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## The Role of Mother's Bargaining Power on Children's Education in Indonesia

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#### **Abstract**

The high dropout rate and low school participation rate at higher levels of education indicate low opportunities for continuing education. It will have an impact on the quality of human capital. In this case, improving the quality of human capital through education could be initiated from children as the generation who will play a role in future development. Several studies have found that education is associated with the mother's bargaining power. However, previous studies used indirect proxies. This research aims to provide evidence regarding the relationship between maternal bargaining power and the continuity status of children's educational levels using a direct proxy measure of the mother's bargaining power. This study uses the decision-making information from IFLS 2000-2014 as the mother's bargaining power. Using the probit method, the mother's bargaining power based on household decisions has not been proven to be related to the continuity status of children's educational levels. For specific decisions regarding children's education, the mother's bargaining power has a significant and positive relationship.

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#### INTRODUCTION

Education is one of the global challenge issues in sustainable development. Over the last few years, achievements in improving primary and secondary education, especially in developing countries, have not shown significant progress (UNESCO, 2019). The high school dropout rate and the lack of optimal progress of school participation levels are the main barriers to achieving the SDG 4 target by 2030. According to the conditions in Indonesia, the participation rate at the elementary school level has almost reached 100 percent in the last decade. However, this does not apply to a higher level of education. The participation rate at the secondary education level is in the range of 50-80 percent. Low participation rates at higher levels of education indicate a higher possibility of dropping out of school. It will impact on the quality of human capital. Most of the labor force is only junior high school (SMP) graduates or below.

Low participation rates at higher levels of education indicate a higher possibility of dropping out of school. It will impact on the quality of human capital. Most of the labor force is only junior high school (SMP) graduates or below. The low opportunity to continue education at a higher level caused by various factors from external and internal of the household (Arshad and Seenprachawong, 2019; Brown and Park, 2002; Gasparovic, 2014; Pezullo et al., 2022). So far, the Indonesian government's efforts to increase the participation rates tend to focus on efforts to minimize barriers from external households such as the number of teachers, education facilities, access, etc. However, these efforts have not shown the result optimally.

Several studies have claimed that the barriers for children to continue their education from internal household factors cannot be ignored. These factors include parental characteristics, child characteristics, household characteristics, and household economic conditions (Brown and Park, 2002; Kuno et al., 2021; Pezzulo et al., 2022). Recently, those studies found that child welfare outcomes such as education are related to the bargaining power of mothers (Afoakwah et al., 2020; Anggaraini and Setyari, 2020; Quisumbing and Maluccio, 2000). It relates to the mother's ability to allocate household resources. Nevertheless, the previous studies used several approaches such as education, income, and assets owned by the mother to investigate the relationship between mothers' bargaining power and children's education. These measures are assumed to increase mothers' ability to allocate household resources.

Using the mother's educational level relative to the father as a measure of the mother's bargaining power, Afoakwah et al. (2020) found that the higher the mother's education level compared to the father's, the child's chances of not repeating a grade or dropping out of school will increase. Meanwhile, Anggaraini and Setyari (2020) found that the higher the relative education level and the relative income level of the mother to the father can increase the average length of time a child has been in school. On the other hand, Quisumbing and Maluccio (2000) proved that asset ownership as a measure of women's bargaining power is related to increased spending on education.

However, several other studies have found different results. Francavilla et al. (2013) revealed that women's income can not always encourage children to achieve better education. In addition, Saaka (2017) found that mothers' asset ownership relative to fathers not show a consistent relationship with children's education. In line with this, Gitter and Barham (2008) found that the mother's bargaining power as seen from their education relative to the father had a different influence on their children's education. The differences in results of the relationship between maternal bargaining power and children's education indicate that the measure used can not describe the mother's ability to manage household resources (Lepine and Strobl, 2013). The level of education, asset ownership, working status, and income obtained after marriage may be the result of a woman's bargaining power, not a measure of the bargaining power itself (Doss, 2013; Iskandar and Maizar, 2020).

Some researchers argue that to investigate the role of women's bargaining power, the use of these proxies can not directly describe how much they can allocate household resources. Thus, it is necessary to use other proxies that directly describe bargaining power such as who makes decisions in the household (Chakraborty and De, 2017; Fidyani and Wisana, 2019; Iskandar and Maizar, 2020; Lepine and Strobl, 2013). The ability to make decisions in the household is considered more inherent in indicating that women have bargaining power (Kulkarni et al., 2021; Peterman et al., 2021).

The research that investigates the relationship between maternal bargaining power and children's education using direct proxies is still limited. One related study that used a direct proxy was conducted by Chakraborty and De (2017). In their research, Chakraborty and De (2017) compiled a mother's bargaining power index by the information about who makes household decisions. However, this research is only limited to children aged 10-14 years because it is considered the most likely age for children to stop school and decide to work. In this case, the research does not include children aged 15-18. Meanwhile, in the Indonesian context, children aged 15-18 are more likely not to continue school.

