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HONOURS THESIS

Does Voluntourism Improve Educational Outcomes?

Evidence from Indonesia

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Declaration

I declare that the content of this thesis is my own work and that, to the best of my knowledge, it contains no material published or written by any other author or authors, except where acknowledged. This thesis has not been submitted for award of any other degree or diploma at the University of New South Wales or any other educational institution.

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Kate A. Mulready
November 22, 2019

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Abstract

Volunteer tourism or 'voluntourism' is a form of development aid that is overlooked in economic literature. By 2017 the industry was estimated to generate USD$173billion and attract 1.6 million hopeful helpers from around the world. Indonesia provides a natural experiment to evaluate English teaching voluntourism programs available in primary schools. I examine the effect of the availability of these programs on schooling, work and aspirational outcomes for students using both a binary and intensity of treatment specification. The estimates suggest school voluntourism programs improve school attendance, reduce child labour among primary students currently exposed, reduce child labour among secondary students previously exposed, and improve aspirations.

Contents

1 | Introduction

Volunteer tourism or 'voluntourism' is a form of development aid. Most recent estimates indicate the voluntourism industry is worth USD$173 billion (Pariyar, 2017) and attracts more than 1.6 million volunteers annually (Save the Children, 2017). Voluntourism organisations provide travellers with the opportunity to volunteer in disadvantaged communities, often in developing countries. English teaching voluntourism programs in primary schools are the most prominent program type available. Voluntourists who participate in these programs assist local teachers by helping enhance the English writing and speaking skills of primary school students. For simplicity I refer to these programs as school voluntourism programs. The well-meaning motivations behind school voluntourism programs and the lack of empirical analysis on the outcomes associated with these programs motivate the research question this thesis answers; Do school voluntourism programs improve the schooling, work and aspirational outcomes of students?

Indonesia provides a natural experiment for my analysis because it (1) hosts a range of school voluntourism programs nationally, (2) has experienced reforms in recent years with little improvement in schooling outcomes and (3) household data on children's education, work and aspirations is available in the Indonesia Family Life Survey (IFLS). Following the fall of the authoritarian New Order regime in the late 1990s the Indonesian government rolled out a series of educational policy reform. Although there is evidence of improvements in education nationally, the distribution of these benefits is not uniform. Secondary enrolment and attendance remains low compared to figures for primary schooling (World Bank, 2018a,b; Education Policy and Data Center, 2008). Child labour has also declined but still remains an issue (Understanding Children's Work, 2012). And while an increasing portion of adults are attaining more years of education, those in rural regions face educational disadvantage (Suharti, 2013). Thus, Indonesian students face educational inequality and disadvantage.

To identify the effects of school voluntourism programs I first construct a database of these voluntourism programs in Indonesia by conducting an extensive search of online forums and program catalogues. The identified organisations describe similar roles and goals for voluntourists which include: (1) complementing the English teaching students already receive from local teachers and (2) making learning fun and exciting for students to encourage greater engagement for students with their education. In doing so voluntourism programs aim to achieve the following goals: (1) motivate greater school attendance among students, (2) instill a greater value for education and (3) encourage educational attainment within and beyond primary school. I then evaluate whether these programs meet their anticipated goals by examining the effects on schooling, child labour, and aspirations for children living in regions with voluntourism programs.

To answer this I merge my voluntourism program data with IFLS survey data to identify where the programs are available, when they began and who would have been exposed. The IFLS was collected in five waves in 1993, 1997, 2000, 2007 and 2014. I identify two sub-districts in Bali as the treated sub-districts; Buleleng and Kubu.[1] After I identify the treated sub-districts I use the commencing year of school voluntourism programs to define the pre- and post-treatment periods. For both sub-districts the programs were introduced in 2007. Since the exact starting date and month of these programs is not available, I assume that 2008 is the first complete year of exposure. Thus the IFLS provides data from four pre-treatment periods (Waves 1 to 4) and one post-treatment period (Wave 5). Following the identification of the pre- and post-treatment waves I identify which IFLS respondents would be exposed to school voluntourism programs by Wave 5 (2014). Primary school in Indonesia covers grades 1 to 6. Therefore students are between the approximate ages of 6 to 12 in the first year of treatment (2008). By 2014 this initial cohort are between the ages of 12 and 18. Thus 31,466 respondents from the IFLS between the ages of 6 to 18 across waves are included in my final data set.

I use a difference in differences approach to understand the impact of voluntourism programs on several outcomes, including: (i) school attendance, (ii) primary school entry age, (iii) child labour among primary students, (iv) child labour among secondary students, (v) primary school graduation, (vi) the completion of at least one year of secondary school, (vii) secondary school graduation and (viii) aspirations. I use two different specifications; a binary treatment specification model and an intensity of treatment specification model. The binary treatment specification includes a dummy treatment variable. This variable equals 1 for a respondents living in a treated sub-district.[2] However, this treatment variable is weak because it assumes that all respondents in treated sub-districts attend a primary school which receives English teaching voluntourists. I find that the number of school voluntourism programs available is less than the number of primary schools for both treated sub-districts. Thus the binary treatment specification does not account for the likelihood that respondents in treated sub-districts are exposed to treatment. To correct for this I use a second specification which captures the intensity of treatment by speci-

[1] Although school voluntourism programs are found elsewhere in Indonesia, they cannot be used in my evaluation because there is no IFLS data available for these sub-districts.

[2] When including fixed effects for sub-district and wave it equals 1 with the additional condition the respondent is in the post-treatment wave.

fying treatment as the ratio of the total number of voluntourism programs in a treated sub-district to the total estimated number of primary schools in that sub-district. Thus, this specification captures the effects of school voluntourism programs when all primary schools host a program.

The results suggest that school voluntourism programs improve primary and secondary school attendance, reduce child labour among primary school students currently exposed, reduce child labour among secondary students previously exposed and improve aspirational outcomes for Indonesian students. Moreover, there are some interesting differences in these effects by gender. For school attendance, I find the increase in school attendance is greatest for boys. For child labour, I find the estimated effect of school voluntourism programs in reducing child labour among junior and senior secondary students is greater among boys. For aspirations, I find school voluntourism programs have a more pronounced and positive effect on the aspirations of girls.

To address potential threats to identification, I run several robustness checks. Firstly I examine if the identifying assumption of the difference in difference method, the Parallel Trends Assumption (PTA), holds in the data. These tests suggest a downward trend in school attendance for the full sample and an upward trend in child labour for both primary and secondary students in treatment areas prior to treatment. This suggests that the main results may be understated. That is, treatment effects on school attendance and child labour could be even larger than what I estimate. In regard to primary school starting age, there is evidence that the PTA is violated, which may bias the initial findings of a positive treatment effect. These pre-trends may be caused by low response rates from earlier waves in treated sub-districts. As a robustness check I reproduce the estimated treatment effects on this outcome after omitting earlier waves with lower response rates. After omitting these waves the effect of school voluntourism programs on primary school starting age is no longer statistically significant. Thus the effect of treatment on this outcome is unclear due to poor response rates from earlier waves.

Another potential threat to identification is the unreliable responses of school attendance among children aged 6 to 12. Perfect mean attendance rates for primary school age children in earlier pre-treatment waves raise concerns that the positive treatment effect estimates for this outcome is biased. As a robustness check I omit these earlier waves and reproduce the original estimates. The positive estimated treatment effect persists and supports the conclusion that school voluntourism programs have a positive effect on school attendance for primary aged children.

Identification may also be threatened by the presence of respondents in treated sub-districts who moved to these regions following the introduction of school voluntourism programs. As a robustness check I reproduce regression estimates after omitting respondents from these households. These results suggest estimated treatment effects on school attendance are understated by the inclusion of new households, particularly for secondary aged respondents. The estimated effects on primary school entry age for primary school aged respondents remain statistically significant after omitting new households, however, their magnitude changes marginally. The same holds for the estimated effects on child labour among primary school and senior secondary students. However, the estimated effect on child labour among junior secondary students increases in magnitude. Finally, there is no longer a statistically significant treatment effect on aspirations after omitting new households suggesting that the inclusion of these new households may bias the positive treatment effect estimates for aspirations.

A final threat to identification is the concern that treated sub-districts are different to the control sub-districts. These differences may exist between primary schools or tourism industries attracting voluntourists. To address this concern I reproduce regression estimates to determine if treatment effects persist when restricting the control group to only neighbouring sub-districts as a robustness check. To do this I consider the treated sub-district of Buleleng and its neighbouring sub-districts surveyed in the IFLS within the Buleleng district.[3] I use the Buleleng district rather than the Karang Asem district where the second treated sub-district is found because Buleleng provides more observations. I find the positive effect on school attendance for respondents aged 6 to 18 and 6 to 12 remain statistically significant and positive. However the estimated effect for secondary age children becomes negative and is no longer statistically significant. Further, I find the treatment effect on primary school starting age is no longer statistically significant for respondents who enter primary school following the introduction of school voluntourism programs. This robustness check also finds that the estimated treatment effect on child labour among primary students is no longer statistically significant for those of primary school age (6 to 12 years old). Finally, the treatment effect estimates on aspirations are no longer statistically significant when comparing respondents in the Buleleng sub-district and its neighbouring controls.

This thesis makes an important contribution to the literature as the first study to rigorously evaluate the impact of voluntourism programs. Currently, there are no such studies in the economics literature. However, a large body of ethnographic literature on voluntourism exists. Few studies within the ethnographic literature portray the potential for successful outcomes within host communities stemming from voluntourism programs (Lough et al., 2018). The bulk of this literature highlights the detrimental and social costs associated with this form of aid (Guttentag, 2009; Raymond and Hall, 2008; Simpson, 2004; Palacios, 2010). Although these studies help contextualise voluntourism more broadly, the findings and contributions of this literature is constrained. The majority of these ethnographic studies limit focus to one organisation and/or one location or host

[3]Note that Buleleng is both the name of the treated sub-district and the district is located in.

community. Hence the observed outcomes are context-specific and thus not systematic.

Although economic literature has not addressed voluntourism directly, there is a large literature on the impacts of education interventions in developing countries, as well as the consequences of development aid. What is clear from the findings of this research is that schooling interventions and development aid (two umbrellas which voluntourism falls under) can have varying levels of effectiveness. Vastly different schooling interventions have witnessed improvements in school attendance and educational attainment among students (Miguel and Kremer, 2004; Duflo, 2001; Akresh et al., 2018; Banerjee et al., 2007; Glewwe et al., 2009). The economic literature focusing on development aid portrays the potential benefits for those receiving aid (Wydick et al., 2013; Ross et al., 2019), however, there is evidence of aid having no or even detrimental outcomes for receivers (Frazer, 2008; Wydick et al., 2018). This broad literature prompts the need to analyse school voluntourism programs both as a form of aid and educational intervention. The well-meaning intentions of voluntourism organisations and the potentially disastrous consequences articulated in the literature motivate the empirical applications of this thesis.

This thesis presents promising results which demonstrate positive educational outcomes for Indonesian students exposed to school voluntourism programs. Given the contrast between my results and the pessimistic conclusions of the ethnographic literature, my results highlight the need for further data collection and analysis of these and related programs.

2 | Literature Review

There is currently no economic literature focusing on school voluntourism programs or any form of voluntourism. However, there is extensive ethnographic literature on voluntourism. This ethnographic literature demonstrates the complexities of voluntourism more generally and motivates the need to assess the nature of the outcomes for host communities. The voluntourism literature is complemented by experiments focusing on the economics of education in developing countries and varying forms of development aid. These analyses highlight the varying effectiveness and sometimes unintended outcomes of educational interventions and aid efforts in developing nations. Thus the conclusions of the economics literature also motivates the need to assess whether school voluntourism programs improve schooling, work and aspirational outcomes for children as intended.

2.1 Ethnographic Literature: Voluntourism

Ethnographic literature on voluntourism portrays the complexities of the practice and industry. Voluntourism programs have been found to provide both positive and negative contributions to host communities despite their aims to assist these disadvantaged groups. Quantitative evidence on the effects of voluntourism is limited. The majority of voluntourism literature is based on ethnographic research and case studies. This literature addresses the contribution of voluntourism for voluntourists and those living in host communities. Therefore in this section I consider the outcomes of voluntourism programs for each of these groups separately.

2.1.1 Outcomes for Volunteers

Voluntourism literature focusing on outcomes for voluntourists suggest volunteers return home from their service with new soft skills, perspectives and future intentions. Thus, the literature focusing on voluntourists demonstrates the benefits they stand to gain from participating in these programs.

Quantitative evidence and personal recounts provide evidence that voluntourists are moulded into global citizens through their experience. McBride et al. (2012) find voluntourism raises international awareness and international career intentions among voluntourists.

Further, (Lough et al., 2014) find voluntourists report increased international concern and awareness upon returning home. Therefore, the worldly experience voluntourism offers can potentially shift the perspectives and shape the future activities or career paths of voluntourists.

Voluntourists additionally develop soft skills applicable to future work. Rothwell and Charleston (2013) finds that volunteer experiences allow for the development of key leadership and teamwork skills such as resilience and courage. However, concerns regarding the motivations of participating voluntourists arise because of this personal development. Sherraden et al. (2008) find that voluntourism programs may be perceived as resumé boosters because they facilitate the development of transferable soft skills. These findings imply that voluntourism projects can attract applicants who are motivated by their own self interests rather than serving the needs of disadvantaged communities.

2.1.2 Outcomes for Host Communities

The effects of school voluntourism programs on outcomes for children in host communities are the main focus of this thesis. Therefore, in this section I address existing literature on the effects of voluntourism on host communities. Some evidence on the positive contributions of voluntourism exists. However, the majority of the literature demonstrates the unintended and detrimental consequences of voluntourism.

Literature on the positive contributions of voluntourism toward host communities is rare. Lough et al. (2018) find voluntourism programs can be effective in helping achieve a host organisations' overarching mission. But this success is contingent on a selective application process based on criteria that aligns with the aims and methods of the program. Volunteers with more appropriate skills and less time to volunteer have more to offer than unskilled volunteers with an abundance of time. In some cases, volunteers can help improve the capacity of host organisations by increasing labour units at the cost of soaking up staff time and resources (Lough et al., 2011).

Despite the well-intentions of voluntourism initiatives, voluntourism can hinder host communities and in some cases contribute to the status quo. Many voluntourism programs require no pre-existing skills among voluntourists and this is a prominent concern within the literature. Guttentag (2009) argues that unskilled voluntourists facilitate the completion of unsatisfactory work and slow down work progress. This suggests that the work of voluntourists and voluntourism projects more broadly could be counter-intuitive and ineffective. Raymond and Hall (2008) highlight that labelling unskilled voluntourists as experts or teachers can facilitate attitudes in support of western superiority. This western superiority is also maintained by voluntourism organisations which normalise the dichotomy of volunteers and aid recipients and prevent cultural tolerance and understanding which many programs wish to facilitate (Simpson, 2004). In addition, the prevalence of western superiority may also facilitate neo-colonialism (Palacios, 2010) and paternalistic charity (Devereux, 2008) which may undermine development. Therefore, the lacking skill prerequisites of voluntourism programs can hinder progress within host communities and foster inequitable values.

Critics also highlight that voluntourism initiatives may not target the needs of host communities. Guttentag (2009) states voluntourist organisations may fail to consult host communities and thereby neglect their desires and needs. Devereux (2008) and Sherraden et al. (2008) argue this practice may be driven by self-serving voluntourists or voluntourist organisations. Thus the work of voluntourists may not be effective in driving development because they may not target areas of disadvantage within host communities.

Sherraden et al. (2008) and Mule (2017) both find voluntourism programs create dependency within host communities. Lough and Carter-Black (2015) suggest this dependency may be facilitated by racial stereotypes that voluntourism can foster. In their study they find that both staff members of receiving organisations working with voluntourists and beneficiaries within host communities report white volunteers are better able to contribute towards progress. These respondents report voluntourists are better equipped to contribute resources and are more knowledgeable than local community members. These perceptions can reinforce excessive dependencies that can perpetuate development issues within host communities.

While this literature helps contextualise the consequences of voluntourism, they are limited. Few studies on voluntourism have considered the effects of exposure to voluntourism programs offered by different organisations in more than one region or country (Lough and Carter-Black, 2015). The majority of the literature focuses on one organisation or one effected community.[1] Hence the observed outcomes can be context-specific and may produce misleading evidence of the true effect of programs. Nevertheless the literature captures the social costs associated with voluntourism and the unintended outcomes faced by host communities. Thus they portray the importance of investigating the true impacts voluntourism on hosts to determine if voluntourists are achieving the overall mission of voluntourism organisations. Building on this prior research, this thesis aims to identify the casual effect of exposure to several school voluntourism programs in treatment sub-districts to estimate the average treatment effect for those living in affected sub-districts in Indonesia.

[1] McBride et al. (2012) and Lough et al. (2014) both examine voluntourists participating in two different programs orchestrated by two different American not for profit organisations. One provides care for vulnerable people (children, the elderly and the disabled) and the other provides education services. Mule (2017) assesses outcomes for American female voluntourists, who were trained professionals across different industries, after participating in education-based programs. Rothwell and Charleston (2013) survey voluntourists following their service with a British charity in Costa Rica, Borneo, Nicaragua and India. The work performed by these voluntourists were community development and environmental projects

2.2 The Economics of Development Aid

Lough and Carter-Black (2015) illustrate voluntourists as key players in aiding development. Although economic literature on voluntourism is lacking, literature focusing on other forms of aid exists. The conclusions of these analyses demonstrate that the outcomes of aid do not always mirror the intentions of aid provision.

Similar to school voluntourism programs, educational inequalities in developing nations have been the target of aid efforts. However, not all aid programs have been successful in achieving intended outcomes. Interventions to address education in developing countries including in-kind donations and child sponsorship have had different results. In a study of child sponsorship, Wydick et al. (2013) find evidence of improved schooling and employment achievements across a six-country study. Further analysis of this effect by Ross et al. (2019) finds these improvements stem from elevated aspirations. In contrast, Wydick et al. (2018) find little evidence that the provision of shoe donations to children in El Salvador by social enterprise, TOMS, leads to improvements in children's health, self-esteem or school attendance as intended. Thus aid programs have the potential for success, however, it is also possible for aid to have little to no effect whatsoever. With school voluntourism programs being the focus of this thesis, the finding of this literature highlights the importance of evaluating different programs and initiatives to address educational disadvantage.

Another example in the literature presents the potentially damaging consequences of aid provision. Frazer (2008) concludes across a two decade study that the provision of clothing donations in Africa resulted in a reduction in apparel production by 40% and employment by 50%. This particular study provides an example of an initiative with well-meaning intentions which lead to unimaginable effects. Thus in the context of school voluntourism programs the effects of these initiatives must be assessed not only to see if they are successful in improving schooling, work and aspirational outcomes for children. They must be investigated to ensure that there are no harmful consequences for students involved.

What is evident across these studies is that development aid programs can be beneficial, limited or detrimental. In light of this voluntourism programs as a form of aid provision should be extensively examined as a whole. This thesis is among the first to do so and narrows focus on the effect of school voluntourism programs in Indonesia.

2.3 Education in Developing Economies

The vast majority of volunteer programs offered globally are based in schools. Within economic literature, several educational interventions have been trialled and investigated within developing economies to help mitigate educational inequalities. Each intervention is different in nature and has had varying levels of success.

One barrier to improving education is access. Within the context of Indonesia, this impediment was addressed through the INPRES school construction program of the 1970s. Duflo (2001) finds that the construction of more than 61,000 primary schools between 1973 and 1978 lead to increases in years of education and wages earned by those attending primary school following construction. In a follow-up study, Akresh et al. (2018) finds that the effects of the program also extend to the children of those originally impacted by the INPRES program, particularly daughters. Households in which the parents attended primary school following the INPRES program were found to experience better living standards relative to those that did not.

Easing the financial burdens associated with schooling have been proven to improve outcomes among children. Silva and Sumarto (2015) find that education transfers and support programs not only lower the price of schooling but reduce the time children spend working. Evans et al. (2009) finds that the distribution of school uniforms can reduce student absenteeism and schooling expenses. Thus, addressing the costs families face in sending their children to school in developing nations are another means of improving schooling outcomes.

Providing learning materials has produced mixed results. Glewwe et al. (2009) concludes that the supply of textbooks to students can lead to improved schooling performance, however, this improvement was limited to already high achieving students. This elite bias demonstrates interventions must target the children who are at the greatest disadvantage within schools to improve overall educational attainment and achievement. One program that successfully addressed this was a remedial education program in India. Banerjee et al. (2007) find that the use of local teaching aids in primary schools improves academic performance, particularly among previously struggling students.

Other studies have focused on other impediments to education. Miguel and Kremer (2004) treated intestinal worms in Kenyan schools and found treatment reduced student absenteeism. Glewwe et al. (2010) finds that reward-based pay for primary school teachers in Kenya improve student's examination results. Thus accessibility and cost are not the only factors determining educational outcomes, the quality of children's health and the teaching they receive are also contributing factors that cannot be ignored.

I believe this literature highlights the complexity of mitigating educational inequality and disadvantage. Each intervention is different and each have some degree of success. There is no one solution to alleviate poor educational outcomes for students in developing nations. Therefore these findings motivate the analysis of school voluntourism programs. As an educational intervention it should be examined to determine its success in improving educational outcomes for Indonesian students.

3 | Background Information

In this chapter I discuss background information on education and school voluntourism programs in Indonesia. In the education section I (1) outline the structure of schooling in Indonesia, (2) a recent history of educational reforms and (3) trends in education leading up to the introduction of school voluntourism programs. In the school voluntourism section of this chapter I describe school voluntourism organisations and programs operating in Indonesian schools. I outline program structure, roles of voluntourists and overall motivations and aims of these projects.

3.1 Education in Indonesia

3.1.1 Overview: Primary and Secondary School Education in Indonesia

Indonesia contains one of the largest education systems in the world with over 60 million students (OECD, 2015). The system divides education across four levels: primary, junior secondary, senior secondary and tertiary education. Basic education is comprised of primary and junior secondary education (Rosser, 2018). Table 3.1 captures grades across primary and secondary levels of schooling and the traditional ages of students in those grades.

The vast majority of educational institutions are public (Rosser, 2018). Private schools within Indonesia are either religious-based or for profit and a smaller portion of the system is comprised of non-secular educational institutions, predominantly Islamic schools (OECD, 2015).

The responsibility of managing educational institutions in Indonesia lies with two major ministries: The Ministry of Education and Culture (MOEC) and the Ministry of Religious Affairs (MORA) (OECD, 2015). The majority of schools fall under the MOEC and the remaining 16% are monitored by the MORA.

Table 3.1: Primary and Secondary Schools: Grades and Ages of Students

Level of Schooling	Grades	Typical Age of Students (Years)
Primary	1	6-7
Primary	2	7-8
Primary	3	8-9
Primary	4	9-10
Primary	5	10-11
Primary	6	11-12
Junior Secondary	7	12-13
Junior Secondary	8	13-14
Junior Secondary	9	14-15
Senior Secondary	10	15-16
Senior Secondary	11	16-17
Senior Secondary	12	17-18

Note: In the early 1990s it became a requirement that those between 7 to 12 years old attend primary school however it has become common for students to start primary school at 6 (OECD, 2015)

3.1.2 Recent History of Educational Reforms

The Indonesian government has taken several strides to improve education on a national scale in recent decades through various policy reform (Raihani, 2007). Historically, the school construction program of the 1970s (INPRES) and the introduction of nine years of compulsory schooling in 1994 are two examples of policy reform seen under the New Order regime (Suharti, 2013). Since the fall of the New Order in 1998, Indonesia has transitioned from an authoritarian government to a democracy. This transition was accompanied by several policy reforms with the intention of improving educational quality and attainment.

The introduction of the Social Safety Net Scholarships Program in 1998 following the Asian Financial Crisis of the late 1990s was the first. Concerned the crisis may force parents to cease their children's school enrolment, the government introduced the scholarship program to provide financial assistance to households. Studies analysing this policy find an improvement in enrolment for primary school students from poor, rural households (Sparrow, 2007) and a reduction in the drop out rate for junior secondary students (Cameron, 2009). Following the crisis, the government initiated several educational reforms to improve access, attainment and quality of education. A summary of these policies between 2003 and 2005 can be seen in Table 3.2.

These reforms have not been without their challenges. Poor quality of education remains an immense barrier to improving educational outcomes (WorldBank, 2018; Rosser, 2018; OECD, 2015). Contrary to the goal of Government Regulation 19 on National Education Standards, the vast majority of schools are not meeting minimum service standards (OECD, 2015). Unfortunately these standards directly effect the delivery of learning as they pertain to lesson planning and the assessments set for students. Rosser (2018) attributes the failings of educational quality to three factors: inadequate funding, calibre of teaching staff and teacher absenteeism arising from poor compensation. Thus, the certification program and amended requirements of teaching staff introduced by the Teachers Law has not been enough to address educational barriers from the supply-side.

Furthermore, the OECD (2015) also highlight the vast disparities in educational outcomes among those of different socioeconomic status as well as differences across provinces and districts. The report recommends the adoption of pro-poor policies to required to address educational inequality that is not currently considered in education legislation. Simply providing free basic education isn't enough.

What is evident from this history of policy reform is that there has been a strong push to improve education within Indonesia. However, the presence of persistent barriers and inefficiencies hinder further improvements in education.

Table 3.2: Educational Reform Following 1998

Year	Policy Reform	Action
2003	Law 20 on the National Education System	Defined a number of key areas that educational institutions must follow including the function and purpose of education, national education standards, the roles and responsibilities of schooling staff, curriculum, amongst others. Cost of basic education (Grades 1 to 9) became the responsibility of the government. Law 23 on the Constitutional Court ensures that a healthy portion of the national budget can finance this expense.
2003	Law 23 on the Constitutional Court	This law stipulated that 20% of the governments national budget would be allotted to the education sector.
2004	Law 32 on Regional Government and Law 33 on Central-Regional Financial Balance	Established the framework for decentralising educational management, implementation and financing. These functions became the responsibility of provincial and district-level government.
2005	Government Regulation 19 on National Education Standards	Produced eight standards which must be fulfilled by schooling institutions; ‘content, process, graduate competency, teacher standards, school facilities, education management, funding and assessment’ (pg.75). These standards were organised and monitored by the National Education Standards Board.
2005	Law 14 on Teachers and Lecturers	Otherwise known as the Teachers Law, Law 14 was implemented to address the issue of under-qualified teaching staff. In terms of pre-service requirements, the minimum qualification required to earn a teaching role was raised and a new certification program was introduced. The law also necessitates a set of minimum competency standards in areas including ‘professionalism, pedagogy, social skills and personal behaviour’ (pg.75)
2005	Introduction of the school operations grant program: Bantuan Operasional Sekolah (BOS) program	School operations grant providing additional funding to schools. These funds are intended to aid schools in maintaining high student attendance and allowing greater flexibility in financial management. Other CCT programs include the Bantuan Siswa Miskin (BSM) and the Program Keluarga Harapan (PKH).

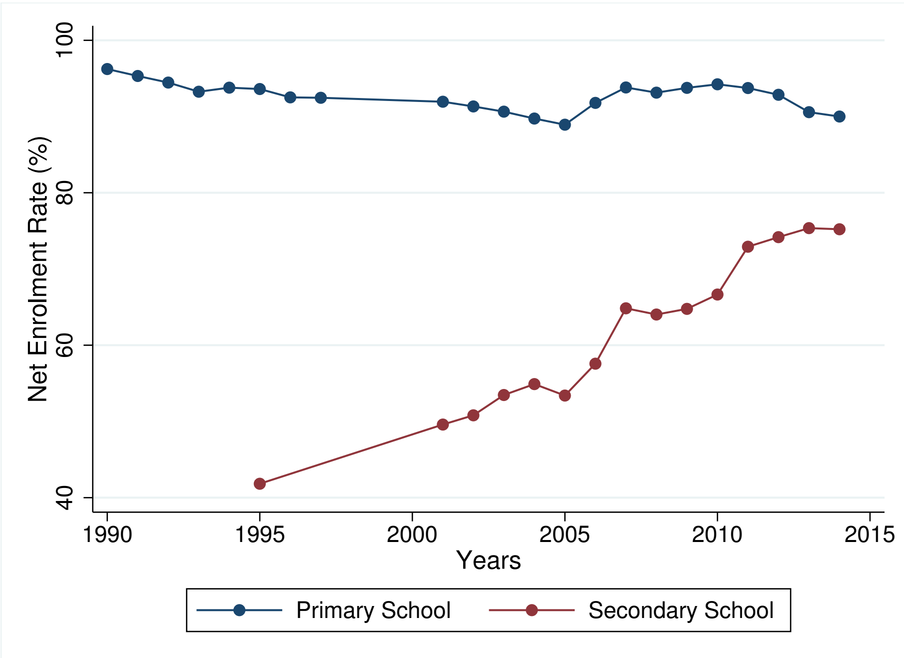
Source: OECD (2015).

3.1.3 Trends in Education

It is evident that the Indonesian government has introduced several policies to improve access, quality and higher attainment with regards to education. But have these reforms lead to improvements in schooling outcomes for students? The schooling outcomes I focus on include the following: school attendance, primary school entry age, child labour among primary and secondary students, primary school graduation, completion of the 7^{th} grade and secondary school graduation. Given limitations on national statistics for some of these outcomes this section outlines developments in net enrolment rates, net attendance rates, child labour and educational attainment in the years leading up to the introduction of school voluntourism programs.

By the end of 2014, Indonesia was close to achieving universal access to education (OECD, 2015). However, Figure 3.1 demonstrates that this access was not equitable across both schooling levels. The net enrolment rate for primary school nationally remained above 90% across all years of data. However, net enrolment in secondary schooling has been consistently lower by comparison in recent decades. Although it has increased from the early to late 2000s.

Figure 3.1: Trends in Net Enrolment Rate

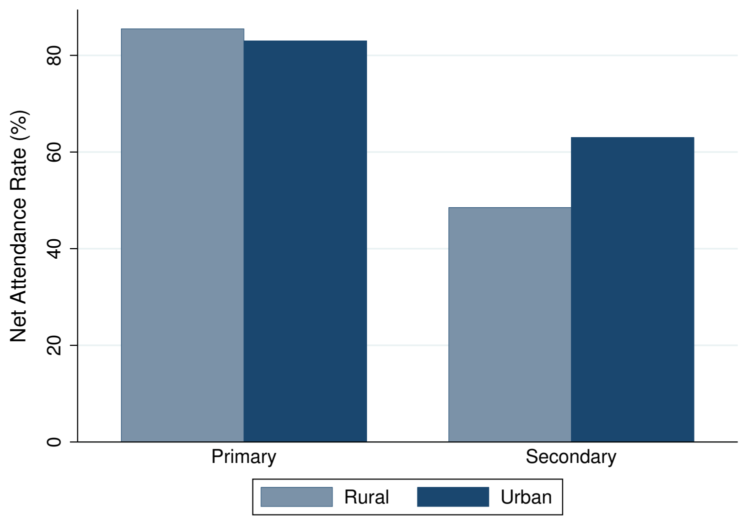


Source: World Bank (2018a) and World Bank (2018b)

The enduring difference between primary and secondary net enrolment reflects another persistent issue; keeping students in school. It is clear that the Indonesian government has been successful in maintaining high rates of primary school enrolment but this does not translate beyond primary into secondary schooling. A significant portion of those aged between 13 and 18 are not enrolled in secondary school. Many of those who are of junior secondary age report entering the labour force rather than attending school because of the high opportunity cost of secondary schooling or because they need to work to support their households (Suharti, 2013).

However, school enrolment rates do not provide a complete picture of children's school participation. School enrolment rates are concerned with drawing students into school. But are enrolled students attending regularly? The Education Policy and Data Center (2008) provides a snapshot in 2008 of school attendance rates across schooling levels and urban/rural regions.[1] The average net attendance rates are shown in Figure 3.2. I identify 2008 as the first year in which the treated sub-districts are exposed to school voluntourism programs. Therefore this snapshot captures national attendance figures in the year school voluntourism programs began in treated regions.

Figure 3.2: Net Attendance Rates Across Regions and Levels in 2008



Source: Education Policy and Data Center (2008)

It is first important to note that the high primary net enrolment rate seen in Figure 3.1 is not mirrored by an equally high net attendance rate. The mean net attendance rate is approximately 80% on average across rural and urban primary school students. This is 10 percentage points lower than the average net enrolment rate seen in Figure 3.1. Hence, although Indonesia has almost perfect primary school enrolment, the issue of imperfect attendance rates is apparent.

Similarly to net enrolment rates, there is a large difference in net attendance rates between primary and secondary students. The difference is approximately 10 percentage points. Therefore the challenge of pushing students to graduate primary school and enrol

[1]Note that this is the only data available on school attendance in Indonesia..

in secondary school is complemented by the challenge of improving attendance among secondary school students.

Perhaps the poor attendance records could be explained by the prevalent use of child labour within Indonesia. In their 2012 report, the Understanding Children's Work (2012) illustrates the nature, determinants and consequences of child employment within Indonesia. The work performed by children in Indonesia is likely to be illegal and dangerous (Understanding Children's Work, 2012). Of the 2.3 million children aged between 7 and 14 working in 2009, 89% worked in rural regions and 58% were working in the agricultural sector. Children working in agriculture are exposed to the most hazardous working environments and are subjected to work that is physically demanding (Understanding Children's Work, 2012).

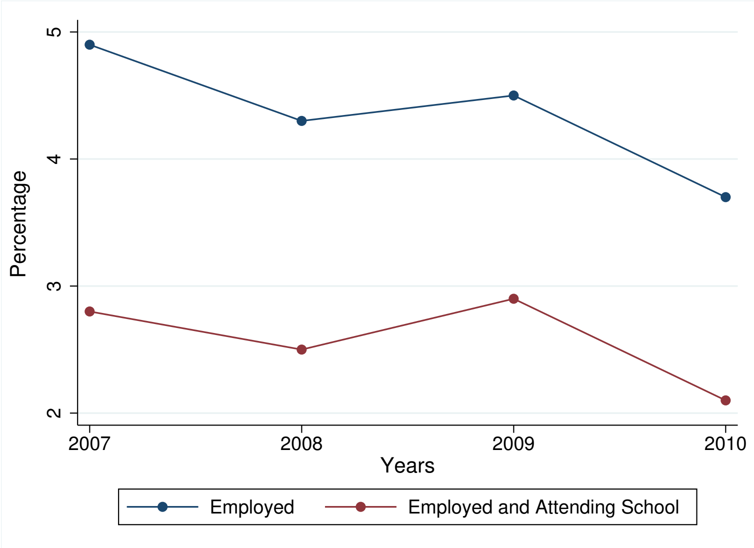
The effects of this labour on children's educational outcomes are detrimental. Working children lag behind their peers in both school attendance and grade progression (Understanding Children's Work, 2012). This is consistent with the understanding that child labour is both time- and labour-intensive, particularly within agriculture. The enrolment and attendance rates among secondary school aged individuals in Figure 3.1 and Figure 3.2 could be explained by the findings of Understanding Children's Work (2012) which suggest that the probability of working increases with age.

Despite these findings, it would appear that child labour is gradually declining. This is seen in Figure 3.3. Between 2007 and 2010 there was an overall decline in child labour on a national scale among those aged 10 to 14 years old in Indonesia. Understanding Children's Work (2012) note that the slight peak in the percentage of working children and the percentage of children working and attending school in 2009 could be attributed to the Global Financial Crisis in 2007/2008.

Most child labour is illegal in Indonesia. The minimum legal working age is 15 years old, although there are some allowances for those aged between 13 and 15 under strict conditions such as parental consent and maximum working hours (Bureau of International Labor Affairs, 2007). It is possible that the data available on child labour used by Understanding Children's Work (2012) is incomplete because Indonesia's child labour laws prohibit the worst forms of child labour. Records may possess reporting bias if either employers or parents fear they will face fines or imprisonment. However, the governments lack of resources and child labour inspections mean that these laws cannot be effectively enforced (Bureau of International Labor Affairs, 2007). Thus, although the data shows a gradual improvement in child labour during the late 2000s, there are still significant challenges preventing further progress.

This thesis is also concerned with educational attainment including primary school graduation, completion of the first grade of secondary and secondary schooling graduation. Indonesia has seen advancements in educational attainment beyond primary schooling and

Figure 3.3: Trends in Child Labour among 10 to 14 Year Olds



Source: Understanding Children's Work (2012). Understanding Children's Work (2012) used the Indonesia National Labour Force Survey from 2007, 2008, 2009 and 2010.

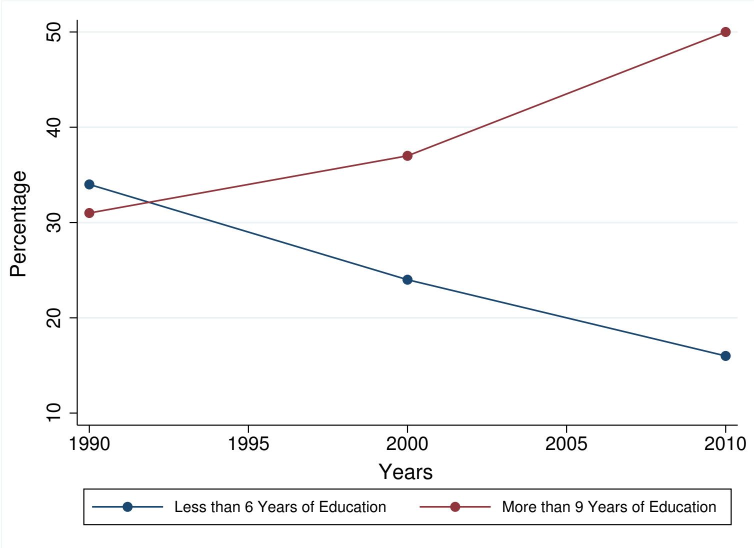
also beyond junior secondary schooling into senior secondary. In his summary of trends in education in Indonesia, Suharti (2013) notes that there has been an improvement in educational attainment over two decades of census data among adults aged 19 or older. This is seen in Figure 3.4.

Figure 3.4 shows that there has been a gradual increase in the percentage of adults attaining more than nine years of education. At the same time, there has been a reduction in the portion of adults reporting having less than six years of education. Thus, an increasing number of adults are graduating from junior secondary and a smaller number of adults are failing to complete primary school.[2]

This improvement is mirrored by improvements in the years of schooling (Suharti, 2013). Among adults aged 15 or older, Figure 3.5 demonstrates the gradual increase in the average years of education. On average, years of education exceeds beyond primary school (i.e. 6 years of schooling) for all years of data. Despite this improvement there is a prominent disparity when comparing those from rural and urban regions. This difference becomes even more pronounced when comparing impoverished and more affluent districts (Suharti, 2013). However the persistent issue remains that those living in rural regions face an educational disadvantage relative to their urban peers. Note that this group are also more likely to work while attending school (Understanding Children's Work, 2012).

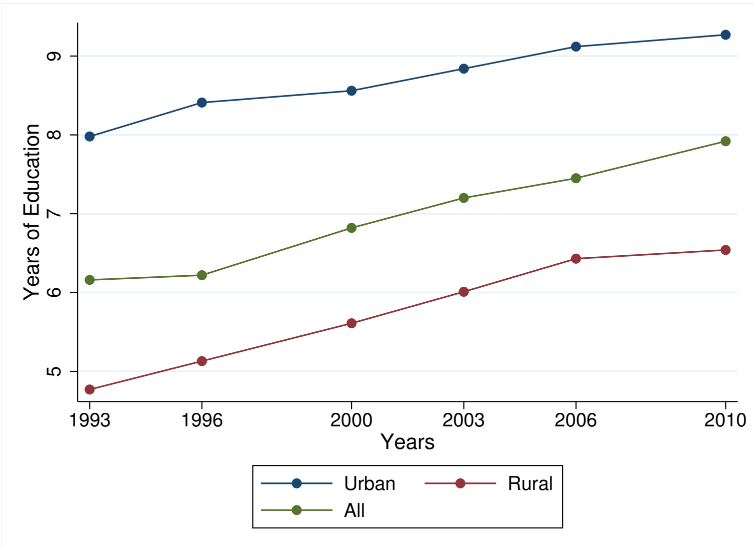
[2]Recall from Table 3.1 that individuals with 6 years of schooling would have graduated from primary school and those with 9 or more years of schooling would have graduated from junior secondary.

