

## Work, Family, and Dropping Out Among Adolescents in Thailand

Pisit Poosanga, Khon Kaen University, Thailand  
Tanyamat SrungBoonmee, Khon Kaen University, Thailand

The Asian Conference on Education & International Development 2025  
Official Conference Proceedings

### Abstract

Education is key to developing human capital and a country's growth. Dropping out of school is a serious problem, affecting both the economy and the individual's quality of life. Even though there are many policies and programs to make education easier to access, financial constraints and family issues still create major barriers. Single parenthood is a potentially important factor affecting dropout among adolescents. Time and financial constraints may limit single parents' ability to support their child education. In addition, children of single parents may face emotional and psychological challenges affecting their studies. Moreover, the trend of single parenthood in Thailand has been continuously increasing in recent years. This study explores factors affecting the dropout rate among Thai youth aged 15-19. Using data from Labor Force Survey Thailand 3rd quarter 2022, this study uses the OLS model and Probit to examine the relationship between single parenthood and children's school enrollment. The findings show that single mothers do not have a significant impact on the dropout rate, whereas single fathers are associated with a higher dropout rate after controlling for family income, work status in adolescents, and a host of potentially relevant demographic factors. Finding that children from single-father families have higher school dropout rates than those from single-mother or two-parent families. Policies should focus on addressing root causes, such as inconsistent parental involvement and financial difficulties, with interventions like learning centers for single fathers and tax deductions for education expenses. Further research to understand single parenthood and its impact on education.

*Keywords:* school dropout, single parents, adolescents

**iafor**

The International Academic Forum  
[www.iafor.org](http://www.iafor.org)

## Introduction

Education is not only a tool for developing the skills and knowledge needed to enter the labor market, but it is essential for improving overall quality of life (Sarker et al., 2019). High-quality education enables individuals to secure stable employment and earn higher incomes, contributing to both economic and social development through the strengthening of human capital (Hanushek & Wößmann, 2010). In Thailand, for instance, show estimated returns on education of 13.5% for primary, 13.4% for lower secondary, 10.6% for upper secondary, and 23.1% for higher education in 2002 (Colclough et al., 2010). Since the early 21st century, rapid global changes especially digital transformation in daily life have increased the need for specialized work skills. Thus, education systems have had to continuously evolve and adapt their curricula to meet the shifting demands of human capital in an increasingly competitive world. However, despite these advantages and skills that enhance human capital, many adolescents still face barriers that lead them to drop out of school. This study, therefore, aims to explore the factors contributing to school dropout.

School dropout refers to students leaving school without graduating, and it affects millions of children worldwide. In Thailand specifically, 238,707 children have dropped out, with those from low-income groups being at higher risk. This widespread issue need for effective solutions to ensure all children receive an education. Although some government policies have shown positive results in reducing school dropout rates, many others have failed to achieve their objectives (Tharmpornphilas, 2013). Thus, adopting appropriate policies can benefit children at risk of dropping out and using government resources efficiently.

Ministry Of Education (2010) in Thailand's has launched "15 Years of Free Education with Quality" campaign aimed to provide free education up to the 12th grade for all children, supported by educational equipment. While this policy successfully increased enrollment rates at the basic level, many students still dropped out after the 12th grade due to financial constraints. Subsequently, the COVID-19 pandemic further exposed existing educational inequalities, as vulnerable households struggled with online learning, leading to additional dropouts. In response, UNICEF Thailand revived the "Education for All" program and launched to promote school re-enrollment. Office of the Permanent Secretary, Ministry of Education (2022) launched "Pha Nong Klub Ma Rean" aimed to bring all out of school children back. The government expected positive outcomes based on research by Dessy et al. (2023) found that free and compulsory education can reduce the negative impact of income shocks on school attendance, as demonstrated in Nigeria. However, these initiatives faced significant barriers, especially financial ones, resulting in lower-than-expected outcomes. These results suggest that financial support alone may not be sufficient to bring children back to school. As Pratibha et al. (2014) concluded, additional factors, such as overall financial stability of families, are also critical for academic success.

Family is the most influential agent among the different social factors that significantly influences the growth and development of any child (Pratibha et al., 2014). While income constraints are often a primary factor leading to school dropout, other family characteristics also play a substantial role. These include household income, number of siblings, single parent status, and various forms of family structural gaps factors that are frequently overlooked in educational policy discussions. Thus, exploring family structure becomes a compelling dimension of educational research.

Characteristics of single-parent families have been linked to child development, and lead to dropout as family size and parental marital status affect children's emotional and intellectual development (Egunsola, 2014; Falana et al., 2012). However, the impact of single-parent families on children remains a subject of debate. For example, Amato et al. (2015) show single mothers' education improves children's math scores, while Gupta and Kashyap (2020) associate single-parent households with higher dropout rates. In Thailand, single-parent households made up 10.6% of all households in 2020, may rise to 11.2% by 2040 (Bhubate Samutachak, J. R. S. C. K. T. P. N. S. S, 2022). This research aims to examine how single-parent families affect child educational attainment in Thailand to reduce school dropout among children from single-parent families and to enhance the educational opportunities or capabilities of youth for entry into the labor market.

This study examines factors influencing school dropout among adolescents aged 15–19, focusing on the role of single parenthood and economic causes in dropout rates. It highlights the need to explore this issue in Thailand, where single-parent families are rising, considering varying cultural beliefs and social support that impact education outcomes.

The increasing prevalence of single-parent families in Thailand necessitates examining their impact on child academic and dropout rates within the country's unique context. Azumah et al. (2018) explore family structure indicated no significant effects on academic performance of children but parental involvement significant difference in children's academic performance. However, recent technological advances and evolving social values promoting equal access to education have created new opportunities for children from all family structures to learn independently. Therefore, this study aims to determine whether single-parent families influence educational attrition in Thailand.

### **Research Question**

- Does single parenthood of parents affect adolescents' school dropout.

### **Expected Outcome**

- Recognize the importance of education children and find ways to reduce children's attrition from education.
- Make families and children aware of problems and be able to deal with it in time.
- Provide policy recommendations and support.

### **Literature Reviews**

Family structure is recognized as a significant factor influencing children's behavior, emotions, and educational outcomes. This study aims to identify the factors contributing to educational attrition, with a particular focus on single-parent families in Thailand.

### **Dropout**

School dropout is defined in various ways, including children not enrolling in school (Polat, 2014), leaving before completing compulsory education (Mpourgos et al., 2020), or exiting the education system without obtaining a minimum diploma (De Witte et al., 2013). Despite these differing definitions, school dropout consistently has negative consequences for the education system, individuals, and society as a whole (Boyacı, A., 2019). Lawrence and

Adebowale (2022) found school dropout occurs for many reasons; however, this study focuses specifically on students who leave school before completing secondary education. Furthermore, this study examines the influence of single parenthood and demographic factors on dropout rates.

