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Listen to Your Wife When It Comes to Saving Decision: Women's Bargaining Power and Household's Saving Outcome in Indonesia

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Abstract
Despite many advantages of women's higher role in literature, GoI seems to lack commitment in addressing women empowerment issues as their priority agenda. Having more empowered women in our society becomes more salient as several studies suggest that it will lead to better financial outcomes such as saving in the household. In the era of the COVID-19 pandemic, where one could lose their source of income easily due to social restriction, having a society with a higher saving level is essential. By exploiting three waves (2000, 2007, 2014) of Indonesian Family Life Survey (IFLS) data and employing Fixed-Effect panel data analysis, this study found that a limited increase in the role of a wife in the household's financial decision-making process will lead to a higher level of saving outcome, thus provide more resilience society toward the pandemic situation.

JEL Classification: D13; D14; J16; C70

Keywords
household savings — women's bargaining power — intra-household decision-making — COVID-19 — Indonesia

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1. Introduction

Despite growing literature that provides evidence regarding the benefit of having more empowered women in society as shown by many positive associations between women's bargaining power with various outcomes, gender equality and women empowerment have yet to receive adequate attention from many governments of developing countries such as Indonesia. The Indonesian government's lack of commitment in empowering women is reflected in the value of the budget allocated to the Ministry Of Women Empowerment and Child Protection.

In 2020, the total budget allocated for the Ministry of Women Empowerment and Child Protection (MoWECP) and the total budget allocated for gender equality and women empowerment programs only contributed to 0.03% and 0.01% of total GoI's budget, respectively. This number is significantly small compared to Spain or Korea with around 6–7% of the budget allocated towards gender-responsive policies[1]. Furthermore, there is also a downward trend during the past five years, that may indicate women empowerment and gender equality have become a less critical issue to address in GoI's perspective. Although one may argue that there are other gender-responsive programs mainstreamed outside MoWECP, still the consistent downward trends in allocated budget for MoWECP itself are a strong indication that gender issue has become less prioritized in Indonesia.

Based on the existing literature, the higher role of women in the family not only has a positive effect on the development outcomes such as a child's health or educational outcomes but also on the level of household saving, which the latter becomes more relevant in this pandemic era.

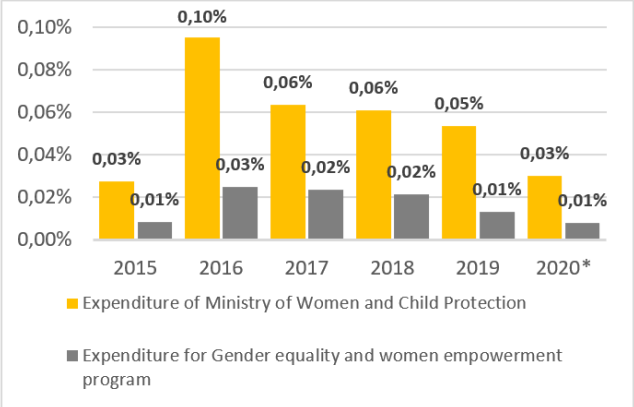

Figure 1. Budget Realization and Allocation Toward Gender Responsive Policies in Indonesia
Source: *Nota Keuangan* (2020). *2015-2019 data is realization of expenditure while 2020 is allocated budget

As widely known, the Pandemic of COVID-19 has caused many countries introduced lockdown or social restriction policies to stop the spread of the virus. However, from an economic point of view, such policies will cause many economic activities to be ceased. As a result, many families will lose their source income during the implementation of such social restriction. While families in developed countries will be able to claim unemployment benefits and survive through the pandemic with little worries, families in developing countries have to survive on their own. This is because most developing countries, like Indonesia, have yet to possess adequate systems and resources in terms of unemployment compensation due to the government's limited

[1] Gender budgeting in OECD countries (2017)

budget.

As a result, those families in which their income are affected by the pandemic will have to rely on their own saving to pay for their daily needs until the government relaxes the lockdown or social restriction measures. This is an unpleasant situation, especially for those families who work in the informal sector and often are near-poor families. For these households, losing their income during the lockdown period means falling into poor categories. Families who were already poor initially will most likely experience even more deprived quality of life.

