Globalization and Female Labor Force Participation (FLFP): Evidence from ASEAN Middle-Income Countries (Thailand, Indonesia, Vietnam, and Philippines)

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Abstract. This study is aimed at observing the influence of globalization on FLFP in ASEAN middle-income countries. The data used in the study is panel data with a cross-section of four countries (Philippines, Indonesia, Thailand, and Vietnam) and time series 1990–2020 sourced from WDI, KOF, and UNDP. The estimation technique in this study uses panel autoregressive distributed lag (PARDL) with the pooled mean group (PMG) method. The findings in this research generally show the negative effects of globalization and several of its dimensions on the FLFP of ASEAN middle-income countries in the long term. Apart from that, economic growth and fertility levels were also found to harm the FLFP of middle-income ASEAN countries, while the average number of years of schooling for women was not found to affect FLFP. Based on country, globalization, and its dimensions show varying effects on the FLFP of ASEAN middle-income countries.

Keywords: Globalization, FLFP, Economic Growth, Fertility, and Average of Years Schooling Female

1 Introduction

Over the past two decades, development performance in terms of female labor force participation (FLFP) globally has shown a slowing trend compared to previous decades. In 1991, it was recorded at 55.49 percent, which fell to 55.15 percent in 2001, 53.49 percent in 2011, and 52.39 percent in 2021. In 2021 there are around 466.8 million female labor force in the world labor market and as a percentage of overall global labor force participation is still very small, around 20.8 percent compared to the percentage of male participation reaching around 50 percent (ILO, 2023). This shows that women's participation in economic aspects is still in a disadvantageous position or tends to be unequal in terms of wages and employment opportunities compared to male workers due to relatively discriminatory labor market conditions by creating gender-related market segmentation that limits women's participation only to jobs with low wages and productivity in informal sectors such as

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individual or family industries and small-scale agricultural activities which by implication tend to be less tangible in encouraging the welfare of women's groups, making women one of the economically vulnerable groups (Wacker et al., 2017; Kumari, 2018; Asongu et al., 2020). Based on the World Bank report, shows that globally, countries lose wealth of around USD 160 due to the gap between men and women (World Bank, 2018).

Conceptually, women's participation has strategic potential in encouraging economic development, especially related to solving socio-economic problems such as unemployment, poverty, inequality, and welfare, and increasing it is also one of the main indicators in the sustainable development targets (SDGs) while reflecting good governance. The importance of women's involvement in formal economic and political activities to optimize the utilization of human resources in promoting development is also increasingly discussed in the literature (Marquez, 2017; Moras, 2017).

Several issues related to the weakening of FLFP and various structural problems, especially related to the wage gap gender-based labor market discrimination, and women's economic vulnerability, are largely similar to the conditions and developments that occur in several emerging market countries in the ASEAN region. This can be seen from the FLFP development of several ASEAN middle-income countries presented in the following figure.