On the other hand, similar research in Indonesia tends to use bargaining power measures in the form of the mother's education and income relative to the father's (Anggaraini and Setyari, 2020). In fact, with the patriarchal culture still inherent in society, the mother's role in making decisions in the household is better to illustrate how the mother's bargaining power is in allocating household resources. Thus, there are limitations in previous research to see the relationship between maternal bargaining power and children's education, especially the proxy measures used.

The theoretical framework used to investigate the role of mothers' bargaining power on the continuity status of children's education levels in this research used the collective household model (Afoakwah et al., 2020; Ahmed and Ray, 2011; Hatlebakk and Gurung, 2014; Walther, 2018). The collective model assumes that households make decisions efficiently so that allocations can be modeled as the result of maximizing household welfare with Pareto weights on individual utility. These Pareto weights represent the relative strength of individuals in the decision-making process (Haryani and Dartanto, 2016; Walther, 2018).

The household utility function is formed from household consumption and children's quality in the form of children's education (Ahmed and Ray, 2011; Becker, 1981; Hatlebakk and Gurung, 2014). In this research, household consumption includes non-educational consumption. Then, for example, the household consists of a mother (m), father (f), and children, the household's decisions are made by both parents while the children are the recipients of the results of the decision. Furthermore, referring to the collective household model, the household utility function is a combination of the mother's and father's utilities. Assuming each parent has a different utility function, the household will maximize its utility as follows:

$$\max U^{H} = \gamma U_{m}(c, e) + (1 - \gamma)U_{f}(c, e) \dots (1)$$

$$s.t.P_{c}c + P_{e}e = I$$

where c is the household consumption, e is the children's education, I is the household income,  $P_c$  is the price of household consumption, and  $P_e$  is the price of children's education. Meanwhile,  $\gamma$  is the Pareto weight that represents the ability to make decisions or bargaining power in allocating household resources ( $0 \le \gamma \le 1$ ). Because this research focuses on the mother's bargaining power, the Pareto weight shows that the higher the mother's bargaining power, the higher the Pareto weight value. When  $\gamma=0$ , decision-making is taken without involving the mother;  $\gamma=1$ , without involving the father; and  $0 < \gamma < 1$ , by both mother and father (Ahmed and Ray, 2011; Eswaran, 2002).

This research applies the Implicit Function Theorem to see the relationship between bargaining power ( $\gamma$ ) and children's education (e) so that:

$$\frac{de}{d\gamma} = -\frac{\left(MU_{me} - MU_{fe}\right) - \left(MU_{mc} - MU_{fc}\right)\left(\frac{Pe}{P_c}\right)}{\left(\gamma MU_{mee} + (1-\gamma)MU_{fee}\right) - \left(\gamma MU_{mce} + (1-\gamma)MU_{fce}\right)\left(\frac{Pe}{P_c}\right)} \quad ...(2)$$

In this case, it assumed that the marginal utility of the father or mother is positive for the child's education and is concave, which means there is diminishing marginal utility. Meanwhile, marginal utility for household consumption is the same for father and mother. Based on this assumption, the denominator in equation (2) is negative, so the direction of the relationship between e and  $\gamma$  depends on two components,  $(MU_{me}-MU_{fe})$  and  $(MU_{mc}-MU_{fc})$ .

Both  $MU_{me}$  and  $MU_{fe}$  are assumed to be positive, so the direction of the relationship between e and  $\gamma$  is positive when the mother's marginal utility for the child's education is greater than the father's. In this research, the value  $\gamma$  indicates how much bargaining power the mother has in household decision-making. When the value  $\gamma$  becomes greater, household decisions will be by the mother's preferences so that, in the end, the household utility will be by the mother's utility. Therefore, if the mother has greater bargaining power than the father, the household utility will match the mother's utility. It can improve the child's education. Next,  $MU_{mc}$  and  $MU_{fc}$  are assumed to be the same, so the value is 0.

This research assumes that the marginal utilities of fathers and mothers for their child's demand for education at the primary school level are the same, so the value  $\gamma$  will not impact children's demand for education at the primary school level. This is supported by the large number of elementary schools available and the existence of a free compulsory education program. Meanwhile, for higher education levels, namely junior high school, eventhough the nine-year compulsory education law states that there are no fees, the availability of school facilities at that level is still limited. Likewise, at the high school education level, there are far fewer high school facilities than at middle or elementary schools. This allows for differences in parental preferences regarding children's educational requests, whether children should study up to a certain level of education or not. In this case, the role of bargaining power ( $\gamma$ ) can determine whether children can continue their education to a higher level.

