

RESEARCH ARTICLE

Examining intergenerational transfers in
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Abstract

With the demographic changes toward the aging population, the role of intergenerational support and transfers has become increasingly prominent in the family support network. Using the Malaysia Ageing and Retirement Survey Wave 1 conducted in 2018/2019, this study analyzed the flow and factors associated with the amount of intergenerational financial transfers across three generations via multiple regression analysis. The results showed an upstream flow of financial support from younger to older generations. Variables with significant capability in determining the amount of intergenerational financial transfers include age, gender, ethnicity, education level, marital status, employment, health status, number of living children or parents, income, and financial assistance received from the government. Findings from this study are useful for policymakers to understand the issues of old-age financial security in Malaysia and thus implement relevant policies such as improving the coverage and adequacy of existing social protection programs, strengthening family support networks, as well as educating the public on the importance of having sound financial knowledge.

Keywords: Intergenerational relationships; Intergenerational transfers; Financial transfers; Malaysia

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1. Introduction

The world is grappling with the inevitable trend of population aging. An indication of the aging trend is the higher world average life expectancy, which had increased from 51 years in 1960 to 73 years in 2019 (World Bank & World Development Indicators, 2019).

Despite the remarkable progress made in extending life expectancy, population growth is observed to be decelerating, which is around 1% as of 2023 (World Bank & World Development Indicators, 2024). As a result, in 2018 for the first time ever, the population of persons aged 65 and older exceeded that of children under the age of five (UN, 2019). The combination of an aging population and a declining birth rate raises serious concerns about the sustainability of economic development in the future, particularly for low- and middle-income countries. The absence of appropriate policy planning will undoubtedly hurt the overall well-being of older persons.

Malaysia's population distribution in the 1970s was predominantly dominated by younger age groups. The population's composition has changed toward older-age cohorts as a result of the demographic transition that took place over the last several decades.

Since 2020, Malaysia has become a country with an aging population. As of 2022, there are about 2.4 million persons in Malaysia who are 65 years of age or older (DOSM, 2022). Malaysia is projected to become a country with an aged population by 2040.

The aging population in Malaysia presents significant challenges since it puts more strain on those of working age, particularly the “sandwiched generation,” who must financially provide for their parents and children at the same time. For every 100 persons of working age, the old-age dependency ratio is predicted to rise from 7.4 in 2010 to 21.7 in 2040 (DOSM, 2016). There will be more older people who need to be supported by the working-age population in the future.

Meanwhile, the fertility rate fell below the 2.1 national replacement level in 2021, falling from 4.9 children per woman in 1970 to 1.6 in 2022 (DOSM, 2023). The reasons behind Malaysian women’s declining fertility rate can be attributed to the increasing participation of women in the labor force, delay in marriage among women, and the spike in childcare costs in recent years (Bakar & Abdulah, 2010; Hartani *et al.*, 2015; Jones, 2007; Tey *et al.*, 2012; Tang & Tey, 2017).

Concerns about income security and the ability of most Malaysian adults to live well in old age are a result of several structural problems, including the lack of social protection coverage and adequacy, as well as low earnings that result in poor retirement savings. As a result, transfers from family members are a major source of income for many Malaysian individuals, particularly older persons (Masud *et al.*, 2008). Strong familial ties and a culture of filial piety are also common among Malaysians (Aziz & Yusoff, 2012). Therefore, intergenerational transfers are a recurrent pattern among Malaysian families, independent of their motivations, which could either be driven by old-age security, unselfish altruism, or even paying back earlier educational expenditures made for the children (Lillard & Willis, 1997).

The flow and direction of intergenerational transfers are determined by a number of factors. The intergenerational transfer debate is important because the average family size in Malaysia is expected to become smaller due to declining birth rates and fertility rates. As a result, financial support from families will soon decline, as evidenced in numerous studies (Chou, 2010; Knodel *et al.*, 2000; Logan & Bian, 2003; Zimmer & Kwong, 2003).

Using Malaysia Ageing and Retirement Survey (MARS) Wave-1 data, this study intends to analyze the factors associated with the amount of intergenerational transfers between three generations in Malaysia, from the

perspective of respondents and their parents, as well as respondents and their children.

Living in a multigenerational household that extends to three generations is quite common in Malaysia. For example, in MARS Wave-1 data, it is found that 10.8% of respondents live together with their children and parents under the same roof. The household structure can be a significant factor in determining the pattern of intergenerational transfers in Malaysia.

In this paper, three research questions will be addressed:

- (1) What are the patterns and flow of intergenerational transfers in Malaysia, whether upstream or downstream?
- (2) How do sociodemographic and socioeconomic backgrounds affect the pattern of intergenerational transfers in Malaysia?
- (3) What motivates intergenerational transfers in Malaysia?

Findings from this study can help policymakers better comprehend Malaysia’s aging population, especially with regard to old-age financial security. Furthermore, it can serve as valuable input in policy formulation to improve coverage and adequacy of existing social protection programs, strengthen family support systems, and raise public awareness on the importance of having good financial management.

1.1. Motives, flow, and factors associated with intergenerational transfers

Willis (1979) proposed the old-age security hypothesis, in which individuals in traditional society rely on transfers from their children for financial security during old age. Financial support given to parents may occur out of the altruistic behavior of the children (Becker, 1974). It can also act as an exchange or payment for services provided by the parents such as taking care of grandchildren and helping with domestic chores (Bernheim *et al.*, 1985). The parental repayment theory, which holds that parents may receive financial assistance in exchange for prior human capital expenditures they made, such as paying for their children’s education, is another primary driver (Becker & Tomes, 1976).

