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**| RESEARCH ARTICLE**

**The Relationship of Child Labor and Globalization in the Philippines**

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**| ABSTRACT**

The problem of child labor has long been studied by economists, and most of it focuses on the microeconomic perspective. For this study, the researchers have decided to shift their focus to macroeconomic analysis. This study focuses on the effects of globalization and economic growth on the prevalence of child labor in the Philippines, mainly focusing on globalization, by using time-series analysis. Studies suggested that there is an inverted U-shaped relationship between globalization and child labor in developing countries, while other studies have determined a U-shaped relationship. The findings of this study reveal that there is no U-shape relationship between the variables but instead follows a linear relationship between globalization and child labor in the Philippine context. However, the lack of data and research publication on a national scale could influence the empirical results. Furthermore, this research can be used as literature in future studies.

**| KEYWORDS**

Globalization, Child Labor, Economic Growth, FDI, Trade Openness, Philippines

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**1. Introduction**

Child labor has been one of the socio-economic issues in the Philippines that stems from different factors. The International Labour Organization defines "child labor" as the deprivation of their childhood as they participate in different work variations that could be harmful to the children. <sup>1</sup> Child labor is also defined as "the participation of a child in a variety of work situations, on a more or less regular basis, to earn a livelihood for him or herself or for the family" (Alojado-Puno, 2016). Children aged 15 to below 18 years old who are permitted to work in any economic activities under the responsibility and supervision of his/her parents or legal guardian, but not more than eight (8) hours a day and in no case beyond forty (40) hours a week.

Research about child labor has experienced a significant upsurge for the past years. Despite this augmented attention, child labor remains a significant problem in different countries (Fors, 2012). According to Rahman and Khanam (2012), a decreasing trend for the number of child labourer is observed, yet the extent of global child labour is still alarming. Moreover, they found that the empirical evidence on different countries and their regions gives mixed results regarding the child labor-globalization nexus. Edmonds and Theoharides (2018) state that despite strong economic progress in the Philippines over the last several decades, one in five Filipino families continue to remain below the poverty line, which results in the children in the family engaged in child labor. Based on the 2011 survey on Children, the Philippine Statistics Authority (PSA) 2011 found that 2.1 million Filipino children aged 5 to 17 years old were engaged in child labor.<sup>4</sup> Moreover, Fernandez and Abocejo (2014) find that in the Philippines, child labor remains multifaceted and a great cause of concern among governments and international organizations, predominantly in developing countries where number of children are exposed to impoverished conditions and incomplete social welfare.

The problem of child labor has long been studied by economists, and most of it focuses on the microeconomic perspective. For this study, the researchers have decided to shift their focus to macroeconomic analysis, specifically on macroeconomic variables such as economic growth and globalization. Thus, to determine the relationship between child labor in the Philippines and globalization, this research paper will focus on the question: To what extent and in what ways does globalization affect child labor

in the Philippines? To achieve this, the researchers have focused on the following objectives: (i) Prove or disprove the U-shape relationship between child labor and globalization in the Philippines. (ii) Estimate the impact of economic growth, measured by real gross domestic product, on the incidence of child labor. (iii) Estimate the impact of globalization, measured by trade openness and foreign direct investment (FDI), on the incidence of child labor. (iv) Gather secondary data such as child labor rates, globalization level, real gross domestic product, trade openness, and foreign direct investment (FDI) from various sites maintained by government agencies.

In addition, this study would be anchored on Xu's (2017) and Dagdemir and Acoroglu's (2010) U-shaped theory between globalization and child labor rates in developing countries. They argue that the different stages of globalization in developing countries would have a different result for child labor. The researchers will want to test if this theory holds in the Philippine context. This research paper would contribute to the limited body of literature revolving around child labor in the Philippines.

## **2. Review of Related Literature**

### **2.1 Measuring Child Labor**

The Statistical Information and Monitoring Programme on Child labour (SIMPOC) defines child labor that involving work that is physically, psychologically, socially, or morally detrimental to children, or that interferes with their education by limiting them the opportunity to attend school, causing them to leave school early, or requiring them to attempt to integrate school attendance with extremely long hours and hard work. (Janzen 2016) Thus, poverty plays a role in influencing child labor activities that draw increasing attention nowadays.

In 1998, the Statistical Information and Monitoring Programme on Child labour (SIMPOC) was established at the ILO to improve the gathering of statistical data on child labour, where every 4 years, the ILO publishes global estimates of child labor. However, Janzen (2016) argue that there are several studies on how to measure child labor; thus, it still remains a complex process, leading to widespread inconsistency across studies, and different measurement techniques will result in different child labor estimates, which are often used in policy decisions. Furthermore, the findings suggest that whom we ask matters considerably when estimating the prevalence of child labor.