Figure 3.4: Trends in Educational Attainment Among Adults



Source: Suharti (2013). Note that the census is conducted every ten years, hence the years of data only include 1990, 2000 and 2010.

Figure 3.5: Trend in Mean Years of Education among Adults Aged 15 or older



Source: Suharti (2013)

Thus Indonesia has witnessed some advancements in schooling outcomes in recent years. However, major differences across primary and secondary schooling as well as differences between rural and urban individuals prevail. Thus despite some progress and policy reform, there is still room for improvement.

3.2 Overview of School Voluntourism Programs in Indonesia

In this section I provide an overview of school voluntourism programs in Indonesia. School voluntourism programs provide opportunities for travellers to teach English in disadvantaged communities. Indonesia hosts a wealth of programs such as these in primary schools. Since there is no existing database or reporting on school voluntourism programs in Indonesia I collect my own database of programs available across the country. Using this collection I identify where programs operate, their common structure, the role of voluntourists and motivation of voluntourism organisations.

There is currently no database of school voluntourism programs operating within Indonesia, nor is there any official reporting on their overall availability, reach and nature. Therefore, for this thesis I collect information and data on school voluntourism organisations operating in Indonesia. To do this I use online forums and online voluntourism program catalogues. Table 3.3 shows the final collection of voluntourism organisations conducting school voluntourism programs in Indonesia.

The bulk of organisations began operating in the mid-2000s and can be found in the Bali Province. The programs are managed by voluntourism organisations who recruit and send voluntourists into Indonesian primary schools. Voluntourists mostly engage with children of primary school age between 6 and 12 years old. However, some programs work with children as old as 17 to 18.

There is limited information on the voluntourists themselves. The minimum age requirement for voluntourists ranges between 16 to 18 and the majority of programs require no prior teaching experience. There is no data on the demographics and characteristics of voluntourists who participate in these programs. However, voluntourism organisations attract volunteers from various sending countries including Australia, the United States, Canada and the UK who pay between USD$135 and USD$1300 to participate in these programs.

The program structure is similar across all voluntourism organisations. Voluntourists benefit from flexible duration of service ranging between 1 to 56 weeks. They work in classrooms with local Indonesian teachers to help students improve their English writing and speaking abilities. They do this through through a variety of games and activities, however, it is rare that voluntourists conduct the classes themselves. The classroom work they perform is often in partnership with other volunteers and is secondary to the teaching of local teaching staff.

The features of school voluntourism programs that this thesis focuses on are the roles of voluntourists and the motivations of voluntourism organisations. These characteristics of voluntourism programs are uniform across the identified organisations in Table 3.3. The roles of voluntourists are two-fold: (1) they complement the English teaching students already receive from local teachers and (2) make learning fun and exciting for students to improve classroom engagement. These responsibilities illuminate the goals of school voluntourism programs which include: (1) motivating greater school attendance among students, (2) instilling a greater value for education and (3) encouraging educational attainment within and beyond primary school. These features inform my research question; Are school voluntourism programs effecting the schooling, work and aspirational outcomes of students?

It is important to note the lack of transparency among the voluntourism organisations working in Indonesia. This lack of transparency prevents the collection of complete information on Indonesian school voluntourism programs. Information such as origin date and the specific teaching structure of the projects is limited. The location of schools is often limited to a province or district rather than sub-district.[3] In addition, the specific schools the programs affiliate with are anonymous. Voluntourism organisations also provide no reasoning on where they conduct programs.

The identified organisations provide an overview of the nature and aims of school voluntourism programs. The collection in Table 3.3 is used in the following section to determine the sample selection and the identified treatment and control groups.

[3]Sub-districts are the smallest geographical region identified in the household survey data provided by the IFLS.

Table 3.3: School Voluntourism Organisations Operating in Indonesia

Voluntourism Organisation	Province	Year Began in Indonesia	Age of Students	Minimum Age of Volunteers	Prior Teaching Experience Required?	Minimum Stay	Maximum Stay	Teaching Structure	Approximate Voluntourist Cost (2weeks)
Involvement Volunteers International	Bali	1989	6-12	16	No	2 Weeks	12 Weeks	Classroom & One-On-One	USD$440
Travellers Worldwide	Bali	2004*	4-5	18	No	1 Week	12 Weeks	Classroom &	USD$975
GapXperience	Bali	2005	5-12	17	No	1 Week	N/A	Classroom One-On-One	USD$670
VIP International*	Bali	2006	N/A	18	No	4 Weeks	24 Weeks	Classroom	USD$135
IFRE Volunteer	Bali	2006	6-12	18	No	1 Week	12 Weeks	N/A	$370USD
GOECO	Bali	2006	7-11	18	No	2 Weeks	8 Weeks	Classroom & One-On-One	USD$775
Volunteering Solutions	Bali	2006	6-12	17	No	2 Weeks	12 Weeks	Classroom	USD$450
International Volunteer HQ	Bali	2007	6-12	18	No	1 Week	12 Weeks	Classroom	USD$470
Bali Internships	Bali	2007	6-12	18	No	4 Weeks	24 Weeks	Classroom & One-On-One	USD$1300
Friends For Asia	Bali	2007	N/A	18	Yes	2 Weeks	N/A	Classroom	USD$850
Slukat Learning Centre$*$	Bali	2007	9-17	N/A	No	2 Weeks	16 Weeks	Classroom	USD$500
Volunteer Bali	Bali	2008	6-16	18	No	N/A	N/A	Classroom	USD$304
The Mighty Roar	Bali	2008	5-17	16	No	1 Week	24 Weeks	Classroom	USD$320
Students Go Abroad	Bali	2008	6-12	18	No	4 Weeks	56 Weeks	Classroom	USD$600
Global Nomadic	Bali	2009	6-12	18	No	4 Weeks	24 Weeks	Classroom	USD$700
Tru Experience Travel	Bali	2012	5-12	N/A	No	1 Week	12 Months	Classroom	USD$840
Love Volunteers	Bali	2010	5-18	17	No	1 Week	12 Weeks	Classroom	USD$450
United Planet	Central Java	2009	N/A	18	No	1 Month	12 Months	N/A	USD$660
Volunteer In Java	West Java	2010	8-18	N/A	No	2 Weeks	4 Weeks	Classroom	N/A
School In Paradise	West Nusa Tenggara	2013	7-17	N/A	No	6 Weeks	N/A	N/A	USD$400

Notes: Some organisations have programs operating across different provinces, districts and/or sub-districts. For those organisations I have recorded the first province they began working in. For organisations which did not supply the year in which their programs began in Indonesia, the year in which they began as an organisation was recorded. Where the ages of students was not specified but primary schools explicitly mentioned I assume the ages of Indonesian students are between 6 and 12 Programs operating in learning centres rather than schools are denoted by $*$. The list of references used to identify and characterise these organisations and programs are found in A.

4 | Empirical Methodology

In this section I outline (1) my sample selection strategy, (2) the final data set and (3) my specification models. Firstly I describe my sample selection strategy using the collection of identified school voluntourism programs operating in Indonesia and the sampling methodology of the Indonesia Family Life Survey (IFLS). Secondly I describe the compiled data sample I use to estimate the effect of school voluntourism programs. Finally, I describe the two specification models I use to determine the effect of school voluntourism programs. I use a difference in difference approach in both specifications, however, each specification defines treatment differently.

4.1 Sample Selection Methodology

The sample I use to estimate the effect of school voluntourism programs is compiled using the identified school voluntourism programs in Table 3.3 and the Indonesia Family Life Survey (IFLS). To select my sample I first (i) identify the treatment and control sub-districts, (ii) identify the pre- and post-treatment periods and (iii) identify the treatment group of IFLS respondents who would have been exposed to the programs in the post-treatment wave.

I identify the treatment and control sub-districts using the collection of school voluntourism programs in Table 3.3 and the Indonesia Family Life Survey (IFLS). The IFLS includes both household and community surveys. However, not all of the identified voluntourism programs seen in Table 3.3 operate in sub-districts sampled by the IFLS. Using the sampling methodology of the IFLS I identify which of the sampled sub-districts host the identified school voluntourism programs.[1] The IFLS-sampled sub-districts hosting school voluntourism programs are found in the Bali Province.[2] Table 4.1 summarises

[1]The IFLS provides province, district and sub-district information however village information was kept anonymous to preserve the anonymity of the survey respondents. Thus the smallest identifiable region in the IFLS are sub-districts. The smallest identifiable region where school voluntourism programs operate is also at a sub-district level due to lack of transparency from the organisations orchestrating them.

[2]Although there were programs operating in the Provinces of Central Java, West Java and West Nusa Tenggara the specific sub-district in which the programs were available was not publicly available. Thus they are omitted.

the total availability of school voluntourism programs within Bali across districts and sub-districts regardless of whether they operate in IFLS-sampled sub-districts.

Table 4.1: Number of Voluntourism Programs in Bali by Sub-District

District	Sub-District	Year First Program Began	Total Number of Programs
Gianyar	Ubud	2006	17
Buleleng	Buleleng	2007	5
Karang Asem	Kubu	2007	3
Karang Asem	Karang Asem	Unknown	2
Denpasar	Denpasar Timur	2007	1
Badung	Kuta	2007	1

Note: Bueleleng is both the name given to the district and the sub-district. The same applies for Karang Asem

Ubud contains the highest number of programs, however, it was not included in the IFLS's sampling. The Buleleng and Kubu sub-districts are second to Ubud, hosting 8 programs between them. Programs also operate in the Karang Asem, Denpasar Timur and Kuta sub-districts. However, these sub-districts are not included in the original IFLS sample in 1993 although respondents in later waves live in these sub-districts. As a longitudinal survey, the IFLS follows respondents from original households. Therefore respondents living in the Karang Asem, Denpasar Timur and Kuta sub-districts are members of households originally surveyed in Wave 1 who have since moved away. Because of this the number of observations from these sub-districts is low.[3] Additionally the community survey was not administered in these sub-districts because they are not included in the original sample.[4] Therefore since respondents from these sub-districts could not be completely included in the empirical analysis or be included in the control group, they are omitted from the sample.[5] Thus Buleleng and Kubu are the identified treatment sub-districts. I refer to all other sub-districts included in the IFLS as the control sub-districts.

Following the identification of treatment and control sub-districts I can define the pre- and post-treatment periods. I do this by using the years school voluntourism programs began in treated sub-districts. Table 4.2 summarises the organisations operating school voluntourism programs in treated sub-districts. The first programs were introduced in 2007 for both sub-districts. However, since there is no information on the exact date and month programs began, I assume that 2008 is the first complete year in which primary students in these sub-districts are exposed. Therefore 2008 is the first treatment year. This allows for the identification of the pre- and post-treatment waves of IFLS household data. The IFLS was conducted in five waves; 1993, 1997, 2000, 2007 and 2014. Hence

[3]The number of observations from these sub-districts was only 92 across all waves.

[4]The community surveys provide the estimated number of primary schools across surveyed sub-districts required to determine exposure to treatment in my intensity of treatment specification model.

[5]Respondents from these sub-districts could be included in the binary treatment specification model. The results are seen in D. These estimates match those of the binary treatment specification when excluding these respondents in Chapter 5.

1993, 1997, 2000 and 2007 are the pre-treatment waves and the fifth wave, 2014, is the post-treatment wave.

Table 4.2: Voluntourism Organisations operating in Treated Sub-Districts

Organisation Name	Organisation Type	District	Sub-District	Year Began in Treated Sub-District
Tru Experience Travel	For Profit	Buleleng	Buleleng	2012
International Volunteer HQ*	For Profit	Buleleng	Buleleng	2007
Bali Internships	For Profit	Buleleng	Buleleng	2007
GapXperience	For Profit	Buleleng	Buleleng	2008
The Mighty Roar	Not For Profit	Karang Asem	Kubu	2008
Volunteering Solutions	For Profit	Karang Asem	Kubu	2007
VIP International	Not For profit	Karang Asem	Kubu	2008

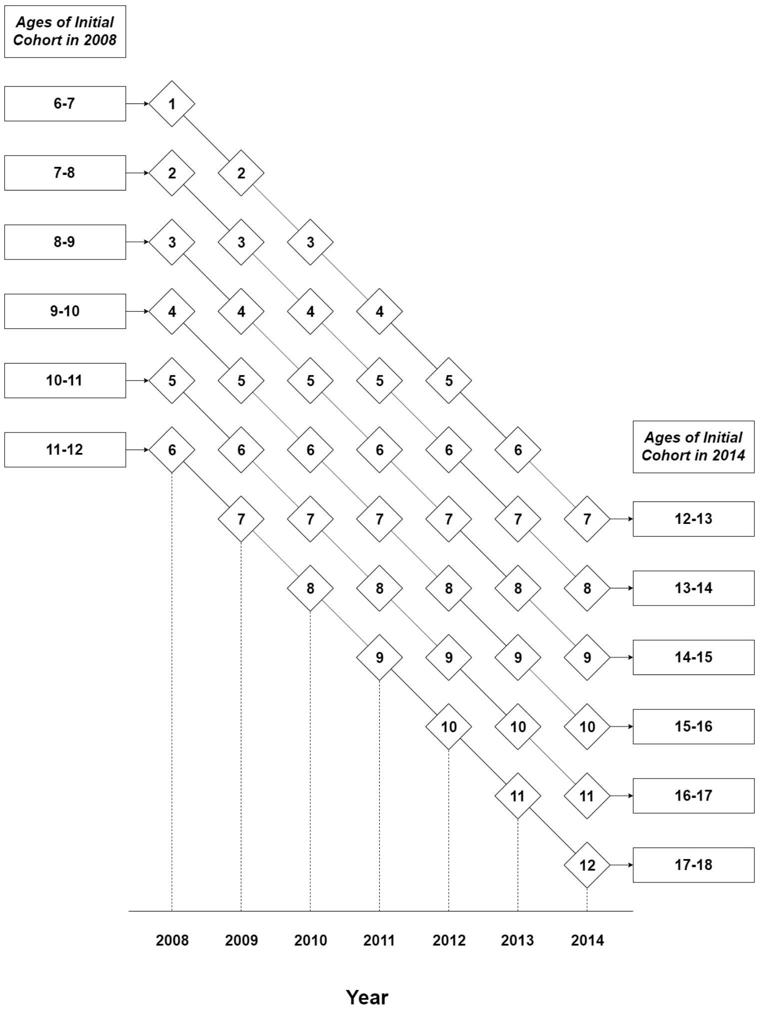
Note: I assume all organisations are affiliated with one primary school in the treated sub-districts. However, based on email correspondence, the International Volunteer HQ is known to associated with several schools in the Buleleng sub-district. But the total number is not publicly available. Therefore I assume this organisation works with a minimum of two primary schools.

Finally, I identify which respondents of the IFLS household survey to include in the sample using the defined pre- and post-treatment periods. I identify those between grades 1 and 6 in 2008 in treated sub-districts as the first cohort exposed to programs. Using information in Table 3.1, Figure 4.1 summarises the approximate ages of these students and their grade progression from 2008 until 2014 assuming no grade repetition.

Figure 4.1 shows that the initial cohort should have progressed to secondary school and thus be enrolled in grades 7 and 12 by 2014. Therefore in the post-treatment wave the oldest IFLS respondents who would have been exposed to school voluntourism programs are 18 years old. Since students still enter primary school from 2009 onward the youngest respondents exposed in the post-treatment wave are aged 6. Therefore the sample of children I extract from the IFLS are those aged between 6 to 18, inclusive. In this sample I define my treatment group as children who live in sub-districts with school voluntourism programs i.e. treated sub-districts.

Thus to estimate the causal effect of primary school voluntourism programs on schooling, work and aspirational outcomes for students I use a sample of those aged between 6 to 18 living in treatment and control sub-districts both before treatment (1993-2007) and after treatment (2014).

Figure 4.1: Grade Progression of Initial Cohort Exposed to Programs in 2008



Notes: This figure captures the ages of the cohort exposed to school voluntourism programs in the first year of exposure, 2008, and the last wave for which data is available, 2014. For example, a student in the first grade would be roughly 6 or 7 years old in 2008 and by 2014 they would have entered the seventh grade at 12 or 13 years old.

4.2 Data

In this section I summarise the data sample used in my empirical analysis. I first (i) describe the IFLS and summary statistics, (ii) the individual-level data on schooling, work and aspirational outcomes, (iii) data on the number of primary schools in treated sub-districts and (iv) data constraints.

4.2.1 Overview: The IFLS and Summary Statistics

The survey data I use is sourced from the Indonesia Family Life Survey (IFLS) conducted by the RAND Corporation. The IFLS provides longitudinal survey data from five waves; 1993, 1997, 2000, 2007 and 2014. Both a household and community survey were collected across 13 of Indonesia's 27 provinces. The total sample of the IFLS is representative of the majority of Indonesia's population (The RAND Corporation, 1993b).[6] I extract household survey responses from 6 to 18 year old respondents to produce the data set used in my empirical analysis. In addition, the community survey reports the estimated number of primary schools in treated sub-districts which I use to estimate treatment intensity.

IFLS household survey responses provide key data on 6 to 18 year old respondents. However, the IFLS defines children as those younger than 15 years old and adults as 15 or older. Therefore survey responses from children aged 6 to 14 were taken from the child surveys and survey responses from teenagers aged 15 to 18 were taken from the adult survey.

Combining these survey responses provides data on schooling, work and aspirational outcomes. These include school attendance, primary school entry age, child labour among primary and secondary students, primary and secondary school graduation, grade completion of the 7^{th} grade and aspirations. In addition I also extract demographic information on 6 to 18 year olds including age, gender, urban residence status, agricultural household status, the gender of the household head and the years of education of the household head and their spouse. Further, the province, district and sub-district respondents live in was also collected to determine which respondents lived in treatment or control sub-districts.

The summary statistics of the final sample are shown in Table 4.3. Overall the total sample of 6 to 18 year old respondents is 31,466. Panel A shows approximately 1.4% of respondents across age groups live in treated sub-districts. The large sample of school age respondents allows for separate analyses of primary and secondary aged respondents. Therefore I consider the estimated effects of school voluntourism programs on school attendance, primary school entry age and the portion of working primary students for primary and secondary school age respondents as well as the full sample.

Table 4.3 reports summary statistics for the full sample in Column (1), primary school aged respondents in Column (2), secondary school aged respondents in Column (3) and older teenage respondents in Column (4). Note that this final group of 15 to 18 year olds are considered because the aspirations-based survey questions are only asked in the adult survey. Therefore the effect of school voluntourism programs on aspirations can only be estimated for those aged 15 to 18 years old.[7]

[6] With regards to sampling households, the 13 provinces in which the IFLS was conducted were deliberately chosen to be representative of Indonesia's population both culturally and socio-economically to the greatest extent given cost constraints (The RAND Corporation, 1993a). The sampling was henceforth stratified by province. In each province, 321 enumeration areas (EAs) were randomly selected for the first wave using the EAs used in the 1993 SUSENAS survey, a socioeconomic survey conducted annually in Indonesia. In rural EAs, 30 households were sampled and in urban EAs, 20 households were sampled. With regard to household location information, the province, district and sub-district was provided. However village information was kept anonymous to preserve the anonymity of the survey respondents.

[7] The derivation of this aspirations measure is detailed in subsubsection 4.2.2.

Table 4.3: Summary Statistics

	(1)		(2)		(3)		(4)	
	Aged 6 to 18		Aged 6 to 12		Aged 13 to 18		Aged 15 to 18	
Variable	Mean	N	Mean	N	Mean	N	Mean	N
Panel A: Portion of Sample Living in Treated Sub-Districts								
Lives In Treated Sub-District	0.014	31466	0.013	18122	0.015	13344	0.015	8001
Panel B: Demographic Characteristics								
Age	11.686	31466	9.036	18122	15.286	13344	16.475	8001
Male	0.499	31466	0.506	18122	0.490	13344	0.482	8001
Urban	0.523	31462	0.502	18118	0.552	13343	0.578	8001
Agricultural HH	0.367	31436	0.374	18111	0.358	13325	0.340	7994
Head of the HH yrs of education	6.326	28340	6.313	16408	6.345	11932	6.520	7124
Head's Spouse yrs of education	5.728	29568	5.747	17215	5.702	12353	5.853	7309
HH Head is Female	0.108	31466	0.101	18122	0.118	13344	0.126	8001
Panel C: Outcome Variables								
School Attendance	0.858	30254	0.966	17077	0.718	13177	0.624	7882
Primary School Entry Age	6.522	20418	6.315	9673	6.708	10745	6.848	7533
Worked (Primary School)	0.036	24626	0.025	13511	0.049	11115	0.049	7417
Worked (Junior Secondary)					0.068	8558	0.073	6255
Worked (Senior Secondary)					0.084	3232	0.084	3232
Completion of One Year of Secondary					0.696	9596	0.841	4789
Graduation from Primary School					0.860	9596	0.950	4789
Aspirations Gap							0.767	4642

Notes: N refers to number of observations. HH denotes household. Note that the imperfect response rates reduce the observations for certain variables. For response rates see Table B.4. Mean values for working in junior secondary school was only considered for those who had 7 years of education or more. Mean values for working in senior secondary school was only considered for those who had 10 or more years of education.

Panel B captures demographic characteristics. There is an even spilt of male and female respondents. The majority of the sample live in urbanised regions and few come from agricultural households.[8] The household head's years of education is on average higher than their spouse across each age group. However, neither exceed a primary level of education i.e. equal to or greater than 7 years. Further, it is rare to find a respondent living in a household where the head is female.

Panel C describes the outcome variables of interest across all age groups. School attendance across the entire sample is 85.8% however those of primary school age in Column (2) largely explain this figure. School attendance across waves is highest for those of primary school age (96.6%) while the rate is much lower for those of secondary schooling age in Column (3) (71.8%) and even lower for those of senior secondary schooling age in Column (4) (62.4%).[9] Thus school attendance falls as we consider older respondents in the sample. Most children commence school at the traditional ages of 6 to 7 years. Overall, 3.6% of the sample report having worked while attending primary school. Although

[8] Agricultural household status is a binary variable equal to 1 for respondents who live in a household where at least one member worked in agriculture. Although some IFLS waves report if households owned farming land, these questions were inconsistent across waves. Across all waves households were asked simply if at least one member worked in agriculture. Therefore this variable could be used to identify which households had an agricultural background.

[9] Recall from Table 3.1 that secondary students are between the ages of 13 to 18 however those in senior secondary are between the ages of 15 to 18.

2.5% of primary school aged respondents report working in primary school in Column (2), the percentages are larger for those of secondary school age at 4.9% in Columns (3) and (4). Therefore more secondary respondents report working while attending primary school compared to respondents who are currently attending primary school.

The portion of working students increases when observing secondary students. The portion of respondents who work while attending junior secondary school (6.8% in Column (3) and 7.3% in Column (4)) is larger than the portion of primary aged students working while attending primary school (2.5%). The likelihood of working increases for those in senior secondary (8.4% in Columns (3) and (4)).

In order to determine if school voluntourism programs improve schooling attainment I estimate the effect of programs on the rate of completion of the first grade of secondary school i.e. 7^{th} grade. Across waves 69.6% of 13 to 18 year old respondents report completing the 7^{th} grade in Column (3). The rate of completion is higher for 15 to 18 year olds at 84.1% in Column (4). Similarly the rate of primary school graduation is larger for those in Column (4) (95%) compared to those in Column (3) (86%).

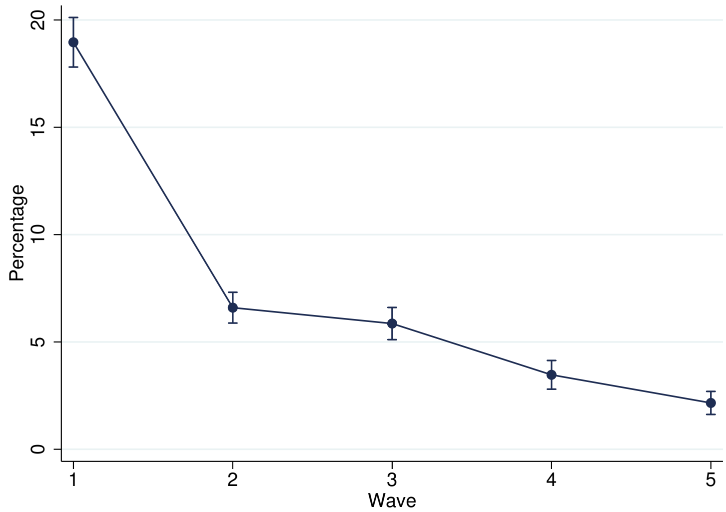
Finally, consider the aspirations gap. This is a measure of aspirations derived from wealth-related questions in the IFLS introduced by Böhme and Glaser (2014). The aspirations gap is on average 0.77 steps for those in Column (4). In the following section I define the derivation of this measure and its interpretation. But in basic terms this positive mean aspirations gap demonstrates positive aspirations among those in the sample.

A sub-sample of those who are 18 years old is considered when identifying the effect of school voluntourism programs on senior secondary school graduation. Summary statistics for this cohort can be seen in Table B.2. This group was largely similar to those in the 15 to 18 group in Table 4.3. However, there is a noticeable difference in the average rate of school attendance for those in this sub-sample. The average rate of school attendance across waves was lower for this group compared to others at 43.4%. In addition they were also more likely to work in senior secondary school (10.2%), which was almost 2 percentage points higher than the 15 to 18 age group.

It is important to note the presence of mature aged primary school students in the sample. I define mature aged students as those between 13 and 18 years old who are still attending primary school. Figure 4.2 captures the portion of mature-aged primary school students as a percentage of total primary school students across the five waves.

Figure 4.2 shows that the presence of mature aged primary students has declined significantly from just below 20% in Wave 1 to below 5% in the final wave. Table B.1 indicates that the majority of mature aged primary students are approximately 13 years old on average.

Figure 4.2: Percentage of Primary Mature Aged School Students



Notes: The graph captures the percentage of primary school students aged between 13 and 18 across all waves of the IFLS. Waves 1, 2, 3, 4 and 5 correspond to the years 1993, 1997, 2000, 2007 and 2014. 95% confidence intervals are included.

4.2.2 Individual Level Data

In this section I outline individual-level data on outcome variables taken from the IFLS. I describe how these variables were generated from IFLS survey questions and the trends in these variables for the treatment and control groups before and after the introduction of school voluntourism programs.

School Attendance

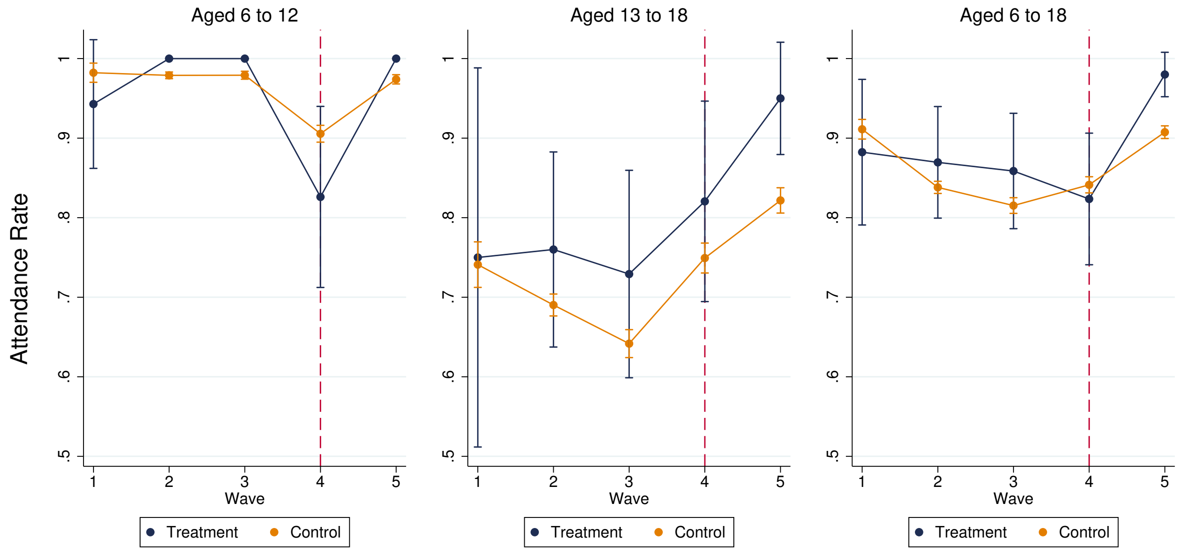
Both child and adult surveys ask respondents if they currently attend school across the five waves. Data was generated on school attendance using these responses. It is important to note that Indonesia divides secondary schooling between junior and senior levels. For simplicity I combine both levels of secondary when considering school attendance.

Figure 4.3 reports the mean rate of school attendance among the treatment and control groups. Three age groups are considered to capture school attendance for primary age children (6 to 12), secondary age children (13 to 18) and all children of schooling age (6 to 18).

First consider average school attendance for respondents aged 6 to 12 in the treatment and control groups. Average attendance for both the treatment and control groups exhibit an upward trend following the introduction of school voluntourism programs after Wave 4 (2007). However, the increase is greatest for the treatment group at approximately 12 percentage points compared to 8 percentage points for the control.

The average attendance for children aged between 6 and 12 living in treated sub-districts

Figure 4.3: Average School Attendance Among Primary and Secondary-Aged Students



Notes: The graph captures the average attendance rates for those aged 6 to 12, 13 to 18 and 6 to 18 across all waves of the IFLS. Waves 1, 2, 3, 4 and 5 correspond to the years 1993, 1997, 2000, 2007 and 2014. 95% confidence intervals are included. The dashed line at Wave 4 indicates the final pre-treatment period.

is 100% in Waves 2 and 3. This raises concerns of misreports from respondents or their proxies.[10] The source of this potential bias is uncertain. Responses provided for children via proxy may have been falsified. If the respondent was a guardian or parent, false positive responses may have been provided if they were concerned there may be consequences for failing to send their child to school. Perfect attendance could also be explained by the actions of the government in the wake of the Asian Financial Crisis during Waves 2 and 3. The Social Safety Net Scholarships Program in 1998 was proven to improve primary school enrolment (Sparrow, 2007). Perhaps these results arise because of the effectiveness of this program or others like it at the time. Despite these potential explanations, there is no literature or reports that support them. As a robustness check, I later reproduce the estimated treatment effects for this age group on school attendance after omitting data from Wave 3 and earlier.

For respondents aged 13 to 18 in the treatment and controls groups, school attendance exhibits a downward trend until Wave 3 before increasing towards the final wave. The treatment and control groups shows parallel trends between Waves 3 and 4 before school voluntourism programs are introduced. However, those in the treatment group see a greater increase in attendance between Waves 4 and 5 compared to the control.

Both the treatment and control groups in the full sample of 6 to 18 year old respondents

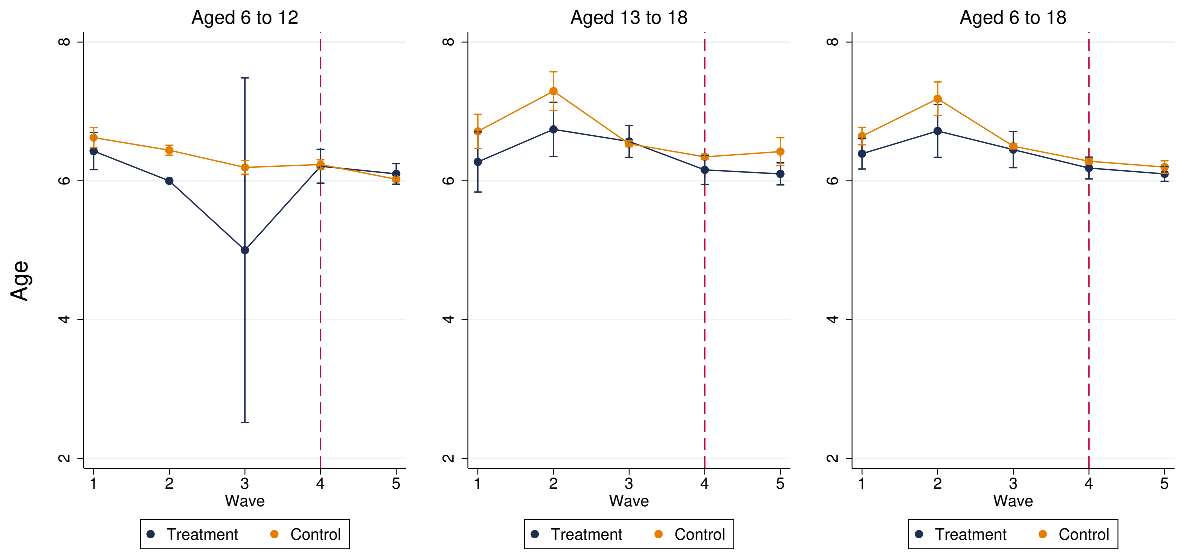
[10]Children who were unable to respond to questions answered via proxy.

exhibit a downward trend in attendance across Waves 1 to 4. However, following Wave 4 both groups experience an increase in school attendance. Again we can see that the increase in school attendance is greatest for the treatment group in the post-treatment wave.

Primary School Entry Age

The child and adult surveys ask respondents the age at which they started primary school. I was able to generate a variable for primary school entry age using these responses. Figure 4.4 summarises this variable across waves.

Figure 4.4: Average Primary School Entry Age



Notes: The graph captures the mean primary school entry age for those aged 6 to 12, 13 to 18 and 6 to 18 across all waves of the IFLS. Waves 1, 2, 3, 4 and 5 correspond to the years 1993, 1997, 2000, 2007 and 2014. 95% confidence intervals are included. The dashed line at Wave 4 indicates the final pre-treatment period.

First consider those of primary school age (6 to 12 years old). Across the five waves the control group shows a slight downward trend in the primary school entry age until it reaches the approximate age of 6 in Wave 5. However, a different pattern emerges for the treatment group. Although the treatment group experiences a similar downward trend to the control group between Waves 4 and 5, there is a large drop in the entry age in Wave 3. For Wave 3 the treatment group is 5 years old on average when commencing school. Across all other waves respondents from the treatment group report being no less than 6 when starting school. This drop could be explained by poor response rates during this wave. The response rate for this age group In Wave 3 was 7.3% among a sample of 3,354 respondents (Table B.4). Hence the large confidence interval for this estimated mean. The IFLS literature provides no reasoning for this low rate, however, this is revisited in the Robustness Chapter. Therefore, as a robustness check I later reproduce the estimated treatment effect for this age group on primary school entry age.

For the two remaining age groups, 13 to 18 and 6 to 18, both treatment and control groups see an upward trend in the entry age between Waves 1 and 2. This trend approaches age 7 in both graphs. From Wave 2 onward both treatment and control exhibit a downward trend between both age groups. Following Wave 4 the treatment and control groups in the 13 to 18 age group exhibit marginally different trends. The 13 to 18 year old treatment group experiences a weak downward trend and the control has a weak upward trend. However, for the 6 to 18 age group both the treatment and control witness a weakly negative trend.

Child Labour: Primary and Secondary Students

Responses from the child and adult surveys provide data on child labour among students while attending primary and secondary school. In this section I first describe data provided on child labour among primary school students and then describe data provided on child labour among secondary school students.

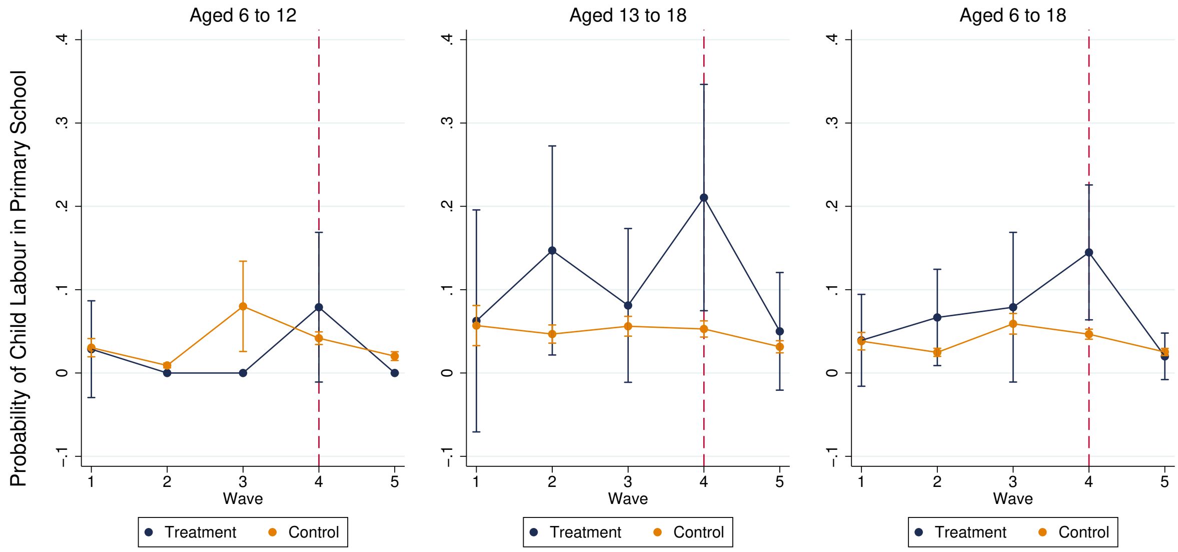
The child and adult surveys asked respondents if they had worked while attending school. In the adult survey respondents were asked if they had worked while attending all levels of schooling including primary, junior secondary, senior secondary and college/university. Therefore I was able to generate a binary outcome variable indicating if respondents from the adult survey had worked while attending primary school. The child survey incorporated the same questions in all waves except Waves 2 and 3. In Waves 2 and 3 children were simply asked if they worked while attending their current level of schooling. Nonetheless the responses provided by children allowed for observations of child labour among primary school students. This variable captures the the probability that a child in primary school works. Figure 4.5 shows child labour among primary school students across the three age groups and all waves.

First consider those of primary school age (6 to 12 years old). Across Waves 1 to 4 the treatment and control groups experience a weak upward trend. However, following Wave 4 both the treatment and control groups see a decline in child labour primary school students. This drop is greatest for the treatment group.

Similarly, those aged 13 to 18 in the treatment group exhibit an upward trend through the pre-treatment waves. Those in the control group demonstrate little change in portion of 13 to 18 year olds who report working in primary school across Waves 1 to 5. However, between Waves 4 and 5 the treatment group witnesses a large decline in the portion of teenagers who report working while attending primary school.

For the full sample of 6 to 18 year olds the treatment and controls groups experience

Figure 4.5: Child Labour Among Primary Students Across Waves and Groups



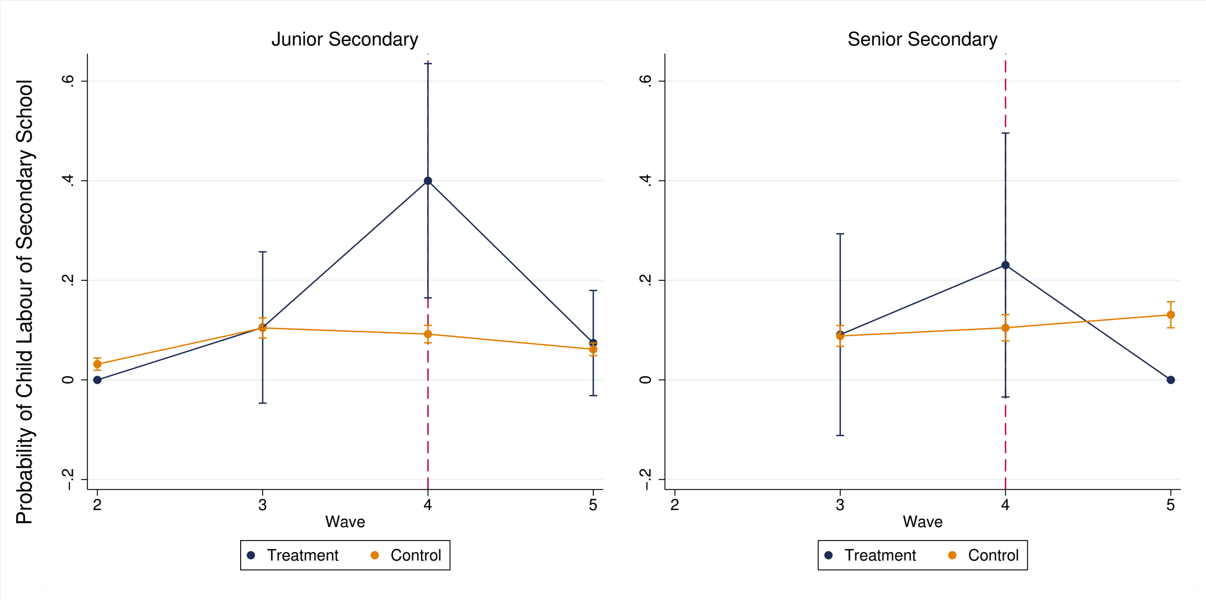
Notes: The graph captures the mean portion of respondents working while attending primary school among those aged 6 to 12, 13 to 18 and 6 to 18 across all waves of the IFLS. Waves 1, 2, 3, 4 and 5 correspond to the years 1993, 1997, 2000, 2007 and 2014. 95% confidence intervals are included. The dashed line at Wave 4 indicates the final pre-treatment period.

a gradual upward trend in the portion of students who report working during primary school. Between Waves 3 and 4 the treatment and control groups exhibit opposing trends. The treatment experiences an upward trend while the control shows a downward trend. However both groups show a decline in the portion of working primary school students following the introduction of school voluntourism programs after Wave 4. This decline is larger for the treatment group. As I robustness check I test whether the trends between Waves 3 and 4 are statistically significantly different between the treatment and control groups in this age group.

