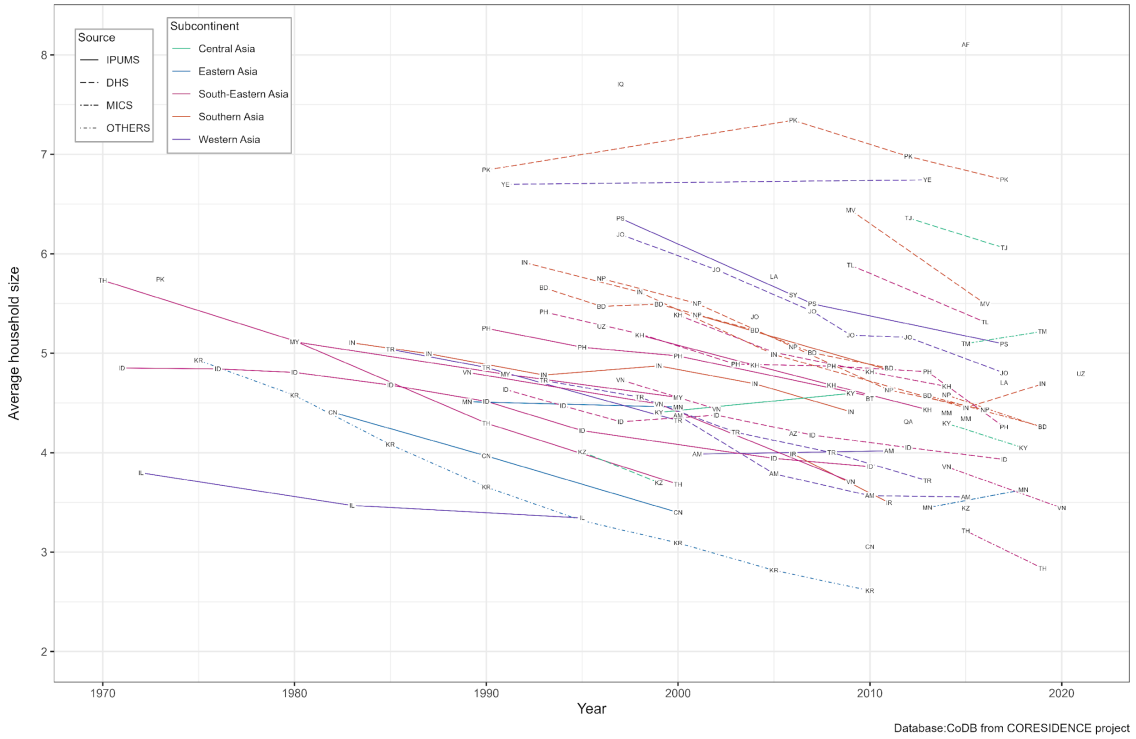


Figure 2. The change in average household size in Asian societies from 1970 to 2021[3].



[2] The data of the United Arab Emirates, Iraq, Kuwait, Japan, Sri Lanka, Saudi Arabia, and Oman is from external sources, listed in the appendix 1.

[3] The countries represented by the codes are listed in the appendix 2.

Figure 3. The distribution of different household sizes in representative countries.