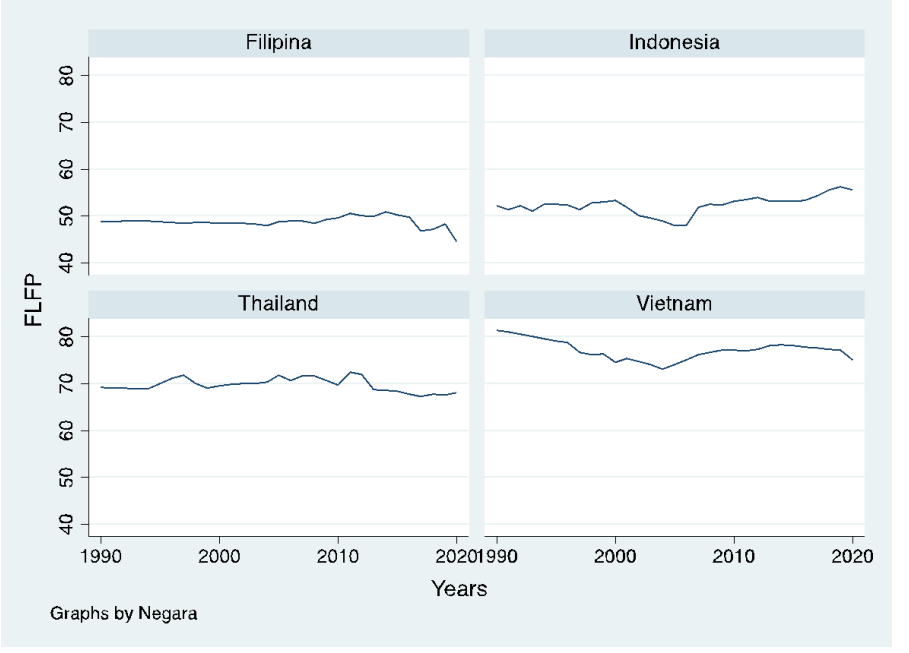

Fig. 1. Dynamics of Female Labor Force Participation (FLFP) 1990-2020

Based on Figure 1, it can be seen that most ASEAN countries' FLFP in the last three decades have tended to decline except for Indonesia. Conceptually, the decline can be caused by several things such as 1) the encouragement of economic growth that is not yet gender inclusive; 2) the relatively weak educational development of women's groups; 3) the lack of representation of women's interests in the political aspect; 4) the social system and values are still relatively patriarchal; 4) technology distribution; 5) market discrimination; 6) the gap in wage levels; 7) and various other obstacles related to limiting women's mobility only to domestic or household work. In addition, the dynamics of FLFP, especially in the contemporary context where the level of dependence and integration between regions or countries is relatively stronger, is also considered to fundamentally produce FLFP linkages with the phenomenon of globalization. This is because the strong increase in globalization in the last three decades has had a broad impact on changing various aspects of life (political, economic, social, and cultural) which conceptually is also a determining factor in the development of FLFP. The relationship between FLFP and globalization has long attracted attention among researchers, academics, governments, and the wider community, and conceptually two opinions are contradictory and continue to be debated, namely between hegemonic and liberalist views.

The effects of globalization on the level of FLFP are empirically found in various forms, some showing that globalization results in an increase in FLFP in some countries while having depressing implications for other countries, so there is no consensus in the literature regarding this matter. Some argue that this is due to the heterogeneity of each country, especially in terms of its economic, political, and social development and structure (Naz, 2023). Some evidence in the literature that shows an increase in the instability of various macro indicators in various countries in terms of financial, economic, and social problems is shown as a result of the increasing trend of globalization and some other evidence finds that globalization has strong potential in driving development processes such as investment efficiency, technological progress, international risk sharing, scientific development, market scale and various other things related to the benefits of a country's involvement in global activities (Price & Elu, 2014; Asongu, 2014; Asongu et al., 2020; Osinubi & Asongu, 2020); Okşak et al., 2017; Wacker et al., 2017). Globalization has resulted in the expansion of employment opportunities for female workers in the early phase but some evidence in the current literature suggests the defeminization of the workforce with increasing technological advances and industrial restructuring driven by the globalization phenomenon (Wacker et al., 2017).

Based on some of these reviews, strengthen the argument that the effects of globalization vary in each country, while the literature related to the effects of globalization on FLFP dynamics in the ASEAN context is still relatively limited so it is necessary to conduct studies related to how the effects of these phenomena on FLFP in ASEAN developing countries to further enrich the literature and the results of these studies can have important relevance as a basis for the direction of globalization policies and the encouragement of FLFP in the future. Several studies have been conducted previously related to the effects of globalization on FLFP using the globalization index and its three dimensions (economic, social, and political) from

the KOF Globalization index but most of them are still concentrated in countries and regions outside ASEAN such as studies conducted by Okşak et al. (2017), Asongu et al. (2020), Osinubi & Asongu, (2020), Chaka et al. (2022). Studies related to the determinants of ASEAN countries' FLFP mostly focus on domestic aspects and tend to ignore the phenomenon of globalization or use globalization proxies limited to economic and financial dimensions such as FDI and trade openness. The novelty in this study includes the period, location, the use of globalization indicators, especially in the ASEAN context using the globalization index proxy and its three dimensions (economic, social, and political) and the measurement of education levels more specifically on women's education. The estimation method in this study uses the Auto Regressive Distributed Lag (ARDL) statistical method which is relatively more developed and has effective control of problems commonly found in panel data, especially endogeneity and autocorrelation problems so that it tends to produce efficient estimated values and globalization indicators in this study use the globalization index in general as well as the globalization index in each dimension such as economic, social and political globalization from the KOF Globalization Index.