Dayioğlu (2013) uses ILO-supported Child Labor Survey over UNICEF-supported Multiple Indicator Cluster Surveys (MICS) to measure child labor, mainly due to ages difference where the Child labor Survey cover children aged 5 to 17 years old and MICS only covered aged 5 to 14. However, the International Conference of Labor Statisticians framework (2008) structure on child labor focuses on two main areas to measure child labor: (i) child's age; and (ii) child's activities (their nature, conditions that the child labour definition used in this paper only relates to children in economic and duration). Activities include economic activities (i.e. paid or unpaid work for

someone who is not a member of the household works for a family farm or business) as well as children's engagements in own-use production of services (i.e. household chores).

Ariyanti et al. (2016) analyze the probability of child labor in Palembang using the effect of gender, parents' education, parent's income, the number of siblings, childbirth order, the presence of parents and patriarchal kinship system in which resulted significantly affect the probability of child labor expect for parents' education and income. Moreover, Azhar and Khalil (2020) suggest that in the economics literature, child labor is treated and investigated as a microeconomic or household level issue. However, several aspects simultaneously justify examining this issue to be considered and investigated at the macro level due to the fact that there are various macroeconomic variables that are closely associated with child labor in an economy. For example, per capita income, the fiscal allocation for human capital formation, government institutions, governance quality, trends of state fertility and its population growth, and the dependency burden of the younger population.

On the other hand, Esguerra (2002) poses problems for measuring child labor since regularly collected household data on labor market activity do not generally provide information about work conditions, let alone the consequences of work. The measurement problem is more acute in the case where the activity is hidden or is considered illegal. Edmonds (2014) proposes that the dominant tool used to combat child labour globally is a minimum age of employment regulation. However, the concept of childhood varies between countries and cultures, resulting in different approaches to child labour measurement. (Janzen 2016) finds that the main purpose of global and regional estimates of child labour is to monitor global trends and regional differences. Yet, measuring child labor remains a multifaceted process, leading to rampant discrepancies across studies.

Khan and Lyon (2015) suggest ILO's the three principal international conventions on child labor as a guide to the statistical measurement of child labor – Minimum Age to Employment, 1973 (No. 138), 10 Worst Forms of Child Labour Convention, 1999 (No. 182)<sup>11</sup> and United Nations Convention on the Rights of the Child (1989, CRC) – together set the legal parameters for child

labour and provide the legal basis for national and international action against it. Furthermore, Geneva (2017) indicates the standard age for child labor: (i) Age 5 to 11 years: At least 1 hour of economic work or 21 hours of unpaid household services per week. (ii) Age 12 to 14 years: At least 14 hours of economic work or 21 hours of unpaid household services per week. (iii) Age 15 to 17 years: At least 43 hours of economic work per week. However, the age group used do not, therefore, reflect national legislation and were instead selected for the sake of comparison with other countries.

In contrast, Institute for Labor Studies, the term child labor in the Philippines applies to the illegal employment of children below 15 years old or those below 18 years old in hazardous occupations. Based on the Philippine Statistic Office (PSO), they have only conducted three (3) existing surveys on working children in the country; 1995, 2001 and 2011. Unfortunately, these surveys are still inadequate to capture the extent of child labor in the Philippines. Vamstad (2011) questions what conception of child labor, that has been used during its measures. For instance, some comprehend the children that are not going to school, some counts all street children in as well, which means that we have had to deal with very diverse numbers, statistics and information. In fact, Mohit et al. (2013) suggest that in order to acquire pertinent statistics from working children, a questionnaire must be produced and a general strategy established such as balanced sex, regional, and ethnic composition of interviewed children. A questionnaire that comprised a set of questions on socioeconomic deprivation of children—along with the standard of living, basic necessities, and housing conditions—was administered to the sampled population.

### **2.2 Child Labor and Economic Growth**

The problem of child labor has been studied throughout time, and there are still ongoing discussions on how child labor incidence influences a country's economy. Economists have different opinions on this problem, particularly if child labor improves or worsens developing economies. Goransson (2016) described economic growth as an increase in the productive capacity of an economy, measured as an increase in a country's gross domestic product. Edmonds and Theoharides (2020) referred to economic growth as the process of developing countries

growing richer. In relation, their study shows that child labor can slow down economic growth through its effect on child development, wages, and technological advancement. Furthermore, Abdullahi and Noor (2016) analyzed the relationship between child labor and economic growth in developing countries, and their study shows that child labor increases as economic growth escalates, but when economic growth is sustained through time, child labor decreases. Shahid & Ali Khan's (2020) study shows that economic growth enhances its impact on child labor. It can be explained as economic growth increases. Developing countries require more labor to meet their production needs which includes adult labor as well as child labor.