### **Family Variables Can in Particular in Family Structure**

Family structure significantly influences dropout rates (Rumberger et al., 1990). Single-parent families typically face economic and time constraints that impede children's academic success, unlike two-parent households that provide greater stability and support. Family dynamics, including parental involvement and family size, further affect dropout risk, with larger families often providing less individual attention. Effects on children in single-parent households extend beyond economics include behavioral problems, such as school disengagement and increased dropout likelihood (McNeal, 1999). Parental divorce or separation during high school can lead to more significant behavioral issues and heightened risks of early sexual activity, teen pregnancy, and substance abuse (Bago, B. A., 2022; Song et al., 2012; Usakli, Hakan., 2018). Understanding family structure whether nuclear or single-parent is crucial, as it continuously influences children's educational and career outcome while significantly impacting high school dropout rates (Biblarz & Raftery, 1999; Lawrence & Adebowale, 2022) and negatively affecting children's economic and social outcomes (Erola et al., 2016).

### ***Single Parenthoods and School Dropout***

Despite challenges, research reveals several advantages in single-parent families. Sangeet and Singh (2022) found that children from single-mother households often develop increased responsibility and improved decision-making skills. Similarly, Golombok et al. (2016) documented reduced mother and child conflict compared to two-parent families. Park (2007) found that children from single-parent families in Indonesia and Thailand outperform their peers in intact families. But negative effect of single parenthood remains to child outcome. Examining both advantages and disadvantages provides critical insights into the mechanisms influencing children's development, thereby informing effective support strategies for single-parent families.

The impact of divorce or separation varies by which parent the child lives with. In Japan, children in single-mother households face financial strain, while child with single fathers may lack emotional support due to limited parenting experience (Nonoyama-Tarumi, 2017). The absence of either parent can disrupt children's emotional and academic development (Coles, 2015; Haritha, Y. D., & Bilquis, 2022).

### **Family Background, Demographic Variables, and School Dropout**

Household income significantly influences child education outcomes. Low-income families struggle with educational expenses, resulting in lower academic achievement and higher dropout rates (Acemoglu & Pischke, 2001; Bainbridge et al., 2005), particularly in resource limited rural areas (Gupta & Kashyap, 2020 ; Yi et al., 2015). Financial hardship negatively impacts both quality of life and children's attitudes toward education (Kearney & Levine, 2016; Maina et al., 2021). However, Blau (1999) suggests that family background factors including parental education and number of siblings play a more crucial role in child development than financial status alone. Szekely and Adelman (2016) note strategic policy

interventions at school and community levels more sense than individual level programs and mitigate these socioeconomic impacts on educational outcomes.

Larger families often face increased financial strain and resource allocation challenges, potentially impacting educational outcomes (Black et al., 2005). In addition, birth order also plays a role, with later-born children potentially experiencing less educational support in low-parental education (Karwath et al., 2014). Furthermore, parental education levels significantly correlate with children's cognitive development (Noble et al., 2015). Low parental education can contribute to higher dropout rates, highlighting the interconnectedness of socioeconomic factors and educational attainment (Aina et al., 2022; Chenge et al., 2017). While these family factors are important, geographical factors also play a role, as the influence of urban and rural areas on dropout rates continues to be debated (Farah & Upadhyay, 2017; Jordan et al., 2011). Beyond family-related and geographical factors, it is also crucial to study and control for the individual characteristics of the child, as these personal attributes may directly influence decisions to continue education or drop out of school.

### ***Child Labor***

Previous studies show that a main reason children drop out of school is working while studying (Hovdhaugen, 2013), as financial problems force them to balance both activities simultaneously. Dupéré et al. (2015) proposed precipitating factors that occur in the short period before the decision to drop out of school, such as new job opportunities, may play an important role in pushing students to drop out of school. While Edmonds and Theoharides (2021) and Mussida et al. (2019) identified child employment as a significant barrier to economic growth. McNeal (1997) show the relationship between work and dropout rates is significant, with both job types and working hours strongly influencing students' likelihood of dropping out. Hamenoo et al. (2018) in-depth interviews with children working on highways reveal that poverty and lack of parental care drive them to work, negatively impacting their health and education. Patrinos and Psacharopoulos (1997) noted that although work can harm education, without employment many children might not attend school at all, as economic constraints require income for educational supplies.

### ***Gender***

Barriers to education and factors leading to early school dropout are significant concerns. Gender differences in victimization and problematic behaviors also influence high school graduation rates (Tan et al., 2017). Although most dropouts are from behavior, when child separate the groups by gender, they find that the reasons for leaving school differ between males and females as Tabassum, N., & Tabassum, H. (2022) found females drop out more than males because of insecurity or harassment they face in both school and way to school. Rafique and Ahmed (2019) found that boys have a frequency of dropping out more than girls because they are more punished than girls' social pressure and norms reflect different gender perspectives. Study (Buchmann et al., 2008; Ovejas, 2024) explore female has fewer dropouts than males due to various factors such as social influences, the higher perceived value of education and they believe graduating and having a degree will make them get a better job higher salary and inequality of gender led to employment-related interests associated with education (Kane, 1995).

## *Age*

Many studies, such as Cardoso and Verner (2006) and Boyacı, A., (2019) shows age positively correlates with dropout rates. Older adolescents have higher dropout risks as they become more attracted to non-educational activities that seem more relevant or engaging to their interests. While government policies aimed at reducing tuition and fees for junior high school students may be necessary, they are insufficient to fully address the dropout issue (Yi et al., 2012). Therefore, this study incorporates age as a key variable in modeling school dropout trends in Thailand.

## **Methodology**

To answer the research question, this study compares dropout rates across three family structures: both-parent, single-mother, and single-father households (micro families). A higher dropout rate indicates a greater impact of family structure on education. The findings highlight the significant link between family structure and dropout rates.

## **Data Collection**

This study uses data from Thailand's 2022 Q3 Labor Force Survey (LFS) (National Statistical Office of Thailand, 2022), covering private and group households nationwide, excluding foreign households. Data were collected through interviews using structured questionnaires on demographics, education, employment, and income. The survey applied a Rotation Sampling method (4 groups, 2-2-2 pattern) and three-stage weighting: design weight, non-response adjustment, and post-stratification aligned with ILO and UN standards (minimum working age: 15 years).