Based on the theory, the greater the mother's marginal utility, the more the demand for children's education at a higher level. Thus, when the mother's bargaining power is greater than the father's, the household's utility will match the mother's utility, which means that the demand for children's education at a higher level will increase. However, when the mother's bargaining power is smaller than the father's, the demand for children's education at a higher level may be small, making it possible for the child not to continue their education to a higher level.

Based on the conceptual framework, this research hypothesized that the mother's bargaining power influences children's education. It means that when the mother participates in household decision-making, the household utility will be by the mother's utility. Therefore, the greater the mother's marginal utility for the children's education, the mother's bargaining power will be positively related to the children's possibility of continuing his education.

#### RESEARCH METHODOLOGY

This research uses the 2000-2014 IFLS survey and 2000-2014 BPS publications. The unit of analysis in this research is children aged 11-18 years, unmarried, and living in a household with two decision-makers, either biological parents or not. The dependent variable in this research is the children's education variable seen from the continuity status of the children's education. In this research, a child can be stated that he was continuing his education to a higher level if he has graduated from elementary school or junior high school and is still in school coded as 1, and 0 otherwise.

The main independent variable in this research is the mother's bargaining power. This

study uses a proxy measure of mothers' bargaining power based on the mother's involvement in making decisions in the household. Information regarding who makes decisions in the household covered 17 decision categories. The household decision variable includes more than one question variable. So, we need a method to combine these variables by forming a combined index without losing information from each variable. By adopting the strategy by Chakraborty and De (2017), this research uses the PCA (Principal Component Analysis) technique to obtain the mother's bargaining power index. This PCA technique has advantages in forming a bargaining power index because this method considers the different weights of various types of decisions (Chakraborty and De, 2017).

This research uses a probit model estimation method to see how the mother's bargaining power is related to the children's educational opportunities. In this case, the continuity status of children's education coded 1 if they were continuing their education and 0 otherwise. The probit model can be written as follows:

$$P(y = 1|x) = F(\beta_0 + x\beta)$$
 ...(3)

To estimate the probability of the continuity status of the children's education, the empirical estimation model can be written as follows:

$$\begin{split} P(continue\_school_{it} = 1|X) &= F(\alpha_0 + \alpha_1 bargainpwr\_ibu_{it} + \alpha_2 joint\_educ\_dec_{it} + \\ & \alpha_3 education\_inflation_{it} + \alpha_4 non - education\_inflation_{it} + \alpha_5 \textbf{\textit{X}}_{it} + \\ & \delta_t + \varepsilon_{it}) \dots (4) \end{split}$$

Table 1. Summary of Research Variables

Variable Name	Operational definition	Data source
Dependent variable	•	
continue_school	Status of educational continuity 1: continuing school (having graduated from elementary or middle school and still attending school during the census period) 0: not in school (have graduated from elementary or middle school but were not attending school during the census period)	IFLS (2000- 2014)
Independent variable		
bargainpwr_ibu	bargaining power index in all household decisions	IFLS (2000- 2014)
bargainpwr_ibu_educ	Bargaining power of mothers as reflected by mothers as decision makers for children's education (1: yes; 0: others)	IFLS (2000- 2014)
joint_educ_dec	Joint decision making for children's education by father and mother (1: yes; 0: others)	IFLS (2000- 2014)
education_inflation	Education prices, proxied by inflation educational group	BPS
non- educational_inflation Control variables Child characteristics	Non-education prices, proxied by inflation food group	BPS
Child_gender	Child's gender (1: Male; 0: Female)	IFLS (2000- 2014)
Child_age	Child's age at time of census	IFLS (2000- 2014)

variable name	Variable Name Operational definition				
Maternal	•				
characteristics					
Mother_education	Mother's last completed education	IFLS (2000-			
	(0: middle school or below; 1: high school; 2: PT)	2014)			
Mother's_working_status	Mother's working status	IFLS (2000-			
_	(1: working; 0: not working)	2014)			
Father's					
characteristics					
Father_education	The last education my father completed	IFLS (2000-			
	(0: middle school or below; 1: high school; 2: PT)	2014)			
Father's_working_status	Father's working status	IFLS (2000-			
	(1: working; 0: not working)	2014)			
Household characteristic	ζ,	/			
Residence_region	Area of household (1: Urban; 0: Rural)				
Ln_income_per capita	Ln Household per capita income,	IFLS (2000-			
·	proxied by In household per capita expenditure	2014)			
Children_under 18 years	Number of children aged 18 and under,	IFLS (2000-			
old	living in the household	2014)			
D2000	2000 dummy	IFLS (2000-			
	•	2014)			
D2007	2007 dummy	IFLS (2000-			
	•	2014)			
D2014	2014 dummy	IFLS (2000-			
	•	2014)			