Agénor and Alpaslan (2013) developed a three-period, gender-based overlapping generations model of economic growth with heterogeneity in parental preferences, endogenous intra-household bargaining, and child labor in-home production by girls in low-income countries. The results show that there are significant benefits for girls (in terms of education outcomes), as well as in terms of economic growth if policies are placed to promote increased family access to infrastructure. Likewise, their analysis shows that even when governments decrease spending on education and increase expenditure on infrastructures, it would still promote human capital development and girls' bargaining power in the family, which balances any detrimental effects on economic growth. Other reasons for child labor are low family income, unemployment of family members and family work burden (Acharya, 2018). In addition, they argued that child labor could negatively affect a country's long-run growth when children involved in work become adults as it turns them less productive in the future.

Basu et al. (2010) state that the channel through which poverty is reduced is important. Their results show that money transfers to poor households can increase their agrarian productivity, which would lead to an increase in child labor. Though, policies that would target education, especially for females, would most likely decrease poverty and incidence of child labor (Admassie, 2003). Kaplan (2012) found that trade liberalization policies would accelerate economic growth, which then would decrease poverty and child labor. Ab-Rahim and Tariq (2016) argue that trade liberalization gives developing countries opportunities for skills and education that would positively impact growth and child labor.

### **2.3 Child Labor and Globalization**

Empirical studies conducted to attempt to explain the impact of globalization on child labor in developing countries are scant, but some reveal that there is a negative relationship between trade openness and child labor rates. The studies also show that in developing countries whose PCGDP's are high leads to a decline in child labor rates until a certain point of income level is reached, child labor rates start to incline, which is shown through a U shape relationship (Xu, 2017; Acaroglu & Dagdemir, 2010). It illustrated that globalization and child labor had a U-shaped relationship taking the substitution and income effects into account. Specifically, in developing countries, income effects dominate up until the point of inflection which decreases the child labor rates, afterwards substitution effects begin to take place and child labor increases. However, this is contradicted by Castillo and Salem's (2016) findings on the relationship between child labor and the globalization level of countries considering their income level. Their

results showed that an inverted U-shaped relationship exists as child labor rates increase as the country's level of globalization is high until a certain threshold, after which child labor rates decrease.

Globalization is one of the most discussed issues in economic literature. The term refers to the increasing interconnectedness as a result of increased trade and cultural exchange. Economic globalization reflects the continued growth and reciprocal integration of market borders (Shangquan, 2000). Despite having a significant study on the economics of child labor, there are few bodies of literature that focus on child labor's impact on international economics (Dinopoulos and Zhao, 2007). According to Neumayer and De Soysa (2005), theory is ambiguous with regards to the effects of globalization on child labor. By 'globalization', we imply increased trade openness and foreign direct investment access (FDI) as both variables have the potential to have a positive or negative impact on child labor.

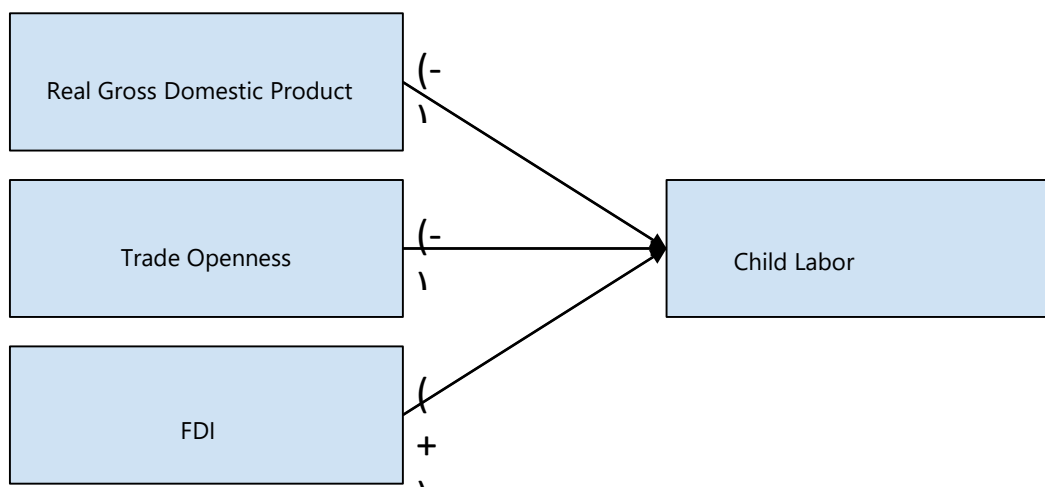
The rise of child labor will cause a reduction in the return on investment in school or the enhancement of the opportunity cost of education—additional income generated by child labor results in the rising opportunity cost of schooling. Additionally, child labor incidence rises because of the substitution effect caused by the increasing supply of child labor activities (Grootaert & Kanbur, 1995). Furthermore, Maskus (1997) demonstrated that trade liberalization could also have an impact on children who labor in non-traded sectors. Increased trade can lead to a higher prevalence of child labor as long as they work in a formal or informal industry that gives inputs to the export sector.