The child and adult surveys also provide responses on child labour among secondary school students. However, the surveys distinguish between whether respondents worked while attending junior and senior secondary school. Therefore I consider child labour among junior and senior secondary students separately.

To determine the samples of junior and senior secondary students, I first consider those who are of age to currently attend or have attained these levels of schooling. I then further adjust the sample to include those who have the relevant years of schooling to currently attend or have attained these levels. Therefore for those in junior secondary school I consider those aged between 13 and 18 who have 7 to 12 years of schooling. For those in senior secondary I consider those aged 15 to 18 who have between 10 to 12 years of schooling. This is based on the approximate ages of students in these grades seen in

Figure 4.6: Child Labour Among Secondary Students Across Waves and Groups



Notes: The graph captures the mean portion of respondents working while attending junior and senior secondary school across the last four waves of the IFLS. Waves 2, 3, 4 and 5 correspond to the years 1997, 2000, 2007 and 2014. Respondents aged 13 to 18 with 7 years of education or more were considered for junior secondary. Respondents aged between 15 and 18 with 10 years of education or more were considered for senior secondary. 95% confidence intervals are included. The dashed line at Wave 4 indicates the final pre-treatment period.

Table 3.1. Since the child survey includes respondents younger than 15 the responses from this survey inform the portion of working junior secondary students. The adult survey includes respondents between 15 and 18 and thus inform both the portion of working junior and secondary students. Trends in the average portion of students working while attending secondary school across the waves and between the treatment and control groups are seen in Figure 4.6.

It is important to note that the survey responses required to generate these outcome variables were not available for all waves of data. Data was only available from the Wave 2 onward for the portion of junior secondary students. Data was available from Wave 3 onward for the portion of working senior secondary students.

First consider junior secondary respondents. The control group exhibit a consistently low portion of working junior secondary students. This percentage peaks at around 1% in Wave 3 for this group. The treatment group shows an upward trend during the pre-treatment periods and exhibits a decline following the introduction of school voluntourism programs after Wave 4.

A similar pattern emerges when considering the portion of working senior secondary students. The control group shows a consistent portion of working senior secondary students throughout Waves 3 until 5. However the treatment group witnesses an upward trend in the last two pre-treatment periods. Between Waves 4 and 5this group sees a decline in the portion of working senior secondary students.

Primary and Secondary School Graduation

Responses on primary and secondary school graduation are not explicitly provided in either the child and adult surveys. I used information on the school level and grades attained by respondents to compute their years of education. Using years of education I generate dummy variable for both primary and secondary school graduation. Therefore, an individual who has 6 or more years of education is classed as a primary school graduate and a respondent with 12 or more years of education is classed as a secondary school graduate.[11] I consider the rate of primary school graduation for respondents aged 13 to 18.[12] The rate of secondary school graduation is only considered for those aged 18. Those who are 18 years old are the only respondents old enough to be of age to have graduated secondary school and be exposed to school voluntourism programs in the treatment group.[13] This reduces observations for this outcome. Figure 4.7 reports the mean graduation rate for both levels of schooling across the treatment and control groups. It is important to note data on secondary graduation is only available from Wave 3 onward due to poor response rates among this age group in earlier waves.

For both the treatment and control groups primary school graduation is relatively higher on average across waves compared to secondary school graduation. The treatment and control groups follow the same trajectory in primary school graduation rates throughout all waves of data. Following the introduction of school voluntourism programs the change in the mean graduation rate is almost parallel between the treatment and control groups.

The treatment and control show different trends in secondary school graduation. Across the two pre-treatment waves the treatment group shows a stronger upward trend compared to the control. However, following the introduction of the school voluntourism programs the treatment group sees a decline in the mean secondary graduation rate and the control sees a slight upward trend.

Completion of At Least One Year of Secondary School

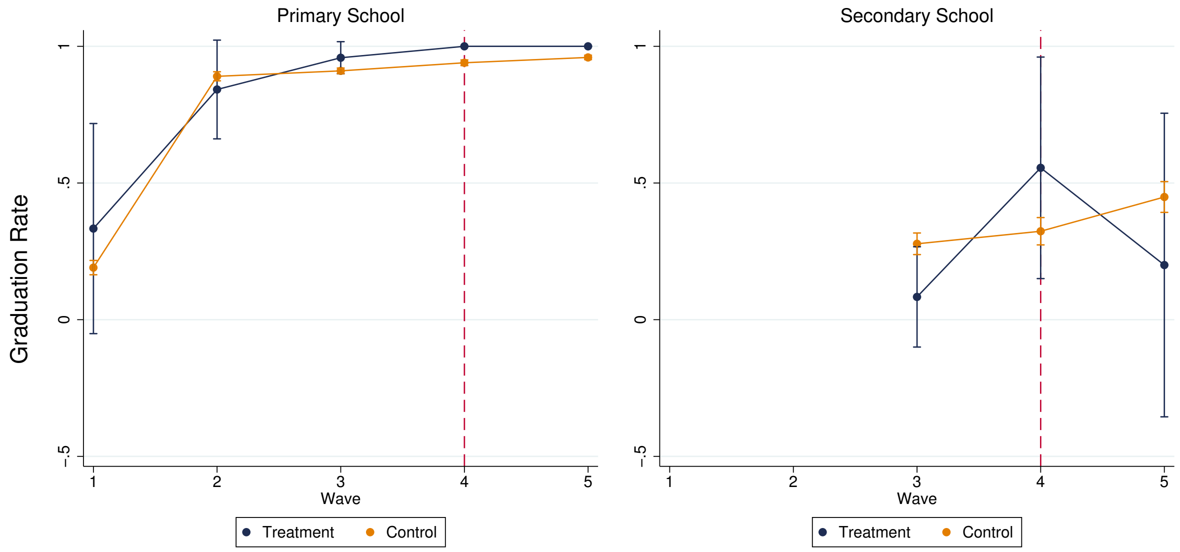
In this section I describe the derivation of the binary variable indicating completion of at least one year of secondary school. I consider this variable to examine whether school

[11] Note that under this definition those who graduate secondary school are senior secondary graduates.

[12] The traditional age of a primary school graduate is 12 at the most in the year they complete primary school based on Table 3.1. Therefore I restrict the sample to 13 to 18 year olds in case some 12 year olds are still completing the 6^{th} grade.

[13] Although those who have completed the 12^{th} grade could be between 17 and 18 (Table 3.1), some 17 year olds could still be completing the 11^{th} grade. Thus to avoid biased results only those who were 18 were considered.

Figure 4.7: Average Graduation Rates Across Primary and Secondary School



Notes: The graph captures the mean primary and secondary graduation rates across all waves of the IFLS. Waves 1, 2, 3, 4 and 5 correspond to the years 1993, 1997, 2000, 2007 and 2014. 95% confidence intervals are included. For primary school graduation those aged 13 to 18 are considered. For secondary school graduation only 18 year old respondents are considered. The dashed line at Wave 4 indicates the final pre-treatment period.

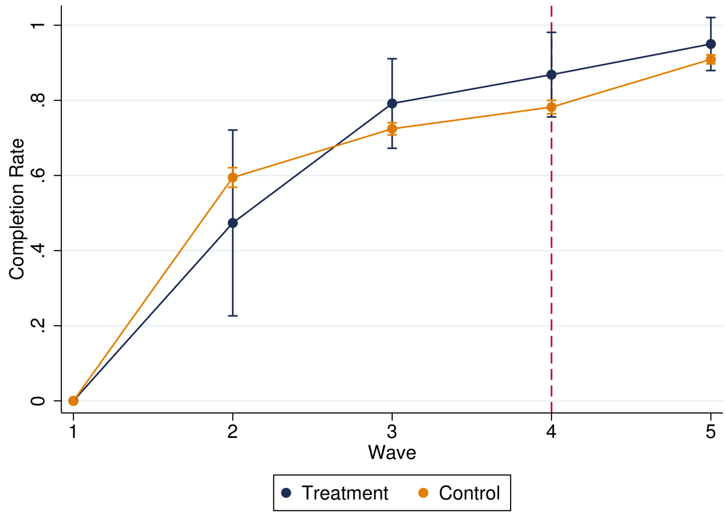
voluntourism programs are pushing children into junior secondary school, thus encourging further educational attainment. Data on the years of education calculated from responses in the child and adult surveys inform whether respondents complete the first year of secondary school i.e. 7^{th} grade. Therefore respondents reporting having 7 years of education or more were identified those who have completed at least one year of secondary schooling. Table 3.1 shows respondents as young as 13 are of age to have completed 7^{th} grade. Hence this variable is considered for those between 13 and 18 years old.

Figure 4.8 shows the mean rate of completion of the 7^{th} grade across groups and all waves. Throughout the five waves, the treatment and control groups show a similar trajectory in the completion rate of 7^{th} grade starting at 0% in Wave 1. From Wave 3 onward the rate of completion is higher in the treatment group. Although both groups follow parallel upward trends in the completion rate between Wave 3 and 4, the upward trend in the completion rate between Wave 4 and 5 is greater for the control group.

Aspirations

Finally in this section I address IFLS data on respondent's aspirations. As previously mentioned, aspirations-based questions were only asked in the adult survey. Böhme and Glaser (2014) utilise IFLS data to construct their measure of aspirations; the aspirations gap. In their working paper, Böhme and Glaser (2014) define the aspirations gap as the

Figure 4.8: Rate of Completion of the 7th grade



Notes: The graph captures the mean rate of completion of the 7^{th} grade across all waves of the IFLS. Waves 1, 2, 3, 4 and 5 correspond to the years 1993, 1997, 2000, 2007 and 2014. 95% confidence intervals are included. Only respondents those aged 13 to 18 are considered. The dashed line at Wave 4 indicates the final pre-treatment period.

distance between an outcome an individual hopes to achieve and the point at which they are today. Using IFLS responses from the subjective well-being section of the adult survey, they generate the aspirations gap using two survey questions:

1. 'Please imagine a six-step ladder where on the bottom (the first step) stand the poorest people, and on the highest step (the sixth step), stand the richest people. On which step are you today?' (The RAND Corporation, 2000b, p. 10)

2. 'On which step do you expect to find five years from now?' (The RAND Corporation, 2000b, p. 10)

The aspirations gap for individual i in treated sub-district s in wave t is therefore calculated as:

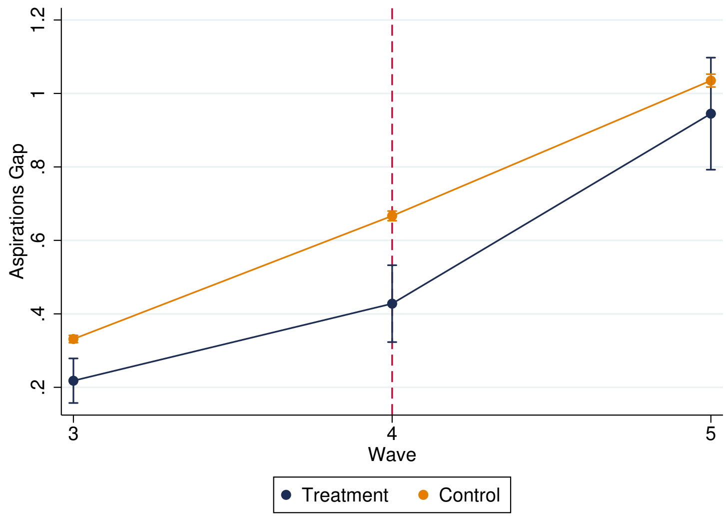
$$AspirationsGap_{i,s,t} = Step_{t=5} - Step_{t=0}$$

The subjective well-being questions were introduced to the adult survey in 2000. Therefore data on aspirations is only available for Waves 3 to 5.[14] Further, since the questions were only asked in the adult survey responses are available only for those aged 15 to 18.

[14]Note that while some respondents provided their current perceptions this did not guarantee an answer for their wealth perception in the following five years. The response rates for the first question were 99.77%, 99.89% and 95.16% for Waves 3, 4 and 5. The response rates for the second question were 97.91%, 95.25% and 91.91% in Waves 3, 4 and 5. In addition some responses did not correspond to the answer options provided (e.g. step 9 was chosen when the option was not provided). Such responses were amended and reported as a non-response.

Figure 4.9 reports the mean aspirations gap across treatment and control groups across the three waves.

Figure 4.9: Average Aspirations Gap Across Groups and Waves



Notes: The graph captures the mean aspirations gap across the last three waves of the IFLS. Waves 3, 4 and 5 correspond to the years 2000, 2007 and 2014. 95% confidence intervals are included. Only respondents those aged 15 to 18 are considered. The dashed line at Wave 4 indicates the final pre-treatment period.

Across the three waves, both the treatment and control groups see an upward trend in aspirations. This trend is constant for the control group both before and after the introduction of school voluntourism programs. The aspirations gap is consistently lower for the treatment group compared to the control. The treatment and control groups follow a parallel trend prior to treatment. Following Wave 4, both groups experience an increase in the aspirations gap however the increase is largest for the treatment.

4.2.3 Total Number of Primary Schools in Treated Sub-Districts

Estimating the number of primary schools in the treated sub-districts is necessary to estimate the likelihood of exposure to school voluntourism programs. The IFLS does not explicitly report the total number of schools across sub-districts. However, Waves 2 to 5 include a Service Availability Roster (SAR) in the community survey which estimates the number of schools per sub-district.

The SAR reports a list of health and schooling facilities used by households in each surveyed sub-district. Data on schools was collected from three strata of school facilities; primary, junior secondary and senior secondary. This provides a list of primary schools used by households in sampled sub-districts. These lists are generated from responses given in the household roster survey[15] and community surveys collected from every village

[15]The household roster survey collects basic information on each household member from one adult

head and their spouse. In every wave following Wave 1 any primary schools mentioned in the household and community surveys that were not previously reported were added to the SAR. The roster was also updated when any schools ceased operations. Although the SAR reported the level of schooling and the location of each school, the name of the school was kept anonymous.

By the final pre-treatment wave in 2007, the SAR contains a list of primary schools across all sub-districts. This list provides an estimated number of primary schools in the treated sub-districts after omitting schools which had closed down. The estimated number of primary schools in the treated sub-districts in Wave 4 and Wave 5 are shown in Table 4.4. There is no significant increase in the number of primary schools used by sampled households between Wave 4 and Wave 5. Since 2007 is the last wave prior to treatment I consider the estimated number of primary schools from this wave to be the best estimates. Using these estimates I can estimate the likelihood of exposure in the treated sub-districts. This is used in the intensity of treatment specification model outlined in final section of this chapter.

Table 4.4: Total Primary Schools Across Treated Sub-Districts using SAR

Treated Sub-District	School Number 2007	School Number 2014
Buleleng	11	14
Kubu	13	15

4.2.4 Dataset Constraints

The IFLS presents some data limitations. These limitations relate to (1) the IFLS sampling methodology, (2) response rates, (3) anonymity of observations, (4) the total population of primary schools, (5) the aspirations measure, (6) inconsistencies in work-related questions asked in the child survey and (7) misreports of child labour.

The sampling methodology used by the RAND Corporation when conducting the IFLS constrains the number of observations available. This is found when using both the child and adult surveys. Since the child survey is collected from respondents aged 0 to 14, data from these surveys includes children who are too young to enrol in primary school. The sample of children surveyed is reduced when omitting those younger than the traditional starting age of 6. The adult survey is collected from respondents aged between 15 and 49, inclusive, and only respondents aged between 15 and 18 are included in the final sample. However, those who are eligible for the adult survey are only interviewed in 25% of households (The RAND Corporation, 1993b). The effects of this sample selection for

within the household.

both the child and adult surveys are captured in Table B.3. Across all waves of the IFLS I use between 29% to 37% of the overall IFLS sample.

The response rates for outcome variables of interest also affected the number of observations. Because IFLS survey respondents could provide a non-response or misunderstood questions, there is a large variance in the response rates across outcome variables. Table B.4 captures the response rates for all outcome variables. Response rates for different age groups are reported where applicable. Across all waves and ages, responses to school attendance questions are above 90%. This could be because the question was relatively easy to answer. There is also a strong response rate for the aspirations gap amongst 15 to 18 year olds. However, response rates for primary school entry age, completion of the 7^{th} grade and graduation from both levels of schooling are inconsistent across waves. Although response rates for these variables were high in Wave 1, rates fell considerably in Wave 2. The fall in response rates could not be explained by changes in survey questions since RAND kept questions identical across waves to allow for intertemporal comparison (The RAND Corporation, 2000a). Unfortunately no IFLS documentation could provide explanations for the drop in response rates for these waves.

The anonymity of observations and primary schools within the IFLS data and the lack of information on the schools voluntourism programs operate within also present issues. IFLS data preserves the anonymity of the primary schools attended by survey respondents and listed in the SAR. Further, voluntourism organisations withhold information on the schools they are associated with. Therefore it is impossible to identify the specific primary schools affected by the programs and specific students who attend those schools. However, by adjusting the treatment definition in my specification model to account for the number of primary school voluntourism programs operating in treated sub-districts and the estimated number of primary schools in treated sub-districts I can overcome this limitation.

Another limitation of the IFLS is that it fails to provide the population of primary schools across sub-districts. Only the estimated number of primary schools across sub-districts is available in the SAR. However, the SAR relies on responses provided by households as well as village leaders and their spouses. Therefore the SAR does not provide a perfect record of all schooling institutions available in sampled sub-districts. However, it is the best estimate available in the data.

Furthermore, the measurement of aspirations is not perfect. Firstly the questions used to generate the aspirations gap are based on perceptions of wealth. However, other studies focusing on the aspirations of young people use survey questions that require respondents to voice their educational and occupational goals or use psychological tools to assess children's aspirations through their drawings (Ross et al., 2019). Thus the aspirations measure examined in this paper may be limited given the wealth perceptions and expectations used to calculate it. Secondly, relative aspirations cannot be assessed due to the anonymity of IFLS respondents. There is the potential for spillover effects between respondents exposed to the voluntourism programs and those who attend a school that is not affiliated with a voluntourism organisation who live in close proximity. Whether this spillover is positive or negative cannot be hypothesised ex ante. However, this analysis is not possible using the IFLS data due to the anonymity of respondents, the schools they attend or have attended, and the primary schools that voluntourism programs operate within. Thirdly, the aspirations gap measure is constrained by the available answer options. Recall respondents are asked to place themselves on a metaphorical ladder representing their current wealth and expected wealth in five years. There are only six steps available on the ladder with the bottom representing the lowest level of wealth. Therefore a respondent with a relatively higher current perception of wealth may have a lower aspirations gap because they are constrained in choosing a higher level of wealth they expect in the near future. However, the mean of current wealth perceptions does not exceed the third step and the mean of expected wealth does not exceed the fourth step across waves. This is seen in Figure B.1. Thus I expect the upper limit of the sixth step does not affect the aspirations gap measure.

Moreover, the IFLS is inconsistent with work-related questions asked in the child survey. In Waves 1, 4 and 5, children were asked if they worked while attending primary and/or junior secondary. Therefore, if a child had already progressed to secondary school they could clarify if they worked while attending primary school. However, for Waves 2 and 3, the employment question was modified. For these waves, children were asked only if they worked while attending their current level of schooling. Whether or not a respondent worked while attending primary school was not recorded if the respondent was in junior secondary school. Thus there may be missing observations for this outcome variable for these waves. Further, Waves 3, 4 and 5 asked additional work-related questions in the child survey. In Wave 3 respondents were asked if they had worked for wages during their time in school. In Waves 4 and 5 respondents were asked whether they had worked for wages, in the family business (farming or otherwise) or performed household work. For simplicity and uniformity, I use survey responses to create an dummy variable indicating whether respondents worked at all while attending school rather than the type of work they conducted across all waves.

Finally, it is likely that responses provided in the child and adult survey may understate the portion of children who work while attending primary school. The legal minimum working age is 15 years with some leniency for those as young as 13 (Bureau of International Labor Affairs, 2007). However, those found guilty of using child labour can face fines or imprisonment (Bureau of International Labor Affairs, 2007). Thus given the illegal nature of child labour, children or their proxies may provide false negative responses to these survey questions. Hence the portion of working primary school students may be under reported.

4.3 Specification Models

In this section I outline the specification models I use in my empirical analysis. I use a difference in differences approach to estimate the effect of voluntourism on schooling, work and aspirational outcomes for students. This approach involves two specification models. The first is a binary treatment specification model and is defined as:

$$Y_{i,s,t} = \alpha + \beta T_{i,s} + \theta P_t + \mu T_{i,s} \cdot P_t + \delta \mathbf{X}_{i,s,t} + \epsilon_{i,s,t} \tag{4.1}$$

Where $Y_{i,s,t}$ is the outcome variable for respondent i in sub-district s in wave t. The treatment dummy, $T_{i,s}$ equals 1 for individual i living in treated sub-district s. The post-treatment variable, P_t, equals 1 for the post-treatment wave t i.e. Wave 5 (2014). In addition, δ is a vector of coefficients and $X_{i,s,t}$ captures all other covariates. After controlling for wave and sub-district fixed effects, $T_{i,s}$ and P_t are omitted from the model and I only include the interaction term $(T_{i,s} \cdot P_t)$.[16] In this model, μ is the main coefficient of interest. This coefficient is the estimated average effect of living in the post-treatment wave in a sub-district which hosts school voluntourism programs in local primary schools.

The binary treatment indicator in Equation 4.1 assumes that all respondents in the treated sub-districts are exposed to a school voluntourism program. However, Table 4.5 shows the number of programs operating in each treated sub-district is less than the estimated number of primary schools. Therefore the binary treatment specification model ignores the likelihood of program exposure.

Table 4.5: The Number of School Voluntourism Programs Versus the Estimated Number of Primary Schools in Treated Sub-Districts

Treated Sub-District	Number of School Voluntourism Programs	Estimated Number of Primary Schools
Buleleng	5	11
Kubu	3	13

Notes: The number of voluntourism programs listed is based on the programs shown in Table 4.2. Although four organisations are listed for Buleleng, International Volunteer HQ operates programs in several schools but does not disclose the total number. Therefore I assume they are affiliated with a minimum of 2 schools. Hence 5 programs are indicated for this sub-district.

[16] When including fixed wave and sub-district effects the treatment dummy is defined as $PT_{i,s,t}$ and equals 1 if respondent i lives in treated sub-district s in the post-treatment wave t.

I use a second model to address this drawback of the binary treatment specification; the intensity of treatment specification model. In this specification I modify the treatment indicator to account for the number of voluntourism programs and the number of primary schools in treated sub-districts. The second model is specified as:

$$Y_{i,s,t} = \alpha + \lambda \cdot IOT_{i,s} + \theta P_t + \gamma \cdot IOT_{i,s} \cdot P_t + \delta \mathbf{X}_{i,s,t} + \epsilon_{i,s,t} \tag{4.2}$$

Where,

$$IOT_{i,s} = \frac{program\_number_s}{school\_number_s}$$

The intensity of treatment ($IOT_{i,s}$) for individual i living in treated sub-district s is the ratio of the number of primary school voluntourism programs operating in the treated sub-district ($program\_number_s$) to the number of the estimated primary schools in that treated sub-district prior to the introduction of the programs ($school\_number_s$). The inclusion of the $IOT_{i,s}$ variable accounts for the likelihood that a given individual is exposed to a school voluntourism program in a treated sub-district. If a sub-district had voluntourism programs operating in all primary schools then $IOT_{i,s} = 1$ i.e. the intensity of treatment equals 1. The intensity of treatment for each treated sub-district can be computed using Table 4.5. For Buleleng the intensity of treatment is 0.45 and for Kubu the it is 0.23.

Similarly to Equation 4.1, after controlling for sub-district and wave fixed effects, $IOT_{i,s}$ and P_t are omitted from the model and I only include the interaction term ($IOT_{i,s} \cdot P_t$).[17] In this second specification the main the coefficient of interest is γ. This coefficient captures the effect of living in a treated sub-district in the post-treament period when $IOT_{i,s} = 1$. In other words, γ estimates the effect of school voluntourism programs when all primary schools are involved in a voluntourism program.

4.3.1 Determining Controls: Baseline Testing

Both specification models include other covariates ($X_{i,s,t}$) which are individual-level and household-level controls. Table 4.6 and Table 4.7 report the means of potential controls for the treatment and control groups in Wave 4 prior to treatment in Columns (1) and (2), respectively. These controls include: (i) gender, (ii) age, (iii) urban residence, (iv) agricultural household status, (v) gender of the household head, (vi) years of education of the household head and (vii) the years of education of the household head's spouse. This is done for each age group considered in the empirical analysis. The results of Column

[17] When including fixed wave and sub-district effects the intensity of treatment dummy is defined as $IOT_{i,s,t}$ and equals 1 if respondent i lives in treated sub-district s in the post-treatment period t.

(3) report t-test p-values and indicate whether the treatment and control exhibit any statistically significant differences across each covariate.

First observe Table 4.6. For children aged 6 to 18 years old in Panel A, those in treated sub-districts are more likely to live in an agricultural household. This difference is statistically significant at the 1% level. In addition, children in treated sub-districts live in households where the years of education of the household head's spouse is statistically significantly lower compared to the control. Similar differences are found in Panels B, C, D and E in Table 4.6 and for junior and senior secondary students in Table 4.7. Therefore these covariates are controlled in the empirical specifications when considering these groups.

Differences in these covariates between the treatment and control groups could have implications for estimated treatment effects. First consider school attendance. Table 4.6 and Table 4.7 show respondents in the treatment group are more likely to have an agricultural background (positive correlation) and live in a household where the head's spouse has fewer years of education relative to the control (negative correlation). I would expect that the education of the head's spouse is positively correlated with school attendance.[18] Therefore, if the estimated effect of school voluntourism programs on attendance is positive, it may be smaller than the true effect. Further, I would expect that a child's agricultural background is negatively correlated with school attendance.[19] Therefore, an estimated positive treatment effect on school attendance may be smaller than the true effect because children from these sub-districts are likely to live in agricultural households.

Secondly, consider child labour among primary school students. I would expect that the head's spouse's years of education are negatively correlated with this outcome (i.e. more educated mothers may have a lower demand for child labour). Hence a negative estimated treatment effect on child labour among primary students could be greater than the true impact because of this difference. Finally, I expect living in an agricultural household is positively correlated with child labour in primary school. Therefore a negative estimated effect of treatment on child labour among primary students would be greater than the true impact.

In Table 4.6, Panel B shows on average children aged 6 to 12 are younger in the treatment group. Therefore age is controlled for in both specification models for this age group. The implications of this difference for the estimated treatment effects can be demonstrated using the examples of school attendance and child labour among primary school students. Since older survey respondents reported lower average attendance rates in Table 4.3, the correlation between attendance and age is expected to be negative. Therefore a positive estimated treatment effect on attendance for this age group could be overstated relative

[18] This is consistent with the findings of Behrman and Rosenweig (2002) and Plug (2004).

[19] This is consistent with Understanding Children's Work (2012). The report states that children in agricultural regions were more likely to work and that the correlation between work and schooling attendance was negative.

to the true effect. Now consider the implications for the estimated treatment effect on child labour. Understanding Children's Work (2012) states that older children are more likely to work. Thus I expect the correlation between age and child labour among primary school students is positive. Therefore if the estimated treatment effect for this group on child labour among primary school students is negative, this may be smaller than the true effect.

In Table 4.7, Panel A shows the average years of education of the household head is statistically significantly lower for junior secondary students or graduates in the treatment group. I expect the years of education of the head is positively correlated with school attendance. Therefore a positive estimated treatment effect on school attendance could be smaller than the true effect. Further, I expect the years of education of the head is negatively correlated with child labour among primary school students. Therefore, a negative estimated treatment effect for this outcome could be greater than the true effect.

Table 4.6: Baseline Testing Covariates Between Treatment and Control Groups

Panel A: Aged 6 to 18 Years Old			
Variable	Control Mean	Treatment Mean	p-value
Gender (Male)	0.507	0.558	0.349
Age	11.593	11.686	0.819
Urban Residence	0.604	0.547	0.282
Agricultural Household	0.348	0.756	0.000*
Household Head is Female	0.107	0.058	0.148
Years of Education of the Household Head	6.100	6.383	0.188
Years of Education of the Household Head's Spouse	6.525	4.821	0.000*
Panel B: Aged 6 to 12 Years Old			
Variable	Control Mean	Treatment Mean	p-value
Gender (Male)	0.514	0.574	0.413
Age	8.889	8.362	0.075*
Urban Residence	0.600	0.511	0.215
Agricultural Household	0.340	0.851	0.000*
Household Head is Female	0.100	0.043	0.189
Years of Education of the Household Head	7.237	6.682	0.379
Years of Education of the Household Head's Spouse	6.734	5.256	0.019*
Panel C: Aged 13 to 18 Years Old			
Variable	Control Mean	Treatment Mean	p-value
Gender (Male)	0.497	0.538	0.609
Age	15.460	15.692	0.405
Urban Residence	0.609	0.590	0.807
Agricultural Household	0.359	0.641	0.000*
Household Head is Female	0.115	0.077	0.455
Years of Education of the Household Head	6.666	6.027	0.360
Years of Education of the Household Head's Spouse	6.218	4.286	0.005*
Panel D: Aged 15 to 18 Years Old			
Variable	Control Mean	Treatment Mean	p-value
Gender (Male)	0.503	0.556	0.592
Age	16.531	16.704	0.427
Urban Residence	0.617	0.593	0.794
Agricultural Household	0.347	0.704	0.000*
Household Head is Female	0.112	0.074	0.531
Years of Education of the Household Head	6.712	6.222	0.549
Years of Education of the Household Head's Spouse	6.192	3.739	0.004*
Panel E: Aged 18 Years Old			
Variable	Control Mean	Treatment Mean	p-value
Gender (Male)	0.491	0.556	0.705
Urban Residence	0.685	0.444	0.128
Agricultural Household	0.289	0.556	0.084*
Household Head is Female	0.145	0.111	0.779
Years of Education of the Household Head	7.122	7.444	0.820
Years of Education of the Household Head's Spouse	6.325	3.333	0.078*

Notes: Statistically significant differences in values are denoted by $*$. Note that the age variable is missing in Panel E since only those age 18 are considered.

Table 4.7: Baseline Testing Covariates Between Treatment and Control Groups: Secondary Students

Panel A: Junior High School Students			
Variable	Control Mean	Treatment Mean	p-value
Gender (Male)	0.482	0.485	0.972
Age	15.615	16.000	0.193
Urban Residence	0.642	0.545	0.251
Agricultural Household	0.320	0.667	0.000*
Household Head is Female	0.118	0.091	0.634
Years of Education of the Household Head	7.356	5.935	0.059*
Years of Education of the Household Head's Spouse	6.891	3.828	0.000*
Panel B: Senior High School Students			
Variable	Control Mean	Treatment Mean	p-value
Gender (Male)	0.470	0.462	0.949
Age	17.166	17.385	0.359
Urban Residence	0.743	0.615	0.302
Agricultural Household	0.251	0.692	0.000*
Household Head is Female	0.127	0.154	0.781
Years of Education of the Household Head	8.325	6.923	0.209
Years of Education of the Household Head's Spouse	7.840	2.778	0.000*

Note: Statistically significant differences in values are denoted by $*$. Those considered in Panel A are those aged between 13 and 18 with between 7 to 12 years of education. Those in Panel B are those aged between 15 and 18 with between 10 to 12 years of education. Note that the number of observations falls when restrict the ages of children included in the sample

5 | Results

This chapter presents the estimated treatment effects for each of the outcomes of interest: (i) school attendance, (ii) age individuals started primary school, (iii) child labour among primary students, (iv) child labour among secondary students, (v) primary school graduation, (vi) the completion of at least one year of secondary school, (vii) secondary school graduation and (viii) aspirations. For each of the outcome variables of interest I first consider the estimated effect using the binary treatment specification (Equation 4.1) followed by the intensity of treatment specification (Equation 4.2). The binary treatment specification captures an intent to treat effect. However the intensity of treatment specification is likely a more reliable estimate since it captures the likelihood a respondent is exposed to a school voluntourism program. Where applicable, the table of results include three panels to account for the three age groups; 6 to 18 years old, 6 to 12 years old and 13 to 18 years old. The results of a difference in differences approach are only valid under the Parallel Trends Assumption. This assumption is tested and addressed in the following Robustness Chapter.

5.1 School Attendance

Improved school attendance is described as one of the primary goals for most of the school voluntourism programs. The results in Table 5.1 suggests that these programs have been successful in achieving this across all school-age children when using the binary treatment specification.

In Table 5.1 and in all subsequent results tables I only show the regression output for the treatment dummy, post-treatment dummy and the interaction of the two. Eight regression estimates are shown. Column (1) starts with a basic regression model which excludes controls, sampling weights and fixed effects for sub-district and waves. I gradually incorporate each until the final column displays the estimated coefficients after including controls, sampling weights and fixed effects. I expect that this is the best estimate of the effect of school voluntourism programs for both specification models.

Panel A considers the entire sample of school aged children. The estimated coefficients on the interaction of treatment and the post-treatment dummies are the focus of this chapter. The basic specification in Column (1) suggests on average children in treated sub-districts in the post-treatment period are more likely to attend school by 6.3 percentage points. For simplicity I henceforth refer to the estimated coefficient on the interaction of treatment and the post-treatment dummies as the *treatment effect*. This treatment effect varies across Columns (2) to (4) when incorporating controls and sampling weights. After including fixed effects in Columns (5) to (8), the estimated magnitude of the effect is slightly smaller. Column (8) suggests all school age children in treated sub-districts are more likely to attend school by 5.6 percentage points on average following the introduction of school voluntourism programs. This is statistically significant at the 1% level.

Panel B reports the estimated treatment effects for primary school aged children. Column (8) implies primary school aged children in the treatment group are more likely to attend school by 3.5 percentage points after including controls, sampling weights and fixed effects. This estimate is statistically significant at a 10% level.

Finally consider 13 to 18 year old respondents in Panel C. This panel includes secondary school aged children who would have been in the cohort initially exposed in 2008. In Column (8), children in this age group in treated sub-districts are more likely to attend school by 3.4 percentage points on average. This estimate is statistically significant at the 5% level. These results suggest that school voluntourism programs have a positive effect on attendance for both primary school students currently exposed to the programs as well as students previously exposed to the programs during primary school, but who are now enrolled in secondary school.

Does the estimated effect of voluntourism programs persist when incorporating the intensity of treatment? After controlling for the intensity of treatment, the estimated effect of voluntourism programs on school attendance across all age groups increases in absolute value.

First consider Panel A which includes all children of schooling age. The effect of school voluntourism programs on school attendance for this sample is a statistically significant and positive when varying the inclusion of controls, sampling weights and fixed effects for sub-district and waves. Column (8) suggests that if all schools were involved with voluntourism programs in the treated sub-districts (hereafter referred to as an intensity of treatment equal to 1), school attendance increases by 16.3 percentage points relative to the control group. This result is significant at a 1% level.

In Panel B, the estimated effect of school voluntourism programs on attendance for primary school age children is larger in magnitude compared to the binary treatment specification. This is true for all columns of estimates. The binary specification suggests that treatment increases the likelihood of attendance for this age group by 3.5 percentage points when including controls, sampling weights and fixed effects. When using the intensity of treatment specification in Column (8), this age group is more likely to attend

Table 5.1: School Attendance: Binary Treatment Specification

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Aged 6-18								
Treated Sub-District ×	0.063***	0.056***	0.065***	0.058***	0.057***	0.053***	0.060***	0.056***
Post-Treatment Period	(0.016)	(0.013)	(0.016)	(0.013)	(0.015)	(0.014)	(0.014)	(0.013)
Treated Sub-District	0.009	0.026	0.011	0.027				
	(0.030)	(0.037)	(0.029)	(0.036)				
Post-Treatment Period	0.060***	0.038***	0.060***	0.037***				
	(0.007)	(0.007)	(0.007)	(0.007)				
Observations	30254	28386	30254	28386	30202	28327	30202	28327
Mean DV	0.858	0.860	0.858	0.860	0.858	0.860	0.858	0.860
Panel B: Aged 6-12								
Treated Sub-District ×	0.050***	0.047**	0.048***	0.044**	0.040**	0.039**	0.037**	0.035*
Post-Treatment Period	(0.018)	(0.021)	(0.016)	(0.019)	(0.017)	(0.020)	(0.015)	(0.018)
Treated Sub-District	-0.024	-0.016	-0.025	-0.017				
	(0.018)	(0.022)	(0.016)	(0.021)				
Post-Treatment Period	0.010**	0.003	0.011***	0.006				
	(0.004)	(0.005)	(0.004)	(0.005)				
Observations	17077	16210	17077	16210	17017	16148	17017	16148
Mean DV	0.966	0.967	0.968	0.968	0.966	0.967	0.968	0.968
Panel C: Aged 13-18								
Treated Sub-District ×	0.058***	0.033	0.053***	0.033	0.063***	0.036**	0.059***	0.034**
Post-Treatment Period	(0.015)	(0.021)	(0.015)	(0.024)	(0.015)	(0.015)	(0.015)	(0.016)
Treated Sub-District	0.070*	0.109**	0.081**	0.119**				
	(0.038)	(0.050)	(0.035)	(0.047)				
Post-Treatment Period	0.127***	0.087***	0.137***	0.091***				
	(0.013)	(0.013)	(0.014)	(0.014)				
Observations	13177	12176	13177	12176	13108	12096	13108	12096
Mean DV	0.718	0.718	0.711	0.711	0.719	0.719	0.713	0.713
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

Notes: Controls for those aged 6-18 years and 13-18 years include agricultural household status and the years of education of household head's spouse. Those aged 6-12 years old had the same controls as well as age. All regressions were clustered by sub-district. Fixed effects for wave and sub-district were included. The number of observations fall when controls are included due to imperfect response rates for covariates. Number of observations also fall when including fixed effects for wave and sub-district due to the removal of singleton observations. The sampling weights included were cross-sectional weights provided in all IFLS waves. Mean DV denotes the mean of the dependent variable for the sample. Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. For full results see Table C.1.

school by 11.9 percentage points when intensity of treatment equals 1. Thus if all schools were exposed to the school voluntourism programs in treated sub-districts, this age group would experience a higher rate of attendance rate by 11.9 percentage points on average compared to the control group.