The discussion section in this study follows the second, literature review; third, data and methodology; fourth, results and discussion; and finally, closing.

2 Literature Review

Some literature discusses concepts related to the labor force participation rate (TPAK) and how a person decides to participate in the labor market, for example, the labor supply theory developed by Marshall which explains the relationship between the supply and price of a good and service where the higher the price of a good and service the higher the amount offered (Jhingan, 2012). Concerning labor the theory of supply of female labor (law of supply of female labor) states that the higher the wage rate, the more women will offer their labor or if the wage rate rises, women who are willing to work will increase. In addition, a person's participation in the labor market is associated with opportunity costs which illustrate the trade-off between working and not working. The decision-making is based on the cost-benefit obtained, if the benefits obtained are greater than the sacrifices incurred in working then a person will tend to choose to work. In addition, the determinants of labor force participation are also explained in the human capital theory developed by Becker (2019) which states that a person who has a high level of knowledge and skills representing the level of human capital tends to have better employment opportunities, thus encouraging participation in the labor market. In addition, in the development of FLFP according to Goldin, there will be a U-shaped relationship between development and female labor force participation, this occurs because the level of female participation initially tends to work in the agricultural sector or low-income sectors. As incomes rise, the transition to a technology-based industrial economy and income effects (from higher spousal income) dominate the substitution effects in married women's labor force participation decisions leading to a decline in FLFP rates. As development progresses,

women's education increases, and the substitution effect begins to outweigh the income effect, leading to an increase in FLFP (Goldin 1990 and 1995).

Asongu et al. (2020) explain the link between globalization and gender economic participation can be seen from two contrasting/opposing schools of thought, namely the hegemonic and neoliberal viewpoints found that the positive impact of social globalization is driven by information flows while the positive impact of economic globalization is driven by information flows (relative to restrictions). so that it has policy implications with some emphasis on how to improve the social status of women and potentially reduce their victimization by male domination. which shows there is a positive relationship between the two. Several articles focus on the relationship between economic growth and U-shaped FLFP levels during the process of economic development. Their findings show the relationship between long-term development and the percentage of women in the labor force. Yuksel also found that there is a positive and statistically significant relationship between economic globalization, social globalization, overall globalization, and female labor force participation.

3 Data and Analysis Method

The type of data used in this study is panel data with time series 1990-2020 and a cross-section of 4 ASEAN countries, namely Indonesia, the Philippines, Thailand, and Vietnam. The use of panel data is based on several things such as: first, it can provide a larger number of observational data, increasing degrees of freedom, and reduce collinearity between explanatory variables so that a more efficient estimation value is obtained; second, it provides more informative and varied data compared to using time-series or cross-section data. In short, panel data can enrich empirical analysis in ways that may not be possible with time-series or cross-section data. Most member countries of the ASEAN region that are still in middle-income country status are the basis for the region to be used as the object of study by using a limitation of only 4 countries for considerations related to data availability as well as factors similar to these countries in several ways such as their income status and level of globalization.

Meanwhile, concerning the study objective to observe the effects of globalization factors on female labor force participation in ASEAN developing countries, several main variables are used to explain this such as the level of female labor force participation, globalization in general, and its various dimensions in economic, social and political aspects, as well as several control variables such as economic growth, average years of schooling for women and fertility rates. To get a clear picture of the variables used, it can be seen in the following table.