Empirical studies by Edmonds and Pavenik (2006) and Shelburne (2001) found a negative relationship between trade and the occurrence of child labor. Neumayer and De Soysa (2005) argued, quoting from Ranjan (2001), Jafarey and Lahiri (2002), that countries that are more open to trade are more penetrated by FDI have a lower prevalence of child labor. Market size and market growth, high labor skills, corruption-free government, and transparent policy are other factors that are equally more important to foreign investors when making an investment decision (Kucera, 2001, 2002; Noorbakhsh, Paloni & Youssef, 2001). As a result, it is possible that FDI is negatively associated with child labor. As FDI stimulates economic growth, it indirectly reduces child labor (Rahman & Khanam, 2012). Proponents of globalization believe that multinational firms hire better competent workers in developing countries and pay higher wages than average wages. If this is true, more FDI as a result of globalization will lower the wages of unskilled workers and children, reducing child labor and encouraging children to go to school (Davies and Voy, 2009).

The research hypothesis statements are the following:

- **H0<sub>1</sub>**: There is no U-shaped relationship between Philippine GDP and child labor.
- **H0<sub>2</sub>**: There is no U-shaped relationship between trade openness and child labor.
- **H0<sub>3</sub>**: There is no U-shaped relationship between FDI penetration and child labor.

#### Simulacrum:



**3. Methodology**

**3.1 Study Design**

The paper employed a quantitative research design. This study attempted to explain the effects of globalization and economic growth on the prevalence of child labor in the Philippines, mainly focusing on globalization, by using time-series analysis. Existing literature has focused on cross country analysis in developing countries to explain the effects of economic growth and globalization on child labor participation rates (Xu, 2017; Acaroglu & Dagdemir, 2010).

**3.2 Study Site**

The paper was conducted in the Philippines and would be on a national scale. Furthermore, the period covered by the study would be yearly, and data would be selected on the basis of its availability.

**3.3 Data Collection Procedure**

The secondary data in this research was obtained from various sites maintained by government agencies. The variable economic growth measured by the annual percentage growth rate of GDP is taken from the World Bank Indicators (2021). The variable child labor measured by 'working children' is taken from the PSA's Statistics on Working Children, which is measured as a percentage distribution of working children in the country. Globalization level is measured by trade openness and foreign direct investment (FDI), which are taken from World Bank Indicators (2021).

**3.4 Data Analysis/Mode of Analysis**

The researchers used the OLS regression to examine the linkages between child labor and globalization in the Philippines. The model is adapted from Xu's (2017) and Dagdamer & Acaroglu (2010) study to further test the hypotheses.

$$child\ labor_i = \beta_0 + \beta_1gdp + \beta_2trade + \beta_3FDI + e_i \quad (1)$$

Equation (1) above assumed that there is a linear relationship between the real GDP and child labor, and globalization and child labor. In this equation, *child labor<sub>i</sub>* is the measurement of working children, *gdp* is the real gross domestic product, globalization is measured by *trade* and *FDI*. The intercept in this equation is  $\beta_0$ ,  $\beta_1$ ,  $\beta_2$ ,  $\beta_3$ , and are coefficients for *gdp*, *trade* and *fdi* accordingly. Lastly,  $e_i$  is the error term.

If there is a negative relationship between GDP and child labor, globalization and the child labor then  $\beta_1 < 0$ ,  $\beta_2 < 0$ ,  $\beta_3 < 0$ .

$$child\ labor_i = \beta_0 + \beta_1gdp + \beta_2gdp^2 + \beta_3trade + \beta_4trade^2 + \beta_5FDI + \beta_6FDI^2 + e_i \quad (2)$$

Moreover, this paper used equation (2) to test the non-linear relationship between the real GDP and the child labor, and globalization index and the child labor.

If  $\beta_1 < 0$ ,  $\beta_2 < 0$ ,  $\beta_3 < 0$ , and  $\beta_1 > 0$ ,  $\beta_2 > 0$ ,  $\beta_3 > 0$ , then there is a U-shape relationship between the real GDP and the child labor, and a U-shape relationship between globalization and child labor.

**4. Results and Discussion**

Table 1 describes the statistics for the variables of the model. For the dependent variable: the total child labor rate is between 11% to 15.1%, and the mean is 12.46%. The independent variables GDP per capita is between 715 USD and 3845 USD; the mean is 1824 USD. Trade openness is between 55.82% and 108.25%, and the mean is at 74.14%. FDI is between

**Table 1. Summary Statistics**

Variable	Mean	Std. Dev.	Minimum	Maximum
CHILDLABORINC	12.460	1.3166	11.000	15.100
GDP_PER_CAPITA	1824.2	939.89	715.75	3845.3
TRADE_OF_GDP	74.148	13.914	55.825	108.25
FDI	3.1655e+009	3.0335e+009	2.2800e+008	1.0256e+010

Table 2 shows the regression results based on equation 1. The regression assumes that there is a linear relationship between globalization and child labor rates. In addition, it also assumes that there is a linear relationship between GDP per capita and the

child labor rates as well.