Source: IFLS, processed

#### **RESULT AND DISCUSSION**

Generally, Table 2 shows that the sample consists of 50.76 percent boys and 49.24 percent girls where the average age of the children is 14.964 years. Overall, 82.65 percent of children continued their education to a higher level, and 17.35 percent did not continue their education. Furthermore, by the characteristics of parents, 77.11 percent of mothers have a junior high school education or below, 18.74 percent have a high school education, and 4.15 percent have a PT education. Meanwhile, for fathers, 67.48 percent had a junior high school education or below, 24.59 percent had a high school education, and 7.93 percent had a PT education. When comparing the education of fathers and mothers, the average education of fathers tends to be higher than mothers. Meanwhile, based on employment status, 52.03 percent of mothers worked, and 90.7 percent of fathers worked.

Table 2.

Descriptive Research Variables

Descriptive Research Variables						
Variable	Number of	Percen	Mean	Std.	Min	Max
	Obs.	tage		Dev.		
Dependent variable						
continue_school	9044	82.65	-	0.379	0	1
(continue=1)						
Independent						
variable						
bargainpwr_ibu	9044	-	0	1.912	-7.984	6.543
<b>o</b> . –						

Variable	Number of Obs.	Percen tage	Mean	Std. Dev.	Min	Max
bargainpwr_ibu_educ (yes=1)	9044	17.25	-	0.338	0	1
joint_educ_dec (yes=1)	9044	69.28	-	0.461	0	1
education_inflation	9044	-	9.135	5.947	0.929	26.63 5
Non- educational_inflation Control Variables Child characteristics	9044	-	8.025	4.899	-5.287	21.73
Child_gender (boy=1)	9044	50.76	-	0.5	0	1
Child_age Characteristics of Mother_education	9044	-	14.964	1.906	11	18
middle school or	6974	77.11	-	0.42	0	1
senior high school	1695	18.74	-	0.39	0	1
PT	375	4.15	-	0.199	0	1
Mother's_working_sta tus (working=1) Father_education	9044	52.03	-	0.5	0	1
middle school or	6103	67.48	-	0.468	0	1
senior high school	2224	24.59	-	0.431	0	1
PT	717	7.93	-	0.27	0	1
Father's_working_stat us (working=1)	9044	90.7	-	0.29	0	1
Household						
Region_of residence (urban=1)	9044	54.53	-	0.498	0	1
Ln_income_per capita	9044	-	16.315	0.941	12.947	21.20
Children_under 18	9044	-	2.64	1.298	1	10

Source: IFLS, processed

Based on household characteristics, the average number of children living in a household is 2-3 children in a range of at least 1 child and a maximum of 10 children. Meanwhile, the household income per capita variable uses the natural logarithm of per capita expenditure as a proxy. This is because respondents tend not to be willing to provide complete information regarding their income. The average value of the natural logarithm of per capita income is 16.315 in a range between 12.967 to 21.209. Meanwhile, 54.53 percent of households are in urban areas, and 45.47 percent are in rural areas.

Table 3 summarizes the estimation results. The results in columns (2) and (3) show what variables significantly related to the continuity status of children's education. Columns (4) and (5) are the marginal effects from the regression that show how much these variables are related to the continuity status of children's education. Based on the estimation results in model 1, the mother's bargaining power index, calculated from all household decisions, is not significantly related to the continuity status of children's education levels.

Table 3. Estimation Results regarding the Relationship between Mother's Bargaining Power and
The Continuity Status of Children's Education