Intergenerational financial transfers, particularly upstream transfers from younger to older generations, are commonly observed in developing countries due to a lack of formal pension coverage and stable income during retirement (Chan, 2005; Knodel *et al.*, 2000; Lillard & Willis, 1997; Logan & Bian, 2003, Zimmer & Kwong, 2003).

There are also several past studies documenting the factors associated with the amount of intergenerational

financial transfers. Overall, it has been observed that respondents who are younger, male, working adults, better educated, have higher incomes, are healthier, and have more parents or children tend to provide greater financial support to their parents or children. At the same time, they receive less financial assistance in return. Conversely, it has been shown that older, female, lower-income, and less educated people give their parents or children less money but also receive more from them (Chou, 2010; Khan, 2013; Logan & Bian, 2003; Masud *et al.*, 2008; Sloan *et al.*, 2002). Living arrangements were also found to be a significant predictor of intergenerational transfers (Silverstein *et al.*, 2006).

Varying patterns of intergenerational transfers may also be seen across ethnic groups as a result of differences in their cultural and socioeconomic backgrounds. For instance, Bumiputera (including Malay, and Bumiputera Sabah, and Sarawak) has the lowest mean household income, at RM 7,093, compared to Chinese (RM 9,895) and Indian (RM 8,216) (DOSM, 2019). Therefore, Bumiputera is expected to be more dependent on financial transfers from their parents and children, compared to other ethnic groups. On the other hand, considering their greater financial capacity, respondents who are Chinese and Indian are anticipated to provide more financial transfers to their parents and children. However, Bumiputera (Sabah and Sarawak) are expected to receive lesser financial transfers from their parents or children while providing it at a lesser amount than Malay. This can be supported by the fact that Sabah and Sarawak have the second and sixth lowest median household income, respectively, among all states and territories in Malaysia.

2. Data and methods

MARS Wave-1 is a nationwide longitudinal survey on aging and retirement that was carried out between 2018 and 2019 by the Social Wellbeing Research Centre (SWRC). MARS Wave 1 involved 5,613 respondents aged 40 years and older living in Malaysia.

MARS Wave-1 is part of the harmonized database including the U.S. Health and Retirement Survey; Survey of Health, Ageing, and Retirement Europe; and the Japanese Study of Ageing and Retirement. MARS has 260 questions that fall under five main components: background information of the respondents and family members, health and health care utilization, work, and employment, income and expenditure, as well as savings and assets.

With regards to the intergenerational transfers, MARS respondents were asked whether they received

or gave financial and non-financial support (*e.g.*, providing food or clothing, looking after grandchildren, assisting parents in daily activities, *etc.*) from and to their parents, siblings, and children. For financial support, respondents were asked to indicate which family members they give or receive financial support from, their frequency (either on a monthly or yearly basis), and the amount in Ringgit Malaysia (RM). For respondents who live together with their children or parents, the survey asked them to indicate the amount of financial support that is excluded from any shared living costs such as rent, utility, and food. The sample is chosen among respondents who still have living children or parents.

2.1. Statistical analysis and conceptual framework

To determine the distribution of intergenerational transfers, descriptive analysis was first conducted on all dependent and independent variables. This was followed by bivariate analysis. Subsequently, multiple linear regression analysis was performed to examine the significant factors that are associated with the amount of intergenerational financial transfers between respondents and their children or parents. IBM SPSS 26.0 was used to conduct the statistical analysis for this study.

This study has four dependent variables to indicate four different flows of intergenerational financial transfers, particularly to and from respondents and children, as well as to and from respondents and parents. The dependent variables were derived from the total amount of financial transfers between respondents and their children or parents. These amounts were transformed into logarithmic form to mitigate data skewness and ensure a normal distribution. Since the dependent variables are expressed in the natural log form, the interpretation of their coefficients in the multiple regression models is made in percentage terms. The financial transfer amount that is recorded on an annual basis is converted into a monthly basis for standardization. The conceptual framework for this study is illustrated in [Figure 1](#).

The independent variables for this study include age, gender, ethnicity, education, marital status, living arrangement, employment status, health status, number of living parents/children, income, and financial assistance received from the government. All the independent variables are categorical. This study hypothesizes that there are significant variations in the factors associated with intergenerational transfers that took place between the respondents and their children or parents.



Figure 1. Conceptual framework of intergenerational transfers

3. Results

3.1. Profile of respondents and amount of financial transfers

More respondents reported having living children (92.3%, or 5,181 respondents) than living parents (46.6%, or 2,614 respondents). The majority of the respondents had between 1 – 3 children (43.6%) and 4 – 6 children (43.9%). Only 12.5% of the respondents had more than 7 children. On the other hand, more than half of the respondents had only one living parent while only 3.2% still had all four living parents, including parents-in-law. About 31% of the respondents also had at least one parent and one child alive.

Among respondents who have living children, the pattern declines with age. There are more male (57%) than female respondents (43%). Malay comprised about 60% of the respondents, followed by Bumiputera (Sabah and Sarawak) (22.3%), Indian and Others (10.5%), and Chinese (10.1%). Bumiputera (Sabah and Sarawak) consists of various Bumiputera ethnicities living in Sabah and Sarawak, including Iban, Dusun, Bajau, and Bugis. Meanwhile, the category “Others” refers to respondents of mixed parentage and those having permanent residence status. About a third quarter of the respondents had a primary school qualification, while only 12% had a tertiary level of education. More than 80% of the respondents had a spouse, while the rest had no spouse (either never married, widowed, divorced, or separated). The majority of the respondents lived together with their children (77.6%). The proportion of respondents who are currently working and homemakers is quite similar, at 38%. About 20% have retired while 5% are not working due to labor market reasons (e.g., unemployed, temporarily laid off, on sick leave, disabled, and unable to work). Half of the respondents reported having good health. Only 12% admitted they have poor health. Slight more than a quarter of the respondents (28%) had no income, while 11.3% earned more than RM 3,000. About 15% of the respondents received financial assistance from the government. With regards to non-financial support, 17.1% reported taking care of their grandchildren, while about 20% helped their children with household chores (Table 1).