Table 2 shows that both coefficients of GDP per capita and trade openness are negatively significant with the child labor rate. However, the coefficient of FDI is positively significant to child labor rates. Hence, these imply that there is no linear relationship between trade openness, FDI and the child labor rate. Linearity cannot capture the relationship between globalization and child labor rate or the GDP per capita and the child labor rate.

**Table 2. OLS Regression Results**

Dependent Variable: CHILDLABORINCIDENCE

Sample: 1991-2020

Variable	Coefficient	Std. Error	T-ratio	P-value
Constant	21.8960	1.65162	13.26	4.47E-013***
GDP_PER_CAPITA	-0.00191187	0.000440188	-4.343	0.0002***
TRADE_OF_GDP	-0.0887057	0.0166223	-5.337	1.39e-015***
FDI	1.98700e-010	1.14736e-010	1.732	0.0952*
Mean dependent var	12.46000	S.D. dependent var	1.316631	
Sum squared resid	20.64721	S.E. of regression	0.891136	
R-squared	0.589290	Adjusted R-squared	0.541901	
F (3, 26)	12.43501	P-value (F)	0.000031	
Log-likelihood	-36.96389	Akaike criterion	81.92779	
Schwarz criterion	87.53258	Hannan-Quinn	83.72081	
rho	0.549758	Durbin Watson	0.906858	

Table 3 shows that there is no heteroskedasticity error using the white's test as well as using the Breusch-Pagan test based on the regression output since the p-value is greater than the alpha of 0.10.

**Table 3. Heteroscedasticity Test**

White's test for heteroskedasticity

Null hypothesis: heteroskedasticity not present

Test statistic: LM = 27.5211

with p-value =  $P(\text{Chi-square}(27) > 27.5211) = 0.43597$

Breusch-Pagan test for heteroskedasticity

Null hypothesis: heteroskedasticity not present

Test statistic: LM = 10.8284

with p-value =  $P(\text{Chi-square}(6) > 10.8284) = 0.0938277$

LM test for autocorrelation up to order 1

Null hypothesis: no autocorrelation

Test statistic: LMF = 7.54673

with p-value =  $P(F(1, 21) > 7.54673) = 0.0120759$

Test for ARCH of order 1  
 Null hypothesis: no ARCH effect is present  
 Test statistic: LM = 3.2843  
 with p-value =  $P(\text{Chi-square}(1) > 3.2843) = 0.0699456$

Table 4 illustrates that in the long run, the variables are cointegrated using the trace statistic and the max-eigen statistic. Probabilities less than 0.05 indicate that the finding is judged acceptable. It would be refused otherwise. Furthermore, in the trace statistic column, at most 1, at most 2, and at most 3 exhibited less than 0.05 probability, indicating that the data is accepted. The max-eigen statistic column revealed that at most 1 and at most 3 are acceptable as long as the value is less than 0.05. The max-eigen statistic of at most 2 is, on the other hand, rejected.

**Table 4. Cointegration Rank Test (Trace and Maximum Eigenvalue)**

Hypothesized No. of CE(s)	Trace Statistic	Prob.*	Max-Eigen Statistic	Prob.*
At most 1	49.612	0.0001*	31.583	0.0007*
At most 2	18.029	0.0187*	10.125	0.2078
At most 3	7.9036	0.0049*	7.9036	0.0049*

Table 5 presents the regression results derived from equation 2 in which the quadratic term of the variables are added. In this equation, it is assumed that there is a non-linear relationship between GDP per capita and the child labor rate. Additionally, it assumes that there is a non-linear relationship between globalization and the child labor rate.

Table regression result in Table 5 shows that the GDP per capita coefficient is negatively insignificant while its quadratic coefficient is also insignificant. The coefficient of trade openness and its quadratic term is also insignificant. Additionally, FDI's coefficient and its quadratic term are also not significant. This shows that the U-shape relationship is not applicable, but there is a linear relationship between the variables and the child labor rate.