## **Data Used**

The study controls for confounding factors using key demographics (age, gender, region, area) and focuses on employment status and single parenthood as primary explanatory variables, based on their expected impact on school dropout rates.

## **Limitations**

The study focuses on nuclear family structures as two-parent, single-mother, and single-father households to enable a direct comparison of their impact on educational outcomes. Extended families, though common in Thailand, are excluded to maintain analytical clarity. This limitation acknowledges that other family structures may also affect school dropout rates.

## **Population**

The study focuses on nuclear family structures two-parent, single-mother, and single-father households to enable a direct comparison of their impact on educational outcomes. Extended families, though common in Thailand, are excluded to maintain analytical clarity. This limitation acknowledges that other family structures may also affect school dropout rates.

## Samples

This study narrowed the sample down to the children who live in 1 of 3 family structures including:

- Children who stay with both parent
- Children who stay with single mother households
- Children who stay with single father households

The sample group among 15–19-year-olds includes 6,019 samples who live in 1 of 3 family structures from 13,447 observations. Children living with both parents serve as the reference group to identify differences between children who stay with single mothers and those who stay with single fathers when incorporating independent variables into the equation.

## Measurement

### *Dependent Variable*

**Dropout.** Dropping out was categorized under explanatory characteristics and divided into two main sections: Dropout = 1 refers to youth who drop out of school and Dropout = 0 refers to youth who study and serve as reference.

### *Explanatory Variables*

**Single Parents.** Single parenthood was analyzed by categorizing adolescents into two groups: those living with a single mother (momonly) and those living with a single father (dadonly). These two groups were compared to children living with both parents, with the latter group serving as the reference. Two dummy variables, momonly and dadonly, were used to analyze the impact of single parenthood.

- Momonly = 1 to control adolescents who stay with single mothers and 0 is otherwise.
- Dadonly = 1 to control adolescents who stay with single fathers and 0 is otherwise.

**Work.** The working was categorized under explanatory characteristics and divided into two main sections: part-time work is adolescents who work no more than 4 hours per day or 36 hours per week and Full-time work is adolescents who work more than 4 hours per day or 36 hours. By using an unemployed group as a reference group.

- Part-time work is 1 to control the working in adolescents no more than 36 hours and 0 is otherwise.
- Full-time work is 1 to control the working in adolescents and more than 36 hours and 0 is otherwise.

### *Control Variable*

Age (Age) refers to a range of age groups with youth between 15-19 years old.

Male (Gender) refers to the number of males in the group receiving value 1 and used Female as reference.

Reg (Region) Region refers to one of five regions in Thailand with Reg = 1 (Bangkok Metropolis) as a reference:

- Reg1 = Bangkok

- Reg2 = Central region
- Reg3 = Northern region
- Reg4 = Northeastern region
- Reg5 = Southern region

Rural (Rural, Urban) Rural refers to adolescents who do not stay in the municipality in the group receiving value 1, and Urban value 0 refers to adolescents who stay in the municipality as a reference group.

hh\_totmoinc (Log Total family income) hh\_totmoinc refers to all of the income in the family including salary + Overtime income + (Bonus/12) + Other money, take log for (hh\_totmoinc) to Reduce data dispersion, variance and transform data to linear.

The number of siblings refers to the number of siblings in the micro family in the family include:

- kidslt6 refers number of kids aged 6 years old in the family
- kidslt6\_12 refers number of kids aged 6-12 years old in the family
- kidslt13\_18 refers number of kids aged 13-18 years old in the family

Maxparenteducg represents the highest level of education completed by either parent. Using Max parent education to reduce potential bias that may arise from selecting inappropriate variables in econometric models because the highest level of education may have a greater influence on children education.

- maxparenteducg 2 refers to the highest level of education they complete in the family is primary school.
- maxparenteducg 3 refers to the highest level of education they complete in the family is junior high school.
- maxparenteducg 4 refers to the highest level of education they complete in the family is high school.
- maxparenteducg 5 refers to the highest level of education they complete in the family is vocational degree.
- maxparenteducg 6 refers to the highest level of education they complete in the family is bachelor's degree.
- maxparenteducg 7 refers to the highest level of education they complete in the family is master's and PhD degree.

## **Econometric Model**

### ***OLS Model***

The data was analyzed using Ordinary Least Squares (OLS) regression to examine the relationship between school dropout and various variables. Each variable was added individually to observe changes in dropout outcomes. Data from the LFS was used, with a significance level set at  $p \leq 0.05$ , and Stata version 14.1 was employed for analysis.

First, find the relationship between dropout and single parenthood by using OLS the regression as follows:

$$\text{Dropout} = \beta_0 + \beta_1 \text{ momonly} + \beta_2 \text{ dadonly} + \beta_m X_m + u \quad (1)$$

By  $m = 1, \dots, n$  where  $X_m$  are given in Table 1

$u$  = Error term

**Table 1**

*Demographic Variables*

No.	Variable name	Description	
1.	Age	15-19 years old	control variable
2.	Male	male = 1, female = 0	control variable
3.	Rural	1 = outside the municipality, 0 = in the municipality	control variable
4.	Reg	Reg2 = Reg5, Reg0 as reference	control variable

Dropout is a binary variable (1 = dropout, 0 = studying).  $\beta_1$  represents the effect of single mothers (momonly) on dropout rates, with a positive  $\beta_1$  indicating that more single mothers lead to higher dropout rates, and a negative  $\beta_1$  indicating the opposite. Similarly,  $\beta_2$  represents the effect of single fathers (dadonly), where a positive  $\beta_2$  suggests more single fathers increase dropout rates, and a negative  $\beta_2$  indicates a decrease in dropouts. A  $\beta_1$  or  $\beta_2$  of zero means no relationship between single parents and dropout rates.

Demographic variables (Age, Male, Rural, and Region) are included after Equation (1) to control for potential endogeneity in the relationship between single-parent households (momonly, dadonly) and dropout rates.

$$\text{Dropout} = \beta_0 + \beta_1 \text{ momonly} + \beta_2 \text{ dadonly} + \beta_m X_m + \beta_n X_n + u \quad (2)$$

By  $n = 1, \dots, n$  where  $X_n$  are given in Table 2

$u$  = Error term

**Table 2**

*Control and Explanatory Variables*

No.	Variable name	Description	
1.	Part-time	1 = parttime worked ,0 = otherwise	Explanatory variable
2.	Full-time	1 = fulltime worked ,0 = otherwise	Explanatory variable
3.	hh_ltotmoinc	log Family income(Baht)	control variable
4.	kidslt6	number of kids aged 6 years old	control variable
5.	kidslt6_12	number of kids aged 6-12 years old	control variable
6.	kidslt13_18	number of kids aged 13-18 years old	control variable
7.	maxparenteducg	Max education level of parent graduate	control variable
8.	momonly	1 = child who stays with a single mother, 0 = otherwise	Explanatory variable
9.	dadonly	1=child who stays with single father, 0= otherwise	Explanatory variable

Equation (2-5) includes control and explanatory variables (Part-time, Full-time, hh\_ltotmoinc, kidslt6, kidslt6\_12, kidslt13\_18, and maxparenteducg) to assess their direct effect on dropout rates and support the impact of single-parent households (momonly,

dadonly) on dropout. Household income (hh\_totmoinc) is logged to reduce heteroscedasticity and linearize exponential relationships.