In Panel C, the estimated treatment effects on attendance for secondary age respondents are also larger compared to the binary specification estimates. Using the intensity of treatment specification, the estimated treatment effect for those of secondary school age

Table 5.2: School Attendance: Intensity of Treatment Specification

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Aged 6-18								
Post-Treatment Period × Intensity of Treatment	0.186***	0.159***	0.197***	0.170***	0.168***	0.151***	0.181***	0.163***
	(0.019)	(0.017)	(0.024)	(0.023)	(0.017)	(0.018)	(0.018)	(0.020)
Intensity of Treatment	-0.011	0.024	-0.006	0.027				
	(0.067)	(0.090)	(0.065)	(0.088)				
Post-Treatment Period	0.061***	0.038***	0.060***	0.037***				
	(0.007)	(0.007)	(0.007)	(0.007)				
Observations	30254	28386	30254	28386	30202	28327	30202	28327
Mean DV	0.858	0.860	0.858	0.860	0.858	0.860	0.858	0.860
Panel B: Aged 6-12								
Post-Treatment Period × Intensity of Treatment	0.159***	0.150***	0.152***	0.143***	0.133***	0.129***	0.126***	0.119***
	(0.015)	(0.022)	(0.013)	(0.020)	(0.020)	(0.025)	(0.019)	(0.026)
Intensity of Treatment	-0.086***	-0.069*	-0.086***	-0.071*				
	(0.027)	(0.040)	(0.023)	(0.037)				
Post-Treatment Period	0.010**	0.003	0.011***	0.006				
	(0.004)	(0.005)	(0.004)	(0.005)				
Observations	17077	16210	17077	16210	17017	16148	17017	16148
Mean DV	0.966	0.967	0.968	0.968	0.966	0.967	0.968	0.968
Panel C: Aged 13-18								
Post-Treatment Period × Intensity of Treatment	0.153***	0.061	0.146***	0.066	0.170***	0.089**	0.162***	0.083*
	(0.034)	(0.045)	(0.042)	(0.071)	(0.034)	(0.042)	(0.037)	(0.046)
Intensity of Treatment	0.139	0.226	0.170	0.255*				
	(0.110)	(0.153)	(0.104)	(0.147)				
Post-Treatment Period	0.127***	0.088***	0.137***	0.091***				
	(0.013)	(0.013)	(0.014)	(0.014)				
Observations	13177	12176	13177	12176	13108	12096	13108	12096
Mean DV	0.718	0.718	0.711	0.711	0.719	0.719	0.713	0.713
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

Notes: Controls for those aged 6-18 years and 13-18 years include agricultural household status and the years of education of household head's spouse. Those aged 6-12 years old had the same controls as well as age. All regressions were clustered by sub-district. Fixed effects for wave and sub-district were included. The number of observations fall when controls are included due to imperfect response rates for covariates. Number of observations also fall when including fixed effects for wave and sub-district due to the removal of singleton observations. The sampling weights included were cross-sectional weights provided in all IFLS waves. Mean DV denotes the mean of the dependent variable for the sample. Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. For full results see Table C.2.

increases in magnitude but not to the same extent as those of primary school age. Table 5.2 suggests children of secondary school age are 8.3 percentage points more likely to attend school if intensity of treatment equals 1. This suggests school voluntourism programs are successful in increasing the attendance of the primary school students they interact with but this effect starts to diminish once those students leave primary school and enter secondary education.

5.2 Primary School Entry Age

Here I consider whether the presence of voluntourism programs has an effect on the primary school entry age. First I consider the binary treatment specification. The results are shown in Table 5.3.

Panel A includes all children of schooling age. The effect of school voluntourism programs on primary school entry age for children in this age group is only statistically significant in the basic regression without controls, sampling weights or fixed effects in Column (1) and when including controls in Column (2). The results of Columns (3) to (8) suggest there is no statistically significant effect of programs on the age children commence primary school in treated sub-districts. This result may be explained by the estimated treatment effect on those of secondary school age in Panel C.

Panel C suggests there is no statistically significant effect of treatment on the age at which those between the ages of 13 and 18 started primary school. However, Figure 4.1 suggests these respondents were initially exposed to the programs in 2008 and would have already started primary school at this time. Thus there should not be an effect of school voluntourism programs on primary school entry age for children in this age group.

In Panel B we consider those of primary school age. Children in this age group in treated sub-districts in the post-treatment period are on average older than children in the control group when they initially start primary school. The estimates range between 0.175 years or 2 months (Column (7)) and 0.295 years or 3.5 months (Column (2)) and are statistically significant. To determine whether these results hold when considering the likelihood of exposure to programs I also examine the intensity of treatment specification.

Table 5.4 shows the estimated effects of school voluntourism programs on primary school entry age using the intensity of treatment specification. Panel A shows the estimated treatment effects are no longer statistically significant for the full sample of 6 to 18 year old respondents. Further, the estimated treatment effects of Panel C are not statistically significant across all columns of results. This is consistent with the results of the binary specification model.

However, the estimated treatment effect for those of primary school age in Panel B are larger in absolute value and retain their significance. After including controls, sampling weights and fixed effects in Column (8), children in treated sub-districts are on average 0.703 years (8 months) older when commencing primary school when intensity of treatment is equal to 1. This age difference is larger than the 2 to 3.5 month difference estimated using the binary treatment specification.

Both specifications suggest school voluntourism programs have a statistically significant and positive effect on the primary school entry age for children entering primary school

Table 5.3: Age Started Primary School: Binary Treatment Specification

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Aged 6-18								
Treated Sub-District ×	0.159**	0.193**	0.076	0.153	0.070	0.112	-0.021	0.056
Post-Treatment Period	(0.069)	(0.077)	(0.112)	(0.114)	(0.073)	(0.079)	(0.108)	(0.120)
Treated Sub-District	-0.258***	-0.332***	-0.290***	-0.370***				
	(0.043)	(0.047)	(0.055)	(0.062)				
Post-Treatment Period	-0.436***	-0.375***	-0.340***	-0.322***				
	(0.062)	(0.060)	(0.101)	(0.080)				
Observations	20418	18838	20418	18838	20357	18776	20357	18776
Mean DV	6.522	6.526	6.573	6.567	6.522	6.526	6.573	6.567
Panel B: Aged 6-12								
Treated Sub-District ×	0.257***	0.295***	0.237***	0.279***	0.193***	0.254***	0.175**	0.241***
Post-Treatment Period	(0.061)	(0.046)	(0.074)	(0.051)	(0.063)	(0.057)	(0.083)	(0.072)
Treated Sub-District	-0.181***	-0.240***	-0.181***	-0.230***				
	(0.051)	(0.047)	(0.062)	(0.051)				
Post-Treatment Period	-0.417***	-0.338***	-0.416***	-0.345***				
	(0.047)	(0.049)	(0.050)	(0.053)				
Observations	9673	8993	9673	8993	9614	8933	9614	8933
Mean DV	6.315	6.320	6.346	6.350	6.315	6.320	6.347	6.351
Panel C: Aged 13-18								
Treated Sub-District ×	0.016	0.062	-0.141	-0.008	-0.068	-0.008	-0.219	-0.089
Post-Treatment Period	(0.124)	(0.168)	(0.210)	(0.238)	(0.123)	(0.157)	(0.185)	(0.232)
Treated Sub-District	-0.338***	-0.432***	-0.392***	-0.512***				
	(0.065)	(0.075)	(0.079)	(0.102)				
Post-Treatment Period	-0.369***	-0.332***	-0.183	-0.226				
	(0.116)	(0.114)	(0.200)	(0.159)				
Observations	10745	9845	10745	9845	10671	9766	10671	9766
Mean DV	6.708	6.714	6.779	6.768	6.710	6.716	6.781	6.770
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

Notes: Controls for those aged 6-18 years and 13-18 years include agricultural household status and the years of education of household head's spouse. Those aged 6-12 years old had the same controls as well as age. All regressions were clustered by sub-district. Fixed effects for wave and sub-district were included. The number of observations fall when controls are included due to imperfect response rates for covariates. Number of observations also fall when including fixed effects for wave and sub-district due to the removal of singleton observations. The sampling weights included were cross-sectional weights provided in all IFLS waves. Mean DV denotes the mean of the dependent variable for the sample. Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. For full results see Table C.3.

following the introduction of programs. This may relate to changes in the strategic decisions made by households in sending their children to school. In less developed countries some parents decide who among their children will be enrolled in school. Not all children from the same household will be enrolled. However, the introduction of programs increase attendance (Table 5.1 and Table 5.2) and draw in older students (Table 5.3 and Table 5.4). It is likely parents are choosing to enrol children in school that they may not have otherwise enrolled in the absence of the programs. Since these children would have otherwise not been enrolled in school, they are slightly older than the average starting age.

Table 5.4: Age Started Primary School: Intensity of Treatment Specification

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Aged 6-18								
Post-Treatment Period ×	0.453***	0.573***	0.232	0.487*	0.236	0.355**	0.021	0.252
Intensity of Treatment	(0.166)	(0.163)	(0.293)	(0.254)	(0.172)	(0.169)	(0.288)	(0.284)
Intensity of Treatment	-0.694***	-0.881***	-0.796***	-1.003***				
	(0.151)	(0.203)	(0.147)	(0.204)				
Post-Treatment Period	-0.436***	-0.376***	-0.341***	-0.322***				
	(0.062)	(0.060)	(0.101)	(0.080)				
Observations	20418	18838	20418	18838	20357	18776	20357	18776
Mean DV	6.522	6.526	6.573	6.567	6.522	6.526	6.573	6.567
Panel B: Aged 6-12								
Post-Treatment Period ×	0.766***	0.820***	0.743***	0.810***	0.583***	0.699***	0.574***	0.703***
Intensity of Treatment	(0.142)	(0.200)	(0.139)	(0.161)		(0.148)	(0.191)	(0.183)
(0.199)								
Intensity of Treatment	-0.532***	-0.666***	-0.562***	-0.669***				
	(0.131)	(0.188)	(0.129)	(0.157)				
Post-Treatment Period	-0.417***	-0.338***	-0.416***	-0.345***				
	(0.047)	(0.049)	(0.050)	(0.053)				
Observations	9673	8993	9673	8993	9614	8933	9614	8933
Mean DV	6.315	6.320	6.346	6.350	6.315	6.320	6.347	6.351
Panel C: Aged 13-18								
Post-Treatment Period ×	0.097	0.308	-0.320	0.142	-0.111	0.099	-0.477	-0.052
Intensity of Treatment	(0.303)	(0.354)	(0.562)	(0.583)	(0.312)	(0.357)	(0.505)	(0.574)
Intensity of Treatment	-0.885***	-1.115***	-1.031***	-1.332***				
	(0.194)	(0.264)	(0.204)	(0.304)				
Post-Treatment Period	-0.369***	-0.333***	-0.183	-0.227				
	(0.116)	(0.113)	(0.200)	(0.159)				
Observations	10745	9845	10745	9845	10671	9766	10671	9766
Mean DV	6.708	6.714	6.779	6.768	6.710	6.716	6.781	6.770
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

Notes: Controls for those aged 6-18 years and 13-18 years include agricultural household status and the years of education of household head's spouse. Those aged 6-12 years old had the same controls as well as age. All regressions were clustered by sub-district. Fixed effects for wave and sub-district were included. The number of observations fall when controls are included due to imperfect response rates for covariates. Number of observations also fall when including fixed effects for wave and sub-district due to the removal of singleton observations. The sampling weights included were cross-sectional weights provided in all IFLS waves. Mean DV denotes the mean of the dependent variable for the sample. Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. For full results see Table C.4

5.3 Child Labour Among Primary School Students

As discussed in Section 3.3, the issue of child labour in Indonesia is persistent. Here I consider the effect of the voluntourism programs on whether children report working during primary school.

Table 5.5 shows the estimated effects of school voluntourism programs on child labour among primary school students using the binary treatment specification. Across all three

Table 5.5: Child Worked During Primary School: Binary Treatment Specification

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: 6-18								
Treated Sub-District × Post-Treatment Period	-0.055*** (0.004)	-0.061*** (0.014)	-0.057*** (0.004)	-0.061*** (0.013)	-0.052*** (0.005)	-0.058*** (0.016)	-0.053*** (0.004)	-0.057*** (0.015)
Treated Sub-District	0.049*** (0.004)	0.043*** (0.006)	0.054*** (0.003)	0.049*** (0.006)				
Post-Treatment Period	-0.013*** (0.004)	-0.010** (0.004)	-0.013*** (0.004)	-0.012*** (0.004)				
Observations	24626	22977	24626	22977	24565	22916	24565	22916
Mean DV	0.036	0.036	0.034	0.033	0.036	0.036	0.034	0.034
Panel B: 6-12								
Treated Sub-District × Post-Treatment Period	-0.029** (0.011)	-0.021*** (0.006)	-0.030** (0.012)	-0.021*** (0.007)	-0.031*** (0.011)	-0.021*** (0.006)	-0.033*** (0.012)	-0.022*** (0.007)
Treated Sub-District	0.008 (0.011)	0.001 (0.005)	0.011 (0.012)	0.004 (0.006)				
Post-Treatment Period	-0.006 (0.004)	-0.006 (0.005)	-0.005 (0.004)	-0.006 (0.005)				
Observations	13511	12770	13511	12770	13450	12711	13450	12711
Mean DV	0.025	0.025	0.023	0.022	0.025	0.025	0.023	0.022
Panel C: 13-18								
Treated Sub-District × Post-Treatment Period	-0.065*** (0.015)	-0.092*** (0.032)	-0.066*** (0.012)	-0.087*** (0.030)	-0.063*** (0.015)	-0.085** (0.037)	-0.062*** (0.013)	-0.077** (0.035)
Treated Sub-District	0.084*** (0.010)	0.079*** (0.010)	0.089*** (0.006)	0.086*** (0.008)				
Post-Treatment Period	-0.021*** (0.006)	-0.017*** (0.006)	-0.023*** (0.006)	-0.020*** (0.007)				
Observations	11115	10207	11115	10207	11046	10136	11046	10136
Mean DV	0.049	0.050	0.047	0.048	0.049	0.050	0.047	0.048
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

*Notes:*Controls for those aged 6-18 years and 13-18 years include agricultural household status and the years of education of household head's spouse. Those aged 6-12 years old had the same controls as well as age. All regressions were clustered by sub-district. Fixed effects for wave and sub-district were included. The number of observations fall when controls are included due to imperfect response rates for covariates. Number of observations also fall when including fixed effects for wave and sub-district due to the removal of singleton observations. The sampling weights included were cross-sectional weights provided in all IFLS waves. Mean DV denotes the mean of the dependent variable for the sample. Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. For full results see Table C.5.

panels there is a statistically significant and negative effect of school voluntourism on child labour while attending primary school. These results are consistent with the estimated positive effect of school voluntourism programs on school attendance and the negative correlation between school attendance and hours spent working (Understanding Children's Work, 2012).

The largest effect is estimated for those in Panel C who are of secondary schooling age. After including controls, sampling weights and fixed effects, children of secondary school age in treated sub-districts are 7.7 percentage points less likely to have worked during primary school than the control group. However, the results in Panel B suggest that the effect on children of primary school age is slightly lower. On average these children are 2.1 to 3.3 percentage points less likely to work while attending primary school compared to the control group. Therefore the binary treatment specification suggests that the effect of the programs on child labour is greatest for the initial cohort who have since moved on to secondary schooling.

It is possible that school voluntourism programs are pulling children away from labour and increasing school attendance as seen in Table 5.1 and Table 5.2. If less children are working when they are enrolled in primary school, this would allow them to allocate more time towards attendance that would have otherwise been spent on labour. For further clarification I consider the intensity of treatment specification.

The results of Table 5.6 echo those of Table 5.5. School voluntourism programs have a statistically significant and negative effect on child labour among primary school students. However, the estimates of the intensity of treatment specification suggest that the effect of exposure to the programs is much larger.

First consider those of secondary school age in Panel C. The negative effect of the programs retains its significance after adjusting for treatment intensity and also increases in absolute value compared to the results seen in Table 5.5. Children of this age in treated sub-districts are on average 24 percentage points less likely to work while attending primary school when including all controls, sampling weights and fixed effects and assuming intensity of treatment equals 1. Since individuals in this cohort would be among the first exposed to the programs, this result suggests that the initial introduction of the programs were successful in reducing the portion of primary students working at the time.

In Panel B, the estimated treatment effect on child labour among primary students for primary aged respondents is still negative and greater in absolute value relative to the binary treatment specification estimates. However, it is much smaller than the estimated effect for those in Panel C. These results may imply that the introduction of the programs to the initial cohort was particularly successful in drawing children away from work however this effect became less pronounced with students who subsequently entered school following the establishment of the programs. One explanation for this may be that reducing the portion of primary school students working in the initial cohort set a new norm in the schooling community for future pupils. As students entered school from 2009 onward the new pupils were introduced to the schooling environment where it was normal for fewer students to work while attending school due to the strong response by the initial cohort. This may explain why we see a smaller effect of voluntourism programs on the portion of primary school students in Panel B relative to Panel C.

Thus, the estimates of both specification models imply that school voluntourism programs have a statistically significant and negative effect on child labour among primary students.

Table 5.6: Child Worked While Attending Primary School: Intensity of Treatment Specification

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Aged 6-18								
Post-Treatment Period×	-0.146***	-0.177***	-0.149***	-0.177***	-0.141***	-0.169***	-0.146***	-0.170***
Intensity of Treatment	(0.026)	(0.011)	(0.029)	(0.011)	(0.025)	(0.013)	(0.031)	(0.014)
Intensity of Treatment	0.133***	0.120***	0.143***	0.134***				
	(0.020)	(0.013)	(0.025)	(0.017)				
Post-Treatment Period	-0.013***	-0.010**	-0.013***	-0.012***				
	(0.004)	(0.004)	(0.004)	(0.004)				
Observations	24626	22977	24626	22977	24565	22916	24565	22916
Mean DV	0.036	0.036	0.034	0.033	0.036	0.036	0.034	0.034
Panel B: Aged 6-12								
Post-Treatment Period ×	-0.066	-0.051**	-0.069	-0.051*	-0.071	-0.051**	-0.076	-0.052*
Intensity of Treatment	(0.042)	(0.023)	(0.047)	(0.028)	(0.045)	(0.024)	(0.051)	(0.028)
Intensity of Treatment	0.009	-0.004	0.015	0.002				
	(0.029)	(0.012)	(0.034)	(0.017)				
Post-Treatment Period	-0.006	-0.006	-0.005	-0.006				
	(0.004)	(0.005)	(0.004)	(0.005)				
Observations	13511	12770	13511	12770	13450	12711	13450	12711
Mean DV	0.025	0.025	0.023	0.022	0.025	0.025	0.023	0.022
Panel C: Aged 13-18								
Post-Treatment Period ×	-0.185***	-0.272***	-0.181***	-0.257***	-0.176***	-0.257***	-0.173***	-0.240***
Intensity of Treatment	(0.015)	(0.026)	(0.017)	(0.028)	(0.016)	(0.039)	(0.020)	(0.041)
Intensity of Treatment	0.226***	0.214***	0.234***	0.227***				
	(0.023)	(0.022)	(0.032)	(0.030)				
Post-Treatment Period	-0.021***	-0.017***	-0.023***	-0.020***				
	(0.006)	(0.006)	(0.006)	(0.007)				
Observations	11115	10207	11115	10207	11046	10136	11046	10136
Mean DV	0.049	0.050	0.047	0.048	0.049	0.050	0.047	0.048
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

Notes: Controls for those aged 6-18 years and 13-18 years include agricultural household status and the years of education of household head's spouse. Those aged 6-12 years old had the same controls as well as age. All regressions were clustered by sub-district. Fixed effects for wave and sub-district were included. The number of observations fall when controls are included due to imperfect response rates for covariates. Number of observations also fall when including fixed effects for wave and sub-district due to the removal of singleton observations. The sampling weights included were cross-sectional weights provided in all IFLS waves. Mean DV denotes the mean of the dependent variable for the sample. Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. For full results see Table C.6.

5.4 Child Labour Among Secondary School Students

In this section I estimate the effect of primary school voluntourism programs on the portion of secondary students working while attending school. In the IFLS, secondary school is comprised of junior and senior secondary school. Therefore, in this section I am concerned with the portion of students working in junior and senior secondary separately. Firstly I estimate the effect of school voluntourism programs using the binary treatment specification model in Table 5.7.

The results in Table 5.7 suggest that the effect of school voluntourism programs on the portion of working junior and senior secondary students is negative. First observe junior secondary students in Panel A. When including controls, fixed effects and sampling weights in the final specification in Column (8), the portion of students who report working while attending junior secondary school is lower in treated sub-districts in the fifth wave by 9.9 percentage points in average compared to the control. In Panel B, senior secondary students living in treated sub-districts in the post-treatment period are less likely to work by 27.6 percentage points on average when including controls, fixed effects and sampling weights. Both are statistically significant at the 1% level.

Table 5.7: Child Labour While Attending Secondary School: Binary Treatment Specification

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Junior Secondary School								
Treated Sub-District ×	-0.089*	-0.113***	-0.096*	-0.125***	-0.067	-0.081***	-0.078	-0.099***
Post-Treatment Period	(0.051)	(0.036)	(0.057)	(0.042)	(0.051)	(0.031)	(0.057)	(0.038)
Treated Sub-District	0.105**	0.102**	0.120**	0.125**				
	(0.044)	(0.043)	(0.052)	(0.052)				
Post-Treatment Period	-0.010	-0.004	-0.016*	-0.009				
	(0.008)	(0.009)	(0.009)	(0.010)				
Observations	6051	4778	6051	4778	5964	4697	5964	4697
Mean DV	0.071	0.074	0.064	0.066	0.072	0.075	0.065	0.067
Panel B: Senior Secondary School								
Treated Sub-District ×	-0.202***	-0.246***	-0.212***	-0.274***	-0.193***	-0.244***	-0.208***	-0.276***
Post-Treatment Period	(0.019)	(0.019)	(0.018)	(0.023)	(0.023)	(0.024)	(0.020)	(0.027)
Treated Sub-District	0.071***	0.094***	0.083***	0.119***				
	(0.014)	(0.015)	(0.011)	(0.022)				
Post-Treatment Period	0.035**	0.034*	0.032*	0.034*				
	(0.017)	(0.019)	(0.017)	(0.020)				
Observations	1904	1663	1904	1663	1819	1578	1819	1578
Mean DV	0.108	0.108	0.107	0.105	0.109	0.107	0.109	0.105
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

Notes: The sample of those in Junior Secondary were those aged between 13 to 18 years who had between between 7 to 12 years of education. The sample of those in Senior Secondary were those aged between 15 to 18 years who had more than 10 years of education. For both cohorts, agricultural household status and the years of education of household head's spouse were controlled for. However those in Panel A had the additional control for the head of household's years of education. Baseline testing to determine choice of covariates are seen in Table 4.7. Results were clustered by sub-district. Fixed effects were included for wave and sub-district. The sampling weights included were cross-sectional weights provided in the IFLS. Mean DV denotes the mean of the dependent variable for the sample. Standard errors in parentheses. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. For full results see Table C.7.

However, I must also consider whether the negative estimated treatment effect child labour among junior and senior secondary students persists when using the intensity of treatment specification model. The estimated effects of school voluntourism programs on the portion of working secondary students are higher in magnitude using the intensity of treatment specification. The results are seen in Table 5.8.

Table 5.8: Child Labour While Attending Secondary School: Intensity of Treatment Specification

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Junior Secondary								
Post-Treatment Period × Intensity of Treatment	-0.176	-0.255*	-0.186	-0.280*	-0.114	-0.172*	-0.137	-0.212*
	(0.156)	(0.145)	(0.167)	(0.158)	(0.125)	(0.088)	(0.149)	(0.115)
Intensity of Treatment	0.225	0.219	0.252	0.267				
	(0.150)	(0.154)	(0.167)	(0.177)				
Post-Treatment Period	-0.011	-0.004	-0.016*	-0.010				
	(0.008)	(0.009)	(0.009)	(0.010)				
Observations	6051	4778	6051	4778	5964	4697	5964	4697
Mean DV	0.071	0.074	0.064	0.066	0.072	0.075	0.065	0.067
Panel B: Senior Secondary								
Post-Treatment Period × Intensity of Treatment	-0.495***	-0.626***	-0.532***	-0.717***	-0.471***	-0.611***	-0.522***	-0.719***
	(0.104)	(0.115)	(0.097)	(0.108)	(0.103)	(0.118)	(0.099)	(0.111)
Intensity of Treatment	0.172***	0.256***	0.208***	0.329***				
	(0.057)	(0.060)	(0.045)	(0.048)				
Post-Treatment Period	0.035**	0.034*	0.032*	0.034*				
	(0.017)	(0.019)	(0.017)	(0.020)				
Observations	1904	1663	1904	1663	1819	1578	1819	1578
Mean DV	0.108	0.108	0.107	0.105	0.109	0.107	0.109	0.105
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

Notes: The sample of those in Junior Secondary were those aged between 13 to 18 years who had between between 7 to 12 years of education. The sample of those in Senior Secondary were those aged between 15 to 18 years who had more than 10 years of education. For both cohorts, agricultural household status and the years of education of household head's spouse were controlled for. However those in Panel A had the additional control for the head of household's years of education. Baseline testing to determine choice of covariates are seen in Table 4.7. Results were clustered by sub-district. Fixed effects were included for wave and sub-district. The sampling weights included were cross-sectional weights provided in the IFLS. Mean DV denotes the mean of the dependent variable for the sample. Standard errors in parentheses. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. For full results see Table C.8.

Panel A reports the regression estimates for junior secondary students. At most, if the intensity of treatment is equal to 1, junior secondary students in treated sub-districts in the post-treatment period are less likely to work by 28 percentage points on average (Column (4)). When including controls, sampling weights and fixed effects in Column (8), the effect is still large with these children less likely to work by 21.2 percentage points on average. Both results are significant at the 10% level.

In Panel B, the estimated effect of school voluntourism programs on the portion of senior secondary students working is negative and statistically significant at a 1% level across all columns. The estimated effects are also larger in magnitude relative to the binary treatment specification. In the final specification in Column (8), senior secondary students in treated sub-districts are less likely to work by 71.9 percentage points on average compared to the control group if intensity of treatment equals 1. Thus the effect of school voluntoursim programs on the portion of students working primary and secondary students is negative.

5.5 Primary School Graduation

The estimated positive effects on school attendance and negative effects on child labour could have implications for educational attainment. Therefore, in this section I estimate the effect of school voluntourism programs on the rate of primary school graduation. First observe the estimated treatment effects using the binary specification in Table 5.9.

Table 5.9: Primary School Graduation: Binary Treatment Specification

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Treated Sub-District ×	-0.034*	-0.039	-0.016	-0.021	-0.017	-0.027	-0.014	-0.025
Post-Treatment Period	(0.020)	(0.032)	(0.025)	(0.040)	(0.022)	(0.026)	(0.026)	(0.029)
Treated Sub-District	0.075***	0.104***	0.058**	0.089***				
	(0.020)	(0.020)	(0.026)	(0.024)				
Post-Treatment Period	0.131***	0.112***	0.121***	0.100***				
	(0.008)	(0.009)	(0.008)	(0.008)				
Observations	9596	8771	9596	8771	9534	8709	9534	8709
Mean DV	0.860	0.855	0.865	0.860	0.860	0.854	0.865	0.859
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

Notes: Only the 13 to 18 year old cohort are considered in this regression since the typical primary graduate is older the 12 years old (Table 3.1). Controls for this age group include agricultural household status and the years of education of household head's spouse. All regressions were clustered by sub-district. Fixed effects for wave and sub-district were included. The number of observations fall when controls are included due to imperfect response rates for covariates. Number of observations also fall when including fixed effects for wave and sub-district due to the removal of singleton observations. The sampling weights included were cross-sectional weights provided in all IFLS waves. Mean DV denotes the mean of the dependent variable for the sample. Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. For full results see Table C.9.

Across all columns in Table 5.9, the estimated effect of the voluntourism programs on the rate of primary school graduation is negative. The effect is greatest in absolute value when only controlling for sampling weights in Column (2) (-3.9 percentage points). When controlling for controls, sampling weights and fixed effects in Column (8), children in treated sub-districts are less likely to graduate by 2.5 percentage points on average in the post-treatment period. However, only the basic regression in Column (1) produces a statistically significant estimated treatment effect in the post-treatment period.

The estimated effect of school voluntourism programs on primary school graduation is still negative when using the intensity of treatment specification. However some estimates become statistically significant. The results are shown in Table 5.10.

Table 5.10: Primary School Graduation: Intensity of Treatment Specification

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Post-Treatment Period ×	-0.117***	-0.150***	-0.071	-0.103	-0.067*	-0.097**	-0.066	-0.098*
Intensity of Treatment	(0.028)	(0.043)	(0.046)	(0.073)	(0.038)	(0.042)	(0.049)	(0.052)
Intensity of Treatment	0.221***	0.296***	0.181***	0.260***				
	(0.021)	(0.034)	(0.032)	(0.033)				
Post-Treatment Period	0.131***	0.112***	0.121***	0.100***				
	(0.008)	(0.009)	(0.008)	(0.008)				
Observations	9596	8771	9596	8771	9534	8709	9534	8709
Mean DV	0.860	0.855	0.865	0.860	0.860	0.854	0.865	0.859
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

Notes: Only the 13 to 18 year old cohort are considered in this regression since the typical primary graduate is older the 12 years old (Table 3.1). Controls for this age group include agricultural household status and the years of education of household head's spouse. All regressions were clustered by sub-district. Fixed effects for wave and sub-district were included. The number of observations fall when controls are included due to imperfect response rates for covariates. Number of observations also fall when including fixed effects for wave and sub-district due to the removal of singleton observations. The sampling weights included were cross-sectional weights provided in all IFLS waves. Mean DV denotes the mean of the dependent variable for the sample. Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. For full results see Table C.10.

In Column (8), children in treated sub-districts are less likely to graduate primary school by 9.8 percentage points on average relative to the control group when intensity of treatment equals 1. This estimate is significant at the 10% level. This result is surprising given there is a statistically significant and positive treatment effect on primary school attendance and a statistically significant and negative treatment effect on child labour in primary school.

However, these results may be skewed by the presence of mature aged primary school students. Table B.1 highlights that the average age of a mature primary aged student is approximately 13 years across all waves. Therefore the results seen in Table 5.10 could be explained by young members of this age group who have not yet graduated primary school because they are still progressing through this level of schooling. Table 5.11 reports the same regression results as Table 5.10 but omits respondents who are 13 years old. Therefore the sample only includes children aged between 14 and 18 years old. After omitting respondents of this age in Table 5.11, the estimated treatment effects in Column (8) are no longer statistically significant. Similar results are found when omitting children aged 13 years old using the binary treatment specification. These can be observed in Table C.17. Therefore, the estimated treatment effect is statistically significant and negative when considering respondents aged 13 to 18. But this estimated effect is no longer statistically significant when omitting 13 year old respondents who may be older than their peers.

Table 5.11: Primary School Graduation Omitting 13 Year Olds: Intensity of Treatment Specification

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Post-Treatment Period × Intensity of Treatment	-0.111*** (0.037)	-0.137*** (0.036)	-0.091*** (0.024)	-0.123*** (0.026)	-0.013 (0.019)	-0.020 (0.022)	-0.023 (0.021)	-0.035 (0.028)
Intensity of Treatment	0.199*** (0.047)	0.264*** (0.070)	0.183*** (0.036)	0.249*** (0.061)				
Post-Treatment Period	0.089*** (0.008)	0.073*** (0.008)	0.080*** (0.008)	0.063*** (0.008)				
Observations	7229	6531	7229	6531	7154	6459	7154	6459
Mean DV	0.899	0.896	0.904	0.901	0.899	0.895	0.903	0.899

Notes: Results only produced for those who should have completed primary school i.e. 14 to 18 years old. Controls include agricultural household status and the years of education of household head's spouse. Results were clustered by sub-district. Fixed effects were included for wave and sub-district. The sampling weights included were cross-sectional weights provided in the IFLS. Mean DV denotes the mean of the dependent variable for the sample. Standard errors in parentheses. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. For full results see Table C.18.

5.6 Completion of At Least One Grade of Secondary School

In this section I estimate the effect of school voluntourism programs on students completing the first grade of secondary school (i.e. the 7^{th} grade). Table 5.12 reports the estimated effects using the binary treatment specification.

Table 5.12: Completion of At Least One Year of Secondary School: Binary Treatment Specification

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Treated Sub-District × Post-Treatment Period	-0.032 (0.067)	-0.052 (0.041)	-0.032 (0.068)	-0.052 (0.058)	0.002 (0.067)	-0.020 (0.073)	-0.014 (0.070)	-0.041 (0.077)
Treated Sub-District	0.073*** (0.028)	0.125*** (0.038)	0.062** (0.026)	0.117*** (0.037)				
Post-Treatment Period	0.280*** (0.013)	0.239*** (0.013)	0.278*** (0.015)	0.234*** (0.014)				
Observations	9596	8771	9596	8771	9534	8709	9534	8709
Mean DV	0.696	0.688	0.694	0.686	0.695	0.688	0.694	0.685
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

Notes: Only those aged between 13 and 18 were included in these regressions. Controls for this age group include agricultural household status and the years of education of household head's spouse. All regressions were clustered by sub-district. Fixed effects for wave and sub-district were included. The number of observations fall when controls are included due to imperfect response rates for covariates.Number of observations also fall when including fixed effects for wave and sub-district due to the removal of singleton observations. The sampling weights included were cross-sectional weights provided in all IFLS waves. Mean DV denotes the mean of the dependent variable for the sample. Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. For full results see Table C.11.

The estimated average treatment effect is negative across all columns except Column (5). The most extreme estimate in Column (4) suggests children living in treated sub-districts in the fifth wave are less likely to complete the 7^{th} grade by 5.2 percentage points on average relative to the control group. In Column (8) the estimated treatment effect is smaller in magnitude with a lower average rate of completion by 4.1 percentage points. However, again these estimated effects are not statistically significant across all columns of results.

Table 5.13: Completion of At Least One Year of Secondary School: Intensity of Treatment Specification

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Post-Treatment Period ×	-0.011	-0.078	-0.002	-0.070	0.083	0.033	0.046	-0.016
Intensity of Treatment	(0.152)	(0.154)	(0.156)	(0.148)	(0.130)	(0.149)	(0.151)	(0.179)
Intensity of Treatment	0.160*	0.288**	0.137*	0.267**				
	(0.094)	(0.144)	(0.081)	(0.133)				
Post-Treatment Period	0.279***	0.239***	0.278***	0.234***				
	(0.013)	(0.013)	(0.014)	(0.014)				
Observations	9596	8771	9596	8771	9534	8709	9534	8709
Mean DV	0.696	0.688	0.694	0.686	0.695	0.688	0.694	0.685
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

Notes: Only those aged between 13 and 18 were included in these regressions. Controls for this age group include agricultural household status and the years of education of household head's spouse. All regressions were clustered by sub-district. Fixed effects for wave and sub-district were included. The number of observations fall when controls are included due to imperfect response rates for covariates. Number of observations also fall when including fixed effects for wave and sub-district due to the removal of singleton observations. The sampling weights included were cross-sectional weights provided in all IFLS waves. Mean DV denotes the mean of the dependent variable for the sample. Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. For full results see Table C.12.

The estimated effect of school voluntourism programs on completion of the 7^{th} grade using the intensity of treatment specification is seen in Table 5.13. In Column (8), if the intensity of treatment is equal to 1, children living in treated sub-districts are less likely to complete the 7^{th} grade by 1.6 percentage points on average compared to the control. However, this estimate is not statistically significant. Neither is any other estimated treatment effect shown in Table 5.13.

Again mature aged primary students may skew these results. We know from Table B.1 that mature primary students are on average 13 years old. However, even after omitting those aged 13, the estimated treatment effect in the post-treatment period is not statistically significant for either specification model or for any variation in the inclusion of controls, sampling weights and fixed effects. These results are reported in Table C.19 and Table C.20. Thus, school voluntourism programs have no statistically significant effect on the rate of completion of the 7^{th} grade.

5.7 Secondary School Graduation

In this section I estimate the effect of school voluntourism programs on secondary school graduation. Recall the sample used to estimate this treatment effect only includes respondents who are 18 years old. Only these respondents are both old enough to be exposed to school voluntourism programs and be of age to have graduated secondary school. Hence the sample for these regressions are relatively small compared to previous regressions. First observe the results of the binary treatment specification in Table 5.14.

In Table 5.14 the estimated treatment effect is negative and statistically significant. In Column (8), 18 year old respondents in treated sub-districts are less likely to graduate secondary school by 34.7 percentage points on average. However, when using the intensity of treatment variable, the estimated treatment effect is magnified. This is seen in Table 5.15 across all columns of results. In Column (8), the rate of senior secondary graduation rate is 63.6 percentage points lower on average in the treated sub-districts relative to the control group if intensity of treatment equals 1.

Table 5.14: Secondary School Graduation: Binary Treatment Specification

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Treated Sub-District ×	-0.238***	-0.451***	-0.275***	-0.465***	-0.294***	-0.356***	-0.332***	-0.347***
Post-Treatment Period	(0.053)	(0.063)	(0.054)	(0.074)	(0.040)	(0.046)	(0.037)	(0.047)
Treated Sub-District	-0.013	-0.017	0.049	0.025				
	(0.043)	(0.051)	(0.045)	(0.065)				
Post-Treatment Period	0.152***	0.092**	0.137***	0.073 *				
	(0.036)	(0.039)	(0.036)	(0.038)				
Observations	1174	1015	1174	1015	1090	933	1090	933
Mean DV	0.335	0.316	0.316	0.297	0.332	0.312	0.313	0.294
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

Notes: Here the secondary graduation dependent variable is binary and is equal to one if a respondent has completed 12 years of schooling. The sub-sample for these regressions are those who are 18 years old since they are the only members of this sample old enough to have completed 12 years of schooling and therefore graduate. Controls for this cohort include agricultural household status and the years of education of household head's spouse. Results were clustered by sub-district. Fixed effects were included for wave and sub-district. The sampling weights included were cross-sectional weights provided in the IFLS. Mean DV denotes the mean of the dependent variable for the sample. Standard errors in parentheses. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. For full results see Table C.13.