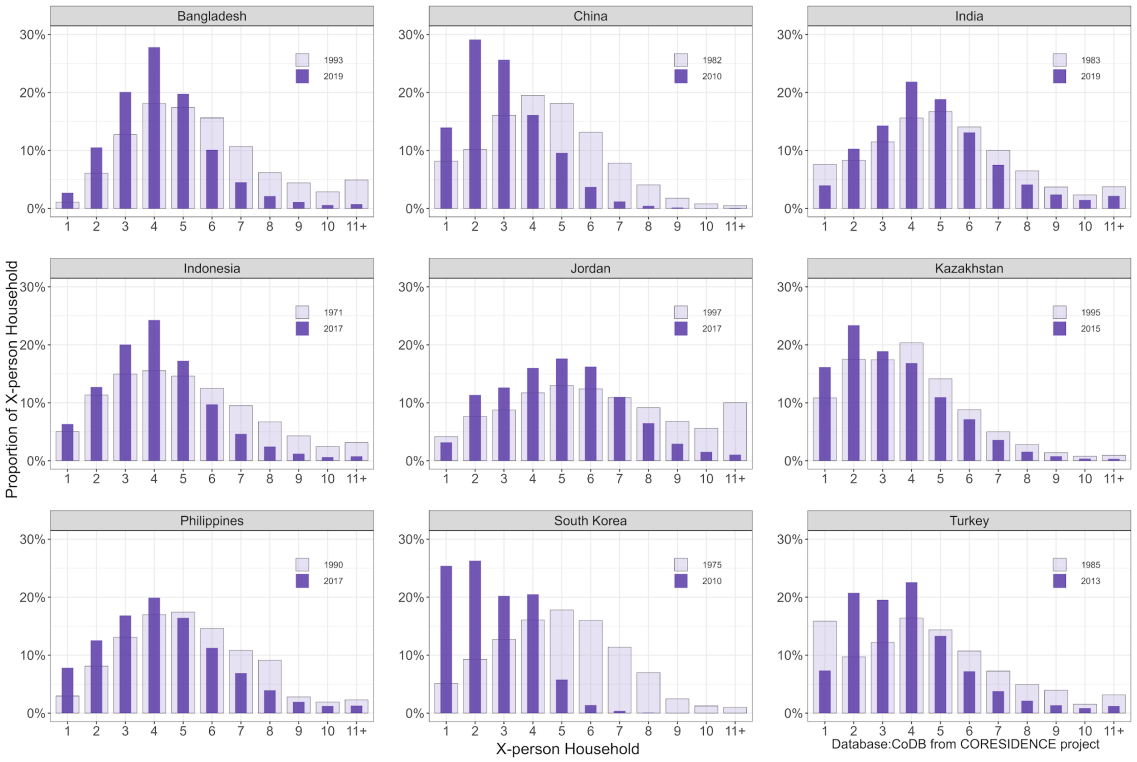


Figure 4. The aging structure in households across Asian countries from 1970 to 2021.

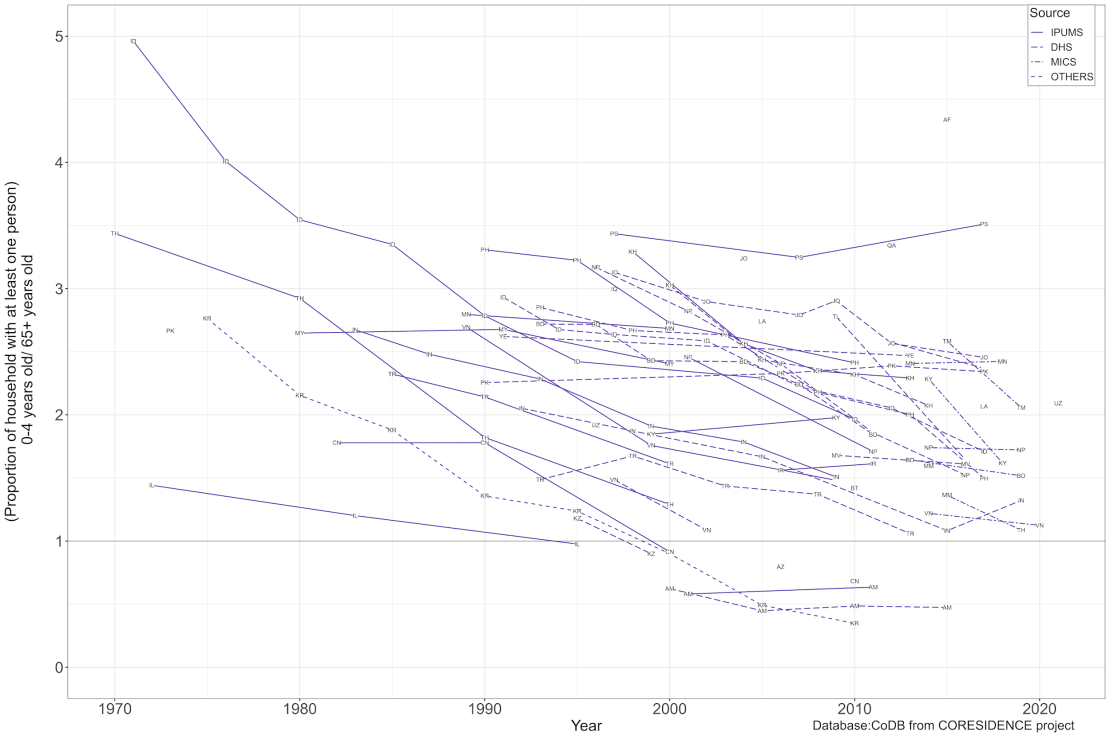
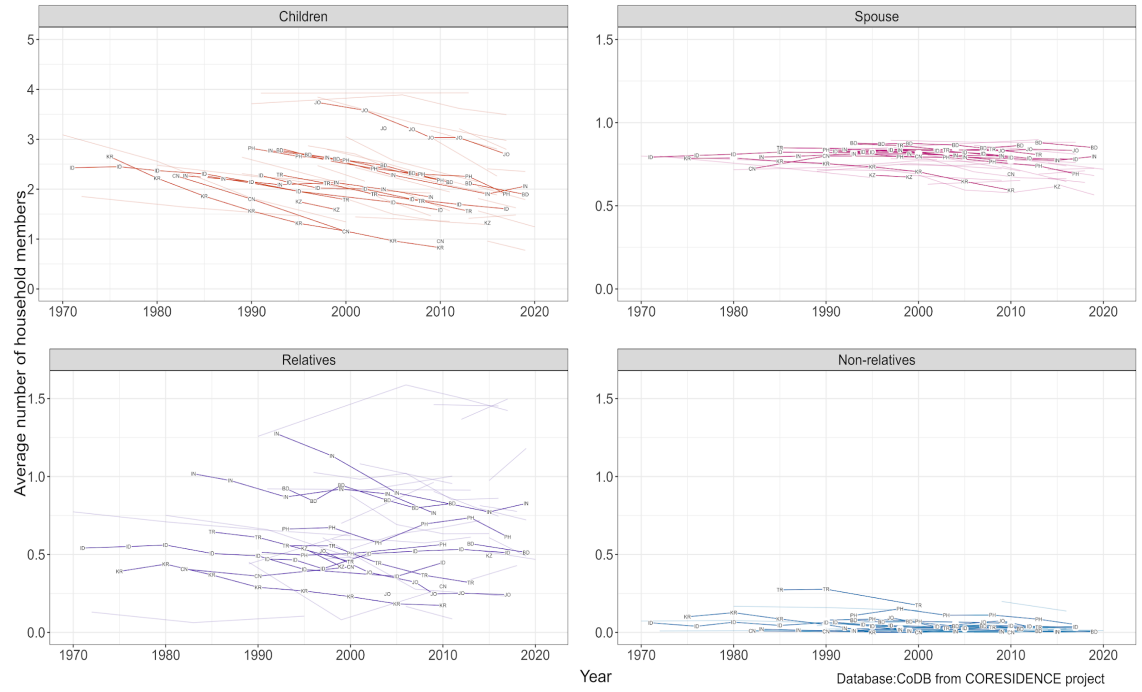