Table 1. Variable Definitions and Data Sources

Variable	Definitions	Sources
FLFP	The percentage of female labor force participation to the total female labor force in	WDI

	the labor market is measured using percent units.	
Globalization	The level of integration in social, economic, political, and cultural terms between countries is measured using index units.	KOF
Economic Globalization	The level of integration in economic terms is measured using an index unit of a group of economic and financial activities with outside countries such as trade, FDI, portfolio investment, and foreign debt.	KOF
Social Globalization	The level of integration in terms of social activities with foreign residents is measured using an index unit of a group of activities related to personal contact, information flow, and cultural interaction on a wider scale related to the global world.	KOF
Political Globalization	The level of integration in terms of political activity between countries is measured using an index unit of a group of things related to the number of embassies, involvement with international organizations, and the number of international agreements.	KOF
GDP	The value of gross domestic product at constant prices on an annual basis as measured in USD	WDI
Average years of schooling for women	The number of years of study completed by the female population aged 15 years and over in formal education, measured in years.	UNDP
Fertility	The number of children per woman in a population using the unit of life.	WDI

For estimation purposes, this study uses the panel autoregressive distributed lag (PARDL) estimation method. The use of the PARDL estimation method is based on several things such as different levels of stationarity of variables; distinguishing short and long-term effects and considering fixed effects in short-term models; can control potential endogeneity and autocorrelation in the model; the estimated value remains efficient even with a smaller number of cross-sections than time-series (Olomola & Osinubi, 2018; Attard, 2019).

For PARDL estimation in this study, the pooled mean group (PMG) method is used, the model is considered more efficient because it uses the average value and clustering of cross-sections (Pesaran & Smith, 1995, 2013). The method assumes that the long-term coefficients are homogeneous or the same in all groups but the slope or coefficient value is different between groups in the short term so that the results can be compared between groups.

The modeling in this study follows the model specification of Osinubi & Asongu, (2020) to estimate the effect of globalization on FLFP in middle-income ASEAN countries but differs in the use of control variables included to gain insight into the effect of other factors on FLFP. To get a clear picture of the FLPF function and model specification, it is presented in the following section.

$$FLFP = f(GI, EcoGI, SocGI, PolGI, GDP, Fert, AYSF)$$

Where FLFP is Female Labor Force Participation, GI is Globalization Index (Economy, Social and Political Globalization Index), EcoGI is Economy Globalization, SocGI is Social Globalization, PolGI is Political Globalization, GDP is Gross Domestic Product, Fert is Fertility, AYSF is Average years of school female.

Based on this, the PARDL estimation equation model can then be compiled in the following section.

$$\Delta Y_{it} = \alpha_i + \sum_{j=1}^{m} a_{ij}\Delta Y_{it-j} + \sum_{j=1}^{n} a_{ij}\Delta X n_{it-j} + \beta_{ij} Y_{it-1} + \beta n_{ij} X n_{it-1} + \varepsilon_{it}$$

Where Δ is the first difference form of the variable, α_i, α_n is the short-term coefficient value, βn is the long-term coefficient value, m is the lag representation of the dependent variable, n is the lag representation of the independent variable, ε is the error term. Then the panel error correction model based on the above equation can be arranged as follows.

$$\Delta Y_{it} = \alpha_i + \sum_{j=1}^{m} a_{ij}\Delta Y_{it-j} + \sum_{j=1}^{m} a_{ij}\Delta X n_{it-j} + \vartheta ECM_{t-1} + \varepsilon_{it}$$

Where ϑ is the ECM coefficient which measures the speed of adjustment made each year towards the long-run equilibrium. The ECM model is for country-specific differences in the panel of countries in the short-run form so that it shows differences in slope and coefficients in each country.

4 Results and Discussions

In the initial stage of estimation, the multicollinearity problem in the model used is checked by the collinearity test on each variable, and in this study using a limit of 0.85 as referred to by Kennedy (2008). For a clear picture of collinearity in each variable, it is presented in the following correlation matrix table.

Table 2. Matrix Correlation

Variable	GI	EcoGI	SocGI	PolGI	GDP	Fert	AYSF
GI	1,00	0,60	0,93	0,69	0,58	-0,44	0,66
EcoGI	0,60	1,00	0,47	-0,04	-0,18	-0,42	0,30
SocGI	0,93	0,47	1,00	0,54	0,61	-0,52	0,70
PolGI	0,69	-0,04	0,54	1,00	0,79	-0,05	0,41
GDP	0,58	-0,18	0,61	0,79	1,00	-0,35	0,33

Fert	-0.44	-0,42	-0,52	-0,05	-0,35	1,00	0,08
AYSF	0,66	0,30	0,70	0,41	0,33	0,08	1,00

Sources: Data processed, 2023

Based on Table 2, the correlation between variables mostly shows below 0.85 so it can be concluded that there is no multicollinearity problem in the model and the estimated value can be efficient except between GDP and SocGI so that the globalization estimation model and all in its dimensions are regressed respectively so that four models are formed.