Similarly, the proportion of respondents who still have living parents declines with their age. There are more male (57.5%) than female (42.5%) respondents in this sample. The biggest proportion is Malay (59.2%), followed

by Bumiputera (Sabah and Sarawak) (22.6%), Indian and Others (9.5%), and Chinese (8.8%). The majority of respondents are well-educated, possessing at least a secondary (59.0%) or tertiary level of education (16.6%). About nine out of ten respondents had a spouse. In terms of living arrangements, about 80% lived with their parents. Slightly more than half of the respondents are currently working, followed by homemakers (30.5%), retired (11.7%), and not working due to labor market reasons (4.7%). Sixty percent of the respondents reported having good health, while only 7.7% had poor health. Almost one-quarter of the respondents (24%) had no income, while 16% earned more than RM 3,000. About one out of five respondents received financial assistance from the government. Those who took care of their grandchildren account for 16.4% of the sample, while 18.3% helped their children with household chores (Table 2).

Overall, there is an upstream flow of financial transfers. More respondents were observed to be receiving financial support from their children (48.1%), than providing it (41.4%). The median amount received by the respondents from their children is RM 283 monthly. Meanwhile, respondents reported giving lower financial support to their children with a median of RM 252/month.

The proportion of respondents giving financial support to their parents is 20.7%, substantially higher than the amount transferred in the opposite direction (2.1%). The median monthly amount given to parents is RM 100, whereas the median amount received from parents is RM 50 (Table 3).

3.2. Bivariate analysis

3.2.1. Giving and receiving financial transfers

Tables 4 and 5 compare the distribution of respondents, whether they gave or received financial transfers from four different situations, *that is*, none, children only, parents only, or both.

The proportion of those who did not provide any financial support to their children or parents is found to be prevalent among respondents who are males, older, Chinese, had a lower level of education, had no spouse, currently not working, earned lower income, and had poorer health. Meanwhile, the percentage of respondents who provided financial transfers only to their children was observed to be higher among those who are female, younger, Malay, Bumiputera (Sabah and Sarawak), had a

Table 1. Distribution of respondents with living children

Variables	<i>n</i>	Percentage
Age		
40 – 49 years	1,276	24.6
50 – 59 years	1,699	32.8
60 – 69 years	1,339	27.0
70 – 79 years	666	12.8
80 years and above	147	2.8
Gender		
Male	2,956	57.0
Female	2,232	43.0
Ethnic groups		
Malay	2,964	57.1
Chinese	524	10.1
Indian & Others	544	10.5
Bumiputera (Sabah and Sarawak)	1,156	22.3
Education level		
No schooling	675	13.0
Primary	1,503	29.0
Lower secondary	1,079	20.8
Upper secondary	1,331	25.7
Tertiary	1,600	11.6
Marital status		
With spouse	4,213	81.2
Without spouse	975	18.8
Living with children		
No	1,115	22.7
Yes	3,854	77.6
Current employment status		
Not working due to labor market reasons	235	4.5
Retired	1,004	19.4
Homemaker	1,962	38.0
Currently working	1,968	38.1
Self-reported health status		
Poor	612	11.8
Moderate	1,956	37.8
Good	2,612	50.4
Number of living children		
1 – 3 children	2,262	43.6
4 – 6 children	2,276	43.9
7 – 9 children	531	10.2
More than 10 children	119	2.3
Income class		
No income	1,449	28.0
Less than RM 1,000	1,485	28.7

(Cont'd...)

Table 1. (Continued)

Variables	<i>n</i>	Percentage
RM 1,001 – RM 1,999	1,167	22.6
RM 2,000 – RM 2,999	483	9.3
More than RM 3,000	583	11.3
Received government financial assistance		
No	4,345	77.4
Yes	836	14.9
Taking care of grandchildren		
No	4,651	82.9
Yes	960	17.1
Helping with household chores		
No	4,504	80.3
Yes	1,107	19.7

higher education level, had a spouse, currently working, earning a higher income, in better health status, as well as received financial assistance from the government. Similarly, those providing financial support to both of their children and parents is higher among respondents who are younger, Malay, with tertiary education, had a spouse, had more living parents, currently working, received higher income, are healthier, not receiving government financial assistance, took care of their grandchildren and helped their children with household chores.

In the opposite direction, the proportion of respondents who did not receive any financial transfers from their children or parents is higher among respondents who are males, younger, Bumiputera (Sabah and Sarawak), had a higher level of education and income, had a spouse, had more living parents, are currently working, healthier, as well as those who had received financial assistance from the government. However, the percentage of respondents who received financial support from children only is prevalent among respondents who are female, older, Malay, had a lower level of education and income, had a spouse, had more children, had retired, had poorer health status, and did not receive any financial assistance from the government. On the other hand, those who reported having received financial transfers from both children and parents are observed to be higher among respondents who are female, younger, Malay, and had a spouse.