	The Continuity	y Otalus of C		it variable:			
		The Continuity Status of Children's Education					
Independent variable			ficient	Marginal Effects			
		Model 1	Model 2	Model 1	Model 2		
bargain	pwr_ibu	0.0033	-	0.0007	-		
Ü	. –	(0.0092)		(0.0018)			
bargain	pwr_ibu_educ (yes=1)		0.1046 *	-	0.0209 *		
_			(0.0633)		(0.0127)		
joint_ed	duc_dec (yes=1)	0.1039 ***	0.1585 ***	0.0208 ***	0.0317 **		
		(0.0395)	(0.0518)	(0.0079)	(0.0103)		
educati	on_inflation	-0.0097 **	-0.0096 **	-0.0019 **	-0.0019 *		
		(0.0039)	(0.0039)	(0.0008)	(0.0008)		
Non-ed	ucational_inflation	-0.0121 **	-0.0121 **	-0.0024 **	-0.0024 *		
<b>^</b> 1	I	(0.0054)	(0.0054)	(0.0011)	(0.0011)		
	l variables	0.4007 ***	0.4000 ***	0.0005 ***	0.0000 *		
S	Child_gender (boy=1)	-0.1027 ***	-0.1038 ***	-0.0205 ***	-0.0208 **		
Child characteristics		(0.0354)	(0.0354)	(0.0071)	(0.0071)		
Child acteri	Child ogo	-0.3247 ***	-0.3245 ***	-0.0649 ***	-0.0649 *		
ပြည်	Child_age	-0.3247 (0.0106)		-0.0649 (0.0019)	-0.0649 (0.0019)		
ha		(0.0106)	(0.0106)	(0.0019)	(0.0019)		
0							
	Mother_education						
	Middle School and	-	-				
	below (base						
	outcome)	0 0007 ***	0.0005 ***	0.0040 ***	0.0047 **		
	senior high school	0.3327 ***	0.3335 ***	0.0616 ***	0.0617 **		
SS	PT	(0.0634) 0.3058 **	(0.0634) 0.3082 **	(0.0107) 0.0573 **	(0.0107) 0.0576 *		
stic	FI						
je i	Mother's_working_	(0.1443) 0.1012 ***	(0.1444) 0.0998 ***	(0.0240) 0.0202 ***	(0.0240) 0.0200 **		
ac	status (working=1)	(0.0361)	(0.0359)	(0.0072)	(0.0072)		
har	Father_education	(0.0301)	(0.0339)	(0.0072)	(0.0012)		
nts characteristics	Middle School and	-	_				
ant Surf	below (base						
Pare	outcome)						
₾	senior high school	0.4128 ***	0.4171 ***	0.0779 ***	0.0786 **		
		(0.0517)	(0.0518)	(0.0089)	(0.0089)		
	PT	0.4940 ***	0.4992 ***	0.0902 ***	0.0910 **		
		(0.0999)	(0.0999)	(0.0152)	(0.0151)		
	Father's_working_	-0.0656	-0.0627	-0.0131	-0.0125		
	status (working=1)	(0.0599)	(0.0599)	(0.0120)	(0.0120)		
δί	Region_of residence	0.2380 ***	0.2363 ***	0.0476 ***	0.0472 **		
Household characteristics	(urban=1)	(0.0375)	(0.0374)	(0.0075)	(0.0074)		
	Ln_income_per capita	0.2200 ***	0.2192 ***	0.0440 ***	0.0438 **		
act		(0.0295)	(0.0293)	(0.0059)	(0.0058)		
Ho Jar	Children_under 18	-0.0697 ***	-0.0708 ***	-0.0139 ***	-0.0142 *		
ਠ	years old	(0.0135)	(0.0135)	(0.0027)	(0.0027)		
D2000		-0.1642 *	-0.1605 *	-0.0328 *	-0.0321		
		(0.0843)	(0.0841)	(0.0168)	(0.0168)		
D2007		-0.1372 **	-0.1352 **	-0.0274 **	-0.0270 *		
		(0.0538)	(0.0537)	(0.0108)	(0.0107)		

	Dependent variable: The Continuity Status of Children's Education					
Independent variable	Coef	ficient	Marginal Effects			
	Model 1	Model 2	Model 1	Model 2		
D2014 (base outcome)	-	-	-	-		
Constant	2.6178 ***	2,5700 ***	_	_		
	(0.5192)	(0.5171)				
Number of Observations	9044	9044				
LR χ <sup>2</sup>	1846.12	1848.72		•		
p-value	0.0000	0.0000				
Pseudo R <sup>2</sup>	0.2212	0.2215				

Standard errors in parentheses; p < .1, p < .05, p < .01

Source: IFLS, processed

Note: The dependent variable is a binary outcome of the children's educational continuity status which has a value of 1 if the child was still continuing their education and 0 otherwise; Model 1 uses the bargaining power index of all decisions; Model 2 uses dummy variables if only the mother decides the child's education.

#### **Discussion**

Based on the estimation results in model 2, the mother's bargaining power of the mother's involvement in children's educational decisions has a positive and significant relationship with the continuity status of children's education levels. It suggests that the mother's involvement in more specific decisions regarding children's education can increase children's chances of continuing their education to a higher level. However, previous studies have found a significant and positive relationship between the mother's bargaining power in several household decisions and children's education (Qian, 2008; Afoakwah et al., 2020; Chakraborty and De, 2017). It is possible because there is no difference in marginal utility between fathers and mothers regarding children's education. Meanwhile, more specific decisions related to children's education show a significant and positive relationship with the continuity status of children's education. If only the mother makes decisions regarding the children's education, the opportunities to continue their education will be 2.09 percent greater than if the mother is not involved.

This research found that there is a difference in the relationship between mothers' bargaining power in several decisions and mothers' bargaining power in a more specific decision related to children's education. It indicates that the mother's involvement in some decisions has no direct influence on the children's education. It may happen because when the mother has bargaining power in overall household decision-making, the mother's priorities are not focused on the child's education. However, this result is in line with Park's (2007) research. If the mother's bargaining power increases, it will improve the children's nutritional status but not the children's education. It could be because mothers dominate decision-making regarding food. So, with increasing bargaining power, mothers will prioritize children's nutrition over children's education.