Figure 5. The proportion of different household types across Asian countries from 1970 to 2021.

Figure 6. The average number of household members based on their relationship with the head.



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Appendix 1:

Country-year sample	**External sources**
United Arab Emirates 2022	https://www.arcgis.com/home/item.html?id=bb9bf7c53c274d19b369901a3cbde406#:~:text=Description-,This%20layer%20shows%20the%20average%20household%20size%20in%20United%20Arab,household%20population%20by%20total%20households.
Iraq 2018	UN database. https://www.un.org/development/desa/pd/data/household-size-and-composition
Kuwait 2011	https://www.un.org/development/desa/pd/sites/www.un.org.development.desa.pd/files/aging_theme_household_size_and_composition_around_the_world_2017_data_booklet.pdf
Japan 2015	UN database. https://www.un.org/development/desa/pd/data/household-size-and-composition
Sri Lanka 2011	https://www.un.org/development/desa/pd/sites/www.un.org.development.desa.pd/files/aging_theme_household_size_and_composition_around_the_world_2017_data_booklet.pdf
Saudi Arabia 2010	https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4174546/
Oman 2018	https://data.gov.om/wnewgpb/income-expenditure?tsId=1041130&lang=en

Appendix 2:

Code and corresponding country							
AF	Afghanistan	IL	Israel	MY	Malaysia	TL	Timor-Leste
AM	Armenia	JO	Jordan	NP	Nepal	TR	Turkey
AZ	Azerbaijan	KZ	Kazakhstan	PK	Pakistan	UZ	Uzbekistan
BD	Bangladesh	KY	Kyrgyz Republic	PH	Philippines	VN	Vietnam
BT	Bhutan	KH	Cambodia	PS	Palestine	YE	Yemen
CN	China	KR	South Korea	QA	Qatar		
ID	Indonesia	LA	Laos	SY	Syria		
IN	India	MV	Maldives	TH	Thailand		
IR	Iran	MM	Myanmar	TJ	Tajikistan		
IQ	Iraq	MN	Mongolia	TM	Turkmenistan		