The negative estimated effect of programs on secondary school graduation could be partially driven by respondents in the sub-sample who are lagging behind i.e. still progressing through lower grades. Recall that Figure 4.2 illustrated the presence of mature aged primary school students. If students are commencing primary school later, then it is possible to have pupils in junior and senior secondary who are older than their peers. Figure 5.1 captures the distribution of 18 year olds in the sample across schooling grades

Table 5.15: Secondary School Graduation: Intensity of Treatment Specification

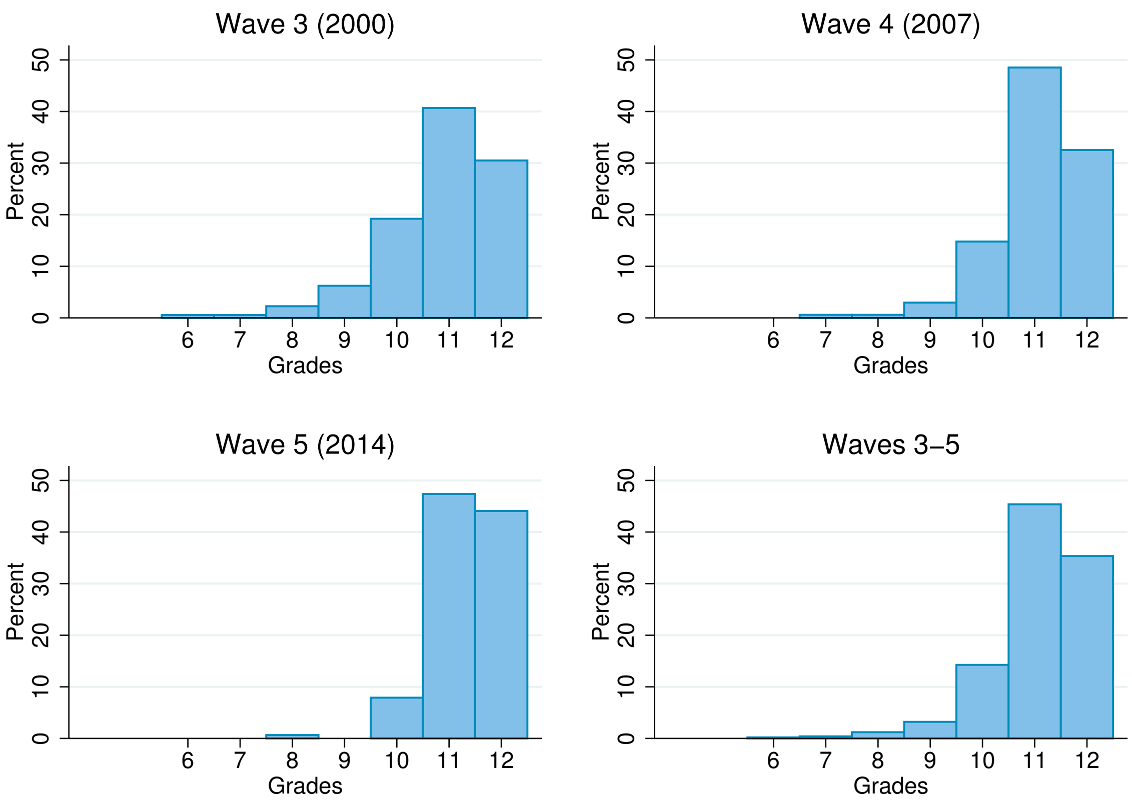
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Intensity of Treatment × Post-Treatment Period	-0.478***	-0.755***	-0.563***	-0.780***	-0.540***	-0.652***	-0.609***	-0.636***
	(0.089)	(0.103)	(0.077)	(0.138)	(0.074)	(0.084)	(0.069)	(0.086)
Intensity of Treatment	0.018	-0.105	0.148***	-0.026				
	(0.070)	(0.080)	(0.057)	(0.122)				
Post-Treatment Period	0.153***	0.092**	0.137***	0.073*				
	(0.036)	(0.039)	(0.036)	(0.038)				
Observations	1174	1015	1174	1015	1090	933	1090	933
Mean DV	0.335	0.316	0.316	0.297	0.332	0.312	0.313	0.294
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

Notes: Here the secondary graduation dependent variable is binary and is equal to one if a respondent has completed 12 years of schooling. The sub-sample for these regressions are those who are 18 years old since they are the only members of this sample old enough to have completed 12 years of schooling and therefore graduate. Controls for this cohort include agricultural household status and the years of education of household head's spouse. Results were clustered by sub-district. Fixed effects were included for wave and sub-district. The sampling weights included were cross-sectional weights provided in the IFLS. Mean DV denotes the mean of the dependent variable for the sample. Standard errors in parentheses. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. For full results see Table C.14.

and across IFLS waves.[1] Across the three waves of data provided by the IFLS, approximately $30 - 45\%$ of 18 year olds had completed 12 years of schooling and had graduated from senior secondary school. However, a substantial portion of 18 year olds who were still attending school were lagging behind and had completed earlier grades at the time of the surveys. Across the three waves, a greater portion of 18 year olds had completed the 11^{th} grade and hence were lagging by a year. Some respondents had only completed 10^{th} , 9^{th} and even the 8^{th}. Therefore the lower rate of secondary graduation seen in Table 5.14 and Table 5.15 could be explained by students who started school later than the typical student and are still progressing through secondary schooling. Therefore, the estimated effect of school voluntourism programs on secondary school graduation is inconclusive given the presence of mature aged students.

[1]Note that data on school level and grades attained by 18 year old respondents were only available for Waves 3 to 5. Thus Wave 1 and 2 are missing.

Figure 5.1: Distribution of 18 Year olds Across Schooling Grades



Note: Responses in the adult survey on the levels of schooling attended and the grades of schooling completed were used to produce these graphs. Only data from Waves 3-5 were used in these graphs due to the imperfect response rates provided in Waves 1 and 2. Only those who were 18 years old and were still attending school at the time of the survey were included.

5.8 Aspirations

In this final section I estimate the effects of school voluntourism programs on student's aspirations. Recall that the survey questions required to generate the aspirations gap variable were only included in the adult survey. Therefore the regression results reported in Table 5.16 are only include those aged 15 to 18 years old.

Table 5.16: Aspirations: Binary Treatment Specification

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Treated Sub-District ×	-0.009	0.131	-0.013	0.115	0.007	0.142	0.007	0.127
Post-Treatment Period	(0.174)	(0.131)	(0.181)	(0.137)	(0.192)	(0.154)	(0.199)	(0.158)
Treated Sub-District	-0.179***	-0.171***	-0.191***	-0.195***				
	(0.059)	(0.059)	(0.066)	(0.068)				
Post-Treatment Period	0.860***	0.852***	0.835***	0.838***				
	(0.034)	(0.036)	(0.036)	(0.039)				
Observations	4642	4121	4642	4121	4558	4049	4558	4049
Mean DV	0.767	0.744	0.782	0.760	0.767	0.744	0.784	0.762
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

Notes: Since the questions used to generate the aspirations gap variable were only provide in the adult survey, these regressions only consider those aged between 15 and 18 years old. Controls for this age group include agricultural household status and the years of education of household head's spouse. All regressions were clustered by sub-district. Fixed effects for wave and sub-district were included. The number of observations fall when controls are included due to imperfect response rates for covariates. Number of observations also fall when including fixed effects for wave and sub-district due to the removal of singleton observations. The sampling weights included were cross-sectional weights provided in all IFLS waves. Mean DV denotes the mean of the dependent variable for the sample. Standard errors in parentheses. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. For full results see Table C.15.

Recall that the aspirations gap is a metaphorical gap which measures the difference in a respondents expected wealth in five years and how they perceive their current wealth. In Columns (1) and (3) the estimated treatment effect is negative. For example, in Column (3) those in treated sub-districts in the fifth wave are expected to have an aspirations gap which is on average 0.013 steps lower than that of the control group. However, when controls are included, all other columns report a positive estimated effect of programs on aspirations. In Column (8), those in the treated sub-districts in the post-treatment period have an aspirations gap which is on average 0.127 steps higher than the control in the post-treatment period. However, for all columns of results the estimated treatment effect is not statistically significant.

Now consider the estimated treatment effects using the intensity of treatment specification. Table 5.17 demonstrates the estimated effect of school voluntourism program exposure is positive across all regression variations.

At most, if intensity of treatment is equal to 1, the aspirations gap for those in the treated sub-districts is 0.522 steps higher on average compared to the control group in Column (6). When including controls, sampling weights and fixed effects, the aspirations gap of respondents in treated sub-districts is 0.499 steps higher on average relative to the control. This estimate is statistically significant at the 10% level. This provides some evidence that school voluntourism programs elevate the aspirations of students in the initially exposed cohort.

Table 5.17: Aspirations: Intensity of Treatment Specification

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Post-Treatment Period × Intensity of Treatment	0.187	0.494**	0.166	0.453**	0.231	0.522**	0.245	0.499*
	(0.320)	(0.193)	(0.369)	(0.225)	(0.358)	(0.235)	(0.393)	(0.262)
Intensity of Treatment	-0.534***	-0.520***	-0.560***	-0.580***				
	(0.054)	(0.061)	(0.062)	(0.070)				
Post-Treatment Period	0.859***	0.852***	0.834***	0.838***				
	(0.034)	(0.036)	(0.036)	(0.039)				
Observations	4642	4121	4642	4121	4558	4049	4558	4049
Mean DV	0.767	0.744	0.782	0.760	0.767	0.744	0.784	0.762
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

Notes: Since the questions used to generate the aspirations gap variable were only provide in the adult survey, these regressions only consider those aged between 15 and 18 years old. Controls for this age group include agricultural household status and the years of education of household head's spouse. All regressions were clustered by sub-district. Fixed effects for wave and sub-district were included. The number of observations fall when controls are included due to imperfect response rates for covariates. Number of observations also fall when including fixed effects for wave and sub-district due to the removal of singleton observations. The sampling weights included were cross-sectional weights provided in all IFLS waves. Mean DV denotes the mean of the dependent variable for the sample. Standard errors in parentheses. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. For full results see Table C.16.

5.9 Heterogeneity of Treatment Effect By Gender

In this section I estimate heterogeneous treatment effects of school voluntourism programs by gender. To do this I introduce a male gender dummy to my original specifications in Equation 4.1 and Equation 4.2. I estimate all heterogeneous treatment effects including controls, sampling weights and sub-district and wave fixed effects.

I produce two new extended specification equations for each of the existing binary and intensity of treatment specification models. I add a male dummy variable in each. In the first extension I add an interaction variable including the treatment variable and the male dummy variable only. In the second extension I add an interaction variable including the male dummy and the treatment variable as well as interaction terms including the male dummy and each of the included controls. The following equation captures the extensions for the binary treatment specification:

$$Y_{i,s,t} = \alpha + \lambda_t + \gamma_s + \beta PT_{i,s,t} + \theta Male_i + \pi Male_i \cdot PT_{i,s,t} + \delta \mathbf{X}_{i,s,t} + \epsilon_{i,s,t} \tag{5.1}$$

Where $PT_{i,s,t} = 1$ for individual i, living in treated sub-district s in the post-treatment wave t. The gender dummy $Male_i = 1$ equals 1 if respondent i is male. Fixed effects for wave and sub-district are captured by λ_t and γ_s, respectively. In the second extension of the binary treatment specification model I interact the male dummy with each of the controls in $X_{i,s,t}$. The estimated coefficient on the interaction of the treatment and male dummies (π) captures the differential treatment effects for males relative to females. Therefore, the effect of treatment is heterogeneous if π is statistically significant and non-zero.

The following equation captures the extensions for the intensity of treatment specification:

$$Y_{i,s,t} = \alpha + \lambda_t + \gamma_s + \sigma IOT_{i,s,t} + \zeta Male_i + \tau Male_i \cdot IOT_{i,s,t} + \delta \mathbf{X}_{i,s,t} + \epsilon_{i,s,t} \tag{5.2}$$

In the second extension of the intensity of treatment specification model I interact the male dummy with each of the controls in $X_{i,s,t}$. The estimated coefficient on the interaction of the intensity of treatment and male dummy (τ) captures the differential intensity of treatment effects of males relative to females. Therefore, the effect of treatment is heterogeneous if τ is statistically significant and non-zero.

I examine effects by gender across the following: (1) school attendance, (2) primary school entry age, (3) child labour among primary school students, (4) child labour among secondary school students, (5) primary school graduation, (6) completion of at least one grade of secondary and (7) aspirations.[2]

5.9.1 School Attendance

Table 5.18 shows the estimated treatment effect using baseline estimates from the previous section and the differential treatment effects for boys relative to girls using the two aforementioned specification extensions. The estimated treatment effects using the baseline models are shown in Columns (1) and (4) for the binary and intensity of treatment specifications, respectively. Note these regressions include controls, sampling weights and fixed effects. The results of Columns (1) and (4) recall the statistically significant and positive effects of treatment on school attendance for all age groups.

Columns (2) and (5) report the estimated differential treatment effect for boys relative to girls when including the interaction of the treatment and male dummy variables. Columns

[2] In the previous section the effect of school voluntourism programs on secondary school graduation was inconclusive given the presence of mature aged primary school students and lagging 18 year old respondents. Thus it is omitted from this section.

Table 5.18: Treatment Effect By Gender: School Attendance

	Difference (Male - Female)					
	Binary Treatment Specification			Intensity of Treatment Specification		
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: Aged 6-18						
Treatment Effect	0.056***	0.030	0.030*	0.163***	0.058	0.058
	(0.013)	(0.018)	(0.018)	(0.020)	(0.058)	(0.057)
Treatment Effect		0.043	0.044		0.175**	0.177**
× Male		(0.047)	(0.047)		(0.085)	(0.083)
Observations	28327	28327	28327	28327	28327	28327
Mean DV	0.860	0.860	0.860	0.860	0.860	0.860
Panel B: Aged 6-12						
Treatment Effect	0.035*	0.027*	0.027	0.119***	0.098***	0.097***
	(0.018)	(0.017)	(0.017)	(0.026)	(0.027)	(0.029)
Treatment Effect		0.015***	0.015***		0.039***	0.040***
× Male		(0.005)	(0.005)		(0.011)	(0.012)
Observations	16148	16148	16148	16148	16148	16148
Mean DV	0.968	0.968	0.968	0.968	0.968	0.968
Panel C: Aged 13-18						
Treatment Effect	0.034**	-0.031	-0.031	0.083*	-0.136	-0.135
	(0.016)	(0.058)	(0.057)	(0.046)	(0.095)	(0.094)
Treatment Effect		0.092	0.094		0.344**	0.346**
× Male		(0.092)	(0.091)		(0.138)	(0.136)
Observations	12096	12096	12096	12096	12096	12096
Mean DV	0.713	0.713	0.713	0.713	0.713	0.713
Male × Controls	No	No	Yes	No	No	Yes

Notes: Three specifications are reported under the binary treatment specification and the intensity of treatment specification. Columns (1) and (4) report the baseline estimated treatment effects without including the male dummy. Columns (2) and (5) report the estimated differential treatment effect for boys relative to girls when including the interaction of the male dummy and treatment. Columns (3) and (6) report the estimated differential treatment effect for boys relative to girls when including the interaction of the male dummy and treatment and the male dummy with controls. All regressions included controls, clustering, fixed effects and sampling weights. Controls for those aged 6-18 years and 13-18 years include agricultural household status and the years of education of household head's spouse. Those aged 6-12 years old had the same controls as well as age. All regressions were clustered by sub-district. Fixed effects for wave and sub-district were included. The sampling weights included were cross-sectional weights provided in all IFLS waves. Mean DV denotes the mean of the dependent variable for the sample. Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. For full results see Table C.21, Table C.23, Table C.25 and Table C.27.

(3) and (6) report the estimated differential treatment effect for boys relative to girls when including the interaction of the male dummy with control variables.

First consider Panel A. Columns (2) and (3) suggest that there is no heterogeneous treatment effect between boys and girls aged 6 to 18 under the binary treatment specification. However, I find heterogeneous treatment effects by gender under the intensity of treatment specification. In Column (5) boys are more likely to attend school than girls in treated sub-districts by 17.5 percentage points on average assuming all primary schools are exposed to school voluntourism programs. A similar average difference of 17.7 percentage points is found when including the male dummy and control interaction variables in Column (6). Therefore, the positive effects of school voluntourism programs on school attendance is more pronounced for boys aged 6 to 18 compared to girls of the same age group.

Next I consider primary aged children in Panel B. Under both treatment specification models in Columns (2), (3), (5) and (6) the estimated treatment effect for boys is statistically significantly higher compared to girls in treated sub-districts. Both extensions of the binary treatment specification suggest boys aged 6 to 12 are more likely to attend school by 1.5 percentage points relative to girls in treated sub-districts. In Columns (5) and (6), the extensions of the intensity of treatment specification estimate boys are more likely to to attend school by 4 percentage points on average compared to their female peers in treated sub-districts. These estimated assume the intensity of treatment equals 1. Thus the statistically significant and positive effects of school voluntourism programs on school attendance for primary school aged children is greatest for boys.

Finally consider children of secondary schooling age in Panel C. There is no statistically significant estimated heterogeneous treatment effect under the binary treatment specification extensions in Column (2) and (3). However, the extensions of the intensity of treatment specification suggest otherwise. The results of Column (5) and (6) suggest that boys of secondary school age are more likely to attend school by between 34.4 and 34.6 percentage points compared to female peers in treated sub-districts. This difference is substantially larger than the differences between boys and girls of schooling age in Panel A and primary school age in Panel C. However, they nevertheless support preceding estimates which suggest the positive effect of school voluntourism programs on school attendance is larger for boys.

5.9.2 Primary School Entry Age

This section addresses heterogeneous treatment effects for boys relative to girls on primary school entry age. The results are shown in Table 5.19.

Firstly observe 6 to 18 year old respondents in Panel A. Columns (1) and (4) show that previous baseline estimates found no statistically significant treatment effect for the full sample. However, all of the specification model extensions suggest that the treatment effect is statistically significantly different for boys relative to girls. Under the binary treatment specification, Columns (2) and (3) suggest that following the introduction of school voluntourism programs boys are 0.235 to 0.326 years (between 3 to 4 months) younger when starting primary school compared to girls in treated sub-districts. Under the intensity of treatment specification, Columns (5) and (6) estimate that boys are between 0.594 to 0.795 years (7 to 10 months) younger than girls in treated sub-districts when starting primary school. These results assume intensity of treatment equals 1.

Table 5.19: Treatment Effect By Gender: Primary School Entry Age

	Difference (Male - Female)					
	Binary Treatment Specification			Intensity of Treatment Specification		
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: Aged 6-18						
Treatment Effect	0.056	0.174	0.223**	0.252	0.563**	0.669***
	(0.120)	(0.116)	(0.106)	(0.284)	(0.262)	(0.251)
Treatment Effect		-0.235***	-0.326***		-0.594**	-0.795**
× Male		(0.073)	(0.105)		(0.264)	(0.386)
Observations	18776	18776	18776	18776	18776	18776
Mean DV	6.567	6.567	6.567	6.567	6.567	6.567
Panel B: Aged 6-12						
Treatment Effect	0.241***	0.309***	0.366***	0.703***	0.966***	1.132***
	(0.072)	(0.102)	(0.117)	(0.199)	(0.221)	(0.269)
Treatment Effect		-0.142*	-0.191**		-0.510***	-0.643***
× Male		(0.082)	(0.092)		(0.146)	(0.180)
Observations	8933	8933	8933	8933	8933	8933
Mean DV	6.351	6.351	6.351	6.351	6.351	6.351
Panel C: Aged 13-18						
Treatment Effect	-0.089	-0.000	0.039	-0.052	0.072	0.106
	(0.232)	(0.181)	(0.168)	(0.574)	(0.461)	(0.426)
Treatment Effect		-0.199	-0.354		-0.292	-0.566
× Male		(0.233)	(0.353)		(0.648)	(0.950)
Observations	9766	9766	9766	9766	9766	9766
Mean DV	6.770	6.770	6.770	6.770	6.770	6.770
Male × Controls	No	No	Yes	No	No	Yes

Notes: Three specifications are reported under the binary treatment specification and the intensity of treatment specification. Columns (1) and (4) report the baseline estimated treatment effects without including the male dummy. Columns (2) and (5) report the estimated differential treatment effect for boys relative to girls when including the interaction of the male dummy and treatment. Columns (3) and (6) report the estimated differential treatment effect for boys relative to girls when including the interaction of the male dummy and treatment and the male dummy with controls. All regressions included controls, clustering, fixed effects and sampling weights. Controls for those aged 6-18 years and 13-18 years include agricultural household status and the years of education of household head's spouse. Those aged 6-12 years old had the same controls as well as age. All regressions were clustered by sub-district. Fixed effects for wave and sub-district were included. The sampling weights included were cross-sectional weights provided in all IFLS waves. Mean DV denotes the mean of the dependent variable for the sample. Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. For full results see Table C.21, Table C.23, Table C.25 and Table C.27.

Panel B reports heterogeneous treatment effects for children of primary school age. Under both specification models the baseline results suggest school voluntourism programs have a statistically significant and positive effect on the primary school entry age. However, relative to girls this estimated treatment effect is negative for boys. Under the binary treatment specification boys are between 0.142 to 0.191 years (1.7 to 2.3 months) younger than girls when starting primary school in the post-treatment period. Under the intensity of treatment specification, boys are between 0.510 to 0.643 years (6.1 to 7.7 months) younger than girls when commencing primary school assuming intensity of treatment equals 1. Therefore, while school voluntourism programs see slightly older students enter primary school relative to the control groups, these older students are female. This may be explained families who now send their daughters to primary school because of the voluntourism programs but would have otherwise decided not to enrol them. Hence they are older than boys when entering primary school when school voluntourism programs are present.

Finally in Panel C children of secondary school age are considered. There was no statistically significant treatment effect for this group found in the baseline estimates seen in Columns (1) and (4). Columns (2), (3), (5) and (6) report no statistically significant heterogeneous treatment effects for boys in this group. These results are consistent given this age group would have already commenced primary school at the time school voluntourism programs first began. Therefore no treatment effect, homogeneous or heterogeneous, should be expected.

5.9.3 Child Labour Among Primary Students

In this section I examine whether the effect of school voluntourism programs on child labour among primary school students is heterogeneous for boys and girls. The results are shown in Table 5.20.

First observe Panels B and C which consider primary and secondary aged children, respectively. The baseline results of Columns (1) and (4) indicate the statistically significant and negative effects of school voluntourism programs on the portion of working primary school students. However, there is no evidence of a differential effect on boys relative to girls in Columns (2), (3), (5) and (6).

Panel A reports differential treatment effects for the full sample of children aged 6 to 18. Columns (2) and (3) suggest that the decline in child labour among primary school students was greatest for boys. Under both extensions boys are less likely to work in primary school by 4.6 percentage points on average compared to their female peers following the introduction of school voluntourism programs. However, in Columns (5) and (6) the estimated heterogeneous treatment effects are larger but no longer statistically significant. Since the intensity of treatment specification is a more robust estimation of the treatment effect these results imply that the treatment effect is likely homogeneous between boys and girls.

5.9.4 Child Labour Among Secondary Students

In this section I examine whether there are differential treatment effects of school voluntourism programs on working secondary students by gender. The results are shown in Table 5.21.

Table 5.20: Treatment Effect By Gender: Child Labour Among Primary School Students

	Difference (Male - Female)					
	Binary Treatment Specification			Intensity of Treatment Specification		
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: Aged 6-18						
Treatment Effect	-0.057***	-0.031	-0.031	-0.170***	-0.116**	-0.120**
	(0.015)	(0.027)	(0.029)	(0.014)	(0.048)	(0.050)
Treatment Effect		-0.046**	-0.046*		-0.094	-0.091
× Male		(0.023)	(0.024)		(0.076)	(0.080)
Observations	22916	22916	22916	22916	22916	22916
Mean DV	0.034	0.034	0.034	0.034	0.034	0.034
Panel B: Aged 6-12						
Treatment Effect	-0.022***	-0.022***	-0.002***	-0.052*	-0.055*	-0.059*
	(0.007)	(0.007)	(0.008)	(0.028)	(0.029)	(0.031)
Treatment Effect		-0.000	0.001		0.004	0.007
× Male		(0.004)	(0.005)		(0.011)	(0.014)
Observations	12711	12711	12711	12711	12711	12711
Mean DV	0.022	0.022	0.022	0.022	0.022	0.022
Panel C: Aged 13-18						
Treatment Effect	-0.077**	0.003	0.002	-0.240***	-0.098	-0.104
	(0.035)	(0.097)	(0.101)	(0.041)	(0.174)	(0.180)
Treatment Effect		-0.128	-0.131		-0.239	-0.240
× Male		(0.092)	(0.098)		(0.227)	(0.242)
Observations	10136	10136	10136	10136	10136	10136
Mean DV	0.048	0.048	0.048	0.048	0.048	0.048
Male × Controls	No	No	Yes	No	No	Yes

Notes: Three specifications are reported under the binary treatment specification and the intensity of treatment specification. Columns (1) and (4) report the baseline estimated treatment effects without including the male dummy. Columns (2) and (5) report the estimated differential treatment effect for boys relative to girls when including the interaction of the male dummy and treatment. Columns (3) and (6) report the estimated differential treatment effect for boys relative to girls when including the interaction of the male dummy and treatment and the male dummy with controls. All regressions included controls, clustering, fixed effects and sampling weights. Controls for those aged 6-18 years and 13-18 years include agricultural household status and the years of education of household head's spouse. Those aged 6-12 years old had the same controls as well as age. All regressions were clustered by sub-district. Fixed effects for wave and sub-district were included. The sampling weights included were cross-sectional weights provided in all IFLS waves. Mean DV denotes the mean of the dependent variable for the sample. Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. For full results see Table C.21, Table C.23, Table C.25 and Table C.27.

Firstly I consider junior secondary students in Panel A. The baseline estimates in Columns (1) and (4) suggest a negative treatment effect on child labor in secondary school. However, under the binary treatment specification, Columns (2) and (3) estimate that boys are less likely to work during junior secondary by between 23.2 to 25.1 percentage points compared to their female peers in treated sub-districts. Assuming all primary schools host voluntourism programs, Columns (5) and (6) suggest that boys are less likely to work in junior secondary by between 53.3 to 54.1 percentage points on average compared to their female peers in treated sub-districts.

Now consider secondary students in Panel B. The baseline estimates of Column (1) and (4) show a statistically significantly negative effect on child labour among secondary school students in treatment areas. This estimated treatment effect is heterogeneous. Under the binary specification, Columns (2) and (3) suggest boys are less likely to work by between 6.8 to 16.3 percentage points compared to female students in treated sub-districts. Under the intensity of treatment specification, Column (6) suggests boys are less likely to work in senior secondary by 33.1 percentage points compared to girls assuming intensity of treatment is equal to 1.

Table 5.21: Treatment Effect By Gender: Child Labour Among Secondary Students

	Difference (Male - Female)					
	Binary Treatment Specification			Intensity of Treatment Specification		
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: Junior Secondary						
Treatment Effect	-0.099***	0.040***	0.046***	-0.212*	0.107***	0.120***
	(0.038)	(0.015)	(0.014)	(0.115)	(0.032)	(0.031)
Treatment Effect		-0.232***	-0.251***		-0.533***	-0.574***
× Male		(0.047)	(0.055)		(0.179)	(0.200)
Observations	4697	4697	4697	4697	4697	4697
Mean DV	0.067	0.067	0.067	0.067	0.067	0.067
Panel B: Senior Secondary						
Treatment Effect	-0.276***	-0.250***	-0.198***	-0.719***	-0.690***	-0.535***
	(0.027)	(0.029)	(0.032)	(0.111)	(0.138)	(0.139)
Treatment Effect		-0.068***	-0.163***		-0.089	-0.331***
× Male		(0.021)	(0.035)		(0.060)	(0.089)
Observations	1578	1578	1578	1578	1578	1578
Mean DV	0.105	0.105	0.105	0.105	0.105	0.105
Male × Controls	No	No	Yes	No	No	Yes

Notes: Three specifications are reported under the binary treatment specification and the intensity of treatment specification. Columns (1) and (4) report the baseline estimated treatment effects without including the male dummy. Columns (2) and (5) report the estimated differential treatment effect for boys relative to girls when including the interaction of the male dummy and treatment. Columns (3) and (6) report the estimated differential treatment effect for boys relative to girls when including the interaction of the male dummy and treatment and the male dummy with controls. All regressions included controls, clustering, fixed effects and sampling weights. For both cohorts, agricultural household status and the years of education of household head's spouse were controlled for. Those in junior secondary had the additional control for the head of household's years of education. All regressions were clustered by sub-district. Fixed effects for wave and sub-district were included. The sampling weights included were cross-sectional weights provided in all IFLS waves. Mean DV denotes the mean of the dependent variable for the sample. Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. For full results see Table C.22, Table C.24, Table C.26 and Table C.28.

5.9.5 Primary School Graduation

In this section I estimate the differential effects of school voluntourism programs on primary school graduation for boys versus girls aged between 13 and 18 and those aged between 14 and 18.[3] The results are shown in Table 5.22

Table 5.22: Treatment Effect By Gender: Primary School Graduation

	Difference (Male - Female)					
	Binary Treatment Specification			Intensity of Treatment Specification		
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: Aged 13-18						
Treatment Effect	-0.025	-0.039	-0.037	-0.098*	-0.130***	-0.121***
	(0.029)	(0.030)	(0.029)	(0.052)	(0.046)	(0.045)
Treatment Effect		0.026***	0.022**		0.060**	0.047
× Male		(0.007)	(0.010)		(0.025)	(0.032)
Observations	8709	8709	8709	8709	8709	8709
Mean DV	0.859	0.859	0.859	0.859	0.859	0.859
Panel B: Aged 14-18						
Treatment Effect	-0.013	-0.020	-0.021*	-0.035	-0.055*	-0.057**
	(0.011)	(0.014)	(0.012)	(0.028)	(0.028)	(0.027)
Treatment Effect		0.015*	0.017*		0.040**	0.039*
× Male		(0.008)	(0.010)		(0.017)	(0.023)
Observations	6459	6459	6459	6459	6459	6459
Mean DV	0.899	0.899	0.899	0.899	0.899	0.899
Male × Controls	No	No	Yes	No	No	Yes

Notes: Three specifications are reported under the binary treatment specification and the intensity of treatment specification. Columns (1) and (4) report the baseline estimated treatment effects without including the male dummy. Columns (2) and (5) report the estimated differential treatment effect for boys relative to girls when including the interaction of the male dummy and treatment. Columns (3) and (6) report the estimated differential treatment effect for boys relative to girls when including the interaction of the male dummy and treatment and the male dummy with controls. All regressions included controls, clustering, fixed effects and sampling weights. Controls for both age groups include agricultural household status and the years of education of household head's spouse. All regressions were clustered by sub-district. Fixed effects for wave and sub-district were included. The sampling weights included were cross-sectional weights provided in all IFLS waves. Mean DV denotes the mean of the dependent variable for the sample. Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. For full results see Table C.22, Table C.24, Table C.26 and Table C.28.

I first address those aged between 13 and 18 in Panel A. The estimated effect of treatment on primary school graduation under the baseline regression was only statistically significant using the intensity of treatment specification. However, the results of Columns (2), (3) and (5) suggest that there are statistically significant heterogeneous treatment effects for boys compared to girls. Under the binary treatment specification, boys are between 2.2 to 2.7 percentage points more likely to graduate from primary school compared to girls in treated sub-districts. Assuming an intensity of treatment equal to 1, Column (5) implies boys are more likely to graduate from primary school by 6.1 percentage points compared to their female peers.

In Panel B, the baseline estimates in Columns (1) and (4) show the absence of a statistically significant treatment effect on primary school graduation after omitting 13 year

[3]Recall that on average mature aged primary school students were 13 years old. Therefore I omit 13 year old respondents in the secon regression to produce a more reliable estimate.

old respondents. However, Columns (2), (3), (5) and (6) suggest differential effects for boys. Under the binary treatment specification, Columns (2) and (3) imply that boys aged 14 to 18 are more likely to graduate by 1.5 to 1.7 percentage points compared to their female peers in treated sub-districts. This differential treatment effect is higher under the intensity of treatment specification. Columns (5) and (6) imply boys are more likely to graduate primary school by 3.9 to 4 percentage points compared to their female counterparts in treated sub-districts.

5.9.6 Completion of At Least One Year of Secondary School

In this section I estimate heterogeneous treatment effects of school voluntourism programs on the completion of at least one year of secondary for boys. The estimated treatment effects for boys and girls who fall in these age groups are shown in Table 5.23.

Firstly observe those aged 13 to 18 in Panel A. Baseline regression estimates in Columns (1) and (4) suggest there is no statistically significant effect of treatment on the likelihood of respondents completing the first grade of secondary school. When testing for heterogeneous treatment effects between boys and girls, none of the estimated treatment effects for boys are statistically significant.

Panel B reports estimated homogeneous and heterogeneous treatment effects for those aged 14 to 18. Columns (1) and (4) reiterate the lack of statistically significant treatment effects found in the baseline regressions for this group. Again, we see that there is no statistically significant heterogeneous treatment effects in Columns (2), (3), (5) and (6). Therefore school voluntourism programs have no statistically significant effect on the rate of completion of the 7^{th} grade and there are no statistically significant differences in the effect of treatment when comparing boys and girls in treated sub-districts.

5.9.7 Aspirations Gap

In this final section I consider the heterogeneous effect of school voluntourism programs on the aspirations for boys versus girls. The results are shown in Table 5.24.

Only the baseline regression using the intensity of treatment specification yields a statistically significant treatment effect on aspirations in Column (4). However, there is some evidence of differential effects by gender. The binary treatment effects of Columns (2) and (3) suggest that boys in treated sub-districts have a statistically significantly lower average aspirations gap by 0.533 to 0.568 steps compared to their female peers. This difference is magnified when observing the intensity of treatment specification. Columns (5) and (6) imply that boys report a lower average aspirations gap by 1.327 to 1.412 steps compared to girls in treated sub-districts. The estimated heterogeneous treatment effects are statistically significant at a 1% level.

Table 5.23: Treatment Effect By Gender: Completion of At Least One Year of Secondary School

	Difference (Male - Female)					
	Binary Treatment Specification			Intensity of Treatment Specification		
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: Aged 13-18						
Treatment Effect	-0.041	0.022	0.027	-0.016	0.068*	0.080*
	(0.077)	(0.018)	(0.018)	(0.179)	(0.041)	(0.041)
Treatment Effect		-0.090	-0.102		-0.121	-0.152
× Male		(0.092)	(0.091)		(0.243)	(0.247)
Observations	8709	8709	8709	8709	8709	8709
Mean DV	0.685	0.685	0.685	0.685	0.685	0.685
Panel B: Aged 14-18						
Treatment Effect	-0.042	0.020	0.022	-0.014	0.068	0.075
	(0.083)	(0.025)	(0.027)	(0.181)	(0.056)	(0.058)
Treatment Effect		-0.092	-0.098		-0.135	-0.156
× Male		(0.082)	(0.078)		(0.216)	(0.210)
Observations	6459	6459	6459	6459	6459	6459
Mean DV	0.765	0.765	0.765	0.765	0.765	0.765
Male × Controls	No	No	Yes	No	No	Yes

Notes: Three specifications are reported under the binary treatment specification and the intensity of treatment specification. Columns (1) and (4) report the baseline estimated treatment effects without including the male dummy. Columns (2) and (5) report the estimated differential treatment effect for boys relative to girls when including the interaction of the male dummy and treatment. Columns (3) and (6) report the estimated differential treatment effect for boys relative to girls when including the interaction of the male dummy and treatment and the male dummy with controls. All regressions included controls, clustering, fixed effects and sampling weights. Controls for both age groups include agricultural household status and the years of education of household head's spouse. All regressions were clustered by sub-district. Fixed effects for wave and sub-district were included. The sampling weights included were cross-sectional weights provided in all IFLS waves. Mean DV denotes the mean of the dependent variable for the sample. Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. For full results see Table C.22, Table C.24, Table C.26 and Table C.28.

Table 5.24: Treatment Effect By Gender: Aspirations

	Difference (Male - Female)					
	Binary Treatment Specification			Intensity of Treatment Specification		
	(1)	(2)	(3)	(4)	(5)	(6)
Treatment Effect	0.127	0.379***	0.394**	0.499*	0.994***	1.028***
	(0.158)	(0.093)	(0.089)	(0.262)	(0.104)	(0.101)
Treatment Effect		-0.533***	-0.568***		-1.327***	-1.412***
× Male		(0.035)	(0.042)		(0.260)	(0.295)
Observations	4049	4049	4049	4049	4049	4049
Mean DV	0.762	0.762	0.762	0.762	0.762	0.762
Male × Controls	No	No	Yes	No	No	Yes

Notes: Three specifications are reported under the binary treatment specification and the intensity of treatment specification. Columns (1) and (4) report the baseline estimated treatment effects without including the male dummy. Columns (2) and (5) report the estimated differential treatment effect for boys relative to girls when including the interaction of the male dummy and treatment. Columns (3) and (6) report the estimated differential treatment effect for boys relative to girls when including the interaction of the male dummy and treatment and the male dummy with controls. All regressions included controls, clustering, fixed effects and sampling weights. Controls for this age group include agricultural household status and the years of education of household head's spouse. All regressions were clustered by sub-district. Fixed effects for wave and sub-district were included. The sampling weights included were cross-sectional weights provided in all IFLS waves. Mean DV denotes the mean of the dependent variable for the sample. Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. For full results see Table C.22, Table C.24, Table C.26 and Table C.28.

6 Robustness

In this chapter I conduct several robustness checks to address potential threats to identification. Firstly I (1) test if the identifying assumption of the Difference-in-Difference method holds to determine the validity of the estimates. Secondly I omit earlier waves of data and re-estimate the treatment effect on (2) school attendance and (3) primary school entry age for primary school aged children. This testing mitigates concerns raised in the data chapter regarding the reliability of data from these earlier waves. Further I (4) reproduce regression estimates after omitting households that moved to treated sub-districts following the introduction of school voluntourism programs to mitigate any selection bias. Finally I (5) test if the estimated treatment effects persist when only including neighbouring control sub-districts to provide a better counterfactual.

6.1 Threats to Validity: Parallel Trends Assumption

The difference-in-difference estimates of the previous chapter are only valid under the Parallel Trends Assumption (PTA). The PTA holds if the treatment and control groups exhibit no differences in trends in the outcome variables of interest prior to the introduction of school voluntourism programs. If the PTA holds, differences in outcome variables for those in the treatment group in the post-treatment period can only be attributable to the presence of school voluntourism programs. To test whether the PTA holds I produce (i) a balance test using data in the last pre-treatment wave and (ii) examine two pre-trends tests to determine whether the treatment and control groups exhibit different trends in outcome variables prior to the introduction of school voluntourism programs.

6.1.1 Balance Testing

I conduct balance tests to examine whether the treatment and control groups exhibit any differences in the outcome variables in the last pre-treatment period. This pre-treatment period is 2007 (Wave 4). The following model is used to determine whether the outcome variables are balanced in this wave:

$$Y_{i,s} = \gamma_s + \mu PT_{i,s} + \epsilon_{i,s}$$

Where the only wave considered is 2007 (Wave 4) and $PT_{i,s} = 1$ if respondent i lives in a treated sub-district s. The balance tests for each outcome variable are reported in Table 6.1.

Table 6.1: Balance Tests for Outcome Variables in 2007 (Wave 4)

Outcome Variable	Age Group	Estimated Treatment Effect	Std. Error	p-value
School Attendance	6-12	-0.079	0.056	0.157
School Attendance	13-18	0.071	0.062	0.252
School Attendance	6-18	-0.018	0.042	0.670
Primary School Entry Age	6-12	-0.025	0.123	0.840
Primary School Entry Age	13-18	-0.187	0.104	0.072*
Primary School Entry Age	6-18	-0.099	0.081	0.224
Child Worked During Primary	6-12	0.037	0.044	0.396
Child Worked During Primary	13-18	0.158	0.066	0.018*
Child Worked During Primary	6-18	0.098	0.040	0.015*
Child Worked During Junior High	13-18	0.308	0.110	0.005*
Child Worked During Senior High	15-18	0.126	0.118	0.285
Graduate Primary	13-18	0.060	0.005	0.000*
Graduate Secondary	18	0.232	0.168	0.168
Completed at Least One Year of Secondary	13-18	0.086	0.056	0.121
Aspirations Gap	15-18	-0.202	0.151	0.182

Across all but five outcome variables, any differences between the treatment and control groups immediately prior to treatment are not statistically significant. Those aged 13 to 18 in treated sub-districts in Wave 4 were on average 0.187 years (2.2 months) younger than the control group when they started primary school. This difference is significant at a 10% level. Further, those in treated sub-districts are more likely to graduate primary school by 6 percentage points compared to the control group prior to treatment. This is statistically significant at the 1% level.

Treatment and control groups exhibit differences in the portion of working students across schooling levels in 2007. All children of school age in treated sub-districts were more likely to work in primary school by 9.8 percentage points on average. Respondents aged 13 to 18 in treated sub-districts are more likely to work while attending primary school by 15.8 percentage points on average compared to the control group. Both estimates are significant at the 1% level. The difference between treatment and control groups is largest when considering the portion of 13 to 18 year olds who report working while attending junior high. Junior secondary students living in the treated sub-districts in 2007 are more likely to work by 30.8 percentage points on average compared to the control group.

Despite these results, any differences between treatment and control groups prior to treatment should not invalidate the estimated treatment effects. This holds if there are no statistically significant differences in trends between the treatment and control groups in these outcome variables prior to treatment. Testing for differences in trends prior to treatment is examined in the following section.

6.1.2 Pre-Trends Testing and Event Study

This section identifies whether the treatment and control groups exhibit different trends in the outcome variables prior to treatment. I use two methods to test this. Firstly I test for pre-trends between the last two pre-treatment periods. Secondly, I use an event study with the last pre-treatment wave (2007) as the reference wave to test for pre-trends across all pre-treatment periods.

First consider the last two pre-treatment periods. To determine whether the treatment and control groups experience different pre-trends between these waves I use the following estimation model:

$$Y_{i,s,t} = \gamma_s + \lambda_t + \mu PT_{i,s,t} + \delta \mathbf{X}_{i,s,t} + \epsilon_{i,s,t}$$

The time periods considered are 2000 and 2007 (Waves 3 and 4). The dummy variable $PT_{i,s,t} = 1$ for individual i living in treated sub-district s in 2007. Pre-trends for the treatment and control group are not parallel and the PTA is violated if the estimated coefficient on the treatment dummy (μ) is statistically significant and non-zero. Table 6.2 reports the results of this test.