In addition, using a bargaining power index measure that includes too many types of decisions can bias the measurement. The reason is the mothers' involvement tends to be more dominant in decisions related to food and daily-needs while other decisions made together. Thus, in the Indonesian context, using a composite index cannot prove a link between maternal bargaining power and the continuity status of children's education levels.

Based on a children's educational decision made by the mother and father, it shows a significant relationship to the continuity status of the children's education in both models. It indicates that children's educational decisions made jointly by father and mother can increase children's opportunities to continue their education. Moreover, the magnitude of the coefficient in model 2 shows a greater value than if only the mother has taken the decision. When children's education decisions are made jointly, the children's chances of continuing their education are 3.71 percent greater than if the mother is not involved. This joint decision indicates that a discussion

between father and mother regarding children's education can encourage better the children's educational outcomes.

The education price variable, proxied by education group inflation, has a negative and significant relationship. The existence of a negative and significant relationship between the price of education and the continuity status of the children's education was in accordance with economic principles. If the price of education rises, the demand for education will decrease. It means that an increase in the price of education can allow parents to send their children to school up to a certain level. This result is in line with research by Asante (2022) and Birdsall & Orivel (1996) that proved the price elasticity of education was negative. It means that an increase in the price of education will reduce the demand for education.

Apart from education prices, non-education price variables, proxied by inflation in the food group, also have a negative and significant relationship with the continuity status of children's education. This result is in line with research by Raihan (2009) and Brown et al. (2023) that proved if there is an increase in food prices, households will reduce non-food expenditures such as children's education. It is applied to maintain the level of food consumption in households. As the consequence, the school dropout rate increases.

Meanwhile, if we observe all the control variables, there are consistent results in both models regarding the direction of the relationship between the mother's bargaining power and the continuity status of the children's educational levels. For the children's characteristic, such as the gender variable, the estimation result shows a negative and significant relationship with the continuity status of the child's education level. This result is in line with research by Kuno et al. (2021) that found girl's chance of dropping out of school are smaller than boys.

Moreover, the children age variable shows a significant and negative relationship, and both models show consistent marginal effect values. It can occur due to the existence of school age limits according to educational level. Thus, when a child has exceeded the age limit for a certain level of education, there is a reluctance to go to school with other younger children.

Parental characteristic variables can be classified into the mother's and father's characteristics. Each characteristic group includes education and work status. The maternal education variable shows positive and significant results in both models. It means that when the mother has a high school or higher education, the children's opportunities of continuing their education are higher than the mother has a junior high school education or less. Likewise, with the father's education variable, the estimation results from model 1 and model 2 consistently show a positive and significant relationship with the continuity status of children's education. It means that when the father has a high school or higher education, the children's opportunities to continue their education are higher than if the father has a junior high school or lower education. However, this research is in line with research by Minsoo et al. (2011). Parents who are more educated will prioritize their children's education so they can achieve higher education.

The next parental characteristic variable is the working status of the mother and father. The estimation results of model 1 and model 2 consistently prove that there is a positive and significant relationship between the mother's working status and the continuity status of the children's education level. It means that children's opportunities to continue their education are higher when the mother has a job. However, different results were shown by the father's working status variable. The estimation results of model 1 and model 2 show that the father's working status has not been able to prove a relationship with the continuity status of the children's educational level.

Meanwhile, the region of residence variable indicates that children who live in urban areas have higher opportunities to continue their education due to differences in educational infrastructure and facilities in the two regions. In general, the number of educational facilities in urban areas is more than in rural areas and access to facilities is also better than in rural areas. Thus, the opportunity for children living in urban areas to continue their education will be higher

than for children living in rural areas.

Based on the variable household income per capita, the estimation results in both models show a positive and significant relationship with the continuity status of children's education levels. It indicates that an increase in household income will increase children's opportunities to continue their education. The household per capita income is related to spending on children's education. The financially sufficient households can allocate a greater proportion of their income to education. Meanwhile, the low-income households will encourage parents to make more efforts in meeting household needs, even by involving children. Finally, it will encourage children not to continue their education and choose to work. In addition, with limited financial conditions, parents will tend to prioritize other needs than their children's education (Lv and Lin, 2017).

The variable for the presence of children aged 18 years and under shows a negative and significant relationship with the contunuity status of children's education levels in both models. Table 3 shows that more children aged 18 years and under in the household will reduce the children's opportunities to continue their education. It indicates that the more school-age children (18 years and under) in the households, the more parents have to share their children's education expenses. This result is in line with research by Nurdinawati (2013) that proved if there were more school-age children in the household, it could reduce children's educational attainment due to decreasing opportunities to pursue education at a higher level. It related to the possibility of sharing parents' income for children's education expenditure.