After that, to ensure that there is no unit root problem in each variable used in this study which generally has the potential to occur in time-series and panel data so that the estimation results can be free from spurious regression problems and see the level of stationarity or cointegration that can be used in each variable. In this study, data stationarity testing is checked using the im-magnification-shin and fisher methods. The results of the unit root test are presented in the following table.

Table 3. Unit Root Test

Variable	Im-Pesharan-Shin		Fisher	
	Level	First Difference	Level	First Difference
FLFP	0,727	0,010**	0,808	0,001***
GI	0,693	0,000***	0,799	0,000***
ECO GI	0,012**	0,006***	0,003***	0,000***
SOS GI	0,998	0,000***	0,968	0,000***
POL GI	0,762	0,000***	0,542	0,000***
GDP	0,782	0,033**	0,817	0,039**
FERTILITY	0,055	0,029**	0,000***	0,014**
ALS FEM	0,309	0,128	0,494	0,034**

Note: *,**,*** indicate significance at 10%, 5%, and 1%, respectively.
Sources: Data processed, 2023

Based on the results of the unit root test above (Table 3) show that most of the data are stationary at I(1) or first difference such as FLFP, SocGI, PolGI, GDP, and AYSF while some others are stationary at the level or I(0) such as GI, EcoGI and Fertility. From these results, it can be seen that the level of cointegration or stationarity of the variables used has a difference so it is appropriate to use the PARDL estimation method which in general even though the variables have different levels of stationarity except I(2), estimation can still be done. The next requirement for dynamic modeling is related to cointegration between the long run and short run in the model.

Table 4. Results Cointegration Test of The Kao and Pedroni Methods

Model	Cointegration Test	
	Kao	**Pedroni**
GI (1)	0,018**	0,004***
EcoGI (2)	0,013**	0,013**
SocGI (3)	0,047**	0,424
PolGI (4)	0,060	0,007***

Note: *,**,*** indicate significance at 10%, 5%, and 1%, respectively.
Sources: Data processed, 2023

The results of the cointegration test using the KAO and Pedroni methods show significant values in all models used in this study, indicating that there is long-term cointegration in each model so that dynamic modeling can be carried out to see the effects of globalization and its dimensions and several other control variables on FLFP both in the long and short term. On the other hand, this is also one of the requirements that must be met to model in dynamic form. Based on this, the model is estimated using the PARDL method with the PMG model, to see a clear picture of the estimation results presented in the following table.

Table 5. PARDL Result With PMG Model

Variable	FLFP			
	(1)	(2)	(3)	(4)
Long-run				
GI	-.2309***			
EcoGI		-0.111***		
SosGI			-0.329***	
PolGI				0.039
LGDP	-6,309***	-9,321***	1,730	-2,525
Fert	-7,049***	-8,534***	-5,887***	-2,269
AYS	0,215	-0,330	-0,332	-0.058
Short-run				
GI	0.049			
ΔEcoGI		-0,009		
ΔSosGI			-0,029	
ΔPolGI				0,074*
ΔLGDP	-4,016**	-5,062*	-3,122	-0,986
ΔFert	3,018	3,094	3,340	3,803
ΔAYS	3,689	4,002	3,838	2,970
ECT	0,250	0,237	0,172	0,288**

C	-62,879	-78.686	-7.403	-37.065**
N	120	120	120	120
Group	4	4	4	4

Note: *,**,*** indicate significance at 10%, 5%, and 1%, respectively.
Sources: Data processed, 2023

Based on the estimation results (Table 5), it shows that most globalization produces a negative effect on FLFP or that increasing globalization has implications for suppressing FLFP in ASEAN middle-income countries in the long term. Apart from that, the variables of economic growth and fertility level each have a negative influence on FLFP in ASEAN. The variable average length of schooling does not affect the FLFP level in ASEAN middle-income countries in the long term. The average number of years of schooling for women was not found to affect FLFP in this study. Then, in the short term, most variables were found to have no influence on FLFP except for the economic growth variable. The estimation results for each middle-income country are presented in the following table.