According to the National Bureau of Statistic (BPS) Republic of Indonesia, in March 2020 (less than a month after the first case of COVID-19 is reported in Indonesia), the number of poor people in Indonesia has climbed by 1.63 million people, or 0.56% compared to September 2019. This number underlines how vulnerable people in developing countries, such as Indonesia, to fall into poverty when they lose their source of income, even though only for a short time period. Therefore, it is crucial to shape a society with better saving behavior for developing countries, such as Indonesia, to survive should another pandemic arises.

Existing literature has shown that women in developing countries are wiser when it comes to a financial decision. For example, many studies discussing rotating savings and credit associations (roscas) show that wives in developing countries use roscas to protect family savings against claims by their husbands for immediate and unimportant consumption (Anderson & Baland, 2002). In Ghana, Afoakwah et al. (2015) found that an increase in women's bargaining power engenders a corresponding increase in the probability of ownership of savings account and amount saved. Meanwhile, by using aggregates data, Seguino & Floro (2003) found as some measures of women's relative income and bargaining power increase, the gross domestic saving rates also rise.

This study will investigate whether higher women's bargaining power in Indonesia's families will also affect household savings by exploiting three waves (2000, 2007, 2014) of the Indonesian Family Life Survey (IFLS) data. The implication of this study is essential. If our hypothesis is correct, this study would be a basis to urge GoI to pay more attention to women empowerment issues by promoting more programs that will increase women's bargaining power. This will shape a society with better saving behavior, which means high resilient in facing another pandemic in the long future.

2. Literature Review

2.1 Intra-Household decision-making process

Traditional models of the intra-household decision-making process or a "unitary model" assume that household members behave as a single entity and thus maximize a single utility function. This model implies that all family resources are pooled and then allocated to maximize a single objective function. However, this model suffers from at least two issues. Firstly, the standard utility theory is applied to the individual rather than the household. Secondly, this conservative model implies an "income pooling" that is widely rejected by other researchers. The implication of "income pooling" is that the source of income (husband or wife) should not have any effect on allocation (Browning & Chiappori, 1998). In contrast, non-unitary models of the household relax this assumption and allow for differential effects.

To allow different views between spouses, this study utilizes a non-unitary model of a collective household setting from Browning & Chiappori (1998) where two individuals collectively decide the consumption of n-vector q that represent a bundle of goods and price vector p by maximizing both their utility function. It is also possible that one good could be used simultaneously by two parties. Therefore, we have:

$$\boldsymbol{q^m} + \boldsymbol{q^f} + \boldsymbol{Q} = \boldsymbol{q} \tag{1}$$

Where $\boldsymbol{q^m}$ and $\boldsymbol{q^f}$ are a vector of private consumption purchased by husband and wife, respectively. $\boldsymbol{Q}$ is joined consumption of husband and wife. Therefore $\boldsymbol{q}$ represents $\boldsymbol{a}$ vector of total household consumption. The household's budget constraint can be written as follows:

$$\boldsymbol{p'}(\boldsymbol{q^m} + \boldsymbol{q^f} + \boldsymbol{Q}) = \boldsymbol{p'q} = \boldsymbol{x} \tag{2}$$

Where x denotes the total income of the household. Household then aims to maximize the following utility function:

$$\max_{q^m, q^f, Q} \lambda . u^m(\boldsymbol{q^m} + \boldsymbol{q^f} + \boldsymbol{Q}) + (1-\lambda) u^f(\boldsymbol{q^m} + \boldsymbol{q^f} + \boldsymbol{Q}) \tag{3}$$

Subject to household's budget constraint

$$\boldsymbol{p'}(\boldsymbol{q^m} + \boldsymbol{q^f} + \boldsymbol{Q}) = \boldsymbol{x} \tag{4}$$

Where λ indicates the degree of bargaining power held by a male member of the household.

Note that in this study we assume that household decisions are decided by only two parties: the household head and the spouse.