#### CONCLUSION

This research uses information regarding mother's involvement in household decision-making to investigate the role of the mother's bargaining power on the continuity status of children's education levels. This research found that there is no evidence to show a relationship between the mother's bargaining power and the continuity status of children's education levels when using the mother's bargaining power index. If a specific measurement of the mother's bargaining power is used, such as the mother's involvement in children's educational decisions, it is found a positive and significant relationship with the continuity status of children's educational levels. This is possible in the context of households in Indonesia because there is a tendency for various household decisions to be made jointly. So, the use of a combined index has not been able to prove the relationship between the mother's bargaining power and children's education.

Meanwhile, the children's educational decisions that made by father and mother jointly, this research finds that it can increase the children's opportunities to continue their education. This joint decision indicates that the discussions between fathers and mothers regarding children's education can encourage better children's educational outcomes. It is because children's education is a shared responsibility, so the joint decision can increase the children's opportunites to continue their education.

On the other hand, this research has not considered things that might influence mother's behavior in household decisions related to the cultural system of residence as a control. Indonesia is a country that has cultural diversity that allows each culture to form different levels of autonomy for women in the household. Future research can consider variables that can show the cultural system in which the household lives or the cultural dominance applied. It needs to be considered in better describing the role of mother's bargaining power in order to maximize household satisfaction through decision-making and its influence on children.

#### **REFERENCES**

- Afoakwah, C., Deng, X., & Onur, I. (2020). Women's Bargaining Power and Children's Schooling Outcomes: Evidence from Ghana. Feminist Economics, 26 (3), 1–29. https://doi.org/10.1080/13545701.2019.1707847.
- Ahmed, S., Ray, R., & Campus, C. (2011). Parent's Bargaining Powers, Child Labor and Education.
- Anggaraini, NKW, & Setyari, NPW (2020). *The Impact of Working Mothers' Bargaining Power on Their Children's Human Capital in Indonesia*. Journal of Economics & Development Studies, 21 (2). https://doi.org/10.18196/jesp.21.2.5044.
- Arshad, I., & Seenprachawong, U. (2019). *Determinants of Enrollment at Secondary and Higher Level of Education in Pakistan*. International Journal of Economics and Management Studies, 6 (3), 48–62. https://doi.org/10.14445/23939125/ijems-v6i3p106.
- Asante, Gabriel. (2022). The effects of cost elimination on secondary school enrollment in Sub-Saharan Africa. Educational Review. DOI: 10.1080/00131911.2022.2028732
- Central Bureau of Statistics. (2022). Education Statistics 2022. Jakarta: BPS.
- Becker, G.S. (1981). A Treatise on the Family. Cambridge: Harvard University Press.
- Birdsall, Nancy & Francois Orivel. (1996). *Demand for Primary Schooling in Rural Mali: Should User Fees be Increased?* Educational Economics, 4:3, 279-296, DOI: 10.1080/09645299600000026
- Brown, KJ, Haer, R. and Østby, G. (2023). *Local Food Price Volatility and School Dropout in Sub-Saharan Africa*. Population and Development Review. https://doi.org/10.1111/padr.12567
- Brown, Philip H. & Albert Park. (2002). Education and poverty in rural China. Economics of Education Review, Volume 21, Issue 6, Pages 523-541. https://doi.org/10.1016/S0272-7757(01)00040-1.
- Chakraborty, T., & De, P. K. (2017). *Mother's autonomy and child's secondary schooling enrollment in Mexico*. Review of Economics of the Household, 15 (3), 1037–1053. https://doi.org/10.1007/s11150-015-9314-9.
- Doss, Cheryl R. (2013). *Intrahousehold bargaining and resource allocation in developing countries*. World Bank Research Observer, 28 (1), 52–78. https://doi.org/10.1093/wbro/lkt001.
- Eswaran, M. (2002). The Empowerment of Women, Fertility, and Child Mortality: Towards A Theoretical Analysis. J Popul Econ, (Vol. 15).
- Fidyani, AY, & Wisana, DGK (2021). The Impact of Mother's Bargaining Power on the Nutritional Status of Children in Indonesia. Economics and Finance in Indonesia, 67(1).
- Filmer, D., & Pritchett, L. H. (2001). Estimating Wealth Effects without Expenditure Data-or Tears: An Application to Educational Enrollments in States of India. Demography, 38 (1), 115–132. https://doi.org/10.2307/3088292.
- Francavilla, F., Giannelli, G. C., & Grilli, L. (2013). *Mothers' Employment and their Children's Schooling: A Joint Multilevel Analysis for India*. World Development, 41 (1), 183–195. https://doi.org/10.1016/j.worlddev.2012. 05.031
- Gasparovic, Slaven. (2014). Impact of Transport Disadvantage on Education of High School Population of The City of Zagreb. International Conference on Traffic and Transport Engineering.
- Gitter, S. R., & Barham, B. L. (2008). Women's Power, Conditional Cash Transfers, and Schooling in Nicaragua. The World Bank Economic Review, 22 (2), 271–290. http://www.jstor.org/stable/40282274
- Haryani, H. & Dartanto, T. (2017). *Intra-household Decision-making and Educational Attainment in Indonesia*. In Book Competition and Cooperation in Economics and Business. https://doi.org/10.1201/9781315225227.
- Hatlebakk, M., & Gurung, Y.B. (2014). Female empowerment and education of children in Nepal. Working Paper-Chr. Michelsen Institute, 7, 1–22. https://doi.org/10.1353/jda.2016.0083.
- Iskandar, SD, & Maizar, FA (2020). Listen To Your Wife When It Comes to Saving Decisions: Women's Bargaining Power and Household's Saving Outcomes in Indonesia. LPEM-FEB UI Working Paper 055.