OLS is a simple and widely used method for exploring factors influencing dropout rates, but it may yield biased results when variables are not normally distributed, particularly with values between 0 and 1. Therefore, while OLS helps identify key factors affecting dropout, a probit model is more appropriate for accurately estimating the binary outcome of dropping out and studying among adolescents in Thailand.

Although OLS is widely used due to its simplicity and ease of interpretation for continuous data (Greene, W. H., 2019; Stock & Watson, 2020), it provides linear results and is not suitable for binary outcomes. Issues such as heteroscedasticity and autocorrelation can also cause biased results, which is why adding a probit model is necessary when analyzing binary variables.

To address these issues, this study uses the Probit model for binary outcomes, effectively handling heteroscedasticity. OLS is suited for continuous variables like age, income, and education, while the Probit model is better for binary outcomes like school dropout (1 = dropped out, 0 = studying).

$$\begin{aligned} Dropout = \beta_0 + \beta_1 momonly + \beta_2 fdadonly + \beta_3 age + \beta_4 male + \beta_5 rural + \\ \beta_6 reg + \beta_7 parttime + \beta_8 fulltime + \beta_9 hhltotmoinc + \beta_{10} kidslt6 + \\ \beta_{11} kidslt6\_12 + \beta_{12} kidslt13\_18 + \beta_{13} headeducg + u \end{aligned} \quad (3)$$

Using both models offers a more complete analysis. While Probit coefficients ( $\beta$ ) don't directly show percentage changes, Marginal Effects reveal how a one-unit increase in an independent variable affects dropout probability in percentage terms.

**Hypothesis 0 (H<sub>0</sub>):**

Adolescents from single-parent households are not affected to drop out of school compared to students from two-parent households.

**Hypothesis 1 (H<sub>1</sub>):**

Adolescents from single-parent households are more likely to drop out of school compared to students from both-parent households.

## Result

To estimate the factors influencing the dropout rate, this study collected data from the Labor Force Survey (LFS) in the 3rd quarter of 2022 (National Statistical Office of Thailand, 2022) and summarized it to descriptive statistics in Table 3, representing data characteristics such as average age of samples, average family income, the highest household education level, demographic characteristics of the samples. The analysis categorized households into three structure groups: two-parent households (Momdad), single-mother households (Momonly), and single-father households (Dadonly), along with a total summary (Total).

**Table 3**  
*Descriptive Statistic From National Statistical Office of Thailand*

Variables	Household structure			Total
	Momdad	Momonly	Dadonly	
Dropout	14.7%	14.5%	18.6%	14.9%
Male	52.4%	52.7%	55.6%	52.6%
AGE	16.796	16.842	16.736	16.80
Non-municipality	51.1%	44.4%	41.8%	49.3%
Region				
Reg1 = Bangkok	4.1%	4.2%	5.7%	4.2%
Reg2 = Central	26.3%	27.6%	30.1%	26.7%
Reg3 = Northern	18.1%	17.9%	18.1%	18.0%
Reg4 = Northeastern	25.5%	27.2%	23.2%	25.7%
Reg5 = Southern	26.1%	23.1%	22.9%	25.4%
Hh_totmoinc(HHincome)	11,883.438	7,801.817	8,933.708	10,971.893
Num. of hh kids less than 6	0.077	0.035	0.011	0.066
Num. of hh kids ages 6-12	0.268	0.201	0.143	0.248
Num. of hh kids ages 13-18	1.130	1.103	1.083	1.123
Parentmaxeducg				
Non-education	2.2%	3.3%	3.7%	2.5%
Primary	32.0%	40.5%	41.3%	34.1%
Junior high	18.9%	6.1%	16.6%	18.2%
High school	23.7%	19.3%	20.3%	22.7%
Vocational Degree	6.6%	5.2%	5.2%	36.3%
Bachelors	13.9%	13.6%	10.6%	13.7%
Master's and PhD	2.6%	1.9%	2.3%	2.5%
	4,578	1,092	349	
Total	(76.1%)	(18.1%)	(5.8%)	6,019 (100.0%)

Source: Labor force survey 3rd Quarter 2022 from National Statistical Office of Thailand

Table 3 summarizes the study's 6,019 participants, revealing an overall dropout rate of 14.9%, with the highest rate (18.6%) in single-father households. The sample comprised 52.6% males with an average age of 16.8 years, with 76.1% living in two-parent households, 18.1% in single-mother households, and 5.8% in single-father households. Nearly half (49.3%) resided in non-municipal areas. Economic disparities showed two-parent households maintaining the highest average income while single-mother households had the lowest. Educational data indicated 32% of parents in two-parent households completed primary education, whereas single-parent households showed higher proportions of lower educational attainment.

**Table 4**  
*Descriptive Statistic Age and Gender (dropout rate %)*

AGE	Gender		
	Female	Male	Total
15	3.1% (n = 616)	6.9% (n = 697)	5.1% (n = 1313)
16	3.4% (n = 656)	12.5% (n = 649)	7.9% (n = 1305)
17	4.1% (n = 687)	16.6% (n = 706)	10.4% (n = 1393)
18	14.1% (n = 597)	27.9% (n = 685)	21.5% (n = 1282)
19	31.8% (n = 296)	49.3% (n = 430)	42.1% (n = 726)
Total	8.7% (n = 2852)	20.5% (n = 3167)	14.9% (n = 6019)

Source: Labor force survey 3rd Quarter 2022 from National Statistical Office of Thailand

Table 4 shows that among 6,019 participants, school dropout rates rose with age, from 5.1% at age 15 to 42.1% at age 19. Males consistently had higher dropout rates than females, notably at age 18 (27.9% vs. 14.1%) and age 19 (49.3% vs. 31.8%). Overall, the male dropout rate was 20.5%, compared to 8.7% for females, highlighting the strong link between age, gender, and dropout risk.