3.3. Multiple regression analysis

3.3.1. Financial transfers between respondents and children

All variables were found to be statistically significant in determining the total amount of financial transfers given

Table 2. Distribution of respondents with living parents

Variables	<i>n</i>	Percentage
Age		
40 – 49 years	1,228	46.9
50 – 59 years	1,012	38.6
60 – 69 years	338	12.9
70 – 79 years	39	1.5
80 years and above	2	0.1
Gender		
Male	1,505	57.5
Female	1,114	42.5
Ethnic groups		
Malay	1,550	59.2
Chinese	230	8.8
Indian& others	248	9.5
Bumiputera (Sabah and Sarawak)	591	22.6
Education level		
No schooling	137	5.2
Primary	502	19.2
Lower secondary	622	23.7
Upper secondary	924	35.3
Tertiary	434	16.6
Marital status		
With spouse	342	13.1
Without spouse	2,277	86.9
Living with parents		
No	554	22.0
Yes	1,960	78.0
Currently employment status		
Not working due to labor market reasons	122	4.7
Retired	305	11.7
Homemaker	797	30.5
Currently working	1,388	53.1
Current health status		
Poor	200	7.7
Moderate	842	32.2
Good	1,572	60.1
Number of living parents		
1 parent	1,424	54.5
2 parents	773	29.6
3 parents	333	12.7
4 parents	84	3.2
Income class		
No income	617	23.6
Less than RM 1,000	651	24.9

(Cont'd...)

Table 2. (Continued)

Variables	<i>n</i>	Percentage
RM 1,001 – RM 1,999	651	24.9
RM 2,000 – RM 2,999	283	10.8
More than RM 3,000	412	15.8
Received government financial assistance		
No	2,077	79.5
Yes	537	20.5
Taking care of grandchildren		
No	2,029	83.6
Yes	399	16.4
Helping with household chores		
No	1,983	81.7
Yes	445	18.3

Table 3. Description of transfers

	Respondents with children	
	Percentage	Median monthly amount (RM)*
Financial transfers to children	41.4	252
Financial transfers from children	48.1	283
	Respondents with parents	
	Percentage	Median monthly amount (RM)*
Financial transfers to parents	20.7	100
Financial transfers from parents	2.1	50

Note: *1 Malaysian ringgit=0.21 U.S. dollar (as of September 18, 2023).

to children, except for marital status, living arrangement, health status, and government financial assistance (Table 6). Meanwhile, in the opposite direction, the variables that are not statistically significant are gender, marital status, and living arrangement (Table 7).

Older respondents were observed to give a lesser amount of financial support to their children, compared to younger respondents. For example, respondents aged more than 70 years gave 48.1% lesser financial transfers amount to their children, compared to respondents aged 40 – 49 years. In contrast, the amount that older respondents (aged 60 – 69 years) received from their children increased by 13.9% compared to younger respondents.

Female respondents were found to give 12.9% lesser financial support amount to their children, compared to male respondents. However, they were also found to receive 1.3% lesser financial support amount from their children compared to male respondents, though it is not statistically significant.

Table 4. Bivariate analysis (giving financial transfers)

Variables	Given to (%)				χ^2
	None	Children only	Parents only	Both	
Gender					7.927 ^b
Male	54.6	37.2	2.2	6.0	
Female	50.9	40.9	2.1	6.1	
Age groups					730.309 ^c
40 – 49 years old	31.0	52.6	3.0	13.4	
50 – 59 years old	42.6	49.1	2.8	5.4	
60 – 69 years old	70.2	26.1	1.4	2.3	
70 years old and above	79.8	17.4	0.6	2.2	
Ethnic groups					250.492 ^c
Malay	47.1	41.5	2.7	8.7	
Chinese	70.1	23.0	3.3	3.6	
Indian & Others	60.9	30.1	2.6	6.4	
Bumiputera (Sabah and Sarawak)	56.8	43.1	0.1	0.1	
Education level					651.309 ^c
No schooling	79.8	19.4	0.3	0.6	
Primary school	64.8	31.7	1.4	2.1	
Lower secondary school	50.1	43.3	1.6	4.9	
Upper secondary school	38.6	49.1	3.5	8.9	
Tertiary education	30.4	47.5	4.2	17.9	
Marital status					188.427 ^c
Without spouse	72.5	24.4	1.0	2.1	
With spouse	48.5	42.1	2.4	7.0	
Number of living children					28.760 ^c
1 – 3	54.8	36.4	2.5	6.3	
4 – 6	50.5	40.7	2.1	6.6	
7 and above	55.8	40.2	0.9	3.0	
Number of living parents					1038.991 ^c
0	70.1	29.9			
1	39.8	45.8	5.0	9.3	
2	28.0	52.4	4.7	14.8	
3	23.3	54.0	2.5	20.2	
4	25.9	45.7	3.7	24.7	
Living with children					2.486
Yes	54.2	38.5	2.2	5.1	
No	52.9	38.5	2.2	6.4	
Living with parents					1.879
Yes	53.5	38.3	2.1	6.0	
No	50.9	39.9	2.3	6.9	
Employment status					611.100 ^c
Working now	31.9	53.8	2.9	11.4	
Not working due to labor market reasons	64.7	29.4	1.7	4.3	

(Cont'd...)

Table 4. (Continued)

Variables	Given to (%)				χ^2
	None	Children only	Parents only	Both	
Retired	68.8	27.4	1.3	2.5	
Homemakers	64.6	30.7	1.9	2.8	
Monthly income					456.511 ^c
<RM 1,000	63.1	32.4	1.5	3.0	
RM 1,001 – RM 1,999	44.0	48.1	2.0	5.9	
RM 2,000 – RM 2,999	42.6	44.3	2.7	10.4	
RM 3,000 and above	28.7	47.7	5.3	18.2	
Health status					140.853 ^c
Good	46.1	42.9	3.0	8.0	
Moderate	57.7	36.3	1.4	4.6	
Poor	67.6	29.1	1.0	2.3	
Received government financial assistance					30.990 ^c
No	53.1	37.9	2.5	6.5	
Yes	52.9	43.3	0.4	3.5	
Taking care of grandchildren					2.124
No	52.8	39.0	2.2	5.9	
Yes	54.0	37.4	1.8	6.8	
Helping with household chores					6.879 ^a
No	52.9	39.2	2.2	5.7	
Yes	53.6	36.9	1.9	7.7	

Note: ^a $p < 0.10$, ^b $p < 0.05$, ^c $p < 0.01$.