- Kulkarni, S., Frongillo, E.A., Cunningham, K., Moore, S., & Blake, C.E. (2021). *Gendered Intrahousehold Bargaining Power is Associated with Child Nutritional Status in Nepal.* Journal of Nutrition, 151 (4), 1018–1024. https://doi.org/10.1093/jn/nxaa399.
- Kuno, C.B. et al. (2021). Children's schooling status: Household and individual factors associated with school enrollment, non-enrollment and dropping out among Ugandan children. International Journal of Educational Research Open, 2. https://doi.org/10.1016/j.ijedro.2021.100033.
- Lépine, A., & Strobl, E. (2013). *The Effect of Women's Bargaining Power on Child Nutrition in Rural Senegal.* World Development, 45, 17–30. https://doi.org/10.1016/j.worlddev.2012.12.018.
- Lv, H. and Tao Lin. (2017). The effects of family income on children's education: An empirical analysis of CHNS data. Research on Modern Education 4, 49–54. https://doi.org/10.24104/rmhe/2017.04.02002
- Minsoo, P., Jeungil, O., & Sora, L. (2011). *Women's Bargaining Power and Educational Expenditures: Implications for Subsidy Policy*. The Korean Journal of Policy Studies, Vol. 26, no. 3 (2011), pp. 37-51.
- Nurdinawati, Dian. (2013). The Influence of Family Structure on Children's Educational Achievement (Analysis of SAKERTI Data 2000 and 2007). University of Indonesia.
- Park, C. (2007). Marriage markets, parents' bargaining powers, and children's nutrition and education. Oxford Bulletin of Economics and Statistics, 69 (6), 773–793. https://doi.org/10.1111/j.1468-0084.2007.00479.x.
- Peterman, A et al. (2021). Measuring women's decisionmaking: Indicator choice and survey design experiments from cash and food transfer evaluations in Ecuador, Uganda, and Yemen. World Development, 141. https://doi.org/10.1016/j.worlddev.2020.105387.
- Pezzulo, C. et al. (2022). Understanding factors associated with attending secondary school in Tanzania using household survey data. PLOS ONE, 17 (2 February). https://doi.org/10.1371/journal.pone.0263734.
- Qian, N. (2008). Missing Women and the Price of Tea in China: The Effect of Sex-Specific Earnings on Sex Imbalance. The Quarterly Journal of Economics, 123 (3), 1251–1285. http://www.jstor.org/stable/25098928
- Quisumbing, Agnes & Maluccio, John. (2000). *Intrahousehold Allocation and Gender Relations:*New Empirical Evidence from Our Developing Countries. In International Food Policy Research Institute (IFPRI). https://www.ifpri.org/publication/intrahousehold-allocation-and-gender-relations.
- Raihan, Selim. (2009). Impact of Food Price Rise on School Enrollment and Dropout in the Poor and Vulnerable Households in Selected Areas of Bangladesh. MPRA Paper No. 37900. https://mpra.ub.uni-muenchen.de/37900/
- Reggio, I. (2011). The influence of the mother's power on her child's labor in Mexico. Journal of Development Economics, 96 (1), 95–105. https://doi.org/10.1016/j.jdeveco.2010.07.002
- Saaka, S. (2017). Women's Intra-Household Bargaining Power and Child Welfare Outcomes: Evidence from Sub-Saharan Africa. University of Sussex.
- UNESCO. (2019). Meeting Commitments: Are Countries on Track to Achieve SDG 4? Canada: UNESCO.
- Walther, Selma. (2018). *Noncooperative decision making in the household: Evidence from Malawi*. Journal of Development Economics, Volume 134, Pages 428-442. https://doi.org/10.1016/j.jdeveco.2018.06.008.