**Table 5**  
*Descriptive Statistic Work and Gender Among Dropout Rate (%)*

Working status	Gender		
	Female	Male	Total
Non-working	5.1% (n = 2,719)	8.2% (n = 2,708)	6.6% (n = 5,427)
Parttime	57.1% (n = 49)	89.3% (n = 159)	81.7% (n = 208)
Fulltime	95.2% (n = 84)	95.3% (n = 300)	95.3% (n = 384)
Total	8.7% (n = 2852)	20.5% (n = 3167)	14.9% (n = 6019)

Source: Labor force survey 3rd Quarter 2022 from National Statistical Office of Thailand

Table 5 examines dropout rates by gender and employment status. Among non-working youth, dropout rates were 5.1% for females (n = 2,719) and 8.2% for males (n = 2,708). Part-time workers showed substantially higher rates: 57.1% for females (n = 49) and 89.3% for males (n = 159), with a combined rate of 81.7%. Full-time employment correlated with the highest dropout rates: 95.2% for females (n = 84) and 95.3% for males (n = 300). These patterns reveal that employment intensity strongly predicts dropout likelihood, with males consistently showing higher dropout rates than females across all employment categories.

**Table 6**  
*Total Effect of Dropout by OLS*

VARIABLES	(1)	(2)	(3)	(4)	(5)
	1	2	3	4	5
Momonly	0.022 (0.021)	0.023 (0.021)	0.026 (0.021)	0.017 (0.020)	0.011 (0.020)
Dadonly	0.067** (0.032)	0.068** (0.032)	0.070** (0.032)	0.070*** (0.023)	0.060** (0.023)
Age	0.074*** (0.005)	0.074*** (0.005)	0.069*** (0.005)	0.031*** (0.005)	0.031*** (0.005)
Male	0.119*** (0.013)	0.119*** (0.013)	0.118*** (0.013)	0.038*** (0.011)	0.040*** (0.011)
Rural	0.050*** (0.014)	0.052*** (0.013)	0.051*** (0.013)	0.010 (0.011)	0.000 (0.011)
Reg2 = Central	0.043* (0.025)	0.043* (0.025)	0.039 (0.025)	0.038* (0.020)	0.036* (0.019)
Reg3 = Northern	0.064*** (0.024)	0.068*** (0.025)	0.064*** (0.025)	0.048*** (0.018)	0.038** (0.018)
Reg4 = Northeastern	0.036* (0.021)	0.039* (0.022)	0.037* (0.022)	0.030* (0.016)	0.022 (0.016)
Reg5 = Southern	0.055** (0.023)	0.056** (0.023)	0.053** (0.023)	0.043** (0.017)	0.035** (0.017)
Hh_Itotmoinc		0.002 (0.001)	0.001 (0.001)	0.000 (0.001)	0.001 (0.001)
Kidslt6			0.078** (0.036)	0.063* (0.037)	0.064* (0.036)
Kids6_12			0.015 (0.015)	0.016 (0.013)	0.017 (0.013)
Kids13_18			-0.045*** (0.012)	-0.019** (0.009)	-0.015 (0.009)
Parttime				0.641*** (0.049)	0.631*** (0.049)
Fulltime				0.812*** (0.023)	0.792*** (0.024)
Maxparenteducg2					-0.093* (0.048)
Maxparenteducg3					-0.103** (0.049)
Maxparenteducg4					-0.133*** (0.049)
Maxparenteducg5					-0.111* (0.062)
Maxparenteducg6					-0.177*** (0.048)
Maxparenteducg7					-0.185*** (0.049)
Constant	-1.245*** (0.087)	-1.255*** (0.088)	-1.123*** (0.096)	-0.499*** (0.087)	-0.382*** (0.101)
Observations	6,019	6,019	6,019	6,019	6,019
Adjusted R-squared	0.113	0.113	0.121	0.499	0.507

p-value for significant level: \*p < 0.05, \*\*p < 0.01, \*\*\*p < 0.001.

Source: Labor force survey 3rd Quarter 2022 from National Statistical Office of Thailand

To identify key factors influencing dropout, this study added variables step by step. Table 6 equation 1 shows that living with a single father increases dropout likelihood by 6.7% when compare with child from both parents, while single motherhood has no significant effect. Each additional year of age raises dropout risk by 7.4%, and males are 11.9% more likely to drop out than females. Living in non-municipal areas increases dropout rates by 5%. Regionally, students in the northern and southern regions have dropout rates 6.4% and 5.5% higher than those in Bangkok, while no significant differences were found for the northeastern and central regions.

Equation 2 from Table 6 shows that family income does not directly cause dropout but interacts with other factors, especially in single-father households. Income appears to increase dropout risk for students in rural areas, suggesting a stronger impact in non-municipal settings. These findings highlight the need for further research on how income and family structure jointly affect educational outcomes.

Equation 3 in Table 6 identifies a significant relationship between the number of younger siblings in a household and school dropout rates. Specifically, having a sibling aged less than 6 years old increases the likelihood of dropping out by 7.8%, whereas having siblings aged 13 to 18 years old reduces the dropout rate by 4.5%. Moreover, the presence of multiple siblings within a household increases the impact of single-father families on dropout rates. This finding suggests that increased child labor responsibilities within these households may contribute to higher dropout rates, highlighting potential challenges for the labor market.

Equation 4 from Table 6 examines how child labor and regional differences affect dropout rates. Northern and southern regions show 4.8% and 4.3% higher dropout rates than Bangkok. Part-time work raises dropout likelihood by 64.1%, and full-time work by 81.2%. Living with a single father increases dropout risk by 7.0%. Employment has a strong impact on dropout rates, especially with longer work hours, while other factors remain stable. Including work status, no significant difference is found between municipal and non-municipal areas. The findings highlight the trade-off between work and schooling and the need to consider family and demographic factors.

Equation 5 from Table 6 shows that children living with single fathers have a 6.0% higher dropout rate when compare with both parents. Dropout risk rises by 3.1% with each additional year of age and is 4.0% higher for males. No significant difference is found between municipal and non-municipal areas, but the northern and southern regions have dropout rates 3.8% and 3.5% higher than Bangkok, respectively. Child employment strongly impacts dropout rates: part-time work raises it by 63.1%, and full-time work by 79.2%. Higher parental education levels significantly reduce dropout risk, with reductions ranging from 9.3% (primary school) and 18.5% (master's or PhD level).