Table 6.2: Pre-Trends Testing for Outcome Variables Between 2000 and 2007

Outcome Variable	Age Group	Estimated Treatment Effect	Std. Error	p-value
School Attendance	6-12	-0.073	0.068	0.286
School Attendance	13-18	0.023	0.097	0.812
School Attendance	6-18	-0.024	0.011	0.027*
Primary School Entry Age	6-12	1.075	0.069	0.000*
Primary School Entry Age	13-18	-0.141	0.193	0.465
Primary School Entry Age	6-18	-0.018	0.180	0.921
Child Worked While Attending Primary School	6-12	0.122	0.048	0.012*
Child Worked While Attending Primary School	13-18	0.154	0.044	0.001*
Child Worked While Attending Primary School	6-18	0.081	0.025	0.002*
Child Worked During Junior High	13-18	0.300	0.099	0.003*
Child Worked During Senior High	15-18	0.270	0.128	0.036*
Graduate Primary	13-18	0.003	0.013	0.846
Graduate Secondary	18	0.198	0.256	0.439
Completed at Least One Year of Secondary	13-18	0.020	0.015	0.178
Aspirations Gap	15-18	-0.042	0.113	0.708

Notes: All regressions include controls, sampling weights and fixed effects for wave and sub-district. Controls included were based on the results of Table 4.6. Clustering is controlled for by sub-district. To view the complete regression results see Table E.1 and Table E.2.

Between 2000 and 2007, children aged 6 to 12 in the treatment and control groups exhibit statistically significant different trends in primary school entry age. Primary school entry age for this treatment group was trending upwards between these two waves. Therefore the estimated positive effect of treatment on primary school entry age may capture this upward pre-trend. However, this estimated pre-trend may be biased because of the poor response rate for this outcome variable in Wave 3. Recall from Table B.4 the response rate for this outcome variable among this age group in Wave 3 was 7.3%. The low sample of responses yields a lower average starting age which rises to a significantly higher average in the Wave 4 immediately prior to treatment. Therefore this positive and statistically significant difference in pre-trends between the treatment and control groups in primary school starting age may be misleading.

Further, trends in school attendance for the 6 to 18 age group are statistically significantly different between the treatment and control groups. Children in treated sub-districts experience a negative trend in attendance between 2000 and 2007. Therefore the estimated effects of treatment on attendance for this age group may be understated. However, those of primary school age and those of secondary schooling age in treatment and control sub-districts show no statistically significant difference in trends. This supports the validity of the positive estimated effect of treatment on attendance for these groups.

There is a statistically significant difference in pre-trends in child labour among primary school students for all three age groups considered. The estimated difference in trends are statistically significant at the 1% level for each age group. The results suggest children in treated sub-districts experience an upward trend in child labour among primary school students prior to treatment. However, the results of Table 5.5 and Table 5.6 suggest that treatment has a significant and negative effect on child labour among primary school students. Therefore it is likely that the estimated negative effect of treatment on children working while in primary school is understated for all age groups.

Similarly, trends in the portion of junior and senior secondary students working are statistically significantly different between treatment and control groups. Between 2000 and 2007 the portion of working students in both levels of secondary in treated sub-districts is trending upwards. This estimated trend is statistically significant at the 1% level. However, the estimated effects of treatment on the portion of working junior and senior secondary students are statistically significant and negative. Thus is is likely that the estimated effects understate the true effect of school voluntourism programs on the portion of working secondary students.

The results of Table 6.2 are limited since they only consider trends between two of the four pre-treatment waves. To determine whether there are parallel trends in outcome variables between the treatment and control groups between earlier waves and Wave 4 I use an event study. To do this I use the following estimation equation:

$$Y_{i,s,t} = \gamma_s + \lambda_t + \delta \mathbf{X}_{i,s,t} + \mu^{W1T} \cdot W1T_{i,s,t} + \mu^{W2T} \cdot W2T_{i,s,t} + \mu^{W30T} \cdot W3T_{i,s,t} + \epsilon_{i,s,t}$$

This model considers all four pre-treatment waves; 1993, 1997, 2000 and 2007. I include dummy variables for treatment observations in pre-treatment waves. For example $W1T_{i,s,t}$ is a dummy variable equal to 1 if the year is 1993 (Wave 1) and individual i lives in treated sub-district s. Note that the last pre-treatment period, Wave 4, is omitted. Therefore Wave 4 is the reference period and the coefficients on the dummy variables capture the differences the outcome variable in pre-treatment periods relative to Wave 4. If the estimated coefficients on the dummy variables ($\mu^{W1T}, \mu^{W2T}, \mu^{W3T}$) are statistically significant and non-zero, then the treatment and control group exhibit different pre-trends and the PTA is violated. Note that fixed effects for sub-district and wave are controlled for (γ_s and λ_t, respectively) as well as covariates ($\mathbf{X}_{i,s,t}$). Table 6.3 and Table 6.4 report the results of this event study for each of the outcome variables.

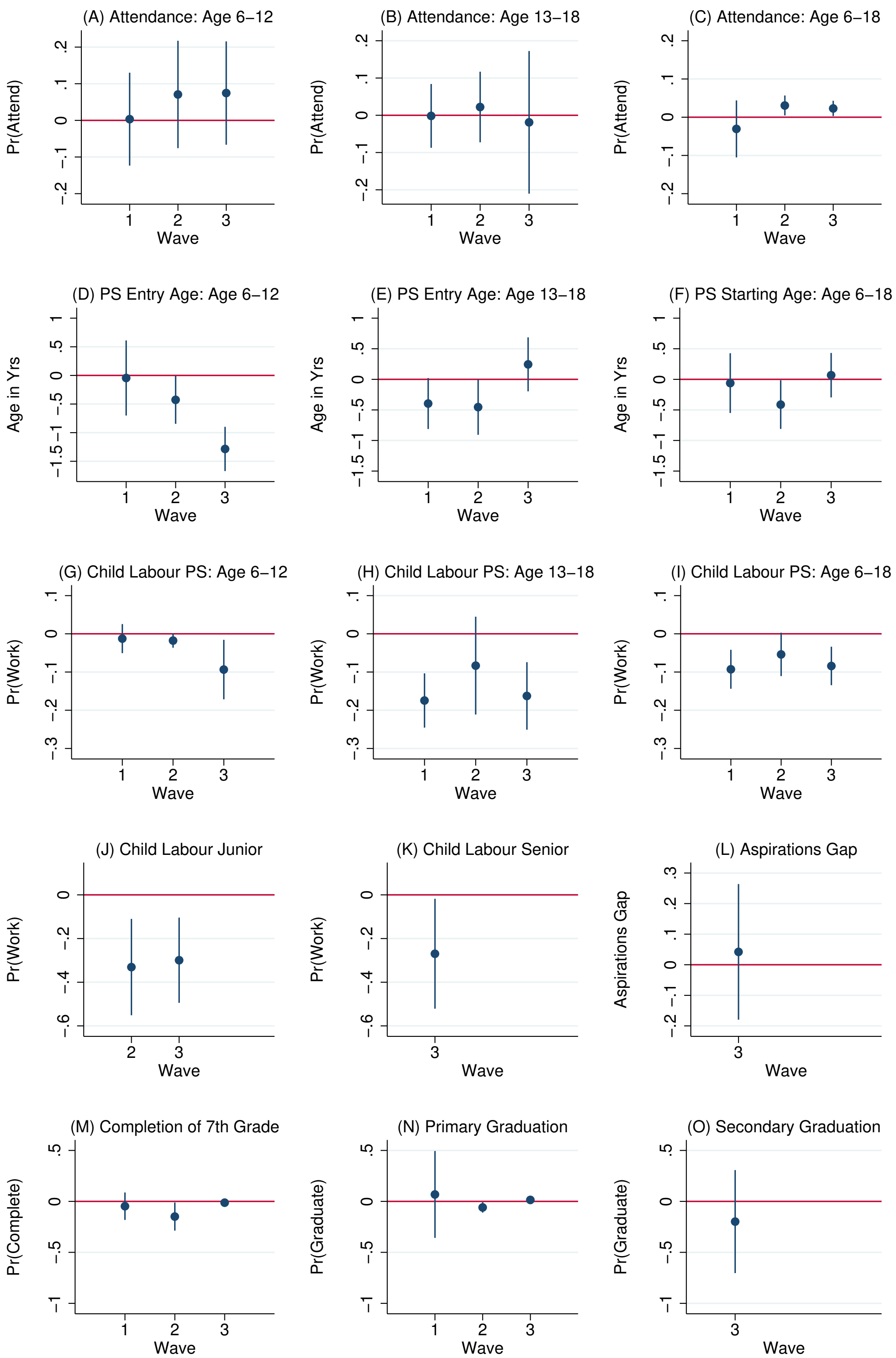
Firstly observe Table 6.3. Recall that treatment has a statistically significant and positive effect on the primary school starting age among those aged 6 to 12 in the post-treatment period. Column (1) suggests that the primary school entry age is statistically significantly lower in treated sub-districts in Wave 3 relative to Wave 4 by 1.284 years. This can be seen in Figure 6.1 in graph (D) since the estimated coefficient on the Wave 3 dummy lies below the zero bound. This estimated coefficient is significant at the 1% level and indicates an upward trend between Waves 3 and 4. As previously discussed this is likely biased by the poor response rate and lower average entry age reported in Wave 3. However, there is also a statistically significant and upward trend from Waves 2 to 4 in the treatment group. Those aged 6 to 12 in treated sub-districts enter school at a younger age in the Wave 2 by 0.426 years relative to the same age group in Wave 4. This estimated coefficient can also be seen in Figure 6.1 in graph (D) as the coefficient on the Wave 2 dummy lies below the zero bound. This estimate may also be influenced by a low response rate for this outcome. In Wave 2 only 10.14% of those aged 6 to 12 provide their primary school entry age (Table B.4). Thus the statistically significant difference in trends from Waves 3 to 4 and Waves 2 to 4 may be unreliable. But if we consider the estimated coefficient for the Wave 1 dummy, there is no statistically significant difference in primary school starting age for those in treated sub-districts in Wave 1 relative to Wave 4. This yields promising results that imply the PTA may hold for this group and outcome variable.

School voluntourism programs are also estimated to have a statistically significant and positive effect on the rate of school attendance across all age groups. The event study results in Columns (4) and (5) suggest there is no statistically significant difference in this outcome variable in earlier pre-treatment waves relative to the last pre-treatment wave for primary and secondary age respondents. This validates the positive treatment effect estimates of school voluntourism programs on attendance found for those of primary school and secondary school age. However, Column (6) shows that between Waves 2 and 4 and between Waves 3 and 4, school attendance was statistically significantly higher in the earlier pre-treatment waves relative to Wave 4. These estimated differences are observed in Figure 6.1 in graph (C) with coefficients for the Wave 2 and 3 dummies lying above the zero bound. This suggests there is a statistically significant and downward trend in school attendance among children aged 6 to 18 in treated sub-districts prior to treatment. Therefore the estimated positive effect of school voluntourism programs on school attendance for this age group may be understated. This is consistent with established pre-trends found for this group between Waves 3 and 4 in Table 6.2.

Finally, the presence of school voluntourism programs in treated sub-districts are found to have a negative effect on child labour among primary school students. This effect is found across all three age groups. However, Table 6.3 shows that each age group exhibits statistically significant and upward trends in working primary school students before school voluntourism programs are introduced. The portion of primary school students who report working is statistically and significantly lower in Wave 3 relative to Wave 4 across Columns (7) to (9) in treated sub-districts. This statistically significant difference holds between Waves 2 and 4 for children in Columns (7) and (9). The estimated coefficients for these wave dummies are seen in Figure 6.1 in graphs (G), (H) and (I). Note that the estimated coefficients for each wave dummy lie below the zero bound. This implies an upward trend in child labour among primary students prior to treatment. These results suggest the estimated negative effects of school voluntourism on the likelihood of primary school students working is understated.

Now consider the event study results in Table 6.4. There are no statistically significant differences in aspirations found between Waves 3 and 4 for the treatment group in Columns (6). This result validates the estimated positive treatment effect on aspirations for those in treated sub-districts following the introduction of school voluntourism programs. However, the results of Column (4) and (5) suggest that there is a statistically significant and positive trend in working secondary students prior to treatment in treated sub-districts. The portion of working junior secondary students in Column (4) is statistically significantly lower in Waves 2 and 3 relative to Wave 4 in treated sub-districts. Similarly, the portion of working senior secondary students was statistically and significantly lower in Wave 3 relative to Wave 4 in Columns (5). This upward trend is observed in Figure 6.1. In graph (J) and (K) the estimated coefficients on the wave dummies lie below the zero bound. Thus the estimated negative effect of programs on the portion of working secondary students may be underestimated by existing pre-trends.

Figure 6.1: Pre-Trends Testing: Event Study Graphs Across Outcome Variables



Notes: The final pre-treatment in 2007 (Wave 4) is the reference period. The plotted estimated coefficients capture the difference in the means for the treatment group relative to the same group in Wave 4. Note that the abbreviation 'PS' refers to primary school. Earlier waves are omitted in (K) and (O) because of poor response rates. Earlier waves are omitted in (L) because the aspirations-based questions were introduced to the IFLS in Wave 3.

Table 6.3: Event Study: Primary School Starting Age, School Attendance and Child Labour Among Primary School Students

	Age Start Primary School			School Attendance			Child Worked During Primary		
	Aged 6-12	Aged 13-18	Aged 6-18	Aged 6-12	Aged 13-18	Aged 6-18	Aged 6-12	Aged 13-18	Aged 6-18
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Treated Sub-District in Wave 1	-0.044	-0.396*	-0.061	0.003	-0.002	-0.031	-0.013	-0.174***	-0.093***
	(0.333)	(0.212)	(0.249)	(0.065)	(0.044)	(0.038)	(0.019)	(0.036)	(0.026)
Treated Sub-District in Wave 2	-0.426**	-0.454**	-0.413**	0.071	0.022	0.031**	-0.018*	-0.083	-0.054*
	(0.213)	(0.230)	(0.202)	(0.075)	(0.048)	(0.013)	(0.010)	(0.065)	(0.029)
Treated Sub-District in Wave 3	-1.284***	0.245	0.068	0.075	-0.019	0.023**	-0.093**	-0.162***	-0.084***
	(0.197)	(0.224)	(0.185)	(0.072)	(0.097)	(0.010)	(0.040)	(0.045)	(0.026)
Observations	6443	7891	14425	13595	10220	23925	10206	8260	18560

Notes: Controls for those aged 6 to 18 years and those aged 13 to 18 years include agricultural household status and the years of education of household head's spouse. For those aged 6 to 12 years old the same covariates were controlled for as the other two age groups with the addition of age. All regressions were clustered by sub-district. Fixed effects for wave and sub-district were included. The sampling weights included were cross-sectional weights provided in all IFLS waves. Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. For full results see Table E.3.

Table 6.4: Event Study: Primary and Secondary Graduation, Completion of At Least One Year of Secondary School, Child Labour Among Junior And Senior Secondary Students and Aspirations

	Primary School Graduation (1)	Secondary School Graduation (2)	Completion of One Year of Secondary (3)	Child Worked During Junior Secondary (4)	Child Worked During Senior Secondary (5)	Aspirations Gap (6)
Treated Sub-District in Wave 1	0.069		-0.047			
	(0.217)		(0.068)			
Treated Sub-District in Wave 2	-0.060**		-0.149**	-0.331***		
	(0.026)		(0.070)	(0.112)		
Treated Sub-District in Wave 3	0.015	-0.198	-0.012	-0.299***	-0.270**	0.042
	(0.014)	(0.256)	(0.015)	(0.099)	(0.128)	(0.113)
Observations	6852	689	6852	3310	1076	2983

Notes: Controls for those aged 6 to 18 years and those aged 13 to 18 years include agricultural household status and the years of education of household head's spouse. For those aged 6 to 12 years old the same covariates were controlled for as the other two age groups with the addition of age. In Columns (2), (5) and (6) dummy variables for Waves 1 and 2 are omitted because data on secondary school graduation, working senior secondary students and the aspirations gap were only available from the Wave 3 onward. In Column (4), the treatment dummy for Wave 1 was omitted because data on working junior secondary students was available from Wave 2 onward. All regressions are clustered by sub-district. Fixed effects for wave and sub-district were included. The sampling weights included were cross-sectional weights provided in all IFLS waves. Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. For full results see Table E.4.

6.2 Pre-Treatment School Attendance Responses Among 6 to 12 Year Old Respondents

Figure 4.3 shows the average school attendance rates for 6 to 12 year old children are perfect in treated sub-districts in Waves 2 and 3. This average rate fell in Wave 4 immediately prior to treatment. The reliability of these perfect average attendance rates is uncertain and the drop in average attendance in Wave 4 has not been addressed in literature. These perfect attendance rates in Waves 2 and 3 may bias the estimated positive treatment effects for this group if the change in attendance following treatment instead captures mean reversion following Wave 4 rather than a treatment effect.

As a robustness check I test whether the perfect average attendance rates in the treated sub-districts prior to Wave 4 are driving the estimated treatment effects. To test this I reproduce regression results for school attendance for this age group using both the binary and intensity of treatment specifications after omitting observations from Wave 3 and earlier. This leaves two periods in the sample; Wave 4 as the pre-treatment period and Wave 5 as the post-treatment period. The results for both specification models are shown in Table 6.5.

Firstly consider the binary treatment specification estimates in Panel A. The estimated binary treatment effect in the post-treatment period is no longer statistically significant in all columns except Columns (1) and (3). Previously in Table 5.1, Column (8) suggests children of this age in treated sub-districts are more likely to attend school by 3.5 percentage points on average. This result is significant at the 10% level. This estimate increases to 5.5 percentage points in Table 6.5 in Column (8). However it is no longer statistically significant.

Now consider the results of the intensity of treatment specification in Panel B. After omitting earlier waves, the estimated treatment effect retains its significance across all columns and is statistically significant. When including controls, sampling weights and fixed effects, children of this age in treated sub-districts in the post-treatment period are more likely to attend school by 21.9 percentage points on average, assuming intensity of treatment equals 1. This result is significant at the 5% level.

Thus, following the omission of earlier pre-treatment periods the estimated effects of treatment on school attendance for children aged 6 to 12 are still positive and statistically significant. Recall the PTA test results suggest no difference in pre-trends in school attendance between the primary aged treatment and control groups. Together these robustness checks support prior estimates which suggest that the introduction of school voluntourism programs has a positive effect on school attendance for children of primary school age.

Table 6.5: School Attendance Omitting Wave 3 and Earlier: Respondents Aged 6 to 12 Years Old

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Binary Treatment Specification								
Treated Sub-District ×	0.106*	0.075	0.095*	0.066	0.093	0.066	0.080	0.055
Post-Treatment Period	(0.057)	(0.061)	(0.055)	(0.057)	(0.057)	(0.061)	(0.054)	(0.057)
Treated Sub-District	-0.079	-0.039	-0.072	-0.032				
	(0.057)	(0.066)	(0.055)	(0.063)				
Post-Treatment Period	0.068***	0.056***	0.066***	0.058***				
	(0.007)	(0.007)	(0.007)	(0.006)				
Observations	5913	5295	5913	5295	5857	5238	5857	5238
Mean DV	0.939	0.938	0.943	0.942	0.939	0.937	0.943	0.941
Panel B: Intensity of Treatment Specification								
Post-Treatment Period ×	0.347***	0.269***	0.325***	0.247***	0.320***	0.248**	0.290***	0.219**
Intensity of Treatment	(0.065)	(0.086)	(0.069)	(0.086)	(0.079)	(0.097)	(0.085)	(0.100)
Intensity of Treatment	-0.274***	-0.178	-0.259***	-0.159				
	(0.080)	(0.116)	(0.083)	(0.120)				
Post-Treatment Period	0.068***	0.056***	0.066***	0.058***				
	(0.007)	(0.007)	(0.007)	(0.006)				
Observations	5913	5295	5913	5295	5857	5238	5857	5238
Mean DV	0.939	0.938	0.943	0.942	0.939	0.937	0.943	0.941
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

Notes: Controls include age, years of education of the household head's spouse and agricultural household status. All regressions were clustered by sub-district. Fixed effects for wave and sub-district were included. The number of observations fall when controls are included due to imperfect response rates for covariates. Number of observations also fall when including fixed effects for wave and sub-district due to the removal of singleton observations. The sampling weights included were cross-sectional weights provided in all IFLS waves. Mean DV denotes the mean of the dependent variable for the sample. Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. For full results see Table F.1.

6.3 Pre-Treatment Primary School Entry Age Responses Among 6 to 12 Year Old Respondents

Recall the response rate for primary school entry age among those aged 6 to 12 in earlier waves are low relative to other waves. Table B.4 shows the response rate for this group was 10.14% in Wave 2 and 7.30% in Wave 3. However the remaining waves had response rates exceeding 90% for this age group. Further, the event study results in Table 6.3 suggest there is a statistically significant and positive trend in primary school entry age for this age group between Waves 2 and 4 and Waves 3 and 4 in Column (1). Thus the low response rate for Waves 2 and 3 may bias estimated treatment effects for this outcome among primary aged respondents. As a robustness check I reproduce the estimated treatment effects on school attendance for this group using both the binary and intensity of treatment specifications to mitigate these concerns The results are shown in Table 6.6.

Across all variations in controls, sampling weights and fixed effects using both treatment specification models there is no longer a statistically significant effect on primary school entry age. Therefore, the previously positive estimated treatment effect of school voluntourism programs on primary school entry age may have been biased by the small sample of responses provided in earlier waves. Given this, the estimated effect of school voluntourism programs on age at which students start primary school is not robust.

Table 6.6: Primary School Entry Age Omitting Wave 3 and Earlier: Respondents Aged 6 to 12 Years OId

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Binary Treatment Specification								
Treated Sub-District ×	0.102	0.172	0.103	0.192	0.126	0.210	0.127	0.202
Post-Treatment Period	(0.084)	(0.124)	(0.086)	(0.130)	(0.090)	(0.138)	(0.085)	(0.126)
Treated Sub-District	-0.025	-0.087	-0.048	-0.116				
	(0.097)	(0.127)	(0.099)	(0.133)				
Post-Treatment Period	-0.212***	-0.210***	-0.200***	-0.201***				
	(0.050)	(0.052)	(0.038)	(0.040)				
Observations	5599	5005	5599	5005	5539	4945	5539	4945
Mean DV	6.127	6.133	6.146	6.150	6.126	6.133	6.145	6.150
Panel B: Intensity of Treatment Specification								
Post-Treatment Period ×	0.196	0.318	0.193	0.367	0.254	0.424	0.250	0.400
Intensity of Treatment	(0.246)	(0.366)	(0.259)	(0.412)	(0.279)	(0.416)	(0.287)	(0.411)
Intensity of Treatment	0.038	-0.095	-0.012	-0.159				
	(0.238)	(0.334)	(0.263)	(0.377)				
Post-Treatment Period	-0.212***	-0.209***	-0.200***	-0.201***				
	(0.050)	(0.052)	(0.038)	(0.040)				
Observations	5599	5005	5599	5005	5539	4945	5539	4945
Mean DV	6.127	6.133	6.146	6.150	6.126	6.133	6.145	6.150
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

Notes: Controls include age, years of education of the household head's spouse and agricultural household status. All regressions were clustered by sub-district. Fixed effects for wave and sub-district were included. The number of observations fall when controls are included due to imperfect response rates for covariates. Number of observations also fall when including fixed effects for wave and sub-district due to the removal of singleton observations. The sampling weights included were cross-sectional weights provided in all IFLS waves. Mean DV denotes the mean of the dependent variable for the sample. Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. For full results see Table F.2.

6.4 Omitting Households that Moved to Treated Sub-Districts during the Post-Treatment Period

Individuals who move to treated sub-districts following the introduction of school voluntourism programs pose another potential threat to identification. If households move to treated sub-districts because of the programs then the estimated treatment effects could be overstated. I will henceforth refer to these households as 'new households'. The number of respondents in the sample living in new households is 15.

In this section I reproduce regression results after omitting new households to test the robustness of prior treatment estimates. I only show the regression results using the intensity of treatment specification since they are a more robust estimate relative to the binary treatment specifications.[1] I consider the effect of treatment after this omission for the following outcomes: (i) school attendance, (ii) primary school starting age, (iii) child labour among primary students, (iv) child labour among secondary students and (v) aspirations. Because the effect of chool voluntourism programs on completion of the 7^{th} grade and graduation from primary and secondary school are unclear given the presence of mature aged students, they are omitted.[2]

Despite the small number of new households omitted from the sample I reproduce baseline testing of covariates in Table G.1 to determine which covariates to include in the regressions. After omitting new households I find that the statistically significant effect of school voluntourism programs on school attendance, primary school starting age, and child labour among primary and secondary students persists.

6.4.1 School Attendance

Table 6.7 shows the estimated treatment effects on school attendance using the intensity of treatment specification model following the removal of new households.[3]

Firstly observe those in Panel A aged 6 to 18 years old. The estimated coefficient on the interaction term in Column (8) has increased from 0.163 in Table 5.2 to 0.248 in Table 6.7 after including controls, sampling weights and fixed effects. The estimated effect is still statistically significant. This suggests that including new households may have understated the estimated treatment effect. The same is seen to a lesser degree with primary age students in Panel B. Previously the estimated coefficient on the interaction term for this age group was 0.119 in Table 5.2, but this has increased to 0.121 in Table 6.7 following the omission of new households after including controls, sampling weights and fixed effects.

Finally in Panel C, the estimated treatment effect on secondary aged children increases after omitting new households. Previously, in Table 5.2 when controls, sampling weights and fixed effects were included, children aged 13 to 18 were 8.3 percentage points more likely to attend school on average when intensity of treatment equals 1. Now the estimated

[1] I also reproduce these regressions using the binary specification and these results can be seen in G.

[2] I reproduce the regressions for these outcomes following the omission of new households. The results for primary school graduation after dropping new households in Table G.11 were similar to those found in Chapter 5 in Table 5.10. These results do include 13 year olds who were found to skew these estimates. However, after dropping new households the number of survey respondents of age to have graduated secondary school (18 years old) in the treated sub-districts fell to zero. Thus the estimated effect of the programs could not be estimated for secondary graduation after omitting these households. For the results see Table G.16.

[3] The binary treatment regressions shown in Table 5.1 are also reproduced in Table G.3.

Table 6.7: School Attendance Omitting New Households: Intensity of Treatment Specification

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Aged 6-18								
Post-Treatment Period ×	0.263***	0.262***	0.265***	0.264***	0.240***	0.244***	0.245***	0.248***
Intensity of Treatment	(0.022)	(0.026)	(0.020)	(0.020)	(0.029)	(0.031)	(0.027)	(0.028)
Intensity of Treatment	-0.011	0.024	-0.006	0.027				
	(0.067)	(0.090)	(0.065)	(0.088)				
Post-Treatment Period	0.060***	0.038***	0.060***	0.037***				
	(0.007)	(0.007)	(0.007)	(0.007)				
Observations	30240	28378	30240	28378	30188	28319	30188	28319
Mean DV	0.858	0.860	0.858	0.860	0.858	0.860	0.858	0.860
Panel B: Aged 6-12								
Post-Treatment Period ×	0.159***	0.153***	0.152***	0.147***	0.133***	0.130***	0.125***	0.121***
Intensity of Treatment	(0.015)	(0.022)	(0.013)	(0.021)	(0.021)	(0.026)	(0.019)	(0.027)
Intensity of Treatment	-0.086***	-0.069*	-0.086***	-0.071*				
	(0.027)	(0.040)	(0.023)	(0.037)				
Post-Treatment Period	0.010**	0.003	0.011***	0.006				
	(0.004)	(0.005)	(0.004)	(0.005)				
Observations	17070	16205	17070	16205	17010	16143	17010	16143
Mean DV	0.966	0.966	0.968	0.968	0.966	0.967	0.968	0.968
Panel C: Aged 13-18								
Post-Treatment Period ×	0.327***	0.300***	0.303***	0.279***	0.326***	0.296***	0.301***	0.267***
Intensity of Treatment	(0.041)	(0.038)	(0.037)	(0.046)	(0.045)	(0.049)	(0.044)	(0.048)
Intensity of Treatment	0.139	0.226	0.170	0.255*				
	(0.110)	(0.152)	(0.104)	(0.147)				
Post-Treatment Period	0.127***	0.088***	0.137***	0.091***				
	(0.013)	(0.013)	(0.014)	(0.014)				
Observations	13170	12173	13170	12173	13101	12093	13101	12093
Mean DV	0.718	0.718	0.711	0.711	0.719	0.719	0.713	0.713
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

Notes: Controls for those aged 6 to 18 years and those aged 13 to 18 years include agricultural household status and the years of education of household head's spouse. For those aged 6 to 12 years old the same covariates were controlled for as the other two age groups with the addition of age. All regressions were clustered by sub-district. Fixed effects for wave and sub-district were included. The number of observations fall when controls are included due to imperfect response rates for covariates. Number of observations also fall when including fixed effects for wave and sub-district due to the removal of singleton observations. The sampling weights included were cross-sectional weights provided in all IFLS waves. Mean DV denotes the mean of the dependent variable for the sample. Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. For full results see Table G.4.

difference is 26.7 percentage points on average in Table 6.7. The significance level of these results has also changed from 10% to 1%. Therefore the inclusion of new households underestimates the treatment effects on attendance for those of secondary school age.

These results imply that the inclusion of new households understates the effect of voluntourism programs on school attendance across all age groups. When omitting new households voluntourists are successful in encouraging students to attend school more regularly and this effect seems to linger as students enter secondary schooling.

6.4.2 Age Started Primary School

The estimated treatment effects on primary school entry age after removing new households are shown in Table 6.8.[4]

Table 6.8: Primary School Entry Age Omitting New Households: Intensity of Treatment Specification

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Aged 6-18								
Post-Treatment Period ×	0.460***	0.560***	0.234	0.465*	0.247	0.370**	0.026	0.257
Intensity of Treatment	(0.168)	(0.163)	(0.296)	(0.258)	(0.172)	(0.172)	(0.289)	(0.287)
Intensity of Treatment	-0.694***	-0.881***	-0.796***	-1.003***				
	(0.151)	(0.203)	(0.147)	(0.204)				
Post-Treatment Period	-0.436***	-0.376***	-0.341***	-0.322***				
	(0.062)	(0.060)	(0.101)	(0.080)				
Observations	20404	18830	20404	18830	20343	18768	20343	18768
Mean DV	6.522	6.526	6.573	6.567	6.522	6.526	6.573	6.568
Panel B: Aged 6-12								
Post-Treatment Period ×	0.807***	0.812***	0.788***	0.805***	0.624***	0.709***	0.619***	0.728***
Intensity of Treatment	(0.143)	(0.206)	(0.139)	(0.167)	(0.149)	(0.192)	(0.183)	(0.198)
Intensity of Treatment	-0.532***	-0.666***	-0.562***	-0.669***				
	(0.131)	(0.188)	(0.129)	(0.157)				
Post-Treatment Period	-0.417***	-0.338***	-0.416***	-0.345***				
	(0.047)	(0.049)	(0.050)	(0.053)				
Observations	9666	8988	9666	8988	9607	8928	9607	8928
Mean DV	6.315	6.320	6.346	6.350	6.315	6.320	6.347	6.351
Panel C: Aged 13-18								
Post-Treatment Period ×	0.045	0.279	-0.399	0.093	-0.149	0.123	-0.536	-0.051
Intensity of Treatment	(0.314)	(0.385)	(0.590)	(0.621)	(0.320)	(0.383)	(0.523)	(0.604)
Intensity of Treatment	-0.885***	-1.115***	-1.031***	-1.332***				
	(0.194)	(0.264)	(0.204)	(0.304)				
Post-Treatment Period	-0.369***	-0.333***	-0.183	-0.227				
	(0.116)	(0.113)	(0.200)	(0.159)				
Observations	10738	9842	10738	9842	10664	9763	10664	9763
Mean DV	6.709	6.714	6.779	6.768	6.710	6.716	6.781	6.770
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

Notes: Controls for those aged 6 to 18 years and those aged 13 to 18 years include agricultural household status and the years of education of household head's spouse. For those aged 6 to 12 years old the same covariates were controlled for as the other two age groups with the addition of age. All regressions were clustered by sub-district. Fixed effects for wave and sub-district were included. The number of observations fall when controls are included due to imperfect response rates for covariates. Number of observations also fall when including fixed effects for wave and sub-district due to the removal of singleton observations. The sampling weights included were cross-sectional weights provided in all IFLS waves. Mean DV denotes the mean of the dependent variable for the sample. Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. For full results see Table G.6.

Consistent with the results found in Table 5.4, there is no statistically significant effect

[4]I reproduce the regressions seen in Table 5.3 in Table G.5. Of interest were the results for those aged 6 to 12 years old. For this group Table 5.3 estimates a higher entry age by 0.241 years on average and Table G.5 estimated a higher average entry age of 0.250 years when including controls, sampling weights and fixed effects.

of treatment using the intensity of treatment specification in the fifth wave for the whole sample in Panel A or those of secondary school age in Panel C.

However, in Panel B the effect of the voluntourism treatment is still statistically significant. Recall the full sample estimates suggest children of primary school age are older than the control group when entering primary by 0.703 years (8 months) in Table 5.4 after including controls, sampling weights and fixed effects. The estimates of Table 6.8 show on average, primary aged children in the treated sub-districts are 0.728 years (almost 9 months) older than the control when starting primary school if intensity of treatment equals 1. This implies an average additional difference of 1 month after omitting new households. Therefore the estimated effect of school voluntourim programs on primary school entry age for this age group is marginally understated by the inclusion of new households.

6.4.3 Child Labour Among Primary Students

The effect of school voluntourism programs on child labour among primary students is negative when considering all households. Table 6.9 suggests that this estimated effect is unchanged when omitting new households.[5]

Earlier estimates suggest school voluntourism programs had the strongest effect on those of secondary school age (13 to 18 years old). In Table 6.9 the estimated effect is marginally smaller in magnitude at -23.7 percentage points compared to the previous estimate of -24 percentage points with the inclusion of new households in Table 5.6. Differences in the estimated effects for those in Panel A and B are also marginally different in Table 6.9 after omitting new households (-17 percentage points and -5.2 percentage points, respectively) compared to initial results in Table 5.6 (-16.8 percentage points and -5.4 percentage points, respectively). Thus, including new households overstates the estimated effect on the portion of working primary students for all age groups but only marginally.

6.4.4 Child Labour Among Secondary Students

In this section I consider the effect of school voluntourism programs on the portion of working secondary students after omitting new households. Relative to the estimates of Table 5.8, the estimated effect of programs on the portion of working junior and senior secondary students is still negative and statistically significant but increases in magnitude.[6]

[5]Regressions produced using the binary treatment specification in Table 5.5 are reproduced in Table G.7. The differences between estimated effects with and without new households are also marginal.

[6]I also reproduce the regressions using the binary treatment specification seen in Table 5.7. The results are seen in Table G.9. The estimated negative treatment effect for senior secondary students changes marginally after omitting new households. The negative estimated treatment effect for junior secondary students is statistically significant and larger in absolute value across all variations in the inclusion of controls, sampling weights and fixed effects.

Table 6.9: Child Labour Among Primary School Students Omitting New Households: Intensity of Treatment Specification

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Aged 6-18								
Post-Treatment Period ×	-0.179***	-0.178***	-0.181***	-0.177***	-0.176***	-0.168***	-0.180***	-0.168***
Intensity of Treatment	(0.014)	(0.011)	(0.015)	(0.011)	(0.015)	(0.014)	(0.019)	(0.014)
Intensity of Treatment	0.133***	0.120***	0.143***	0.134***				
	(0.020)	(0.013)	(0.025)	(0.017)				
Post-Treatment Period	-0.013***	-0.010**	-0.013***	-0.012***				
	(0.004)	(0.004)	(0.004)	(0.004)				
Observations	24612	22969	24612	22969	24551	22908	24551	22908
Mean DV	0.036	0.036	0.034	0.033	0.036	0.036	0.034	0.034
Panel B: Aged 6-12								
Post-Treatment Period ×	-0.066	-0.054**	-0.069	-0.053*	-0.071	-0.053**	-0.077	-0.054*
Intensity of Treatment	(0.042)	(0.024)	(0.047)	(0.028)	(0.045)	(0.024)	(0.052)	(0.029)
Intensity of Treatment	0.009	-0.004	0.015	0.002				
	(0.029)	(0.012)	(0.034)	(0.017)				
Post-Treatment Period	-0.006	-0.006	-0.005	-0.006				
	(0.004)	(0.005)	(0.004)	(0.005)				
Observations	13504	12765	13504	12765	13443	12706	13443	12706
Mean DV	0.025	0.025	0.023	0.022	0.025	0.025	0.023	0.022
Panel C: Aged 13-18								
Post-Treatment Period ×	-0.255***	-0.271***	-0.247***	-0.254***	-0.250***	-0.255***	-0.245***	-0.237***
Intensity of Treatment	(0.029)	(0.031)	(0.030)	(0.033)	(0.030)	(0.043)	(0.028)	(0.044)
Intensity of Treatment	0.226***	0.214***	0.234***	0.227***				
	(0.023)	(0.022)	(0.032)	(0.030)				
Post-Treatment Period	-0.021***	-0.017***	-0.023***	-0.020***				
	(0.006)	(0.006)	(0.006)	(0.007)				
Observations	11108	10204	11108	10204	11039	10133	11039	10133
Mean DV	0.049	0.050	0.047	0.048	0.049	0.050	0.047	0.048
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

Notes: In the child and adult survey, respondents who were attending primary school or who had attended school were asked whether they worked while enrolled in school. Controls for those aged 6 to 18 years and those aged 13 to 18 years include agricultural household status and the years of education of household head's spouse. For those aged 6 to 12 years old the same covariates were controlled for as the other two age groups with the addition of age. All regressions were clustered by sub-district. Fixed effects for wave and sub-district were included. The number of observations fall when controls are included due to imperfect response rates for covariates. Number of observations also fall when including fixed effects for wave and sub-district due to the removal of singleton observations. The sampling weights included were cross-sectional weights provided in all IFLS waves. Mean DV denotes the mean of the dependent variable for the sample. Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. For full results see Table G.8.

Firstly I address junior secondary students in Panel A. Previously in Table 5.7 the results suggest school voluntourism programs reduce the likelihood of junior secondary students working by 21.2 percentage points. In Table 6.10 the estimated effect of school voluntourism programs is higher in magnitude and statistically significant at a 1% across all columns of results after omitting new households. When including all controls, sampling weights and fixed effects, junior secondary students in treated sub-districts are less likely

Table 6.10: Child Labour Among Secondary School Students Omitting New Households: Intensity of Treatment Specification

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Junior Secondary								
Post-Treatment Period ×	-0.332***	-0.362***	-0.327***	-0.373***	-0.279***	-0.282***	-0.295**	-0.313***
Intensity of Treatment	(0.115)	(0.122)	(0.121)	(0.133)	(0.093)	(0.072)	(0.117)	(0.099)
Intensity of Treatment	0.225	0.218	0.252	0.267				
	(0.150)	(0.154)	(0.167)	(0.177)				
Post-Treatment Period	-0.011	-0.004	-0.016*	-0.010				
	(0.008)	(0.009)	(0.009)	(0.010)				
Observations	6044	4775	6044	4775	5957	4694	5957	4694
Mean DV	0.071	0.074	0.064	0.066	0.072	0.075	0.065	0.067
Panel B: Senior Secondary								
Post-Treatment Period ×	-0.517***	-0.636***	-0.554***	-0.726***	-0.500***	-0.621***	-0.549***	-0.724***
Intensity of Treatment	(0.123)	(0.125)	(0.115)	(0.118)	(0.129)	(0.128)	(0.121)	(0.119)
Intensity of Treatment	0.172***	0.256***	0.208***	0.329***				
	(0.057)	(0.060)	(0.045)	(0.048)				
Post-Treatment Period	0.035**	0.034*	0.032*	0.034*				
	(0.017)	(0.019)	(0.017)	(0.020)				
Observations	1901	1662	1901	1662	1816	1577	1816	1577
Mean DV	0.108	0.108	0.107	0.106	0.110	0.107	0.109	0.105
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

Notes: The sample of those in Junior Secondary were those aged between 13 to 18 years who had between between 7 to 12 years of education. The sample of those in Senior Secondary were those aged between 15 to 18 years who had more than 10 years of education. For both cohorts, agricultural household status and the years of education of household head's spouse were controlled for. However those in Panel A had the additional control for the head of household's years of education. Baseline testing to determine choice of covariates are seen in Table G.2. Results were clustered by sub-district. Fixed effects were included for wave and sub-district. The sampling weights included were cross-sectional weights provided in the IFLS. Mean DV denotes the mean of the dependent variable for the sample. Standard errors in parentheses. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. For full results see Table G.10.

to work by 31.3 percentage points on average after removing new households.