Indian and Others respondents provided 16.6% more financial transfers to their children than Malay. However, other ethnic groups, Chinese and Bumiputera (Sabah and Sarawak) are not statistically significant in the analysis. Meanwhile, Chinese, Indian, and Others respondents were found to receive 63.2% and 25.3%, respectively, more financial transfers from their children.

The amount given to children was also found to be increasing with the level of education of the respondents. Against those with no schooling experience, respondents with tertiary education provided the highest financial transfers to their children (91.4%). However, respondents with a lower level of education received fewer financial transfers amount from their children. Those with no schooling experience received 58.5% lesser financial support from their children, compared to respondents with a tertiary education.

Expectedly, respondents who were working gave 11.7% more financial transfers amount to their children. On the contrary, those who have retired or as homemakers received 26.8% and 42.4%, respectively, more financial transfers from their children compared to working respondents. The amount of financial transfers given to

children also decreases as health deteriorates, although it is not statistically significant. Surprisingly, our findings revealed respondents with moderate or poor health received less financial support from their children, compared to respondents in good health.

Respondents with more than seven children gave the highest, at 27.7% more financial transfers compared to respondents who had between one to three children. Similarly, in the opposite direction, the amount of financial transfers received from children increased with the number of children.

Respondents earning higher income were observed to provide more financial support amount to their children. Respondents with an income of more than RM 3,000 gave the highest financial transfers to their children (85.8%). However, it is observed that respondents earning low income tend to receive lower financial support from their children compared to respondents with higher income. Respondents who earned less than RM 1,000 received 22.4% lesser financial transfers from their children. Respondents who received financial assistance from the government were found to receive lesser financial support from their children.

Table 5. Bivariate analysis (receiving financial transfers)

Variables	Received from (%)				χ^2
	None	Children only	Parents only	Both	
Gender					47.979 ^c
Male	50.9	48.5	0.5	0.2	
Female	42.6	55.7	0.8	1.0	
Age groups					412.188 ^c
40 – 49 years old	68.9	28.6	1.6	0.9	
50 – 59 years old	45.7	53.5	0.2	0.6	
60 – 69 years old	36.3	63.2	0.2	0.3	
70 years old and above	35.7	63.6	0.5	0.2	
Ethnic groups					42.751 ^c
Malay	44.4	54.0	0.7	0.8	
Chinese	49.6	49.4	0.8	0.2	
Indian & Others	49.7	48.6	1.1	0.6	
Bumiputera (Sabah and Sarawak)	52.4	47.6	-	-	
Education level					240.611 ^c
No schooling	40.0	59.8	0.1	-	
Primary school	37.9	61.3	0.3	0.5	
Lower secondary school	44.9	53.7	0.7	0.7	
Upper secondary school	53.3	44.8	1.0	0.8	
Tertiary education	69.9	28.8	1.2	0.2	
Marital status					83.370 ^c
Without spouse	34.5	64.7	0.4	0.4	
With spouse	50.3	48.5	0.7	0.6	
Number of living children					275.945 ^c
1 – 3	59.2	39.1	1.1	0.6	
4 – 6	40.4	58.8	0.3	0.5	
7 and above	30.1	69.1	0.2	0.6	
Number of living parents					378.440 ^c
0	39.1	60.9	-	-	
1	48.4	49.5	0.9	1.1	
2	63.3	34.7	1.0	1.0	
3	69.6	26.1	2.8	1.6	
4	77.8	16.0	4.9	1.2	
Living with children					0.759
Yes	46.9	52.2	0.5	0.4	
No	47.6	51.1	0.6	0.6	
Living with parents					5.029
Yes	47.0	51.8	0.6	0.6	
No	51.1	48.1	0.7	0.2	
Employment status					310.100 ^c
Working now	61.5	36.7	1.0	0.9	
Not working due to labor market reasons	47.2	51.1	0.9	0.9	

(Cont'd...)

Table 5. (Continued)

Variables	Received from (%)				χ^2
	None	Children only	Parents only	Both	
Retired	34.4	65.4	0	0.2	
Homemakers	39.4	59.7	0.6	0.4	
Monthly income					161.020 ^c
<RM 1,000	42.1	56.9	0.4	0.5	
RM 1,001 – RM 1,999	47.4	51.4	0.5	0.7	
RM 2,000 – RM 2,999	51.8	46.4	1.5	0.4	
RM 3,000 and above	68.8	29.6	1.2	0.3	
Health status					83.565 ^c
Good	53.2	45.4	0.8	0.7	
Moderate	41.6	57.7	0.4	0.4	
Poor	39.9	58.8	0.7	0.7	
Received government financial assistance					123.421 ^c
No	44.0	54.8	0.6	0.6	
Yes	64.5	34.7	0.8	-	
Taking care of grandchildren					1.305
No	47.4	51.4	0.6	0.6	
Yes	46.8	52.2	0.6	0.3	
Helping with household chores					3.289
No	47.8	51.0	0.6	0.5	
Yes	44.7	54.3	0.5	0.6	

Note: ^a $p < 0.10$, ^b $p < 0.05$, ^c $p < 0.01$.