**Table 7**  
*Dropout Affected by Dad Only With OLS and Probit*

VARIABLES	OLS coefficient	Probit coefficient	Probit Marginal effect (dF/dx)
momonly	0.011 (0.020)	0.106 (0.130)	0.017 (0.022)
dadonly	0.060** (0.023)	0.447*** (0.135)	0.087*** (0.032)
Demographics control	Yes	Yes	Yes
Family control	Yes	Yes	Yes
Work status control	Yes	Yes	Yes
parenteducg control	Yes	Yes	Yes
Constant	-0.382*** (0.101)	-5.958*** (0.725)	
Observations	6,019	6,019	6,019

p-value for significant level: \*p < 0.05, \*\*p < 0.01, \*\*\*p < 0.001.

Source: Labor force survey 3rd Quarter 2022 from National Statistical Office of Thailand

Note: The table variable by scope other variables to age, male, rural, reg2-reg5 define demographic control.

Define family control including hh\_ltotmoinc kidslt6 kids6\_12 kids13\_18 control. Define work status control parttime, fulltime. Define parenteducg control as parenteducation

This study initially used Ordinary Least Squares (OLS) regression to examine school dropout rates but switched to the Probit model to better analyze binary outcomes. The analysis focuses on the “dadonly” variable, with a binary dependent variable (0 or 1). Table 7 examines single-parent households while controlling for factors such as age, gender, rural residence, regional indicators, household income, child age groups, and parental education. To compare OLS and Probit results, marginal effects from the Probit model are used for clearer interpretation, as they allow for easier comparison with OLS coefficients.

The encouraging results from the comparison, Table 7, show that the results between the two models are slightly different, with single fathers affecting children's school dropout by 6% in the OLS and 8.7% in the Marginal effect. This result indicates the robustness and increases the credibility of the results that single fathers in Thailand affect school dropout.

### Conclusion

This study examines factors influencing school dropout among Thai adolescents aged 15–19, using data from the National Statistical Office of Thailand 3Quarter, 2022 (National Statistical Office of Thailand, 2022). The analysis employs a Probit model with marginal effects for binary outcomes, while Ordinary Least Squares (OLS) identifies variables with the strongest impact on dropout rates. Findings highlight family structure, particularly single-father households, as a significant determinant. The consistency between Probit and OLS results strengthens the study’s reliability, providing insights into the complex factors influence school dropout.

The study finds that single parenthood, especially in single-father households, significantly increases school dropout rates in Thailand, while single-mother households show no significant effect after controlling for income, employment, and demographics. This highlights the greater importance of emotional support over financial stability, with Thai fathers’ limited involvement in caregiving contributing to children's academic struggles and

mental health issues. The higher dropout rates among children of single fathers reflect Thailand's unique social and cultural context regarding parenting roles. The study suggests that further research should explore fathers' behaviors, parenting time, and the factors leading to single fatherhood to better understand and support these families.

The study reveals that family income does not directly influence school dropout rates but can indirectly affect single-father households, where financial strain may increase dropout risks. This underscores the importance of emotional support over financial stability in preventing dropout, particularly in single-father households, where caregiving time is often limited. Additionally, having young siblings under the age of 6 increases the likelihood of dropout, as older siblings may prioritize caregiving over their education, supporting the notion that resource competition among siblings negatively impacts academic outcomes. The study also finds that males have a significantly higher dropout rate than females, reflecting gender disparities in education, and that aging adolescents are more likely to drop out, indicating a shift in educational attitudes and the need for early intervention.

Regional analysis reveals higher dropout rates in Thailand's Northern and Southern regions compared to Bangkok, indicating disparities in educational opportunities and resource access. Employment status significantly impacts educational outcomes, with both part-time and full-time work correlating with increased dropout rates by promoting school disengagement and potentially leading to delinquency and substance abuse ultimately threatening the Thai workforce's skill development. The study recommends policies that better balance employment and education to prevent work from undermining educational attainment. Additionally, parental education emerges as a critical factor in children's success, with higher educational attainment among parents strongly predicting better academic and life outcomes for their children, reinforcing education's role as a protective factor against dropout risk.

To address rising dropout rates, especially among children of single fathers, it is crucial to tackle the root causes, though identifying them remains challenging. Effective interventions could include establishing learning centers to support single fathers with time management and parenting, and offering tax deductions for education expenses to ease financial burdens. These strategies would help sustain children's education. Further in-depth studies are needed to better understand differences between single mothers and single fathers in the context of single parenthood.

### **Acknowledgements**

This study on school dropout rates in Thailand stems from a long-standing question of mine: why do dropout rates remain high despite government support? I am deeply grateful to Asst. Prof. Tanyamat Srungboonmee for the opportunity to pursue this research and for her invaluable guidance on working with large datasets. Thanks also to the National Statistical Office of Thailand for providing the essential Labor Force Survey data.

Throughout this study, I balanced my work by taking breaks, spending time with family, and seeking advice from close friends and classmates. Special thanks to my best friends, Apiwit, Nuam Pi, and senior Jirawan, for their constant support. I am deeply grateful to everyone who contributed to this research and hope it proves useful to its readers.

## References

- Acemoglu, D., & Pischke, J. S. (2001). Changes in the wage structure, family income, and children's education. *European Economic Review*, 45(4-6), 890-904.
- Aina, C., Baici, E., Casalone, G., & Pastore, F. (2022). The determinants of university dropout: A review of the socio-economic literature. *Socio-Economic Planning Sciences*, 79, 101102.
- Amato, P. R., Patterson, S., & Beattie, B. (2015). Single-parent households and children's educational achievement: A state-level analysis. *Social Science Research*, 53, 191-202.
- Azumah, F. D., Samuel, K., & Onzaberigu, N. J. (2018). Effects of Family Structure on the Academic Performance of Children: A Case Study of Ayeduase R/C Junior High School in the Kumasi Metropolis, Ghana. *International Journal of Social Science Studies*, 6(10), 11.
- Bago, B. A. (2022). Effect of Single Parenthood in Students' Academic Performance; A Case of Selected Secondary Schools in Bitereko Sub County Mitooma District. *IAA JOURNAL OF SOCIAL SCIENCES (IAA-JSS)*, 8(1), 216–226 <https://www.iaajournals.org/wp-content/uploads/2022/11/IAA-JSS-81216-226-2022.-KIUP5.pdf>
- Bainbridge, J., Meyers, M. K., Tanaka, S., & Waldfogel, J. (2005). Who Gets an Early Education? Family Income and the Enrollment of Three- to Five-Year-Olds from 1968 to 2000. *Social Science Quarterly*, 86(3), 724–745.
- Bhubate Samutachak, J. R. S. C. K. T. P. N. S. S. (2022). The Future of Thai Families in 2583 BE. *Population and Social Research Institute*, Mahidol University. (1st ed.). Institute for Population and Social Research, Mahidol University. [https://ipsr.mahidol.ac.th/post\\_research/ครอบครัวไทยในอนาคต-พ-ศ-2583/](https://ipsr.mahidol.ac.th/post_research/ครอบครัวไทยในอนาคต-พ-ศ-2583/) [in Thai]
- Biblarz, T. J., & Raftery, A. E. (1999). Family Structure, Educational Attainment, and Socioeconomic Success: Rethinking the “Pathology of Matriarchy”<sup>1</sup>. *American Journal of Sociology*, 105(2), 321–365.
- Black, S. E., Devereux, P. J., & Salvanes, K. G. (2005). The More the Merrier? The Effect of Family Size and Birth Order on Children's Education\*. *Quarterly Journal of Economics*, 120(2), 669-700.
- Blau, D. M. (1999). The Effect of Income on Child Development. *Review of Economics and Statistics*, 81(2), 261-276.
- Boyacı, A. (2019). Exploring the factors associated with the school dropout. *International Electronic Journal of Elementary Education*, 12(2), 145–156.
- Buchmann, C., DiPrete, T. A., & McDaniel, A. (2008). Gender Inequalities in Education. *Annual Review of Sociology*, 34(1), 319-337.