Table 6. ARDL PMG Estimation Result Based On ASEAN Middle-Income Country

Variable	**FLFP Filipina**				**FLFP Indonesia**			
	(1)	**(2)**	**(3)**	**(4)**	**(1)**	**(2)**	**(3)**	**(4)**
ΔGI	-0,089*				0,094			
ΔEcoGI		-0,068**				0,031		
ΔSosGI			-0,022**				0,020	
ΔPolGI				0,206				0,183
ΔLGDP	-5,894	-5,081	7,172*	1,302	-1,207	-0,475	-4,517	-5,860
ΔFert	-5,607	-6,355**	-3,879	-2,694	-2,781	-3,757	-3,222	-0,524
ΔAYS	3,298**	3,425**	1,822*	3,770***	-4,423**	-4,589**	-4,742**	-4,257**
EC	0,907***	0,868**	0,666**	0,657***	0,026	-0,109	0,004	0,081
C	-226,159***	-286,835***	-27,110	-79,358**	-5.618	-5,937	0,956	-8,929
Variable	**FLFP Thailand**				**FLFP Vietnam**			
	(1)	**(2)**	**(3)**	**(4)**	**(1)**	**(2)**	**(3)**	**(4)**

ΔGI	0,188				0,000			
ΔEcoGI		-0,015				0,017		
ΔSosGI			0,205***				-0,119***	
ΔPolGI				0,074				0,019
ΔLGDP	-0,465	-0,998	-5,141	1,360	-8,502	-13,696	-10,002	-0,746
ΔFert	19,424**	22,477**	19,295***	12,580*	1,034	0,012	1,170	5,852**
ΔAYS	0,246	-0,538	-5,579	0,346	15,626***	17,711***	18,851***	12,022**
EC	-0,067	-1,089	-0,126*	0,156	0,135**	0,168**	0,145**	0,255**
C	17,809	37,628	7,111	-21,353	-37.547***	59,599***	10,569	-38,622***
N	120	120	120	120	120	120	120	120
Group	4	4	4	4	4	4	4	4

Note: *,**,*** indicate significance at 10%, 5%, and 1%, respectively; (1), (2), (3) and (4) indicate model GI, EcoGI, SocGI, and PolGI respectively.
Sources: Data processed, 2023

Based on the estimation results (Table 6), most of the globalization variables and their respective dimensions do not affect FLFP by country in the short term, except for the Philippines. The fertility variable in this study was found to only affect FLFP in Thailand, whereas no real effect was found in other countries. Meanwhile, the variable average years of schooling for women statistically shows mixed results, with a positive effect on FLFP in the Philippines and Vietnam and a negative effect on FLFP in Indonesia and Thailand. The economic growth variable was found to not affect FLFP in all ASEAN middle-income countries. The fertility level in the study was also found to have no influence on FLFP in most middle-income countries except Thailand. Then the results for average years of schooling show varying effects on FLFP in middle-income countries in ASEAN, where it has a positive effect on FLFP in the Philippines and Vietnam and negatively on FLFP in Indonesia and Thailand. A discussion of the estimation results is discussed in the next section.

Discussion

Based on ASEAN, globalization in general and most of its dimensions show a negative influence on FLFP in ASEAN middle-income countries in the long term, except for political globalization, so the increase in this phenomenon has implications

for suppressing FLFP in most ASEAN middle-income countries. The negative effects of globalization are mainly attributed to the phenomenon of economic and social globalization, which has shown an increasing trend in recent years. Economic globalization is reflected in the increasingly integrated economies and financial systems of ASEAN countries, especially middle-income countries, both in the form of trade and investment. The effects can be seen in several ways, such as the effect of trade openness, which tends to demand high competitiveness and productivity in a country so that it can produce goods and services more efficiently and can compete in the global market, as well as the direction of development, which tends to be open to encouraging increased capital with alternatives. The use of foreign direct investment (FDI) inflows in the domestic economy has had implications for encouraging the creation of market segmentation, decreasing wages, and eliminating various jobs in several countries that are still relatively underdeveloped.