3.3.2. Financial transfers between respondents and parents

All variables that determine the financial support amount given by respondents to their parents, except for age, gender, and living arrangement, are statistically significant (Table 8). Meanwhile, five independent variables were found to be significant in determining the total amount of financial transfers that the respondents received from their parents, which are age, gender, ethnicity, and marital status (Table 9).

Compared to Malay, all other races were observed to provide more financial support amount to their parents. Respondents with a higher education level had more living parents, not working due to labor market reasons, and earned a higher income also were observed to give more financial transfers to their parents. However, those with spouses who had poorer health conditions and received financial assistance from the government were observed to provide less money to their parents.

Meanwhile, older respondents and being Indian and Others enabled them to receive more financial support from their parents. However, respondents who are female

or had a spouse were observed to receive lower financial transfers from their parents.

4. Discussion

Female respondents were observed to provide lesser financial support amount to their children compared to their male counterparts. Compared to men, women in Malaysia tend to be outside of the labor force, fulfilling their roles as housewives. These women's lack of participation in the workforce restricts their financial capacity to support for their children. Unfortunately, compared to male respondents, they also received less financial support from their parents or children.

These findings are concerning because their lack of participation in the labor market hinders them from earning a regular income through paid work, which in turn prevents them from saving enough money for old age. They will therefore be more financially dependent on their children (Hamid *et al.*, 2004). Masud *et al.* (2008) have cautioned that Malaysian women are more likely to face poverty in their old age because of the possibility of inadequate financial support from their children – especially if their children have low salaries.

Table 6. Multiple regression result (financial support given to children)

Variable	Coefficient	Standard error	t-statistics
No. of observation	5,181		
F-statistics	31.410		
R-squared	0.256		
Adj. R-squared	0.248		
Age			
40 – 49 years old (reference)			
50 – 59 years old	-0.037	0.055	-0.676
60 – 69 years old	-0.489 ^c	0.075	-6.492
More than 70 years old	-0.481 ^c	0.101	-4.780
Gender			
Male (reference)			
Female	-0.129 ^c	0.050	-2.587
Ethnicity			
Malay (reference)			
Chinese	0.112	0.100	1.113
Indian & Others	0.166 ^a	0.086	1.936
Bumiputera (Sabah and Sarawak)	-0.098	0.061	-1.607
Education level			
No schooling (reference)			
Primary school	0.061	0.110	0.555
Lower secondary school	0.378 ^c	0.111	3.395
Upper secondary school	0.573 ^c	0.111	5.165
Tertiary	0.914 ^c	0.124	7.349
Marital status			
Without spouse (reference)			
With spouse	0.042	0.077	0.545
Living arrangement			
Not living with children (reference)			
Living with children	0.066	0.056	1.195
Current employment status			
Working now	0.117 ^b	0.059	1.964
Not working due to labor market reasons	0.036	0.138	0.258
Retired	-0.004	0.083	-0.050
Homemakers (reference)			
Self-reported health status			
Good health (reference)			
Moderate health	-0.080	0.051	-1.573
Poor health	-0.115	0.089	-1.293
Number of living children			
1 – 3 children (reference)			
4 – 6 children	0.246 ^c	0.051	4.835
More than 7 children	0.277 ^c	0.078	3.533

(Cont'd...)

Table 6. (Continued)

Variable	Coefficient	Standard error	t-statistics
Income group			
<RM 1,000 (reference)			
RM 1,000 – RM 1,999	0.298 ^c	0.059	5.071
RM 2,00 – RM 2,999	0.470 ^c	0.080	5.886
More than RM 3,000	0.858 ^c	0.081	10.644
Received government financial assistance			
No (reference)			
Yes	0.017	0.064	0.257
C	4.645 ^c	0.154	30.235

Note: ap<0.10, bp<0.05, cp<0.01.

Nevertheless, although female respondents might not be able to contribute financially to their children as much as the male respondents, they still provide non-financial support, such as helping with household chores, and taking care of the grandchildren. About 17% of female respondents from MARS Wave-1 reported taking care of their grandchildren.

The results also revealed that there is an upstream flow of intergenerational transfers, from the younger to the older generation, similar to a trend described by Lillard & Willis (1997). As for the motives, our findings confirm the existence of the old-age security hypothesis, whereby as the respondents get older, they are expected to receive more financial support from their children rather than providing it.

We also observed that low-income respondents are more financially dependent on their children compared to those with higher incomes, although the actual amount received is smaller. Low wages and salaries received throughout most of the working period may be the cause of this predicament, which left them unable to sustain their livelihood on their own. Eventually, this forces them into a position where they must rely on their children for financial support. This puts a burden on the working-age population and is further exacerbated if the children are unable to secure better jobs that can provide them with better salaries and benefits than their parents, thus catapulting them into financial insecurity or worse, trapping them in an endless poverty cycle.

Our findings also showed that respondents who received government assistance were found to be getting fewer financial transfers from their children. This demonstrates how the government's financial assistance plays a crucial role in easing the financial burden that the younger generation has in providing for their parents.

On a positive note, the findings are in line with altruistic behavior, in which respondents having a higher level of education and income were observed to provide more financial support to their parents or children. The results also validate the parental repayment hypothesis, which postulates that parents' earlier investments in human capital were repaid in proportion to the respondents' income and educational attainment. This is supported by the fact that the investment in higher education within Malaysian households has been increasing over the decades. The proportion of the Malaysian labor force having a tertiary education has been increasing over the last several decades. Only 6.1% of the Malaysian labor force had a tertiary education in 1982, compared to around 31.8% in 2021 (DOSM, 2021).