In Panel B, the estimated effect of treatment on the portion of working senior secondary students is still negative and statistically significant at a 1% level across all columns. Following the inclusion of all controls, sampling weights and fixed effects, senior secondary students in treated sub-districts are less likely to work by 72.4 percentage points on average. This is marginally different to the estimated effect of 71.9 percentage points seen in Table 5.7. These results suggest that previous regressions including new households understate the effect of school voluntourism programs on the portion of working junior secondary students.

6.4.5 Aspirations

Finally I consider estimated treatment effect on aspirations after dropping new households. The results are reported in Table 6.11.

When including new households in the sample in Table 5.17, the estimated effect of school voluntourism programs is statistically significant and positive. Table 6.11 shows that the estimated treatment effect using the intensity of treatment specifications is no longer statistically significant across all columns of results. Thus the estimated treatment effect on aspirations is no longer robust after omitting new households.

Table 6.11: Aspirations Gap Omitting New Households: Intensity of Treatment Specification

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Post-Treatment Period × Intensity of Treatment	-0.263	0.014	-0.287	0.001	-0.216	0.020	-0.209	0.027
	(0.329)	(0.134)	(0.357)	(0.153)	(0.364)	(0.173)	(0.386)	(0.193)
Intensity of Treatment	-0.534***	-0.522***	-0.560***	-0.580***				
	(0.054)	(0.062)	(0.062)	(0.071)				
Post-Treatment Period	0.859***	0.852***	0.834***	0.838***				
	(0.034)	(0.036)	(0.036)	(0.039)				
Observations	4637	4118	4637	4118	4553	4046	4553	4046
Mean DV	0.766	0.743	0.781	0.760	0.766	0.743	0.783	0.762
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

Notes: Only respondents aged 15 to 18 are included in this regression. Controls for this group include agricultural household status and the years of education of the household head's spouse. Results were clustered by sub-district. Fixed effects were included for wave and sub-district. The sampling weights included were cross-sectional weights provided in the IFLS. Mean DV denotes the mean of the dependent variable for the sample. Standard errors in parentheses. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. For full results see Table G.18.

6.5 Inclusion of Neighbouring Sub-Districts in Same District as Controls

Differences between treated and control sub-districts pose a potential threat to identification. Treated and control sub-districts may exhibit differences in primary schools or they may demonstrate differences in the scale of their local tourism industries.

To account for such differences as much as possible, I restrict my control sample to sub-districts that are located in the same district as the treated sub-districts. However, by reducing the overall sample size, this lowers the power of my estimation to identify treatment effects.

For this robustness check I use the sample of sub-districts within the Buleleng District because has the most observations of the districts that contain a treated sub-district. This can be seen in Table 6.12. Therefore this robustness check I use the Buleleng District[7] and its sub-districts covered in the IFLS to see if estimated treatment effects persist. In this section I only consider the intensity of treatment specification since it yields more

[7] Recall that Buleleng is both the name of the treated sub-district and the district this sub-district is located within.

robust estimates by accounting for the likelihood of treatment exposure.[8] Further, baseline testing of covariates between the adjusted treatment and control groups was conducted to determine controls. The results of this testing is seen in Table H.1.

Table 6.12: Total Observations Across Waves in Buleleng and Karang Asem Districts

Total Observations	Buleleng District	Karang Asem District
Aged 6-12	407	272
Aged 13-18	304	186
Aged 6-18	711	458

I only consider outcome variables for which school voluntourism programs were found to have a statistically significant effect: (1) school attendance, (2) primary school starting age, (3) child labour among primary students, (4) the portion of working secondary students and (5) aspirations.

6.5.1 School Attendance

In this section I reproduce the estimatedt treatment effect of school voluntourism programs on school attendance using the intensity of treatment specification when only including sub-districts in the Buleleng district. The results are reported in Table 6.13.

For all school age children in Panel A and primary school aged children in Panel B the estimated positive effect of programs on school attendance remains. When controls, sampling weights and fixed effects are included those aged 6 to 18 are 16 percentage points more likely to attend school in the Buleleng sub-district when the intensity of treatment equals 1. In Panel B, Column (8), those aged 6 to 12 in the Buleleng sub-district are 32.6 percentage points more likely to attend when intensity of treatment is equal to 1. The estimated effects for all children and primary children are statistically significant at the 10% and 1% level respectively.

Panel C produces estimated treatment effects that are contrary to earlier estimates. When only considering sub-districts in the Buleleng district, the estimated effect of school voluntourism programs on the school attendance of secondary age children is no longer positive or statistically significant. Thus, the positive effect school voluntourism programs on school attendance for the primary students they currently work with persists when narrowing the sample to one district but this effect vanishes for primary students who move onto secondary schooling.[9]

[8] I also reproduce results using the binary treatment specification. These results can be seen in the appendix.

[9] The same results are found when comparing the estimated effects using the binary treatment specification in Table 5.1 after including sub-districts only in the Buleleng district in Table H.3. The estimated

Table 6.13: School Attendance Buleleng District Only: Intensity of Treatment Specification

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Aged 6-18								
Post-Treatment Period ×	0.090	0.122	0.107	0.127	0.087	0.156*	0.111	0.160*
Intensity of Treatment	(0.121)	(0.062)	(0.112)	(0.067)	(0.125)	(0.056)	(0.102)	(0.055)
Intensity of Treatment	0.036	-0.043	0.031	-0.037				
	(0.104)	(0.034)	(0.098)	(0.042)				
Post-Treatment Period	0.101	0.141***	0.092	0.127***				
	(0.055)	(0.016)	(0.051)	(0.017)				
Observations	689	629	689	629	689	629	689	629
Mean DV	0.833	0.825	0.836	0.829	0.833	0.825	0.836	0.829
Panel B: Aged 6-12								
Post-Treatment Period ×	0.207	0.301**	0.206	0.293**	0.215	0.327***	0.217	0.326***
Intensity of Treatment	(0.139)	(0.077)	(0.139)	(0.083)	(0.124)	(0.044)	(0.129)	(0.052)
Intensity of Treatment	-0.092*	-0.165*	-0.088*	-0.156**				
	(0.038)	(0.053)	(0.037)	(0.048)				
Post-Treatment Period	-0.009	0.020	-0.012	0.012				
	(0.063)	(0.041)	(0.063)	(0.043)				
Observations	388	356	388	356	388	356	388	356
Mean DV	0.948	0.944	0.950	0.945	0.948	0.944	0.950	0.945
Panel C: Aged 13-18								
Post-Treatment Period ×	-0.138	-0.066	-0.109	-0.062	-0.128	-0.029	-0.087	-0.014
Intensity of Treatment	(0.110)	(0.113)	(0.089)	(0.102)	(0.088)	(0.141)	(0.063)	(0.142)
Intensity of Treatment	0.314	0.256	0.307	0.272				
	(0.158)	(0.141)	(0.144)	(0.145)				
Post-Treatment Period	0.260**	0.283***	0.244***	0.258***				
	(0.050)	(0.038)	(0.040)	(0.035)				
Observations	301	301	301	301	301	301	301	301
Mean DV	0.684	0.684	0.693	0.693	0.684	0.684	0.693	0.693
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

Notes: Controls for 6-18 year olds and 6-12 year olds include male gender binary variable, urban residence and years of education of the household head. Controls for the 13-18 group only included urban residence. All regressions were clustered by sub-district. Fixed effects for wave and sub-district were included. The number of observations fall when controls are included due to imperfect response rates for covariates. Number of observations also fall when including fixed effects for wave and sub-district due to the removal of singleton observations. The sampling weights included were cross-sectional weights provided in all IFLS waves. Mean DV denotes the mean of the dependent variable for the sample. Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. For full results see Table H.4.

6.5.2 Age Started Primary School

In this section I estimate the effect of school voluntourism programs on the primary school starting age when only sampling sub-districts in the Buleleng District. Table 6.14 reports the results.

positive effect on school attendance among 6 to 18 year olds and 6 to 12 year olds remains but the effect is no longer statistically significant for those aged 13 to 18 when only considering a sample taken from the Buleleng district.

Table 6.14: Primary School Entry Age Buleleng District Only: Intensity of Treatment Specification

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Aged 6-18								
Post-Treatment Period ×	0.161	0.212*	0.246	0.311**	0.249*	0.236*	0.326**	0.326*
Intensity of Treatment	(0.120)	(0.072)	(0.151)	(0.091)	(0.103)	(0.084)	(0.100)	(0.104)
Intensity of Treatment	-0.174	-0.155	-0.248	-0.241				
	(0.116)	(0.127)	(0.148)	(0.149)				
Post-Treatment Period	-0.306**	-0.330***	-0.303**	-0.326***				
	(0.054)	(0.022)	(0.068)	(0.043)				
Observations	471	416	471	416	471	416	471	416
Mean DV	6.310	6.332	6.306	6.327	6.310	6.332	6.306	6.327
Panel B: Aged 6-12								
Post-Treatment Period ×	0.204	0.217	0.225	0.263	0.180	0.163	0.226	0.227
Intensity of Treatment	(0.120)	(0.150)	(0.180)	(0.188)	(0.086)	(0.156)	(0.143)	(0.207)
Intensity of Treatment	-0.110	-0.076	-0.131	-0.119				
	(0.083)	(0.043)	(0.131)	(0.089)				
Post-Treatment Period	-0.187**	-0.188	-0.182	-0.176				
	(0.054)	(0.095)	(0.082)	(0.134)				
Observations	222	193	222	193	221	192	221	192
Mean DV	6.185	6.197	6.185	6.197	6.181	6.193	6.181	6.193
Panel C: Aged 13-18								
Post-Treatment Period ×	0.186	0.158	0.296	0.279	0.214	0.114	0.316	0.227
Intensity of Treatment	(0.242)	(0.287)	(0.245)	(0.293)	(0.200)	(0.185)	(0.177)	(0.177)
Intensity of Treatment	-0.348	-0.326	-0.431	-0.419				
	(0.173)	(0.206)	(0.189)	(0.222)				
Post-Treatment Period	-0.385**	-0.394**	-0.377**	-0.383**				
	(0.110)	(0.088)	(0.111)	(0.093)				
Observations	249	249	249	249	249	249	249	249
Mean DV	6.422	6.422	6.410	6.410	6.422	6.422	6.410	6.410
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

Notes: Controls for 6-18 year olds and 6-12 year olds include male gender binary variable, urban residence and years of education of the household head. Controls for the 13-18 group only included urban residence. All regressions were clustered by sub-district. Fixed effects for wave and sub-district were included. The number of observations fall when controls are included due to imperfect response rates for covariates. Number of observations also fall when including fixed effects for wave and sub-district due to the removal of singleton observations. The sampling weights included were cross-sectional weights provided in all IFLS waves. Mean DV denotes the mean of the dependent variable for the sample. Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. For full results see Table H.6.

In Panel A, school voluntourism programs have a positive and statistically significant effect on the starting age of primary students for respondents aged 6 to 18. In Column (8), children in the Buleleng sub-district are on average 0.326 years (3.9 months) older when they enter primary school following the introduction of programs compared to the control group. In Panel B, the previously positive and statistically significant effect of school voluntourism programs on the starting age for 6 to 12 year olds is no longer evident. Across all variations in controls, sampling weights and fixed effects, school voluntourism programs have no statistically significant effect on the starting age of primary students. However, Panel C shows school voluntourism programs have no statistically significant effect on those of secondary schooling age. This is consistent with prior estimates.

Therefore, when only considering the treated sub-district of Buleleng and its neighbouring sub-districts in the Buleleng district, programs only have an effect on the starting age for the entire sample of children. However, these results are questionable given Panel A includes students in the initially exposed cohort who would have already started school when the programs were introduced.

6.5.3 Child Labour Among Primary Students

In this section I reproduce regressions using the intensity of treatment specification to see if the estimated effect on child labour among primary school children persists when only considering the Buleleng District. The results are shown in Table 6.15.

First observe Panel A. The negative estimated effect of school voluntourism programs on the portion of working primary school students persists and is still statistically significant. In Column (8), children of this age in the Buleleng sub-district are less likely to work by 17.8 percentage points on average when the intensity of treatment equals 1. This is slightly higher than the prior estimate in Table 5.6 with a difference of -17 percentage points for the full sample.

In Panel B, the estimated effect on child labour among primary students for respondents aged between 6 and 12 is no longer statistically significant. This holds across all columns of results. Therefore there is no statistically significant effect of voluntourism programs on the portion of working primary school students that voluntourists currently interact with. In Panel C the estimated effect is still statistically significant and negative across all columns. However, these estimates are lower in magnitude relative to the results seen in Table 5.6. When all controls, sampling weights and fixed effects are included, children of secondary school age in the Buleleng sub-district are less likely to work in primary school by 14.1 percentage points on average. This is lower than the prior estimate of -24 percentage points from the full sample. These results suggest that the programs are successful in reducing child labour among primary school students although this improvement is concentrated among the initial cohort exposed.

6.5.4 Child Labour Among Secondary Students

In this section I consider the estimated effect of treatment on the portion of working secondary students for the Buleleng District only. The results are shown in Table 6.16.

There is a positive estimated effect of school voluntourism programs for both junior secondary students in Panel A and senior secondary students in Panel B. However, the only

Table 6.15: Child Labour Among Primary School Students Buleleng District Only: Intensity of Treatment Specification

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Aged 6-18								
Post-Treatment Period ×	-0.141**	-0.194**	-0.129**	-0.187**	-0.142***	-0.179**	-0.142***	-0.178**
Intensity of Treatment	(0.026)	(0.034)	(0.028)	(0.036)	(0.023)	(0.037)	(0.021)	(0.033)
Intensity of Treatment	0.083**	0.102**	0.073**	0.090**				
	(0.019)	(0.018)	(0.018)	(0.022)				
Post-Treatment Period	-0.006	-0.009	-0.011	-0.017				
	(0.012)	(0.016)	(0.013)	(0.016)				
Observations	557	501	557	501	557	501	557	501
Mean DV	0.057	0.054	0.060	0.058	0.057	0.054	0.060	0.058
Panel B: Aged 6-12								
Post-Treatment Period ×	-0.072	-0.103	-0.050	-0.085	-0.079	-0.083	-0.073	-0.070
Intensity of Treatment	(0.056)	(0.060)	(0.053)	(0.058)	(0.051)	(0.042)	(0.046)	(0.042)
Intensity of Treatment	-0.050*	-0.033	-0.073**	-0.058**				
	(0.018)	(0.016)	(0.013)	(0.014)				
Post-Treatment Period	0.014	0.004	0.006	-0.004				
	(0.025)	(0.022)	(0.024)	(0.021)				
Observations	293	262	293	262	293	262	293	262
Mean DV	0.038	0.034	0.041	0.038	0.038	0.034	0.041	0.038
Panel C: Aged 13-18								
Post-Treatment Period ×	-0.161***	-0.142***	-0.155***	-0.144***	-0.161***	-0.137*	-0.156***	-0.141**
Intensity of Treatment	(0.015)	(0.017)	(0.006)	(0.013)	-0.161***	-0.137*	-0.156***	-0.141**
Intensity of Treatment	0.176**	0.160***	0.173**	0.165**				
	(0.039)	(0.027)	(0.036)	(0.031)				
Post-Treatment Period	-0.030**	-0.023*	-0.033***	-0.029**				
	(0.007)	(0.008)	(0.003)	(0.007)				
Observations	264	264	264	264	264	264	264	264
Mean DV	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

Notes: Controls for 6-18 year olds and 6-12 year olds include male gender binary variable, urban residence and years of education of the household head. Controls for the 13-18 group only included urban residence. All regressions were clustered by sub-district. Fixed effects for wave and sub-district were included. The number of observations fall when controls are included due to imperfect response rates for covariates. Number of observations also fall when including fixed effects for wave and sub-district due to the removal of singleton observations. The sampling weights included were cross-sectional weights provided in all IFLS waves. Mean DV denotes the mean of the dependent variable for the sample. Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. For full results see Table H.8.

estimated effects which are statistically significant are those of the the junior secondary group when including controls. In Column (8), junior secondary students in the treated Buleleng sub-district are 18.1 percentage points more likely to work on average. This results is statistically significant at the 10% level. These estimates contradict previously estimated negative effects of treatment on working junior secondary students. However it is important to note that the sample size for these regressions are much lower than those used in prior estimates.[10] Therefore these estimated treatment effects should be

[10]There are only 7 senior secondary respondents and 23 junior secondary respondents from the Buleleng sub-district in the post-treatment wave.

considered with caution.

Table 6.16: Child Labour Among Secondary School Students Buleleng District: Intensity of Treatment Specification

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Junior Secondary								
Post-Treatment Period ×	0.253	0.265**	0.247	0.258*	0.151	0.176***	0.163	0.181**
Intensity of Treatment	(0.123)	(0.081)	(0.128)	(0.089)	(0.103)	(0.028)	(0.100)	(0.039)
Intensity of Treatment	-0.352*	-0.350**	-0.367*	-0.360**				
	(0.138)	(0.072)	(0.140)	(0.075)				
Post-Treatment Period	-0.142*	-0.113	-0.146*	-0.122				
	(0.056)	(0.053)	(0.058)	(0.055)				
Observations	162	162	162	162	162	162	162	162
Mean DV	0.167	0.167	0.174	0.174	0.167	0.167	0.174	0.174
Panel B: Senior Secondary								
Post-Treatment Period ×	0.329	0.329	0.381	0.381	0.514	0.514	0.490	0.490
Intensity of Treatment	(0.504)	(0.504)	(0.481)	(0.481)	(0.353)	(0.353)	(0.352)	(0.352)
Intensity of Treatment	-0.487	-0.487	-0.529	-0.529				
	(0.582)	(0.582)	(0.558)	(0.558)				
Post-Treatment Period	-0.304	-0.304	-0.350	-0.350				
	(0.229)	(0.229)	(0.219)	(0.219)				
Observations	50	50	50	50	50	50	50	50
Mean DV	0.180	0.180	0.204	0.204	0.180	0.180	0.204	0.204
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

Notes: The sample of those in Junior Secondary were those aged between 13 to 18 years who had between between 7 to 12 years of education. The sample of those in Senior Secondary were those aged between 15 to 18 years who had more than 10 years of education. Controls for junior secondary students only include a dummy variable for urban residence. There were no differences in baseline characteristics for senior secondary students therefore no control were included in regressions for these secondary students. These controls were determined using Table H.2. All regressions were clustered by sub-district. Fixed effects for wave and sub-district were included. The number of observations fall when controls are included due to imperfect response rates for covariates. Number of observations also fall when including fixed effects for wave and sub-district due to the removal of singleton observations. The sampling weights included were cross-sectional weights provided in all IFLS waves. Mean DV denotes the mean of the dependent variable for the sample. Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. For full results see Table H.10.

6.5.5 Aspirations

In this final section I estimate the effect of treatment on aspirations using the sample of sub-districts within the Buleleng district. The results are shown in Table 6.17.

Previous estimates suggest school voluntourism programs have a statistically significant and positive effect on aspirations. Table 6.17 shows for this sample there is no statistically significant effect of treatment on aspirations. This is seen across all columns of results.

Table 6.17: Aspirations Gap Buleleng District Only: Intensity of Treatment Specification

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Post-Treatment Period ×	0.392	0.338	0.384	0.326	0.429	0.370	0.470	0.410
Intensity of Treatment	(0.589)	(0.549)	(0.584)	(0.542)	(0.582)	(0.535)	(0.580)	(0.535)
Intensity of Treatment	-0.368	-0.347	-0.368	-0.352				
	(0.212)	(0.237)	(0.216)	(0.235)				
Post-Treatment Period	0.883**	0.859*	0.875**	0.858**				
	(0.268)	(0.273)	(0.266)	(0.264)				
Observations	126	126	126	126	126	126	126	126
Mean DV	0.698	0.698	0.686	0.686	0.698	0.698	0.686	0.686
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

Notes: Only respondents aged 15 to 18 are included. Urban residence is the only control used. All regressions were clustered by sub-district. Fixed effects for wave and sub-district were included. The number of observations fall when controls are included due to imperfect response rates for covariates. Number of observations also fall when including fixed effects for wave and sub-district due to the removal of singleton observations. The sampling weights included were cross-sectional weights provided in all IFLS waves. Mean DV denotes the mean of the dependent variable for the sample. Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. For full results see Table H.18.

7 | Discussion and Conclusion

The results of this paper demonstrate that school voluntourism programs increase school attendance, are linked to declining child labour among primary and secondary students and increase the aspirations of those initially exposed. However, my findings contrast with those found in the ethnographic literature which emphasise the detrimental consequences of voluntourism for host communities. This highlights the need for data collection and further examination of voluntourism.

Furthermore, since economic literature on the effects of voluntourism is lacking, the scale of further research into this form of development aid is immense. The findings, data limitations and assumptions of this thesis can inform future research into school voluntourism programs and voluntourism more broadly.

The presence of mature aged students within the data prevents the analysis of the effect of school voluntourism programs on educational attainment. The effect of school voluntourism programs on primary school graduation, completion of the 7^{th} grade and secondary school graduation is unclear due to the presence of lagging and mature aged students in the data. The effects of these programs on educational attainment would complement evidence that they can increase school attendance. Therefore future research may focus on the effects of school voluntourism programs on primary and secondary graduation rates or even progression into tertiary education.

Another data constraint is the anonymity of primary schools attended by children in the sample and the schools that voluntourism programs operate within. While I could not control for individual-level characteristics among primary schools, these differences should be taken into consideration in future applications. The issue of anonymity also prevents the analysis of aspirational spillovers. In their paper Ross et al. (2019) examine aspirational spillover effects between children who are sponsored and those who are not. However, the anonymity of children, the primary schools they attend and the primary schools receiving voluntourists mean that the aspirations of children living nearby one another who do or do not attend a primary school with a voluntourism program could not be compared. An application such as this would be of interest in better understanding the effects of school voluntourism programs.

Future research may also consider heterogeneity in the voluntourists working in Indonesian primary schools. No information was available on voluntourists received by the voluntourism organisations considered in this thesis. Thus I assume that voluntourists working in primary schools are homogeneous. Future research could examine whether the effect of school voluntourism programs on outcomes for students vary depending on the origin country of voluntourists. It would also be of interest to see if effects are heterogeneous across the characteristics of voluntourists such as their gender, education, income or profession among other factors.

Finally, this thesis only focuses on school voluntourism programs within Indonesia. Thus the effects of school voluntourism programs found in this analysis are only applicable to Indonesian students. However, future research could determine whether this effect persists or varies in other countries with different social, cultural, political and developmental contexts. In addition, the programs offered by voluntourism organisations are not limited to education. Other program types include environmental conservation, rebuilding efforts following natural disaster and development of infrastructure. Therefore future research could expand on my analysis and examine other forms of voluntourism.

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Appendices

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B Data

Table B.1: Average Age of Mature Aged Primary Students Across Waves

Year	Average Age	Number of Observations
1993	13.439	840
1997	13.233	304
2000	13.439	221
2007	13.629	100
2014	13.358	61

Table B.2: Summary Statistics: 18 Year Olds

Variable	Mean	Observations
Lives In Treated Sub-District	0.018	1937
Male	0.450	1937
Urban	0.602	1937
Agricultural Households	0.320	1935
Years of Education of the Head of the Household	6.685	1730
Years of Education of the Head's Spouse	5.894	1749
Household Head is Female	0.136	1937
School Attendance	0.434	1908
Age Commenced Primary School	6.650	1819
Worked While Attending Primary School	0.052	1550
Worked While Attending Junior Secondary School	0.072	1433
Worked While Attending Senior Secondary School	0.102	1110
Completion of At Least One Year of Secondary	0.835	1166
Graduation from Primary School	0.960	1166
Aspirations Gap	0.898	1176

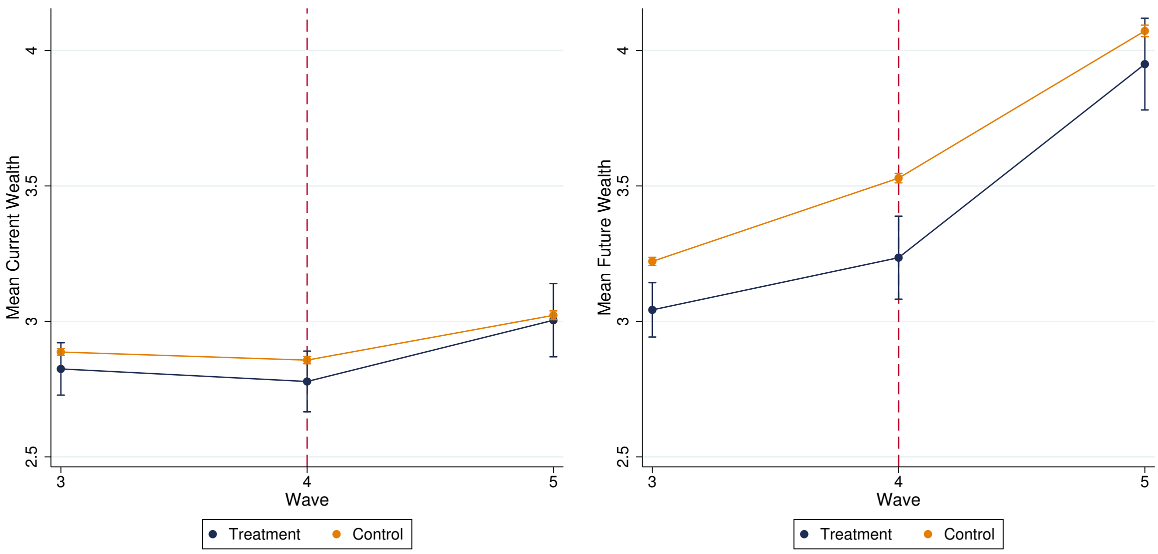
Notes: Mean values for working in junior secondary school was only considered for those who had 7 years of education or more i.e. they had reached junior secondary school. Similarly, mean values for working in senior secondary school was only considered for those who had 10 or more years of education i.e. they had reached senior secondary.

Table B.3: Effect of Sampling on Observations

Respondents	1993	1997	2000	2007	2014
Children					
Children (6 $\leq Age <$ 15)	4740	6701	4321	3726	3977
Total Sample of Children (Age < 15)	7367	10380	7301	6480	6806
Percentage of Total	64.34%	64.56%	59.18%	57.50%	58.43%
Adults					
Adults (15$\leq Age \leq$ 18)	385	2762	2089	1352	1413
Total Sample of Adults (15$\leq Age \leq$ 49)	8973	15138	12806	11255	11889
Percentage Captured	4.29%	18.25%	16.31%	12.01%	11.88%
All: Children and Teenagers					
Children and Adults (6$\leq Age \leq$ 18)	5125	9463	6410	5078	5390
Total Sample of Children and Adults	16340	25518	20107	17735	18695
Percentage Captured	31.23%	37.08%	31.88%	28.63%	28.83%

Note: That I am only considering two of the three types of respondents. The one group I am omitting here are Seniors (those aged 50 or older).

Figure B.1: Aspirations Gap Components Across Waves: Mean Current Wealth Perceptions and Mean Future Wealth Perceptions



Notes: Current wealth responses where provided following the question: 'Please imagine a six-step ladder where on the bottom (the first step) stand the poorest people, and on the highest step (the sixth step), stand the richest people. On which step are you today?'. Mean future wealth perceptions were provided following the question: 'On which step do you expect to find five years from now?'.

Table B.4: Response Rates Across Waves and Age Brackets for Outcome Variables

Outcome Variable	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5
School Attendance					
Aged 6-12	91.06%	91.50%	96.01%	99.81%	93.85%
Aged 13-18	95.80%	98.29%	99.20%	99.67%	99.59%
Aged 6-18	92.33%	94.61%	97.42%	99.75%	96.37%
Primary School Entry Age					
Aged 6-12	91.06%	10.14%	7.30%	91.75%	92.05%
Aged 13-18	72.96%	68.96%	70.32%	99.62%	99.23%
Aged 6-18	86.21%	37.08%	35.12%	95.24%	95.20%
Child worked while attending primary school					
Aged 6-12	90.97%	84.27%	9.62%	91.66%	92.23%
Aged 13-18	95.68%	66.81%	76.44%	99.55%	99.42%
Aged 6-18	92.24%	76.28%	39.11%	95.16%	95.38%
Child Labour Among Secondary Students					
Junior Secondary		97.20%	68.76%	99.86%	100%
Senior Secondary			99.41%	100%	100%
Primary School Graduation					
Aged 13-18	60.64%	32.14%	98.70%	98.84%	98.80%
Completion of 7th Grade					
Aged 13-18	60.63%	32.14%	98.70%	98.84%	98.80%
Secondary School Graduation					
Aged 18	0%	0%	98.40%	98.65%	98.55%
Aspirations Gap					
Aged 15-18			99.97%	99.97%	95.56%

Notes: Data on child labour among junior secondary students was unavailable in Wave 1. Data on child labour among senior secondary students was unavailable in Waves 1 and 2. The questions used to generate the aspirations gap were not asked in Waves 1 and 2.

C | Main Results

Table C.1: School Attendance: Binary Treatment Specification

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: 6-18								
Treated Sub-District ×	0.063***	0.056***	0.065***	0.058***	0.057***	0.053***	0.060***	0.056***
Post-Treatment Period	(0.016)	(0.013)	(0.016)	(0.013)	(0.015)	(0.014)	(0.014)	(0.013)
Treated Sub-District	0.009	0.026	0.011	0.027				
	(0.030)	(0.037)	(0.029)	(0.036)				
Post-Treatment Period	0.060***	0.038***	0.060***	0.037***				
	(0.007)	(0.007)	(0.007)	(0.007)				
Years of Education of the		0.012***		0.013***		0.009***		0.009***
Household Head's Spouse		(0.001)		(0.001)		(0.001)		(0.001)
At least one household		-0.007		-0.006		-0.001		-0.004
member works in agriculture		(0.008)		(0.008)		(0.007)		(0.008)
Constant	0.847***	0.787***	0.848***	0.785***	0.858***	0.810***	0.858***	0.809***
	(0.006)	(0.008)	(0.006)	(0.009)	(0.000)	(0.005)	(0.000)	(0.005)
Observations	30254	28386	30254	28386	30202	28327	30202	28327
Mean DV	0.858	0.860	0.858	0.860	0.858	0.860	0.858	0.860
Panel B: 6-12								
Treated Sub-District ×	0.050***	0.047**	0.048***	0.044**	0.040**	0.039**	0.037**	0.035*
Post-Treatment Period	(0.018)	(0.021)	(0.016)	(0.019)	(0.017)	(0.020)	(0.015)	(0.018)
Treated Sub-District	-0.024	-0.016	-0.025	-0.017				
	(0.018)	(0.022)	(0.016)	(0.021)				
Post-Treatment Period	0.010**	0.003	0.011***	0.006				
	(0.004)	(0.005)	(0.004)	(0.005)				
Age		0.005***		0.001		0.004***		0.002
		(0.001)		(0.002)		(0.001)		(0.002)
Years of Education of the		0.002***		0.002***		0.002***		0.002***
Household Head's Spouse		(0.001)		(0.001)		(0.001)		(0.001)
At least one household		-0.007		-0.009		-0.006		-0.011
member works in agriculture		(0.006)		(0.006)		(0.006)		(0.008)
Constant	0.964***	0.913***	0.966***	0.945***	0.966***	0.919***	0.968***	0.948***
	(0.003)	(0.014)	(0.003)	(0.018)	(0.000)	(0.013)	(0.000)	(0.017)
Observations	17077	16210	17077	16210	17017	16148	17017	16148
Mean DV	0.966	0.967	0.968	0.968	0.966	0.967	0.968	0.968
Panel C: 13-18								
Treated Sub-District ×	0.058***	0.033	0.053***	0.033	0.063***	0.036**	0.059***	0.034**
Post-Treatment Period	(0.015)	(0.021)	(0.015)	(0.024)	(0.015)	(0.015)	(0.015)	(0.016)
Treated Sub-District	0.070*	0.109**	0.081**	0.119**				
	(0.038)	(0.050)	(0.035)	(0.047)				
Post-Treatment Period	0.127***	0.087***	0.137***	0.091***				
	(0.013)	(0.013)	(0.014)	(0.014)				
Years of Education of the		0.025***		0.027***		0.015***		0.017***
Household Head's Spouse		(0.002)		(0.002)		(0.001)		(0.001)
At least one household		-0.013		-0.000		0.027**		0.035**
member works in agriculture		(0.015)		(0.015)		(0.013)		(0.014)
Constant	0.695***	0.567***	0.687***	0.544***	0.718***	0.622***	0.713***	0.603***
	(0.011)	(0.015)	(0.013)	(0.017)	(0.000)	(0.009)	(0.000)	(0.010)
Observations	13177	12176	13177	12176	13108	12096	13108	12096
Mean DV	0.718	0.718	0.711	0.711	0.719	0.719	0.713	0.713
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

Table C.2: School Attendance: Intensity of Treatment Specification

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Aged 6-18								
Post-Treatment Period × Intensity of Treatment	0.186***	0.159***	0.197***	0.170***	0.168***	0.151***	0.181***	0.163***
	(0.019)	(0.017)	(0.024)	(0.023)	(0.017)	(0.018)	(0.018)	(0.020)
Intensity of Treatment	-0.011	0.024	-0.006	0.027				
	(0.067)	(0.090)	(0.065)	(0.088)				
Post-Treatment Period	0.061***	0.038***	0.060***	0.037***				
	(0.007)	(0.007)	(0.007)	(0.007)				
Years of Education of the Household Head's Spouse		0.012***		0.013***		0.009***		0.009***
		(0.001)		(0.001)		(0.001)		(0.001)
At least one household member works in agriculture		-0.007		-0.005		-0.001		-0.004
		(0.008)		(0.008)		(0.007)		(0.008)
Constant	0.847***	0.787***	0.848***	0.785***	0.858***	0.810***	0.858***	0.809***
	(0.006)	(0.008)	(0.006)	(0.009)	(0.000)	(0.005)	(0.000)	(0.005)
Observations	30254	28386	30254	28386	30202	28327	30202	28327
Mean DV	0.858	0.860	0.858	0.860	0.858	0.860	0.858	0.860
Panel B: Aged 6-12								
Post-Treatment Period × Intensity of Treatment	0.159***	0.150***	0.152***	0.143***	0.133***	0.129***	0.126***	0.119***
	(0.015)	(0.022)	(0.013)	(0.020)	(0.020)	(0.025)	(0.019)	(0.026)
Intensity of Treatment	-0.086***	-0.069*	-0.086***	-0.071*				
	(0.027)	(0.040)	(0.023)	(0.037)				
Post-Treatment Period	0.010**	0.003	0.011***	0.006				
	(0.004)	(0.005)	(0.004)	(0.005)				
Age		0.005***		0.001		0.004***		0.002
		(0.001)		(0.002)		(0.001)		(0.002)
Years of Education of the Household Head's Spouse		0.002***		0.002***		0.002***		0.002***
		(0.001)		(0.001)		(0.001)		(0.001)
At least one household member works in agriculture		-0.007		-0.008		-0.006		-0.011
		(0.006)		(0.006)		(0.006)		(0.008)
Constant	0.964***	0.913***	0.966***	0.945***	0.966***	0.919***	0.968***	0.948***
	(0.003)	(0.014)	(0.003)	(0.018)	(0.000)	(0.013)	(0.000)	(0.017)
Observations	17077	16210	17077	16210	17017	16148	17017	16148
Mean DV	0.966	0.967	0.968	0.968	0.966	0.967	0.968	0.968
Panel C: Aged 13-18								
Post-Treatment Period × Intensity of Treatment	0.153***	0.061	0.146***	0.066	0.170***	0.089**	0.162***	0.083*
	(0.034)	(0.045)	(0.042)	(0.071)	(0.034)	(0.042)	(0.037)	(0.046)
Intensity of Treatment	0.139	0.226	0.170	0.255*				
	(0.110)	(0.153)	(0.104)	(0.147)				
Post-Treatment Period	0.127***	0.088***	0.137***	0.091***				
	(0.013)	(0.013)	(0.014)	(0.014)				
Years of Education of the Household Head's Spouse		0.024***		0.027***		0.015***		0.017***
		(0.002)		(0.002)		(0.001)		(0.001)
At least one household member works in agriculture		-0.012		-0.000		0.027**		0.035**
		(0.015)		(0.015)		(0.013)		(0.014)
Constant	0.695***	0.567***	0.687***	0.544***	0.718***	0.622***	0.713***	0.603***
	(0.011)	(0.015)	(0.013)	(0.017)	(0.000)	(0.009)	(0.000)	(0.010)
Observations	13177	12176	13177	12176	13108	12096	13108	12096
Mean DV	0.718	0.718	0.711	0.711	0.719	0.719	0.713	0.713
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

Table C.3: Primary School Entry Age: Binary Treatment Specification

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Aged 6-18								
Treated Sub-District ×	0.159**	0.193**	0.076	0.153	0.070	0.112	-0.021	0.056
Post-Treatment Period	(0.069)	(0.077)	(0.112)	(0.114)	(0.073)	(0.079)	(0.108)	(0.120)
Treated Sub-District	-0.258***	-0.332***	-0.290***	-0.370***				
	(0.043)	(0.047)	(0.055)	(0.062)				
Post-Treatment Period	-0.436***	-0.375***	-0.340***	-0.322***				
	(0.062)	(0.060)	(0.101)	(0.080)				
Years of Education of the		-0.046***		-0.050***		-0.034***		-0.039***
Household Head's Spouse		(0.008)		(0.010)		(0.010)		(0.013)
At least one household		0.011		0.043		-0.053		-0.031
member works in agriculture		(0.062)		(0.083)		(0.081)		(0.107)
Constant	6.635***	6.888***	6.658***	6.913***	6.522***	6.745***	6.573***	6.804***
	(0.042)	(0.074)	(0.047)	(0.094)	(0.000)	(0.067)	(0.000)	(0.086)
Observations	20418	18838	20418	18838	20357	18776	20357	18776
Mean DV	6.522	6.526	6.573	6.567	6.522	6.526	6.573	6.567
Panel B: Aged 6-12								
Treated Sub-District ×	0.257***	0.295***	0.237***	0.279***	0.193***	0.254***	0.175**	0.241***
Post-Treatment Period	(0.061)	(0.046)	(0.074)	(0.051)	(0.063)	(0.057)	(0.083)	(0.072)
Treated Sub-District	-0.181***	-0.240***	-0.181***	-0.230***				
	(0.051)	(0.047)	(0.062)	(0.051)				
Post-Treatment Period	-0.417***	-0.338***	-0.416***	-0.345***				
	(0.047)	(0.049)	(0.050)	(0.053)				
Age		0.035**		0.033*		0.024		0.025
		(0.017)		(0.017)		(0.017)		(0.017)
Years of Education of the		-0.030***		-0.027***		-0.019**		-0.010
Household Head's Spouse		(0.008)		(0.007)		(0.009)		(0.011)
At least one household		0.116*		0.167**		0.106		0.094*
member works in agriculture		(0.062)		(0.078)		(0.067)		(0.053)
Constant	6.440***	6.228***	6.462***	6.225***	6.314***	6.173***	6.347***	6.133***
	(0.044)	(0.173)	(0.046)	(0.154)	(0.000)	(0.173)	(0.000)	(0.144)
Observations	9673	8993	9673	8993	9614	8933	9614	8933
Mean DV	6.315	6.320	6.346	6.350	6.315	6.320	6.347	6.351
Panel C: Aged 13-18								
Treated Sub-District ×	0.016	0.062	-0.141	-0.008	-0.068	-0.008	-0.219	-0.089
Post-Treatment Period	(0.124)	(0.168)	(0.210)	(0.238)	(0.123)	(0.157)	(0.185)	(0.232)
Treated Sub-District	-0.338***	-0.432***	-0.392***	-0.512***				
	(0.065)	(0.075)	(0.079)	(0.102)				
Post-Treatment Period	-0.369***	-0.332***	-0.183	-0.226				
	(0.116)	(0.114)	(0.200)	(0.159)				
Years of Education of the		-0.059***		-0.071***		-0.048***		-0.065***
Household Head's Spouse		(0.013)		(0.018)		(0.016)		(0.022)
At least one household		-0.082		-0.067		-0.241		-0.213
member works in agriculture		(0.102)		(0.140)		(0.154)		(0.210)
Constant	6.791***	7.159***	6.820***	7.252***	6.710***	7.083***	6.782***	7.227***
	(0.062)	(0.124)	(0.072)	(0.171)	(0.000)	(0.114)	(0.000)	(0.156)
Observations	10745	9845	10745	9845	10671	9766	10671	9766
Mean DV	6.708	6.714	6.779	6.768	6.710	6.716	6.781	6.770
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