2.2 Women's Bargaining Power and Its Impact on the Household

Women's bargaining power in the family and its implication has been a growing topic in the last few decades. Many existing studies suggest that women's higher bargaining power in the family will lead to better results in terms of resource allocation. Various research has used numerous outcomes to measure the positive impact of having higher women's bargaining power in the family, such as health, education, and financial outcomes.

Quisumbing & Maluccio (2003) find that higher women's bargaining power is associated with higher education expenditure for family offspring in Bangladesh and African countries. A similar result was found in rural Senegal where Lépine & Strobl (2013) found that if a mother has more bargaining power, her children will have a better nutritional status. Meanwhile, Duflo (2012) argues that in the households where the wife earns more may be more progressive and therefore invest more in the well-being of their children (Duflo, 2012). This result may be due to the common perception that women care more about their children than men do (Doss, 2013).

The list of empirical evidence regarding how women are better in managing financial resources goes on. Khandker (2005) found that a loan borrowed by a woman would lead to a higher non-food and food expenditure of their families compared to the loan disbursed to men. Meanwhile, in his experimental study in the Philippines, Ashraf (2009) found that most male respondents of his survey imply that their wife is better at managing their money than them.

In terms of saving outcome, using panel data for a set of semi-industrialized economies, Seguino & Floro (2003) found an indication that as some measures of women's relative income and bargaining power increase, then the gross domestic saving rates also rise. Meanwhile, using household-level data, Afoakwah et al. (2015) found that an increase in women's bargaining power in Ghana engenders a corresponding increase in the probability of ownership of savings account and amount saved.

2.3 Women's Bargaining Power: Indonesian Context

The pattern of growing research interest related to women's bargaining power also happened in Indonesia. However, such research is still limited and relatively focused on child and or health-related outcomes. Beegle et al. (2001) examines the nexus between women's bargaining power and the use of prenatal and delivery care, where he found a positive relationship between them. On the other hand, Varanasi (2009) showed that higher women's bargaining power negatively impacts the total number of births within the family. Meanwhile, a study conducted by Deijl (2015) suggested that women's higher bargaining power leads to a positive and significant effect on the child's health, but not on child education.

Unlike other studies that mainly focused on child or health-related outcomes, Pangaribowo et al. (2019) focus their study in assessing how higher women's bargaining power effect family consumption pattern. Their study suggests a negative effect on adult goods expenditure (e.g. tobacco and alcohol) and a positive and substantial effect on richer nutrients (e.g. meat and dairy milk).

2.4 Women's Bargaining Power: Measurement Issues

Despite growing literature that has been mentioned before, measuring women's bargaining power is not an easy task. According to Doss (2003), bargaining power is anything that allows a particular individual to influence household decisions. However, in nature, bargaining power is unobservable. Because of that, many researchers often use indirect measurement(s) or instrument(s) to be a proxy of bargaining power. Doss (2003,2013) provide a thorough discussion of each common variable.

The first and perhaps the most logical variable to measure an individual's bargaining power within a household is his/her earned income (Hoddinott & Haddad, 1995) or unearned income (Thomas, 1990; Schultz, 1990). However, income is usually endogenous and maybe a result of the bargaining process itself as a woman with low bargaining power will less likely have the luxury to decide whether she will join the labor force or not. Although it seems less endogenous, unearned income is also often related to the past saving behavior or labor decisions, which may also depend on the level of the bargaining power itself.

Similar with income, the possession and control over assets may determine the level of bargaining power of an individual within households, which many previous studies use, such as Beegle et al. (2001) and Pangaribowo et al. (2019). However, similar to income, using possession of current assets may also suffer from an endogeneity issue since the ability to acquire assets may reflect the bargaining power itself. To address this issue, some researchers use assets brought to the marriage to measure bargaining power rather than current assets. However, such a variable is time-invariant and thus won't perform well in capturing the change in bargaining power within a household over time. On top of that, for the Indonesian context with such diverse culture and ethnicity, women's ability to retain ownership over the assets she brought to the marriage varies across each culture.

Another measure that could measure bargaining power is education level (Afoakwah et al., 2015). First, higher education affects woman's outside options, such as potential earned income. Second, it is expected that more educated women will consume different basket of goods compared to the less educated women. Nevertheless, similar to asset possession and income, the education level obtained after marriage could also be the product of the bargaining power itself. Meanwhile using level of education prior to marriage will suffer from the caveat of using a time-invariant variable.