**Table 5. OLS Regression Results (Non-linearity)**

Dependent Variable: CHILDLABORINCIDENCE

Sample: 1991-2020

Variable	Coefficient	Std. Error	T-ratio	P-value
Constant	8.83008	6.44047	1.371	0.1836
GDP_PER_CAPITA	-8.96560e-05	0.00162940	-0.05502	0.9566
TRADE_OF_GDP	-0.22071	0.159966	-1.388	0.1784
FDI	1.34772e-010	3.54039e-010	0.3804	0.7072
sq_GDP	-7.54062e-08	4.72609e-07	-0.1596	0.8746
sq_TRADE	0.00136743	0.000976014	1.401	0.1746
sq_FDI	0.000000	0.000000	-0.1537	0.8792
Unadjusted R-Squared	0.90699			
Non Linearity Test (squares)				

Null hypothesis: Relationship is linear

Test statistic: LM= 2.72096

With p-value =  $P(\text{Chi-square}(3) > 2.72096) = 0.436677$

Table 6 shows that we accept the null hypothesis, which shows that there is no heteroskedasticity error using white's test as well as using the Breusch-Pagan test based on the regression output since the p-value is greater than alpha of 0.10.

**Table 6. Heteroscedasticity Test**

White's test for heteroskedasticity Null hypothesis: heteroskedasticity not present Test statistic: LM = 24.8174 with p-value = $P(\text{Chi-square}(27) > 24.8174) = 0.584692$
Breusch-Pagan test for heteroskedasticity Null hypothesis: heteroskedasticity not present Test statistic: LM = 9.7429 with p-value = $P(\text{Chi-square}(6) > 9.7429) = 0.135905$
LM test for autocorrelation up to order 1 Null hypothesis: no autocorrelation Test statistic: LMF = 8.3541 with p-value = $P(F(1, 21) > 8.3541) = 0.00875394$
Test for ARCH of order 1 Null hypothesis: no ARCH effect is present Test statistic: LM = 7.51842 with p-value = $P(\text{Chi-square}(1) > 7.51842) = 0.00610713$

Table 7 illustrates that in the long run, the variables are cointegrated using the trace statistic and the max-eigen statistic. Probabilities less than 0.05 suggest that the discovery is deemed acceptable. Otherwise, it would be denied. Furthermore, in the trace statistic column, at most 1, at most 2, and at most 6 had a probability of less than 0.05, suggesting that the data is accepted. At most 3, at most 4, and at most 5 demonstrated more than the chance that the data is rejected. The max-eigen statistic column indicated that as long as the value is less than 0.05, at most 1, at most 2, and at most 6 are acceptable. In contrast, the max-eigen statistic of at most 3, at most 4, and at most 5 is rejected.

**Table 7. Cointegration Rank Test (Trace and Maximum Eigenvalue)**

Hypothesized No. of CE(s)	Trace Statistic	Prob.*	Max-Eigen Statistic	Prob.*
At most 1	139.22	0.0000*	55.491	0.0002*
At most 2	83.733	0.0021*	36.711	0.0185*
At most 3	47.021	0.0582	18.303	0.4823
At most 4	28.719	0.0670	13.371	0.4331
At most 5	15.348	0.0511	8.9909	0.2936
At most 6	6.3566	0.0117*	6.3566	0.0117*



## **5. Summary, Conclusion, and Policy Implications**

The objective of this research is to determine whether a U-shape relationship exists between child labor rate and globalization (Xu, 2016) as well as child labor rate and economic growth in the Philippines. The researchers gathered secondary data from different government websites and publications. The researchers used time-series data starting from 1991 to 2020 to comply with the minimum of 30 observations. To examine the linkages between the variables, the researchers used OLS regression. The researchers also applied different econometric tests to validate the significance of the data compiled. The results show that when the quadratic terms of the variables are added and tested for non-linearity, the variables become insignificant to child labor rates.

This study accepts the null hypothesis that there is no U-shape relationship between globalization and child labor rates in the Philippines. This study also accepts the null hypothesis that there is no U-shape relationship between economic growth and child labor rates; this might be because there is not enough data to measure child labor activities and the process of globalization in the country. However, GDP growth had a significant influence on child labor rates as it shows that when GDP growth increases, the child labor rate decreases.