This condition is relatively in line with conditions in several ASEAN middle-income countries, where productivity and competitiveness are still relatively low so openness to trade and FDI flows implies producing gender-biased market segmentation which increasingly limits women's involvement in aspects of economic activity due to increasing productivity. and economic competitiveness as well as increasing capital resources by attracting FDI, which results in a restructuring of industries or production systems that use technology-intensive and tend to absorb a large proportion of male workers compared to women, thus further limiting women's employment opportunities in sectors that have low productivity and wages. or forced to lose their job. These findings are in line with Marshall's job supply theory that a decrease in wage levels implies a reduction in the willingness of female workers to participate in a job and the U-shape hypothesis regarding the development push towards industrialization with characteristics of capital that will reduce the role of women in several jobs, as well as the pessimistic view of hegemonic groups. explained that globalization will have implications for pressing workers, especially female workers, due to the various bad effects of globalization.

The negative effects produced by social globalization on the FLFP of ASEAN middle-income countries in the long term are mainly due to increased interaction, especially in the aspects of information openness, culture, and personal contact, apart from encouraging progress, which in some ways is also often misinterpreted or adaptations are less by norms or systems. social issues that tend to threaten security or isolate and exploit women, for example in the work environment, so changes in these aspects due to the increasing development of social interaction globally have implications for reducing FLFP in mid-income ASEAN. The implications of political globalization in this study were not found to be influential in encouraging an increase in FLFP. This is mainly because women's interests are not yet represented in aspects of global politics that are encouraged by international organizations and the government.

Apart from focusing on aspects of the role of globalization in the development of FLFP middle-income countries, this study also includes consideration of several other variables, such as income, economic growth, fertility levels, and the average number of years of schooling for women. Statistically, economic growth

mostly shows a negative effect on ASEAN middle-income FLFP in the long term. This is mainly because most of the economic systems in these countries are still at the level of industrialization development, especially extractive industries, which characteristically encourage the use of high technology and are relatively tight. in terms of workers' skills, which then has implications for producing gender-biased market segmentation and decreasing wages, which further limits women's participation because, on the other hand, the development of the level of education that women have in these countries is also a gap compared to men, so that in the economic development stage, it has implications for reducing FLFP. ASEAN middle-income countries are in line with the U-shape FLFP hypothesis, which explains that the role of women in work tends to decrease in the economic transition to a more industrial-based direction, and the findings in the study of Asongu et al. (2020), also show the negative influence of economic development on the FLFP of Sub-Saharan Africa.

The female fertility rate in this study was also found to have implications for suppressing the development of ASEAN FLFP in the long term. This is generally because high fertility levels or the number of children who have children tend to increase women's time on domestic matters and caregiving, thus limiting women from doing outside work to reducing FLFP levels in middle-income ASEAN countries. These findings are in line with the studies of Cipollone et al. (2012) dan Bloom et al. (2009), who also found a negative effect of fertility levels on women's participation in work. The average length of schooling for women in the long term and the effects of all determinant variables in the short term were found to have no real influence on the FLFP aspect of ASEAN middle-income countries.

As for countries, globalization in general and in its various dimensions has been found to have varying effects between countries. Some ASEAN developing countries tend to gain benefits from pushing up the FLFP level even though it is not yet real from the wave of globalization, while on the other hand, this has pressing implications for several other countries, and some previous literature argues that this is due to differences in several things, such as the economic, social, and political development of each country. Conceptually, the negative effects of globalization on FLFP generally occur in countries with economies and educational levels that are still relatively developed. This condition is in line with the effects of globalization produced in the Philippines, which shows that globalization as a whole has implications for suppressing women's participation in work because fundamentally, the Philippine economy is still in the development stage of industrialization and the level of education is still relatively low, with education ranking 73rd, or the lowest globally, about increasingly limiting the expansion of women's employment opportunities, which tend to be increasingly segmented both in terms of gender and skill level. The effects of globalization on several other countries, namely Indonesia, Thailand, and Vietnam, were found to have no real effect except for the effects of political globalization, which had a positive effect on Thailand's FLFP and a negative effect on Vietnam's FLFP.