- Cardoso, A. R., & Verner, D. (2006). School Drop-Out and Push-Out Factors in Brazil: The Role of Early Parenthood, Child Labor, and Poverty. *SSRN Electronic Journal*.
- Chenge, R. M., Chenge, E., & Maunganidze, L. (2017). Family Factors that contribute to school dropout in Rushinga District in Zimbabwe. *Journal of Law, Humanities & Social Science, 2017•ijlhss. Com, 1(4)*, 105. <https://ijlhss.com/wp-content/uploads/2017/09/Family-Factors-that-contribute-to-school-dropout-in-Rushinga-District-in-Zimbabwe.pdf>
- Colclough, C., Kingdon, G., & Patrinos, H. (2010). The Changing Pattern of Wage Returns to Education and its Implications. *Development Policy Review, 28(6)*, 733–747.
- Coles, R. L. (2015). Single-Father Families: A Review of the Literature. *Journal of Family Theory & Review, 7(2)*, 144–166.
- Dessy, S., Gninafon, H., Tiberti, L., & Tiberti, M. (2023). Free compulsory education can mitigate COVID-19 disruptions' adverse effects on child schooling. *Economics of Education Review, 97*, 102480. <https://doi.org/10.1016/j.econedurev.2023.102480>
- De Witte, K., Cabus, S., Thyssen, G., Groot, W., & van den Brink, H. M. (2013). A critical review of the literature on school dropout. *Educational Research Review, 10*, 13–28. <https://doi.org/10.1016/j.edurev.2013.05.002>
- Dupéré, V., Leventhal, T., Dion, E., Crosnoe, R., Archambault, I., & Janosz, M. (2015). Stressors and Turning Points in High School and Dropout: A Stress Process, Life Course Framework. *Review of Educational Research, 85(4)(4)*, 591–629.
- Edmonds, E. V., & Theoharides, C. (2021). Child labor and economic development. *Handbook of Labor, Human Resources and Population Economics*, 1–29.
- Egunsola, A. O. E. (2014). Influence of parental marital status, family type and size on academic performance of secondary school students in agricultural science in Adamawa State Nigeria. *IOSR Journal of Humanities and Social Science, 19(11)*, 63–68.
- Erola, J., Jalonen, S., & Lehti, H. (2016). Parental education, class and income over early life course and children's achievement. *Research in Social Stratification and Mobility, 44*, 33–43.
- Falana, B. A., Bada, F. O., & Ayodele, C. J. (2012). Single-parent Family Structure, Psychological, Social and Cognitive Development of Children in Ekiti State. *Journal of Educational and Developmental Psychology, 2(2)*.
- Farah, N., & Upadhyay, M. P. (2017). How are school dropouts related to household characteristics? Analysis of survey data from Bangladesh. *Cogent Economics & Finance, 5(1)*.
- Golombok, S., Zadeh, S., Imrie, S., Smith, V., & Freeman, T. (2016). Single mothers by choice: Mother-child relationships and children's psychological adjustment. *Journal of Family Psychology, 30(4)*, 409–418.

- Greene, W. H. (2019). *Econometric analysis* (Global ed.). Pearson.  
[https://www.ctanujit.org/uploads/2/5/3/9/25393293/\\_econometric\\_analysis\\_by\\_green\\_e.pdf](https://www.ctanujit.org/uploads/2/5/3/9/25393293/_econometric_analysis_by_green_e.pdf)
- Gupta, A., & Kashyap, S. (2020). Growing up in a Single Parent Family; A Determining factor of Adolescent's Well-being. *Advanced Journal of Social Science*, 7(1), 138–144.
- Hamenoo, E. S., Dwomoh, E. A., & Dako-Gyeke, M. (2018). Child labour in Ghana: Implications for children's education and health. *Children and Youth Services Review*, 93, 248–254.
- Hanushek, E., & Wößmann, L. (2010). Education and economic growth. In *Elsevier eBooks*, 245–252.
- Haritha, Y. D., & Bilquis. (2022). Pleasure of Fulfilling the Aspect as Parents between Mother and Father. *Asian Journal of Agricultural Extension, Economics & Sociology*, 40(12), 196–201. <https://doi.org/10.9734/ajaees/2022/v40i121782>
- Hovdhaugen, E. (2013). Working while studying: the impact of term-time employment on dropout rates. *Journal of Education and Work*, 28(6), 631–651.
- Jordan, J. L., Kostandini, G., & Mykerezi, E. (2011, November 30). Rural and urban high school dropout rates: Are they different? *Journal of Research in Rural Education*. <https://eric.ed.gov/?id=EJ1002295>
- Kane, E. W. (1995). Education and Beliefs About Gender Inequality. *Social Problems*, 42(1), 74–90.
- Karwath, C., Relikowski, I., & Schmitt, M. (2014). Sibling structure and educational achievement: how do the number of siblings, birth order, and birth spacing affect children's vocabulary competences? *Journal of Family Research*, 372–396.
- Kearney, M. S., & Levine, P. B. (2016). Income inequality, social mobility, and the decision to drop out of high school. *Brookings Papers on Economic Activity*, 333–396.
- Lawrence, K. C., & Adebowale, T. A. (2022). Adolescence dropout risk predictors: Family structure, mental health, and self-esteem. *Journal of Community Psychology*, 51(1), 120–136.
- Maina, D. K., Motungo, Z. B., & Nzengya, D. (2021). Influence of household income level on secondary school dropout in Kenya. Editon Consortium *Journal of Economics and Development Studies*, 3(1), 210–218.
- McNeal, R. B. (1997). Are students being pulled out of high school? The effect of adolescent employment on dropping out. *Sociology of Education*, 70(3), 206–220.
- McNeal, R. B. (1999). Parental Involvement as Social Capital: Differential Effectiveness on Science Achievement, Truancy, and Dropping Out. *Social Forces*, 78(1), 117–144.