This study addresses the socioeconomic issue of the country, which is child labor. Child labor cannot be eliminated overnight since its origins are rooted in socioeconomic and cultural aspects of the country. There are a few drawbacks to this study. First, there is a scarcity of research publications on child labor in the Philippines. In addition, the study's conclusions may be influenced by a lack of data on child labor incidence. Furthermore, it failed to capture several factors due to a lack of data and research publications. The Philippines approved the Minimum Age Convention, 1973 (No. 138) and Worst Forms of Child Labour Convention, 1999 (No. 182). The Philippine Program Against Child Labor (PPACL) has been designated as the official national program to abolish child labor, resulting from the National Child Labor Committee (NCLC), chaired by the Department of Labor and Employment (DOLE), collaborating with the government, different sectors, non-governmental organizations (NGOs), and international development institutions to prevent, protect, and remove child labor victims from hazardous and exploitative work, as well as to heal and reintegrate them as appropriate. One perspective is that productive asset transfer for families of child laborers is a standard tool used by policymakers to reduce child labor. Additionally, Kabuhayan Para Sa Magulang ng Batang Manggagawa (KASAMA) is a government program in the Philippines in improving the well-being of child laborers. KASAMA provides a one-time PHP10,000 in-kind asset transfer to improve the lives of poor communities with child laborers. However, KASAMA appears to have a short-term impact on child laborers. Regardless of the program, efforts must be made to eliminate child labor. In the Philippines, which has a lower level of development, policies must be developed to improve globalization, particularly with regards to the variables that impact economic and social aspects, to achieve the inflection point as quickly as possible and, therefore, lower child labor rates. From improved and quality educational opportunities at the lowest possible cost to more efficient capital and labor markets should all be considered a policy tool. All aspects of the child labor problem must be considered to eliminate this socioeconomic issue. The study's findings show that economic growth alone is insufficient to alleviate child labor but that it should be accompanied by policies aimed at reducing income inequality distribution and poverty.

## **References**

- [1] Abdullahi, I. I., & Noor, Z. M. (2015). *The Impact of Economic Growth on Child Labour in Developing Countries*. *Journal of Economics and Sustainable Development*, 6(12), 206–212.
- [2] Ab-rahim, R., & Tariq, B. (2016). *The Effect Of Trade Openness On Child Labor: Empirical Evidence From Developing Economies*. *Journal of Economics and Management*, 10(1), 155–171.
- [3] Acharya, K. R. (2018). *Causes of Child Labour in Nepal: An Analysis from Economic Perspective*. *Contemporary Social Sciences*, 27(2), 78–89. <https://doi.org/10.29070/27/57467>
- [4] Agenor, P.-R., & Alpaslan, B. (2013). *Child Labor, Intra-Household Bargaining and Economic Growth*. Centre for Growth & Business Cycle Research, 1–41.
- [5] Ariyanti, I., Marwa, T., Soebyakto, B.B., & Tarmizi, N. (2014). *Child Labor in Palembang*. *Eurasian Journal of Social Sciences*, 4(3), 36-47.
- [6] Can T., Liqiu Z., & Zhong Z. (2018). *Child labor in China*. *China Economic Review* 51 (2018) 149-166.
- [7] Castillo, L. L., & Salem, D. S. (n.d.). *Does Globalization Contribute to Decreasing Child Labor Rates?*. *Revista De Economia Mundial*, 1(44), 127–151.
- [8] Chaudhuri, S. (2011). *Labor market reform and incidence of child labor in a developing economy*. *Economic Modelling*, 28(4), 1923-1930.
- [9] *Child labour in the Philippines* (ILO in the Philippines). (n.d.). Retrieved April 29, 2021, from <https://www.ilo.org/manila/areasofwork/child-labour/lang--en/index.htm>
- [10] Dagdemir, O., & Acaroglu, H. (2010). *The effects of globalization on child labor in developing countries*. *Business and Economic Horizons*, 2(2), 37–47. <https://doi.org/10.15208/beh.2010.15>
- [11] Davies, R.B. and Voy, A. (2009). *The Effect of FDI on child labour*. *Journal of Development Economics*, 88, 59-66.
- [12] Dayıođlu, M. (2013). *Impact of Unpaid Household Services on the Measurement of Child Labour*. United Nations Children's Fund, New York.
- [13] Dinopoulos, E. and Zhao, L. (2007). *Child labour and globalization*. *Journal of labour Economics*, 25, 553-79.
- [14] Edmonds, E., & Theoharides, C. (2019, January 7). *The Impact of Productive Assets and Training on Child Labor in the*. Innovations for Poverty Action. <https://www.poverty-action.org/study/reducing-child-labor-philippines>.