As an alternative from using several indirect measurements mentioned above, few researchers started to construct direct measurement of bargaining power within the household, such as Majlesi (2016) and Deijl (2015). Both studies developed an index measuring the women's bargaining power from a set of questions asking who makes the household decisions with various categories of decisions. This study will also follow the same strategy as Majlesi (2016) and Deijl (2015) by constructing a direct measure of women's bargaining power in the household.

3. Data & Methodology

3.1 Data

To investigate how women's financial bargaining power affects household saving outcomes, panel data from three waves (2000, 2007, 2014) of the Indonesian Family Life Survey (IFLS) were exploited. The sample represents about 83% of the Indonesian population and contains over 30.000 individuals living in 13 of the 30 provinces in the country[2]. A visual representation of the IFLS provinces can be found in Figure 2.

3.1.1 Measurement of bargaining power

To measure women's bargaining power inside household, this study exploits Book 3A section PK of IFLS data. It comprises 17 categories of decisions and who decide each category. Decisions could be made solely by one party or jointly made. The detailed list of questions could be seen in Annex 1. several direct measurements representing wife bargaining power is used, (i) a dummy variable to indicate whether a wife is involved in saving decision of the

[2] rand.org

Figure 2. Visual Map of 13 IFLS Provinces in Indonesia
Source: rand.org

household, (ii) more restrictive dummy variable indicating whether a wife is the sole decision-maker of household saving, and (iii) a broader measure which is the percentage of financial categories in which a wife is involved as a decision-maker.

As mentioned before, our dataset is built from IFLS wave 2000, 2007, and 2014. The descriptive statistic of our dataset is provided in Table 1. Our sample seems to follow a regular pattern of households in developing countries in terms of demographic aspects. The average size of our household sample is 4.21, where the size of the household seems to be larger as the families become less prosperous. Similarly, differences in age between spouses also have a decreasing pattern as the family becomes more prosperous, although the differences are not substantial.

As for educational background, majority of the respondents have senior high school as their highest educational level, with 33% of husbands and 28% of wives. It is worth to be noted that husbands seem to be more educated than wives. There is a 22% proportion of a husband with a university level of education, while only 17% of the wife. Meanwhile, the wives have a higher proportion of lower educational backgrounds, such as elementary or junior secondary levels. This educational pattern seems to be consistent regardless of the household level of income.

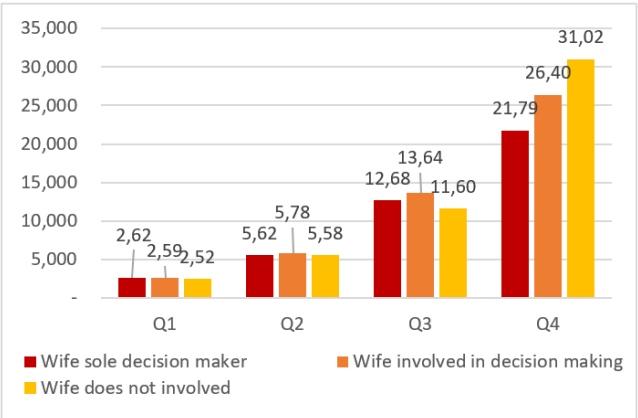

Figure 3. Shift in Pattern of Saving Outcome Across Income Level Group

In terms of saving outcomes, there is an interesting pattern that worth to be discussed. In the overall sample, the saving level reaches the highest when there is a bargaining process between wife and husband when making the saving decision, followed by if the wife is the sole decision-maker and reaches the lowest level if the husband made the saving decision independently. However, the pattern differs if the sample is being disaggregated. For low-income households (q1), the wife's higher authority in terms of saving decisions means a higher level of saving. In contrast, for high-income households (q4), the higher power of the wife in saving decisions resulted in a smaller saving level. Meanwhile for middle-income households (Q2 and Q3,) the maximum level of saving is achieved when there is a bargaining process between husband and wife. This pattern indicates that women are less likely to perform saving and become more consumptive as their welfare level goes up.