Bumiputera (Sabah and Sarawak) respondents were found to give more financial support amount to their parents than Malay respondents, following a similar pattern to Chinese and Indian and Others respondents. Earlier, we proposed Bumiputera (Sabah and Sarawak) will provide lesser financial support amount to their parents, considering they have lower income in general. Although the pattern in providing financial support to parents for Bumiputera (Sabah and Sarawak) is similar to Chinese, Indian, and others, the motives behind these transfers can be varied.

Chinese and Indian and Others respondents can provide more financial transfers to their parents since their average household income is higher than Malay. Therefore, they can provide more money to their parents, despite their parents might not be too financially dependent on them. On the other hand, Bumiputera (Sabah and Sarawak) respondents may need to provide their parents with greater financial support because their parents are reliant on them. This is supported by the fact that across states in Malaysia, Sabah has the highest incidence of absolute poverty, while

Table 7. Multiple regression result (financial support received from children)

Variable	Coefficient	Standard error	t-statistics
No. of observation	5,181		
F-statistics	10.765		
R-squared	0.088		
Adj. R-squared	0.080		
Age			
40 – 49 years old (reference)			
50 – 59 years old	0.090	0.076	1.191
60 – 69 years old	0.139 ^a	0.080	1.739
More than 70 years old	0.100	0.090	1.102
Gender			
Male (reference)			
Female	-0.013	0.052	-0.252
Ethnicity			
Malay (reference)			
Chinese	0.632 ^c	0.085	7.428
Indian & Others	0.253 ^c	0.083	3.053
Bumiputera (Sabah and Sarawak)	-0.057	0.065	-0.882
Education level			
No schooling	-0.585 ^c	0.126	-4.638
Primary school	-0.369 ^c	0.113	-3.261
Lower secondary school	-0.190 ^a	0.115	-1.656
Upper secondary school	-0.257 ^c	0.112	-2.304
Tertiary (reference)			
Marital status			
Without spouse (reference)			
With spouse	-0.022	0.061	-0.354
Living arrangement			
Not living with children (reference)			
Living with children	0.056	0.056	1.002
Current employment status			
Working (reference)			
Not working due to labor market reasons	0.094	0.125	0.749
Retired	0.268 ^c	0.071	3.760
Homemaker	0.424 ^c	0.063	6.724
Current health status			
Good health (reference)			
Moderate health	-0.138 ^c	0.052	-2.671
Poor health	-0.112	0.076	-1.478
Number of living children			
1 – 3 children (reference)			
4 – 6 children	0.137 ^b	0.054	2.534
More than 7 children	0.322 ^c	0.075	4.379

(Cont'd...)

Table 7. (Continued)

Variable	Coefficient	Standard error	t-statistics
Income group			
Less than RM 1,000	-0.224 ^c	0.106	-2.115
RM 1,000 – RM 1,999	-0.020	0.110	-0.184
RM 2,000 – RM 2,999	0.213	0.125	1.710
More than RM 3,000 (reference)			
Received government financial assistance			
No (reference)			
Yes	-0.548 ^a	0.081	-6.802
C	5.423 ^c	0.160	33.798

Note: ^a $p < 0.10$, ^b $p < 0.05$, ^c $p < 0.01$.

Sarawak has the third highest (DOSM, 2019). A study by Mohd *et al.* (2018) also found there is a high probability of poverty among older persons in Sabah, as compared to other states.

Our findings also revealed that those with worse health conditions are unable to provide financial support to their parents. Since they might not be able to work and have an inconsistent income flow, respondents with poor health will find it difficult to provide for their children. Unfortunately, they were also observed to receive lower financial support from their children, compared to respondents with better health status. These results highlighted the issue of financial security for those with poor health conditions, considering they may need more money for medical equipment purchases or treatment expenses. The lack of financial support may put higher financial stress on them.

As mentioned earlier, children were often perceived as a provider of financial security for parents during old age, particularly in developing countries. Thus, having a higher number of children is sometimes preferred compared to having fewer children. Our findings are consistent with Logan & Bian (2003), who found that the number of children is positively related to the amount of support received by older parents in China.

4.1. Policy recommendations

Despite that the act of giving financial support to the family can be viewed as a selfless act, it raises huge concerns about the financial security of older persons in the future, considering Malaysia's average family size is expected to decline. Going forward, Malaysia should strive to improve the social protection system, by adopting the life-cycle approach and extending the coverage of social insurance, particularly for women and informal workers.

Policymakers may consider introducing a universal social pension that provides a minimum monthly income to senior citizens in Malaysia, instead of giving ad-hoc cash transfers which are implemented under a framework reportedly fraught with inclusion and exclusion errors. The implementation of a public pension program may help to supplement older persons with basic income to mitigate their lack of retirement savings. The provision of a minimum income for older persons in Malaysia will reduce their risk of falling into old-age poverty, as well as their dependency on the working-age population. Universal social pension programs have already been introduced in neighboring countries such as Thailand and Vietnam.

The government also needs to work together with the Employees Provident Fund (EPF) and employers to figure out the best approach to strengthen retirement savings for workers in the private sector. Any formal programs run by the government should fortify the family network and encourage more familial support toward older persons, rather than crowding it out, to preserve a strong filial piety culture among Malaysians. For example, Singapore introduced priority housing schemes and tax incentives for adult children who live with their older parents (Chan, 2005).

Human capital expenditure financed by parents plays a critical role in shaping the outcome of their children. Thus, establishing a strong social safety net is essential for easing the working-age population's financial burden for supporting their parents. It will also facilitate younger parents to allocate more financial resources for their children's development, instead of having to financially support their parents. This will ultimately bring greater benefits to the country in the future.