- [15] Edmonds, E. (2014). *Does minimum age of employment regulation reduce child labor?*. IZA World of Labor.
- [16] Edmonds, E. V., & Theorides, C. (2020). *Child Labor and Economic Development. Handbook of Labor, Human Resources and Population Economics*, 1–34.
- [17] Edmonds, E. V., & Pavcnik, N. (2006). *International Trade and child labor: Cross-country evidence. Journal of International Economics*, 68, 115-140.
- [18] Edmonds, Eric & Theoharides, Caroline, 2020. *The short term impact of a productive asset transfer in families with child labor: Experimental evidence from the Philippines. Journal of Development Economics, Elsevier*, 46(C).
- [19] Esguerra, E. (2003). *An Analysis of the Causes and Consequences of Child Labor in the Philippines*. International Labour Office (ILO).
- [20] Eskander, A., & Seife, D. (2011). *Sibling Differences in School Attendance and Child Labour in Ethiopia. Oxford Development Studies*, 39(3), 285-313.
- [21] Faraz, M.A. (2019). *Economics of Child Labor: A Multidimensional approach. Journal of Social Science Research*.
- [22] Fors, H.C (2010). *Child labour: a recent review theory and evidence with policy implications. Journal of Economic Surveys*, 26(4), 570-593., DOI: 10.1111/j.1467-6419.2010.00663.x.
- [23] Geneva. (2017). *Global estimates of child labour: Results and trends*. International Labour Office (ILO).
- [24] Grootaert, C. & Kanbur, R. (1995). *Child labour: a review*. World Development Report.
- [25] Jafarey, S. & Lahiri, S. (2002). *Will trade sanctions reduce child labour? The role of credit markets. Journal of Development Economics*, 68, 137-156.
- [26] Janzen, S. (2018). *Child Labor Measurement: Whom Should We Ask?. International Labour Review Organization*, 157(2), 169-191.
- [27] Kaplan, G. (2012). *Moving Back Home: Insurance Against Labor Market Risk. Journal of Political Economy* 120(3), 446–512. <https://doi.org/10.21034/sr.449>
- [28] Khan, S., & Scott, L. (2015). *Measuring Children's Work in South Asia: Perspectives from national household surveys*. International Labour Organization.
- [29] Khanam, R., & Rahman, M. M. (2012). *Child Labour: The Effects of Globalisation*. The University of Iowa Labour Center.
- [30] Kucera, D. (2001) *The effects of core worker rights on labour costs and foreign direct investment: evaluating the conventional wisdom*. International Institute for Labour Studies.
- [31] Luca Pellerano & Eleonora Porreca & Furio C. Rosati (2019). *The Income Elasticity of Child Labour: Do Cash Transfers Have an Impact on the Poorest Children?*. Tor Vergata University, CEIS, 2019.
- [32] Maskus, K. E. (1997). *Should core labour standards be imposed through international trade policy?*. Policy Research Working Papers 1817.
- [33] Neumayer, E. and De Soysa, I. (2005). *Trade openness, foreign direct investment and child labour. World Development*, 33(1), 43 – 63.
- [34] Noorbakhsh, F. Paloni, A., & Youssef, A. (2001). *Human capital and foreign direct investment inflows to developing countries: new empirical evidence. World Development*, 29(9), 1593-1610.
- [35] Ranjan, P. (2001). *Credit constraints and the phenomenon of child labour. Journal of Development Economics*, 64, 81-102.
- [36] Sayan, C., Ulrike, G., & Guido, L. (2011). *Does social labelling encourage child schooling and discourage child labour in Nepal?. International Journal of Educational Development*, 31 (2011), 489-495.
- [37] Shahid, S., & Ejaz Ali Khan, R. (2020). *Informal Sector Economy, Child Labor and Economic Growth in Developing Economies: Exploring the Interlinkages. Asian Development Policy Review*, 8(4), 277–287. <https://doi.org/10.18488/journal.107.2020.84.277.287>
- [38] Shangquan, G. (2000). *Economic Globalization: Trends, Risks and Risk Prevention*. CDP Background Paper No. 1, Economic and Social Affairs.
- [39] Sheikh, MMR., & Prodhan, M. (2013). *The Socioeconomic Deprivation of the Child Laborer: Bangladesh Perspective. Journal of International Social Issues*, 2 (1), 45-59.
- [40] Smith, Lauren C. (2011). *Re-Evaluating Poverty Alleviation Strategies: The Impact of Microfinance on Child Labor in Bangladesh*. Claremont McKenna College.
- [41] Vamstad, J. (2011). *A Child Labor Free Philippine - When Will That Be?* 1–76.
- [42] *What is child labour (IPEC) ?*(n.d.). Retrieved April 29, 2021, from
- [43] <https://www.ilo.org/ipec/facts/lang--en/index.htm>
- [44] Xu, J. (2017). *Globalization and Child Labor*. Radboud University, 1–39.
- [45] Xu, J. (2017). *Globalization and Child Labor*. Nijmegen School of Management International Economics & Development, Radboud University.

#### Data sources:

- [1] The World Bank. (2021). *GDP per Capita*. Retrieved from
- [2] <https://data.worldbank.org/indicator/NY.GDP.PCAP.CD?locations=PH>
- [3] PSA. (2021). *Annual Poverty Indicator Survey (APIS)*. Retrieved from
- [4] <https://psa.gov.ph/content/annual-poverty-indicators-survey-apis>
- [5] The World Bank. (2021). *Trade Openness*. Retrieved from
- [6] <http://data.worldbank.org/indicator/NE.TRD.GNFS.ZS>
- [7] The World Bank. (2021). *Foreign Direct Investment (FDI)*. Retrieved from
- [8] <http://data.worldbank.org/indicator/BX.KLT.DINV.CD.WD>