3.2 Methodology

To start our analysis, we estimate the model that explores the relationship between the household saving outcome and the level of wife's bargaining power in the family, as shown in equation 3.1.

$$saving_{it} = \alpha_0 wife_{it} + \alpha_1 exp_{it} + \beta_0 X_{it} + \beta_1 Z_{it} + \varepsilon_{it} \quad (5)$$

$saving_{ih}$ is a total saving of household i in period t in natural logarithmic form. $wife_{it}$ is the level of bargaining power proxied by three types of measurement that we have describes in the previous section. exp_{it} is the level of household expenditure expressed in logarithmic form. X_{it} is a vector of individual characteristics of wife and or husband, such as education level or religion, and Z_h is a vector of household h characteristics that remain constant within certain households, such as households' size or historical record regarding chronicle disease among family members. Finally, ε_{it} is a random, idiosyncratic error term.

Separate regression of each sub-sample based on the level of household expenditure will also be performed to investigate whether there is a distinct pattern among the prosperous and the less prosperous households as indicated in the descriptive statistic. To address the endogeneity is-

Table 1. Summary Statistic

Variables	Entire Sample		Q1	Q2	Q3	Q4
	mean	stdev	mean	mean	mean	mean
Household size	4.21	1.69	4.68	4.25	4.02	3.69
Per Capita Expenditure (IDR mio)	0.86	0.86	0.21	0.53	0.98	2.18
Household saving (IDR mio)	10.98	42.60	2.59	5.74	13.10	27.9
wife as a sole decision-maker	11.05	40.03	2.62	5.62	12.68	21.79
wife involves in dec. making	11.88	43.98	2.59	5.78	13.64	26.40
wife does not involve	9.45	39.94	2.52	5.58	11.60	31.02
Age of Household's Head	42.81	20.24	44.33	42.75	42.29	42.61
Age of Wife	38.01	20.00	38.72	37.99	37.93	38.59
Wife saving power 1	0.64	0.48	0.53	0.64	0.70	0.72
Wife saving power 2	0.20	0.40	0.14	0.18	0.25	0.26
wife financial power	0.27	0.22	0.67	0.73	0.76	0.76
Proportion of Head of HH with Elementary School as Highest Education	0.27	0.45	0.42	0.28	0.20	0.12
Proportion of wife with Elementary School as Highest Education	0.28	0.45	0.41	0.29	0.21	0.14
Proportion of Head of HH with Junior High School as Highest Education	0.15	0.36	0.17	0.16	0.14	0.11
Proportion of wife with Junior High School as Highest Education	0.17	0.37	0.16	0.18	0.19	0.14
Proportion of Head of HH with Senior High School as Highest Education	0.33	0.47	0.25	0.34	0.38	0.38
Proportion of wife with Senior High School as Highest Education	0.28	0.45	0.19	0.28	0.32	0.34
Proportion of Head of HH with University as Highest Education	0.22	0.41	0.10	0.19	0.26	0.39
Proportion of wife with University as Highest Education	0.17	0.37	0.05	0.13	0.21	0.34
Number of Obs	7,377	7,377	2,175	1,962	1,819	1,406

sue related to the women's bargaining power, panel data estimation with a fixed effects model will be employed. By performing a fixed effects model, time-invariant unobserved heterogeneity within the family that could influence wives' bargaining power should be eliminated, such as cultural views or other household members' inherent traits.

4. Empirical Result

We start our analysis by discussing our entire sample's estimation result based on Equation 5, as shown in Table 2 in the first column. This estimation uses a simple dummy variable to see whether the wife's involvement in saving decisions is associated with a higher saving level. Our estimation suggests that if the wive is involved in a decision-making process, it would lead to an overall increase of a 23.9% increase in household savings.

When we limit our sample, the effect of wife involvement in saving decisions seems boost for lower-middle and low-income households. This finding supports our main hypothesis that women's higher bargaining power within a family could help shape society with higher saving levels, especially for low-income households. Therefore, provide a more resilient society towards a pandemic situation where one could easily lose their source of income even though only temporary. This result could be the basis for GoI in promoting more programs that could increase women's bargaining power, such as programs that will allow women to have more access to the labor market or attain higher education since both are associated with higher bargaining power of women in Indonesian family (Rammohan & Johar, 2009).