Then the economic growth variable generally shows a negative but insignificant effect on FLFP in each country. This is mainly because economic

encouragement tends to focus on industrial sectors, so it still has relatively negative implications for encouraging FLFP in each country as well as uneven expansion in various sectors, especially the service sector, which has relatively good employment expansion for women. These findings are in line with the studies of Asongu et al. (2020) dan Fatima & Khan, (2019), who empirically also found a negative effect of economic growth on FLFP. Meanwhile, the fertility level variable was found to only affect FLFP in Thailand, where this increase led to an increase in FLFP. These findings are not in line with previous findings by Asongu et al. (2020), this is mainly due to the expansion of the service sector in the Thai economy, which continues to be strong, reflecting service activities that continue to grow specifically related to child care services, so that increasing fertility or the number of children does not limit women from carrying out activities outside and participating in the economy.

The effect of average years of schooling in this study was found in various forms, where it had a positive influence in the Philippines and Thailand while it was negative in Indonesia and Thailand. This illustrates that the effect of increasing women's education on the FLFP of countries with relatively small economic levels, such as the Philippines and Vietnam, has positive and negative implications for countries that are slightly better off economically, such as Indonesia and Thailand, even though they have the same economic status as developing countries. This is mainly because in countries such as Indonesia and Thailand, which have almost reached the maturity stage of industrialization and are increasingly creating a gap in employment opportunities between men and women, increasing women's education tends to be insignificant, or in the face of this high gap, women leave the job market to obtain better education so that in some cases this has negative implications. This is in line with the U-shape hypothesis, which explains that the rapid development of industrialization is pushing women out of the job market temporarily and accessing higher education to obtain better skills and competitiveness compared to male workers to expand employment opportunities, which will eventually reduce women's participation in that period. There is a positive increase in the Philippines and Vietnam, where increasing women's education has positive implications for the absorption of female workers. Basically, the economy is still in the early stages of industrialization, so there has not been strong industrial restructuring or is still limited to the use of simple technologies that have developed so that female workers are at a high level. The education they have still has a relatively good chance of being absorbed into the job market compared to economic conditions that are relatively more industrialized. Female workers have to sacrifice a relatively long time to obtain an education to enter the job market.

5 Conclusions and Recommendation

Research Conclusion

Based on the findings from this research, in general, globalization, economic globalization, social globalization, GDP, and fertility have a long-term negative

influence on the FLFP of middle-income countries in ASEAN. Meanwhile, economic growth was mostly found to have implications for suppressing FLFP levels in ASEAN middle-income countries. The fertility variable shows various effects in each country, where it has a positive effect on encouraging FLFP in Thailand but has a negative but insignificant effect on FLFP in Indonesia, the Philippines, and Vietnam.

The effects of globalization by country in the short term show varying results, for example, in the Philippines, where overall economic globalization has implications for suppressing the FLFP of the country. Meanwhile, Indonesia, Thailand, and Vietnam show that globalization does not have a big effect on encouraging FLFP. The economic growth variable was found to have a negative but not strong influence on most countries. The fertility level variable was only found to have a positive effect on FLFP in Thailand. Women's education levels were found to have implications for encouraging economic growth in the Philippines and Vietnam, but negatively for Indonesia and Thailand.

Recommendations

In increasing FLFP, it is important to encourage investment in education and training that is relevant to the needs of the global labor market so that it can help improve the skills and competencies of the female workforce. In addition, it is important to adopt policies that encourage a more gender-inclusive labor market, especially regarding discrimination in employment opportunities, such as differences in wages and employment opportunities between female and male workers. Apart from that, the governments of several ASEAN countries need to encourage equitable sectoral development or not only focus on the industrial sector so that they can expand employment for women. Countries in ASEAN can work together to increase the participation rate of women in the workforce through the exchange of experience and knowledge, as well as cooperation in developing policies and programs. Flexibility, inclusion, and gender equality must be the basis of efforts to increase FLFP. By adopting a holistic approach and involving various related parties, it is hoped that it can create positive changes in increasing female workforce participation and achieving sustainable development in ASEAN.

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