Table 8. Multiple regression result (financial support given to parents)

Variable	Coefficient	Standard error	t-statistics
No. of observation	1,160		
F-statistics	18.046		
R-squared	0.29		
Adj. R-squared	0.276		
Age			
40 – 49 years old (reference)			
50 – 59 years old	-0.078	0.083	-0.940
60 – 69 years old	-0.010	0.120	-0.083
More than 70 years old	-0.024	0.163	0.145
Gender			
Male (reference)			
Female	-0.089	0.073	-1.211
Ethnicity			
Malay (reference)			
Chinese	0.500 ^c	0.132	3.798
Indian & Others	0.323 ^c	0.125	2.572
Bumiputera (Sabah and Sarawak)	0.260 ^c	0.093	2.802
Education level			
No schooling (reference)			
Primary school	-0.063	0.234	-0.272
Lower secondary school	0.149	0.230	0.649
Upper secondary school	0.269	0.227	1.183
Tertiary	0.657 ^c	0.241	2.726
Marital status			
Without spouse (reference)			
With spouse	-0.414 ^c	0.116	-3.565
Living arrangement			
Not living with parents (reference)			
Living with parents	-0.011	0.111	-0.096
Current employment status			
Working	0.106	0.096	1.101
Not working due to labor market reasons	0.433 ^b	0.205	2.115
Retired	0.151	0.145	1.047
Homemaker (reference)			
Current health status			
Good health (reference)			
Moderate health	-0.201 ^c	0.080	-2.494
Poor health	-0.547 ^c	0.163	-3.367
Number of living parents			
1 living parent (reference)			
2 living parents	0.320 ^c	0.081	3.945
3 living parents	0.400 ^c	0.107	3.718
4 living parents	0.452 ^b	0.185	2.450

(Cont'd...)

Table 8. (Continued)

Variable	Coefficient	Standard error	t-statistics
Income group			
<RM 1,000 (reference)			
RM 1,000 – RM 1,999	0.217 ^b	0.095	2.285
RM 2,000 – RM 2,999	0.765 ^c	0.115	6.625
More than RM 3,000	1.011 ^c	0.116	8.691
Received government financial assistance			
No (reference)			
Yes	-0.342 ^c	0.101	-3.376
C	4.058 ^c	0.262	15.510

Note: ^a $p < 0.10$, ^b $p < 0.05$, ^c $p < 0.01$.

Table 9. Multiple regression result (financial support received from parents)

No. of observation	117		
F-statistics	1.191		
R-squared	0.259		
Adj. R-squared	0.042		
Variable	Coefficient	Standard error	t-statistics
Age			
40 – 49 years old (reference)			
50 – 59 years old	-0.208	0.419	-0.497
60 – 69 years old	0.574	0.556	1.032
More than 70 years old	1.200 ^a	0.687	1.749
Gender			
Male (reference)			
Female	-0.797 ^b	0.377	-2.111
Ethnicity			
Malay (reference)			
Chinese	0.787	0.652	1.206
Indian & Others	0.912 ^a	0.547	1.666
Bumiputera (Sabah and Sarawak)	0.429	0.625	0.687
Education level			
No schooling	0.016	1.021	0.015
Primary school	-0.664	0.644	-1.031
Lower secondary school	0.183	0.623	0.294
Upper secondary school	0.292	0.599	0.488
Tertiary (reference)			
Marital status			
Without spouse (reference)			
With spouse	-0.713 ^a	0.414	-1.724
Living arrangement			
Not living with parents (reference)			
Living with parents	-0.174	0.617	-0.282

(Cont'd...)

Table 9. (Continued)

Variable	Coefficient	Standard error	t-statistics
Current employment status			
Working (reference)			
Not working due to labor market reasons	-0.168	0.603	-0.278
Retired	-0.002	0.696	-0.003
Homemaker	0.507	0.412	1.229
Current health status			
Good health (reference)			
Moderate health	0.223	0.392	0.569
Poor health	1.037	0.647	1.604
Number of living parents			
1 living parent (reference)			
2 living parents	0.474	0.459	1.033
3 living parents	0.813	0.491	1.654
4 living parents	0.334	0.735	0.455
Income group			
Less than RM 1,000	-0.643	0.701	-0.916
RM 1,000 – RM 1,999	-0.458	0.725	-0.632
RM 2,000 – RM 2,999	-0.577	0.751	-0.768
More than RM 3,000 (reference)			
Received government financial assistance			
No (reference)			
Yes	-0.080	0.416	-0.192
C	4.449 ^c	0.837	5.317

Note: ^a $p < 0.10$, ^b $p < 0.05$, ^c $p < 0.01$.

5. Conclusions

The present study investigates the factors associated with the amount of intergenerational transfers, particularly financial transfers, made between Malaysian older adults with their children or parents. Altogether, our findings revealed there is an upstream transfer from younger to older generations. Based on the multiple regression analysis, all variables, except for the living arrangement, are revealed to be statistically significant in determining the amount of financial transfers between respondents and their children, or parents.

This study is not without limitations. The multiple regression analysis excluded non-financial intergenerational transfers such as providing food or clothing, looking after grandchildren, and assisting parents in daily activities. The inclusion of these variables in future research will allow for a more extensive analysis of this issue, particularly in explaining the exchange motive for services provided by the parents.

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Conflict of interest

The authors declare that they have no competing interest.

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Ethics approval and consent to participate

The study protocol was approved by the institutional ethics review board of Universiti Malaya (Reference Number: UM.TNC2/UMREC-341). Written informed consent was obtained from study participants.

Consent for publication

Both verbal and written consent were obtained from the respondents before the survey interview to publish their data in this study in aggregate form only.

Availability of data

Data from MARS can be obtained from <https://swrc.um.edu.my/mars-data>.

Further disclosure

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