On the other hand, for the upper-middle and high-income households, the wife's involvement becomes irrelevant to the household saving level. This result supports the pattern that arises in Figure 3, suggesting that women's saving behavior tends to fade away as they become wealthier. This result may be due to the compulsive buying behavior that is more common and occurs more frequently in women than in men (McElroy et al., 1995).

An increase in the size of the household will likely associate with lower savings as expected. Having more family members to be fed means a smaller "fiscal" capacity of the household that could be saved. However, the effect seems to be nullified for lower-income families. This result may be due to the characteristic of consumption of each group, where an additional member of low-income families would only lead to additional basic consumption while an additional member in wealthier families will have more possibilities to lead in additional secondary or tertiary consumption. Lastly, having children that ever-had chronic conditions do not seem to affect the level of saving significantly. One plausible reason is such health risk may be mitigated through another instrument such as health insurance rather than saving.

We expand our analysis by using a different measurement of wife's bargaining power in estimating equation 5. First, we use a more restrictive dummy variable indicating whether the wife is the sole decision-maker of saving decisions or not. The use of a dummy variable is to investigate the impact of the wife, who possesses full authority for saving decisions. Unfortunately, handing over full responsibility for saving decisions for women does not significantly affect the saving outcome. This result applies to both the entire sample and the sub-sample, as shown in Column 1–3 in Table 3, which indicates the importance of the exixtence of the bargaining process itself.

To explain this result, we could see the bargaining process as a check and balance procedure between parties (husband and wife) that will allow each party to prevent irresponsible consumption behavior performed by the other party. Therefore, when the wife has full authority over saving decisions, there would be a temptation of moral hazard of using resources that could be saved otherwise.

The above check and balance argument is also supported by the estimation result of an age difference between hus-

Table 2. Regression Result 1

Variables	HH Saving (ln) entire sample	HH Saving (ln) Q1&Q2	HH Saving (ln) Q3&Q4
HH Expenditure (ln)	0.981***	0.999***	0.671***
	(0.0483)	(0.126)	(0.166)
Dummy variable whether wife is involved in saving decision	0.239***	0.342*	0.164
	(0.0912)	(0.176)	(0.190)
Dummy variable whether the head of household religion is Muslim	0.618	-0.471	1.251
	(0.590)	(1.528)	(1.018)
Dummy variable whether children in the HH ever had a chronic condition	0.255	0.00603	0.457
	(0.226)	(0.420)	(0.434)
Household size (ln)	-0.524***	-0.466	-0.589**
	(0.137)	(0.304)	(0.291)
Dummy variable whether the wife has a university degree	0.222	0.38	0.673
	(0.225)	(0.488)	(0.410)
Age difference between husband and wife (%)	-2.278**	-5.456***	-8.528***
	(0.920)	(2.074)	(2.321)
Constant	0.17	0.995	5.067*
	(0.892)	(2.192)	(2.653)
Observations	4,825	2,261	2,564
Number of households	3,534	1,875	2,305
Household Fixed Effects?	Yes	Yes	Yes
DIstrict Fixed Effects?	No		

Note: Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 3. Regression Result 2