- Ministry Of Education. (2010). *Free Education for 15 Years: A Key Policy for Enhancing Education Quality - Ministry of Education*. Ministry of Education. <https://www.moe.go.th/เรียนฟรี-15-ปี-นโยบายสำคัญ-2/> [in Thai]
- Mpourgos, I., Kiprianos, P., Koustourakis, G., & Stamelos, G. (2020). Student dropouts and the difficulty to speak about themselves. *Educational Journal of the University of Patras UNESCO Chair*, 7(1), 2241–9152.
- Mussida, C., Sciulli, D., & Signorelli, M. (2019). Secondary school dropout and work outcomes in ten developing countries. *Journal of Policy Modeling*, 41(4), 547–567.
- National Statistical Office of Thailand. (2022). *Labor Force Survey Quarter 3, 2022*. Bangkok: National Statistical Office of Thailand. [in Thai]
- Noble, K. G., Houston, S. M., Brito, N. H., Bartsch, H., Kan, E., Kuperman, J. M., Akshoomoff, N., Amaral, D. G., Bloss, C. S., Libiger, O., Schork, N. J., Murray, S. S., Casey, B. J., Chang, L., Ernst, T. M., Frazier, J. A., Gruen, J. R., Kennedy, D. N., Van Zijl, P., ... Sowell, E. R. (2015). Family income, parental education and brain structure in children and adolescents. *Nature Neuroscience*, 18(5), 773–778.
- Nonoyama-Tarumi, Y. (2017). Educational Achievement of Children from Single-Mother and Single-Father Families: The Case of Japan. *Journal of Marriage and Family*, 79(4), 915–931.
- Office of the Permanent Secretary, Ministry of Education. (2022). “Bring students back to school” project [พาน้องกลับมาเรียน โครงการสำคัญ]. <https://ops.moe.go.th/360bring-students-back-to-school-3/> [in Thai]
- Ovejas, I. S. (2024). The Influence of Gender on Early School Dropout. *The International Journal of Interdisciplinary Educational Studies*, 119–141.
- Park, H. (2007). Single Parenthood and Children’s Reading Performance in Asia. *Journal of Marriage and Family*, 69(3), 863–877.
- Patrinos, H. A., & Psacharopoulos, G. (1997). Family size, schooling and child labor in Peru - An empirical analysis. *Journal of Population Economics*, 10(4), 387–405.
- Polat, S. (2014). Educational Research and Reviews Reasons for school dropout in vocational high school. *Journal of Policy and Development Studies*, 9(18), 711–718.
- Pratibha, J., Mishra, D., Ghasidas, G., Bilaspur, V., & Azeez, A. (2014). Family Etiology of School Dropouts: A Psychosocial Study. *International Journal of Language & Linguistics*, 1(1). [https://ijllnet.com/journals/Vol\\_1\\_No\\_1\\_June\\_2014/6.pdf](https://ijllnet.com/journals/Vol_1_No_1_June_2014/6.pdf)
- Rafique, S., & Ahmed, K. F. (2019). Gender Differences in Corporal Punishment, Academic Self-Efficacy and Drop-Out in Secondary School Students. *International Journal of Psychology and Educational Studies*, 6(3), 73–79.

- Rumberger, R. W., Ghatak, R., Poulos, G., Ritter, P. L., & Dornbusch, S. M. (1990). Family Influences on Dropout Behavior in One California High School. *Sociology of Education*, 63(4), 283.
- Sangeet, O., & Singh, S. (2022). Experiences of single-parent children in the current Indian context. *Journal of Family Medicine and Primary Care*, 11(7), 3790.
- Sarker, M. N. I., Wu, M., & Hossin, M. A. (2019). Economic effect of school dropout in Bangladesh. *International Journal of Information and Education Technology*, 9(2), 136–142.
- Song, C., Benin, M., & Glick, J. (2012). Dropping Out of High School: The Effects of Family Structure and Family Transitions. *Journal of Divorce & Remarriage*, 53(1), 18–33.
- Stock, J. H., & Watson, M. W. (2020). *Introduction to Econometrics*, (4<sup>th</sup> ed.). In Biometrics (Vol. 20, Issue 1). <https://www.sea-stat.com/wp-content/uploads/2020/08/James-H.-Stock-Mark-W.-Watson-Introduction-to-Econometrics-Global-Edition-Pearson-Education-Limited-2020.pdf>
- Szekely, M., & Adelman, M. (2016). *School Dropout in Central America: An Overview of Trends, Causes, Consequences, and Promising Interventions*. Policy Research Working Paper; No. 7561.
- Tabassum, N., & Tabassum, H. (2022). Gender Differences in School Dropout Due to Insecurity And Harassment In And On The Way To School In Sindh. *Pakistan Journal of Gender Studies*, 22(1), 83–96.
- Tan, K., Heath, R. D., Das, A., & Choi, Y. (2017). Gender Differences in Patterns of School Victimization and Problem Behaviors During Middle School and Their Relation to High School Graduation. *Youth & Society*, 51(3)(3), 339–357.
- Tharmpornphilas, R. (2013). Impact of household factors on youth's school decisions in Thailand. *Economics of Education Review*, 37, 258–272.
- Usakli, H. (2018). Behavioral tendencies of single parent students. *International Journal of Science Annals*, 1(1-2), 21–27. <https://doi.org/10.26697/ijsa.2018.1-2.03>
- Yi, H., Zhang, L., Luo, R., Shi, Y., Mo, D., Chen, X., Brinton, C., & Rozelle, S. (2012). Dropping out: Why are students leaving junior high in China's poor rural areas? *International Journal of Educational Development*, 32(4), 555–563. <https://doi.org/10.1016/j.ijedudev.2011.09.002>
- Yi, H., Zhang, L., Yao, Y., Wang, A., Ma, Y., Shi, Y., Chu, J., Loyalka, P., & Rozelle, S. (2015). Exploring the dropout rates and causes of dropout in upper-secondary technical and Vocational Education and training (TVET) schools in China. *International Journal of Educational Development*, 42, 115-123. <https://doi.org/10.1016/j.ijedudev.2015.04.009>

**Contact email:** [pisit.po@kkumail.com](mailto:pisit.po@kkumail.com)