Variables	HH Saving (ln) entire sample	HH Saving (ln) Q1&Q2	HH Saving (ln) Q3&Q4	HH Saving (ln) entire sample	HH Saving (ln) Q1&Q2	HH Saving (ln) Q3&Q4
HH Expenditure (ln)	0.997***	1.033***	0.667***	0.989***	1.030***	0.689***
	(0.049)	(0.126)	(0.168)	(0.0484)	(0.126)	(0.167)
Dummy variable whether the wife is the sole decision-maker in saving decision	-0.110	-0.262	-0.0146			
	(0.110)	(0.220)	(0.208)			
Percentage of financial decision that involved wife				0.0662	-0.323	0.436
				(0.204)	(0.442)	(0.424)
Dummy variable whether the head of household religion is Muslim	0.616	-0.504	1.166	0.620	-0.485	1.304
	(0.592)	(1.532)	(1.016)	(0.592)	(1.534)	(1.022)
Dummy variable whether children in the HH ever had a chronic condition	0.220	-0.0592	0.423	0.225	-0.122	0.424
	(0.226)	(0.419)	(0.434)	(0.227)	(0.423)	(0.432)
Household size (ln)	-0.533***	-0.495	-0.593**	-0.533***	-0.484	-0.600**
Dummy variable whether head of household religion is moslem	(0.137)	(0.305)	(0.292)	(0.137)	(0.305)	(0.291)
Dummy variable whether wife has university degree	0.213	0.333	0.683*	0.218	0.378	0.679*
	(0.226)	(0.490)	(0.411)	(0.226)	(0.490)	(0.409)
Age difference between husband and wife (%)	-2.266**	-5.242**	-8.739***	-2.189**	-4.969**	-8.526***
	(0.926)	(2.076)	(2.331)	(0.923)	(2.094)	(2.316)
Constant	0.148	0.858	5.350**	0.165	1.036	4.538
	(0.898)	(2.198)	(2.652)	(0.918)	(2.211)	(2.750)
Observations	4,827	2,263	2,564	4,827	2,263	2,564
R-squared	0.287	0.227	0.180	0.286	0.225	0.184
Number of Household	3,535	1,877	2,305	3,535	1,877	2,305
Household Fixed Effects?	Yes	Yes	Yes	Yes	Yes	Yes
District Fixed Effects?	No	No	No	No	No	No

Note: Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

band and wife, which is statistically significant and has a negative relationship with saving outcome. Most cultures in Indonesia teach to respect older people; therefore, while having a considerably older spouse, one may be more reluctant and tends to hold back to prevent the action of his/her spouse even though one thinks that his/her spouse is irresponsible. Thus, it leads to an absence (or at least lower) of check and balance procedure (i.e. bargaining process) between spouses.

Lastly, we estimate Equation 5 by using a broader measure of women's bargaining power. Rather than only focused on the wife's involvement in the saving decision, in the last

measure, we calculate the percentage of the proportion of financial decisions in which the wife is involved. However, our result suggests that higher participation of women in financial decisions in a more general financial aspect does not significantly influence the saving outcome. This result perhaps suggests that giving broader responsibility and to the wife in making financial decisions will not necessarily increase household saving outcomes. However, still involving the wife in deciding savings to some extent could result in a higher saving level.

5. Conclusion

In this study, we found supportive evidence that to some extent involvement of women in the household saving decisions is positively significant to the household saving outcome. In general, households, where the wife involves in deciding how much money to save are associated with around 24% higher saving level compared to the household in which the wife is uninvolved in such a decision-making process. While the effect seems to be boosted for poorer households, our result suggests that the effect of wife involvement on the saving level is absent for richer households.

This result is essential to be the basis for government in promoting more gender-responsive policies, especially in this pandemic era, where saving highly determines whether a vulnerable household will fall to poverty or not. Lower barriers to labor participation or higher education could be intermediate targets that the government should aim for since previous study found that both aspects are significant in increasing women's bargaining power in Indonesia.

However, there is no supportive evidence that having a wife as the sole decision-maker of household saving will increase household savings. This result suggests that the bargaining process between spouses itself is crucial in determining the saving outcome level. There is also no supportive evidence that saving will increase when the wife is entrusted with broader and wide-ranging responsibility for financial-related decisions.

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Appendix

List of decision-making question from IFLS Book 3A section PK:
A1. Expenditure on food eaten at home
A2. Choice of food eaten at home
B. Routine purchases for the household of items such as cleaning supplies
C. Your clothes
D. Your spouse's clothes
E. Your children's clothes
F. Your children's education
G. Your children's health
H. Large expensive purchases for the household (i.e., refrigerator or TV)
I. Giving money to your parents/family
J. Giving money to your spouse's parents/family
K. Gifts for parties/weddings
L. Money for monthly *arisan* (savings lottery)
M. Money for monthly savings
N. Time the husband spends socializing
O. Time the wife spends socializing
P. Whether you/your spouse works?
Q. Whether you and your spouse use contraception?

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