Table C.4: Primary School Entry Age: Intensity of Treatment Specification

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Aged 6-18								
Post-Treatment Period ×	0.453***	0.573***	0.232	0.487*	0.236	0.355**	0.021	0.252
Intensity of Treatment	(0.166)	(0.163)	(0.293)	(0.254)	(0.172)	(0.169)	(0.288)	(0.284)
Intensity of Treatment	-0.694***	-0.881***	-0.796***	-1.003***				
	(0.151)	(0.203)	(0.147)	(0.204)				
Post-Treatment Period	-0.436***	-0.376***	-0.341***	-0.322***				
	(0.062)	(0.060)	(0.101)	(0.080)				
Years of Education of the		-0.046***		-0.050***		-0.034***		-0.039***
Household Head's Spouse		(0.008)		(0.010)		(0.010)		(0.013)
At least one household		0.011		0.043		-0.053		-0.031
member works in agriculture		(0.062)		(0.083)		(0.081)		(0.107)
Constant	6.634***	6.887***	6.657***	6.912***	6.522***	6.745***	6.573***	6.804***
	(0.042)	(0.074)	(0.047)	(0.094)	(0.000)	(0.067)	(0.000)	(0.086)
Observations	20418	18838	20418	18838	20357	18776	20357	18776
Mean DV	6.522	6.526	6.573	6.567	6.522	6.526	6.573	6.567
Panel B: Aged 6-12								
Post-Treatment Period ×	0.766***	0.820***	0.743***	0.810***	0.583***	0.699***	0.574***	0.703***
Intensity of Treatment	(0.142)	(0.200)	(0.139)	(0.161)	(0.148)	(0.191)	(0.183)	(0.199)
Intensity of Treatment	-0.532***	-0.666***	-0.562***	-0.669***				
	(0.131)	(0.188)	(0.129)	(0.157)				
Post-Treatment Period	-0.417***	-0.338***	-0.416***	-0.345***				
	(0.047)	(0.049)	(0.050)	(0.053)				
Age		0.035**		0.032*		0.024		0.025
		(0.017)		(0.017)		(0.017)		(0.017)
Years of Education of the		-0.030***		-0.027***		-0.019**		-0.010
Household Head's Spouse		(0.008)		(0.007)		(0.009)		(0.011)
At least one household		0.116*		0.167**		0.107		0.094*
member works in agriculture		(0.062)		(0.077)		(0.067)		(0.053)
Constant	6.440***	6.228***	6.462***	6.225***	6.314***	6.173***	6.347***	6.134***
	(0.044)	(0.173)	(0.046)	(0.154)	(0.000)	(0.173)	(0.000)	(0.144)
Observations	9673	8993	9673	8993	9614	8933	9614	8933
Mean DV	6.315	6.320	6.346	6.350	6.315	6.320	6.347	6.351
Panel C: Aged 13-18								
Post-Treatment Period ×	0.097	0.308	-0.320	0.142	-0.111	0.099	-0.477	-0.052
Intensity of Treatment	(0.303)	(0.354)	(0.562)	(0.583)	(0.312)	(0.357)	(0.505)	(0.574)
Intensity of Treatment	-0.885***	-1.115***	-1.031***	-1.332***				
	(0.194)	(0.264)	(0.204)	(0.304)				
Post-Treatment Period	-0.369***	-0.333***	-0.183	-0.227				
	(0.116)	(0.113)	(0.200)	(0.159)				
Years of Education of the		-0.059***		-0.071***		-0.048***		-0.065***
Household Head's Spouse		(0.013)		(0.018)		(0.016)		(0.022)
At least one household		-0.082		-0.067		-0.241		-0.213
member works in agriculture		(0.102)		(0.140)		(0.154)		(0.210)
Constant	6.790***	7.158***	6.820***	7.251***	6.710***	7.083***	6.782***	7.227***
	(0.062)	(0.123)	(0.072)	(0.171)	(0.000)	(0.114)	(0.000)	(0.156)
Observations	10745	9845	10745	9845	10671	9766	10671	9766
Mean DV	6.708	6.714	6.779	6.768	6.710	6.716	6.781	6.770
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

Table C.5: Child Labour Among Primary School Students: Binary Treatment Specification

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Aged 6-18								
Treated Sub-District ×	-0.055***	-0.061***	-0.057***	-0.061***	-0.052***	-0.058***	-0.053***	-0.057***
Post-Treatment Period	(0.004)	(0.014)	(0.004)	(0.013)	(0.005)	(0.016)	(0.004)	(0.015)
Treated Sub-District	0.049***	0.043***	0.054***	0.049***				
	(0.004)	(0.006)	(0.003)	(0.006)				
Post-Treatment Period	-0.013***	-0.010**	-0.013***	-0.012***				
	(0.004)	(0.004)	(0.004)	(0.004)				
Years of Education of the		-0.001*		-0.001		-0.001		-0.000
Household Head's Spouse		(0.001)		(0.001)		(0.001)		(0.001)
At least one household		0.016***		0.013**		0.004		0.003
member works in agriculture		(0.005)		(0.005)		(0.006)		(0.006)
Constant	0.038***	0.038***	0.036***	0.036***	0.036***	0.038***	0.034***	0.035***
	(0.003)	(0.005)	(0.003)	(0.005)	(0.000)	(0.004)	(0.000)	(0.004)
Observations	24626	22977	24626	22977	24565	22916	24565	22916
Mean DV	0.036	0.036	0.034	0.033	0.036	0.036	0.034	0.034
Panel B: Aged 6-12								
Treated Sub-District ×	-0.029**	-0.021***	-0.030**	-0.021***	-0.031***	-0.021***	-0.033***	-0.022***
Post-Treatment Period	(0.011)	(0.006)	(0.012)	(0.007)	(0.011)	(0.006)	(0.012)	(0.007)
Treated Sub-District	0.008	0.001	0.011	0.004				
	(0.011)	(0.005)	(0.012)	(0.006)				
Post-Treatment Period	-0.006	-0.006	-0.005	-0.006				
	(0.004)	(0.005)	(0.004)	(0.005)				
Age		0.006***		0.005***		0.005***		0.004***
		(0.001)		(0.001)		(0.001)		(0.001)
Years of Education of the		0.000		0.001		-0.000		0.000
Household Head's Spouse		(0.001)		(0.001)		(0.001)		(0.001)
At least one household		0.007		0.007		-0.001		0.002
member works in agriculture		(0.005)		(0.005)		(0.005)		(0.004)
Constant	0.026***	-0.030***	0.024***	-0.027***	0.025***	-0.019**	0.023***	-0.014*
	(0.003)	(0.009)	(0.003)	(0.008)	(0.000)	(0.010)	(0.000)	(0.008)
Observations	13511	12770	13511	12770	13450	12711	13450	12711
Mean DV	0.025	0.025	0.023	0.022	0.025	0.025	0.023	0.022
Panel C: Aged 13-18								
Treated Sub-District ×	-0.065***	-0.092***	-0.066***	-0.087***	-0.063***	-0.085**	-0.062***	-0.077**
Post-Treatment Period	(0.015)	(0.032)	(0.012)	(0.030)	(0.015)	(0.037)	(0.013)	(0.035)
Treated Sub-District	0.084***	0.079***	0.089***	0.086***				
	(0.010)	(0.010)	(0.006)	(0.008)				
Post-Treatment Period	-0.021***	-0.017***	-0.023***	-0.020***				
	(0.006)	(0.006)	(0.006)	(0.007)				
Years of Education of the		-0.002***		-0.003***		-0.001		-0.001
Household Head's Spouse		(0.001)		(0.001)		(0.001)		(0.001)
At least one household		0.026***		0.019**		0.008		-0.001
member works in agriculture		(0.008)		(0.009)		(0.011)		(0.011)
Constant	0.052***	0.057***	0.051***	0.060***	0.049***	0.052***	0.047***	0.055***
	(0.004)	(0.008)	(0.005)	(0.009)	(0.000)	(0.007)	(0.000)	(0.006)
Observations	11115	10207	11115	10207	11046	10136	11046	10136
Mean DV	0.049	0.050	0.047	0.048	0.049	0.050	0.047	0.048
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

Table C.6: Child Labour Among Primary School Student: Intensity of Treatment Specification

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Aged 6-18								
Post-Treatment Period ×	-0.146***	-0.177***	-0.149***	-0.177***	-0.141***	-0.169***	-0.146***	-0.170***
Intensity of Treatment	(0.026)	(0.011)	(0.029)	(0.011)	(0.025)	(0.013)	(0.031)	(0.014)
Intensity of Treatment	0.133***	0.120***	0.143***	0.134***				
	(0.020)	(0.013)	(0.025)	(0.017)				
Post-Treatment Period	-0.013***	-0.010**	-0.013***	-0.012***				
	(0.004)	(0.004)	(0.004)	(0.004)				
Years of Education of the		-0.001*		-0.001		-0.001		-0.000
Household Head's Spouse		(0.001)		(0.001)		(0.001)		(0.001)
At least one household		0.016***		0.013**		0.004		0.003
member works in agriculture		(0.005)		(0.005)		(0.006)		(0.006)
Constant	0.038***	0.038***	0.036***	0.036***	0.036***	0.038***	0.034***	0.035***
	(0.003)	(0.005)	(0.003)	(0.005)	(0.000)	(0.004)	(0.000)	(0.004)
Observations	24626	22977	24626	22977	24565	22916	24565	22916
Mean DV	0.036	0.036	0.034	0.033	0.036	0.036	0.034	0.034
Panel B: Aged 6-12								
Post-Treatment Period ×	-0.066	-0.051**	-0.069	-0.051*	-0.071	-0.051**	-0.076	-0.052*
Intensity of Treatment	(0.042)	(0.023)	(0.047)	(0.028)	(0.045)	(0.024)	(0.051)	(0.028)
Intensity of Treatment	0.009	-0.004	0.015	0.002				
	(0.029)	(0.012)	(0.034)	(0.017)				
Post-Treatment Period	-0.006	-0.006	-0.005	-0.006				
	(0.004)	(0.005)	(0.004)	(0.005)				
Age		0.006***		0.005***		0.005***		0.004***
		(0.001)		(0.001)		(0.001)		(0.001)
Years of Education of the		0.000		0.001		-0.000		0.000
Household Head's Spouse		(0.001)		(0.001)		(0.001)		(0.001)
At least one household		0.007		0.007		-0.001		0.002
member works in agriculture		(0.005)		(0.005)		(0.005)		(0.004)
Constant	0.026***	-0.030***	0.024***	-0.027***	0.025***	-0.019**	0.023***	-0.014*
	(0.003)	(0.009)	(0.003)	(0.008)	(0.000)	(0.010)	(0.000)	(0.008)
Observations	13511	12770	13511	12770	13450	12711	13450	12711
Mean DV	0.025	0.025	0.023	0.022	0.025	0.025	0.023	0.022
Panel C: Aged 13-18								
Post-Treatment Period ×	-0.185***	-0.272***	-0.181***	-0.257***	-0.176***	-0.257***	-0.173***	-0.240***
Intensity of Treatment	(0.015)	(0.026)	(0.017)	(0.028)	(0.016)	(0.039)	(0.020)	(0.041)
Intensity of Treatment	0.226***	0.214***	0.234***	0.227***				
	(0.023)	(0.022)	(0.032)	(0.030)				
Post-Treatment Period	-0.021***	-0.017***	-0.023***	-0.020***				
	(0.006)	(0.006)	(0.006)	(0.007)				
Years of Education of the		-0.002***		-0.003***		-0.001		-0.001
Household Head's Spouse		(0.001)		(0.001)		(0.001)		(0.001)
At least one household		0.026***		0.019**		0.008		-0.001
member works in agriculture		(0.008)		(0.009)		(0.011)		(0.011)
Constant	0.052***	0.057***	0.051***	0.060***	0.049***	0.052***	0.047***	0.055***
	(0.004)	(0.008)	(0.005)	(0.009)	(0.000)	(0.007)	(0.000)	(0.006)
Observations	11115	10207	11115	10207	11046	10136	11046	10136
Mean DV	0.049	0.050	0.047	0.048	0.049	0.050	0.047	0.048
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

Table C.7: Child Labour Among Secondary School Students: Binary Treatment Specification

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Junior Secondary								
Treated Sub-District ×	-0.089*	-0.113***	-0.096*	-0.125***	-0.067	-0.081***	-0.078	-0.099***
Post-Treatment Period	(0.051)	(0.036)	(0.057)	(0.042)	(0.051)	(0.031)	(0.057)	(0.038)
Treated Sub-District	0.105**	0.102**	0.120**	0.125**				
	(0.044)	(0.043)	(0.052)	(0.052)				
Post-Treatment Period	-0.010	-0.004	-0.016*	-0.009				
	(0.008)	(0.009)	(0.009)	(0.010)				
Years of Education of the		-0.002*		-0.002*		-0.002*		-0.002
Household Head		(0.001)		(0.001)		(0.001)		(0.001)
Years of Education of the		-0.004***		-0.003**		-0.003*		-0.002
Household Head's Spouse		(0.001)		(0.001)		(0.001)		(0.001)
At least one household		0.022**		0.022*		-0.001		0.005
member works in agriculture		(0.011)		(0.011)		(0.010)		(0.013)
Constant	0.073***	0.112***	0.069***	0.100***	0.072***	0.112***	0.065***	0.095***
	(0.006)	(0.012)	(0.005)	(0.012)	(0.000)	(0.009)	(0.000)	(0.010)
Observations	6051	4778	6051	4778	5964	4697	5964	4697
Mean DV	0.071	0.074	0.064	0.066	0.072	0.075	0.065	0.067
Panel B: Senior Secondary								
Treated Sub-District ×	-0.202***	-0.246***	-0.212***	-0.274***	-0.193***	-0.244***	-0.208***	-0.276***
Post-Treatment Period	(0.019)	(0.019)	(0.018)	(0.023)	(0.023)	(0.024)	(0.020)	(0.027)
Treated Sub-District	0.071***	0.094***	0.083***	0.119***				
	(0.014)	(0.015)	(0.011)	(0.022)				
Post-Treatment Period	0.035**	0.034*	0.032*	0.034*				
	(0.017)	(0.019)	(0.017)	(0.020)				
At least one household		0.032*		0.044**		0.040*		0.051*
member works in agriculture		(0.019)		(0.021)		(0.024)		(0.027)
Years of Education of the		-0.002		-0.001		-0.002		-0.000
Household Head's Spouse		(0.002)		(0.002)		(0.002)		(0.002)
Constant	0.095***	0.105***	0.096***	0.091***	0.111***	0.112***	0.109***	0.091***
	(0.010)	(0.018)	(0.011)	(0.019)	(0.000)	(0.016)	(0.000)	(0.017)
Observations	1904	1663	1904	1663	1819	1578	1819	1578
Mean DV	0.108	0.108	0.107	0.105	0.109	0.107	0.109	0.105
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

Table C.8: Child Labour Among Secondary School Students: Intensity of Treatment Specification

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Junior Secondary								
Post-Treatment Period ×	-0.176	-0.255*	-0.186	-0.280*	-0.114	-0.172*	-0.137	-0.212*
Intensity of Treatment	(0.156)	(0.145)	(0.167)	(0.158)	(0.125)	(0.088)	(0.149)	(0.115)
Intensity of Treatment	0.225	0.219	0.252	0.267				
	(0.150)	(0.154)	(0.167)	(0.177)				
Post-Treatment Period	-0.011	-0.004	-0.016*	-0.010				
	(0.008)	(0.009)	(0.009)	(0.010)				
Years of Education of the		-0.002*		-0.002*		-0.002*		-0.002
Household Head		(0.001)		(0.001)		(0.001)		(0.001)
Years of Education of the		-0.004***		-0.003**		-0.003*		-0.002
Household Head's Spouse		(0.001)		(0.001)		(0.001)		(0.001)
At least one household		0.022**		0.022*		-0.001		0.005
member works in agriculture		(0.011)		(0.011)		(0.010)		(0.013)
Constant	0.074***	0.113***	0.069***	0.101***	0.072***	0.112***	0.065***	0.095***
	(0.006)	(0.012)	(0.005)	(0.012)	(0.000)	(0.009)	(0.000)	(0.010)
Observations	6051	4778	6051	4778	5964	4697	5964	4697
Mean DV	0.071	0.074	0.064	0.066	0.072	0.075	0.065	0.067
Panel B: Senior Secondary								
Post-Treatment Period ×	-0.495***	-0.626***	-0.532***	-0.717***	-0.471***	-0.611***	-0.522***	-0.719***
Intensity of Treatment	(0.104)	(0.115)	(0.097)	(0.108)	(0.103)	(0.118)	(0.099)	(0.111)
Intensity of Treatment	0.172***	0.256***	0.208***	0.329***				
	(0.057)	(0.060)	(0.045)	(0.048)				
Post-Treatment Period	0.035**	0.034*	0.032*	0.034*				
	(0.017)	(0.019)	(0.017)	(0.020)				
At least one household		0.032*		0.044**		0.039		0.051*
member works in agriculture		(0.019)		(0.021)		(0.024)		(0.027)
Years of Education of the		-0.002		-0.001		-0.002		-0.000
Household Head's Spouse		(0.002)		(0.002)		(0.002)		(0.002)
Constant	0.096***	0.105***	0.096***	0.091***	0.110***	0.112***	0.109***	0.091***
	(0.010)	(0.018)	(0.011)	(0.019)	(0.000)	(0.016)	(0.000)	(0.017)
Observations	1904	1663	1904	1663	1819	1578	1819	1578
Mean DV	0.108	0.108	0.107	0.105	0.109	0.107	0.109	0.105
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

Table C.9: Primary School Graduation: Binary Treatment Specification

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Treated Sub-District ×	-0.034*	-0.040	-0.016	-0.021	-0.017	-0.027	-0.014	-0.025
Post-Treatment Period	(0.020)	(0.032)	(0.025)	(0.040)	(0.022)	(0.026)	(0.026)	(0.029)
Treated Sub-District	0.075***	0.104***	0.059**	0.090***				
	(0.020)	(0.020)	(0.026)	(0.024)				
Post-Treatment Period	0.131***	0.112***	0.121***	0.100***				
	(0.008)	(0.009)	(0.008)	(0.008)				
Years of Education of the		0.013***		0.015***		0.006***		0.006***
Household Head's Spouse		(0.001)		(0.002)		(0.001)		(0.001)
At least one household		-0.020		-0.018		0.012		0.018
member works in agriculture		(0.015)		(0.016)		(0.011)		(0.013)
Constant	0.828***	0.758***	0.837***	0.755***	0.860***	0.812***	0.865***	0.817***
	(0.008)	(0.012)	(0.009)	(0.015)	(0.000)	(0.007)	(0.000)	(0.009)
Observations	9596	8771	9596	8771	9534	8709	9534	8709
Mean DV	0.860	0.855	0.865	0.860	0.860	0.854	0.865	0.859
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

Note: Only those aged between 13 and 18 were considered in these regressions.

Table C.10: Primary School Graduation: Intensity of Treatment Specification

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Post-Treatment Period ×	-0.117***	-0.150***	-0.071	-0.103	-0.067*	-0.097**	-0.066	-0.098*
Intensity of Treatment	(0.028)	(0.043)	(0.046)	(0.073)	(0.038)	(0.042)	(0.049)	(0.052)
Intensity of Treatment	0.221***	0.296***	0.181***	0.260***				
	(0.021)	(0.034)	(0.032)	(0.033)				
Post-Treatment Period	0.131***	0.112***	0.121***	0.100***				
	(0.008)	(0.009)	(0.008)	(0.008)				
Years of Education of the		0.013***		0.015***		0.006***		0.006***
Household Head's Spouse		(0.001)		(0.002)		(0.001)		(0.001)
At least one household		-0.021		-0.018		0.012		0.018
member works in agriculture		(0.015)		(0.016)		(0.011)		(0.013)
Constant	0.828***	0.759***	0.837***	0.756***	0.860***	0.812***	0.865***	0.817***
	(0.008)	(0.012)	(0.009)	(0.015)	(0.000)	(0.007)	(0.000)	(0.009)
Observations	9596	8771	9596	8771	9534	8709	9534	8709
Mean DV	0.860	0.855	0.865	0.860	0.860	0.854	0.865	0.859
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

Note: Only those aged between 13 and 18 were considered in these regressions.

Table C.11: Completion of At Least One Year of Secondary School: Binary Specification

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Treated Sub-District ×	-0.032	-0.052	-0.032	-0.052	0.002	-0.020	-0.014	-0.041
Post-Treatment Period	(0.067)	(0.058)	(0.068)	(0.058)	(0.067)	(0.073)	(0.070)	(0.077)
Treated Sub-District	0.073***	0.125***	0.062**	0.117***				
	(0.028)	(0.038)	(0.026)	(0.037)				
Post-Treatment Period	0.280***	0.239***	0.278***	0.234***				
	(0.013)	(0.013)	(0.015)	(0.014)				
Years of Education of the		0.028***		0.031***		0.016***		0.016***
Household Head's Spouse		(0.002)		(0.002)		(0.001)		(0.002)
At least one household		-0.044**		-0.038*		0.002		0.010
member works in agriculture		(0.019)		(0.021)		(0.016)		(0.017)
Constant	0.629***	0.486***	0.629***	0.466***	0.695***	0.592***	0.694***	0.584***
	(0.012)	(0.017)	(0.015)	(0.020)	(0.000)	(0.010)	(0.000)	(0.012)
Observations	9596	8771	9596	8771	9534	8709	9534	8709
Mean DV	0.696	0.688	0.694	0.686	0.695	0.688	0.694	0.685
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

Table C.12: Completion of At Least One Year of Secondary School: Intensity of Treatment Specification

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Post-Treatment Period ×	-0.011	-0.078	-0.002	-0.070	0.083	0.033	0.046	-0.016
Intensity of Treatment	(0.152)	(0.154)	(0.156)	(0.148)	(0.130)	(0.149)	(0.151)	(0.179)
Intensity of Treatment	0.160*	0.288**	0.137*	0.267**				
	(0.094)	(0.144)	(0.081)	(0.133)				
Post-Treatment Period	0.279***	0.239***	0.278***	0.234***				
	(0.013)	(0.013)	(0.014)	(0.014)				
Years of Education of the		0.028***		0.031***		0.016***		0.016***
Household Head's Spouse		(0.002)		(0.002)		(0.001)		(0.002)
At least one household		-0.044**		-0.038*		0.002		0.010
member works in agriculture		(0.019)		(0.021)		(0.016)		(0.017)
Constant	0.629***	0.487***	0.630***	0.467***	0.695***	0.592***	0.693***	0.584***
	(0.012)	(0.017)	(0.015)	(0.020)	(0.000)	(0.010)	(0.000)	(0.012)
Observations	9596	8771	9596	8771	9534	8709	9534	8709
Mean DV	0.696	0.688	0.694	0.686	0.695	0.688	0.694	0.685
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

Table C.13: Secondary School Graduation: Binary Treatment Specification

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Treated Sub-District ×	-0.238***	-0.448***	-0.276***	-0.464***	-0.294***	-0.354***	-0.332***	-0.346***
Post-Treatment Period	(0.053)	(0.063)	(0.054)	(0.074)	(0.040)	(0.046)	(0.038)	(0.047)
Treated Sub-District	-0.011	-0.018	0.050	0.025				
	(0.043)	(0.051)	(0.045)	(0.065)				
Post-Treatment Period	0.153***	0.090**	0.138***	0.072*				
	(0.036)	(0.040)	(0.036)	(0.038)				
Years of Education of the		0.033***		0.034***		0.028***		0.029***
Household Head's Spouse		(0.004)		(0.004)		(0.005)		(0.006)
At least one household		-0.054		-0.064*		0.014		-0.018
member works in agriculture		(0.035)		(0.035)		(0.048)		(0.047)
Constant	0.296***	0.107***	0.280***	0.093***	0.333***	0.139***	0.314***	0.129***
	(0.019)	(0.031)	(0.020)	(0.031)	(0.000)	(0.038)	(0.000)	(0.041)
Observations	1166	1010	1166	1010	1084	930	1084	930
Mean DV	0.335	0.316	0.316	0.297	0.332	0.312	0.313	0.294
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

Table C.14: Secondary School Graduation: Intensity of Treatment Specification

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Post-Treatment Period ×	-0.565***	-0.915***	-0.667***	-0.953***	-0.647***	-0.779***	-0.730***	-0.762***
Intensity of Treatment	(0.112)	(0.133)	(0.098)	(0.176)	(0.089)	(0.101)	(0.083)	(0.103)
Intensity of Treatment	0.017	-0.112	0.170**	-0.013				
	(0.090)	(0.106)	(0.075)	(0.157)				
Post-Treatment Period	0.153***	0.089**	0.138***	0.072*				
	(0.036)	(0.039)	(0.036)	(0.038)				
Years of Education of the		0.033***		0.034***		0.028***		0.029***
Household Head's Spouse		(0.004)		(0.004)		(0.005)		(0.006)
At least one household		-0.054		-0.064*		0.014		-0.018
member works in agriculture		(0.035)		(0.035)		(0.048)		(0.047)
Constant	0.296***	0.107***	0.280***	0.093***	0.333***	0.139***	0.314***	0.129***
	(0.019)	(0.031)	(0.020)	(0.031)	(0.000)	(0.038)	(0.000)	(0.041)
Observations	1166	1010	1166	1010	1084	930	1084	930
Mean DV	0.335	0.316	0.316	0.297	0.332	0.312	0.313	0.294
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

Table C.15: Aspirations Gap: Binary Treatment Specification

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Treated Sub-District ×	-0.009	0.131	-0.013	0.115	0.007	0.142	0.007	0.127
Post-Treatment Period	(0.174)	(0.131)	(0.181)	(0.137)	(0.192)	(0.154)	(0.199)	(0.158)
Treated Sub-District	-0.179***	-0.171***	-0.191***	-0.195***				
	(0.059)	(0.059)	(0.066)	(0.068)				
Post-Treatment Period	0.860***	0.852***	0.835***	0.838***				
	(0.034)	(0.036)	(0.036)	(0.039)				
Years of Education of the		0.005		0.003		0.002		0.001
Household Head's Spouse		(0.003)		(0.003)		(0.004)		(0.004)
At least one household		-0.074***		-0.052*		-0.029		-0.019
member works in agriculture		(0.027)		(0.030)		(0.030)		(0.036)
Constant	0.528***	0.523***	0.549***	0.547***	0.767***	0.743***	0.784***	0.760***
	(0.016)	(0.031)	(0.019)	(0.032)	(0.001)	(0.026)	(0.000)	(0.029)
Observations	4642	4121	4642	4121	4558	4049	4558	4049
Mean DV	0.767	0.744	0.782	0.760	0.767	0.744	0.784	0.762
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

Table C.16: Aspirations Gap: Intensity of Treatment Specification

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Post-Treatment Period ×	0.187	0.494**	0.166	0.453**	0.231	0.522**	0.245	0.499*
Intensity of Treatment	(0.320)	(0.193)	(0.369)	(0.225)	(0.358)	(0.235)	(0.393)	(0.262)
Intensity of Treatment	-0.534***	-0.520***	-0.560***	-0.580***				
	(0.054)	(0.061)	(0.062)	(0.070)				
Post-Treatment Period	0.859***	0.852***	0.834***	0.838***				
	(0.034)	(0.036)	(0.036)	(0.039)				
Years of Education of the		0.005		0.003		0.002		0.001
Household Head's Spouse		(0.003)		(0.003)		(0.004)		(0.004)
At least one household		-0.074***		-0.052*		-0.029		-0.019
member works in agriculture		(0.027)		(0.030)		(0.030)		(0.036)
Constant	0.528***	0.523***	0.549***	0.547***	0.767***	0.743***	0.784***	0.760***
	(0.016)	(0.031)	(0.019)	(0.032)	(0.001)	(0.026)	(0.000)	(0.029)
Observations	4642	4121	4642	4121	4558	4049	4558	4049
Mean DV	0.767	0.744	0.782	0.760	0.767	0.744	0.784	0.762
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

Table C.17: Primary School Graduation Omitting 13 Year Olds: Binary Treatment Specification

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Treated Sub-District ×	-0.040***	-0.044***	-0.032***	-0.040***	-0.006	-0.008	-0.009	-0.013
Post-Treatment Period	(0.008)	(0.010)	(0.008)	(0.014)	(0.007)	(0.009)	(0.008)	(0.011)
Treated Sub-District	0.075***	0.100***	0.069***	0.094***				
	(0.008)	(0.012)	(0.009)	(0.013)				
Post-Treatment Period	0.089***	0.073***	0.080***	0.063***				
	(0.008)	(0.008)	(0.008)	(0.008)				
Years of Education of the		0.010***		0.011***		0.006***		0.006***
Household Head's Spouse		(0.001)		(0.002)		(0.001)		(0.001)
At least one household		-0.027*		-0.020		-0.002		0.005
member works in agriculture		(0.014)		(0.016)		(0.012)		(0.013)
Constant	0.876***	0.829***	0.884***	0.825***	0.899***	0.862***	0.903***	0.865***
	(0.007)	(0.012)	(0.008)	(0.015)	(0.000)	(0.007)	(0.000)	(0.009)
Observations	7229	6531	7229	6531	7154	6459	7154	6459
Mean DV	0.899	0.896	0.904	0.901	0.899	0.895	0.903	0.899

Notes: Only those aged between 14 to 18 were considered in these results. Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table C.18: Primary School Graduation Omitting 13 Year Olds: Intensity of Treatment Specification

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Post-Treatment Period ×	-0.111***	-0.137***	-0.091***	-0.123***	-0.013	-0.020	-0.023	-0.035
Intensity of Treatment	(0.037)	(0.036)	(0.024)	(0.026)	(0.019)	(0.022)	(0.021)	(0.028)
Intensity of Treatment	0.199***	0.264***	0.183***	0.249***				
	(0.047)	(0.070)	(0.036)	(0.061)				
Post-Treatment Period	0.089***	0.073***	0.080***	0.063***				
	(0.008)	(0.008)	(0.008)	(0.008)				
Years of Education of the		0.010***		0.011***		0.006***		0.006***
Household Head's Spouse		(0.001)		(0.002)		(0.001)		(0.001)
At least one household		-0.028*		-0.020		-0.002		0.005
member works in agriculture		(0.014)		(0.016)		(0.012)		(0.013)
Constant	0.876***	0.829***	0.884***	0.825***	0.899***	0.862***	0.903***	0.865***
	(0.007)	(0.012)	(0.008)	(0.015)	(0.000)	(0.007)	(0.000)	(0.009)
Observations	7229	6531	7229	6531	7154	6459	7154	6459
Mean DV	0.899	0.896	0.904	0.901	0.899	0.895	0.903	0.899

Notes: Only those aged between 14 to 18 were considered in these results. Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table C.19: Completion of At Least One Year of Secondary Omitting 13 year Olds: Binary Treatment Specification

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Treated Sub-District ×	-0.051	-0.078	-0.059	-0.092	0.005	-0.013	-0.016	-0.042
Post-Treatment Period	(0.063)	(0.066)	(0.064)	(0.068)	(0.066)	(0.078)	(0.068)	(0.083)
Treated Sub-District	0.097***	0.145***	0.100***	0.150***				
	(0.035)	(0.047)	(0.032)	(0.048)				
Post-Treatment Period	0.201***	0.163***	0.197***	0.157***				
	(0.012)	(0.012)	(0.014)	(0.014)				
Years of Education of the		0.025***		0.029***		0.015***		0.016***
Household Head's Spouse		(0.002)		(0.002)		(0.002)		(0.002)
At least one household		-0.038**		-0.030		0.007		0.017
member works in agriculture		(0.019)		(0.022)		(0.017)		(0.018)
Constant	0.720***	0.592***	0.721***	0.571***	0.771***	0.672***	0.770***	0.665***
	(0.013)	(0.019)	(0.015)	(0.023)	(0.000)	(0.011)	(0.000)	(0.013)
Observations	7229	6531	7229	6531	7154	6459	7154	6459
Mean DV	0.772	0.768	0.771	0.766	0.771	0.767	0.770	0.765
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

Notes: Only those aged between 14 and 18 were included in these regressions. All regressions were clustered by sub-district. Fixed effects for wave and sub-district were included. The number of observations fall when controls are included due to imperfect response rates for covariates. Number of observations also fall when including fixed effects for wave and sub-district due to the removal of singleton observations. The sampling weights included were cross-sectional weights provided in all IFLS waves. Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table C.20: Completion of At Least One Year of Secondary Omitting 13 year Olds: Intensity of Treatment Specification

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Post-Treatment Period ×	-0.072	-0.146	-0.086	-0.173	0.084	0.053	0.035	-0.014
Intensity of Treatment	(0.161)	(0.195)	(0.160)	(0.195)	(0.120)	(0.148)	(0.141)	(0.181)
Intensity of Treatment	0.219*	0.332*	0.228**	0.344*				
	(0.126)	(0.186)	(0.116)	(0.181)				
Post-Treatment Period	0.200***	0.163***	0.197***	0.157***				
	(0.012)	(0.012)	(0.014)	(0.014)				
Years of Education of the		0.025***		0.029***		0.015***		0.016***
Household Head's Spouse		(0.002)		(0.002)		(0.002)		(0.002)
At least one household		-0.038**		-0.030		0.007		0.017
member works in agriculture		(0.019)		(0.022)		(0.017)		(0.018)
Constant	0.720***	0.593***	0.721***	0.572***	0.771***	0.672***	0.770***	0.665***
	(0.013)	(0.019)	(0.015)	(0.023)	(0.000)	(0.011)	(0.000)	(0.013)
Observations	7229	6531	7229	6531	7154	6459	7154	6459
Mean DV	0.772	0.768	0.771	0.766	0.771	0.767	0.770	0.765
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

Notes: Only those aged between 14 and 18 were included in these regressions. All regressions were clustered by sub-district. Fixed effects for wave and sub-district were included. The number of observations fall when controls are included due to imperfect response rates for covariates. Number of observations also fall when including fixed effects for wave and sub-district due to the removal of singleton observations. The sampling weights included were cross-sectional weights provided in all IFLS waves. Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table C.21: Binary Treatment Specification with Interaction of Treatment and Male Dummy: School Attendance, Primary School Starting Age and Child Labour Among Primary School Students

	School Attendance			Age Start Primary School			Child Worked During Primary		
	Aged 6-18	Aged 6-12	Aged 13-18	Aged 6-18	Aged 6-12	Aged 13-18	Aged 6-18	Aged 6-12	Aged 13-18
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Treated Sub-District in	0.043	0.015***	0.092	-0.235***	-0.142*	-0.199	-0.046**	-0.000	-0.128
Post-Treatment Period × Male	(0.047)	(0.005)	(0.092)	(0.073)	(0.082)	(0.233)	(0.023)	(0.004)	(0.092)
Treated Sub-District in	0.030	0.027*	-0.031	0.174	0.309***	-0.000	-0.031	-0.022***	0.003
Post-Treatment Period	(0.018)	(0.017)	(0.058)	(0.116)	(0.102)	(0.181)	(0.027)	(0.007)	(0.097)
Male	0.011*	-0.013***	0.042***	0.249***	0.127**	0.375***	0.011***	0.002	0.021***
	(0.006)	(0.004)	(0.011)	(0.068)	(0.055)	(0.126)	(0.004)	(0.003)	(0.007)
Years of Education of the	0.009***	0.002***	0.017***	-0.038***	-0.010	-0.063***	-0.000	0.000	-0.001
Household Head's Spouse	(0.001)	(0.001)	(0.001)	(0.013)	(0.011)	(0.022)	(0.001)	(0.001)	(0.001)
At least one household	-0.004	-0.010	0.035**	-0.035	0.093*	-0.223	0.002	0.002	-0.001
member works in agriculture	(0.008)	(0.008)	(0.014)	(0.107)	(0.053)	(0.209)	(0.006)	(0.004)	(0.011)
Age		0.002			0.026			0.004***	
		(0.002)			(0.017)			(0.001)	
Constant	0.804***	0.955***	0.581***	6.675***	6.067***	7.030***	0.029***	-0.015*	0.043***
	(0.006)	(0.018)	(0.011)	(0.097)	(0.152)	(0.170)	(0.004)	(0.008)	(0.006)
Observations	28327	16148	12096	18776	8933	9766	22916	12711	10136
Mean DV	0.860	0.968	0.713	6.567	6.351	6.770	0.034	0.022	0.048

Notes: All regressions included clustering, fixed effects and sampling weights. All regressions were clustered by sub-district. Fixed effects for wave and sub-district were included. The sampling weights included were cross-sectional weights provided in all IFLS waves. Standard errors in parentheses.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table C.22: Binary Treatment Specification with Interaction of Treatment and Male Dummy: Child Labour Among Secondary Students, Primary School Graduation, Completion of 7^{th} Grade and Aspirations

	Child Worked During Junior Secondary	Child Worked During Senior Secondary	Primary School Graduation		Completion of One Year of Secondary		Aspirations Gap
			Aged 13-18	Aged 14-18	Aged 13-18	Aged 14-18	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Treated Sub-District in Post-Treatment Period × Male	-0.232***	-0.068***	0.026***	0.015*	-0.090	-0.092	-0.533***
	(0.047)	(0.021)	(0.007)	(0.008)	(0.092)	(0.082)	(0.035)
Treated Sub-District in Post-Treatment Period	0.040***	-0.250***	-0.039	-0.020	0.022	0.020	0.379***
	(0.015)	(0.029)	(0.030)	(0.014)	(0.018)	(0.025)	(0.093)
Male	0.049***	0.073***	-0.020***	-0.021***	-0.034***	-0.032***	-0.070**
	(0.009)	(0.020)	(0.006)	(0.006)	(0.010)	(0.010)	(0.029)
Years of Education of the Household Head	-0.002						
	(0.001)						
Years of Education of the Household Head's Spouse	-0.002	0.000	0.006***	0.005***	0.016***	0.016***	-0.001
	(0.001)	(0.002)	(0.001)	(0.001)	(0.002)	(0.002)	(0.004)
At least one household member works in agriculture	0.005	0.051*	0.018	0.005	0.010	0.018	-0.017
	(0.013)	(0.027)	(0.013)	(0.013)	(0.017)	(0.018)	(0.036)
Constant	0.071***	0.051***	0.828***	0.876***	0.603***	0.683***	0.799***
	(0.011)	(0.019)	(0.009)	(0.009)	(0.013)	(0.013)	(0.033)
Observations	4697	1578	8709	6459	8709	6459	4049
Mean DV	0.067	0.105	0.859	0.899	0.685	0.765	0.762

Notes: All regressions included clustering, fixed effects and sampling weights. All regressions were clustered by sub-district. Fixed effects for wave and sub-district were included. The sampling weights included were cross-sectional weights provided in all IFLS waves. Standard errors in parentheses.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table C.23: Binary Treatment Specification with Interaction of Treatment and Male Dummy and Interactions of Male Dummy with Controls: School Attendance, Primary School Entry Age and Child Labour Among Primary School Students

	School Attendance			Age Start Primary School			Child Worked During Primary		
	Aged 6-18	Aged 6-12	Aged 13-18	Aged 6-18	Aged 6-12	Aged 13-18	Aged 6-18	Aged 6-12	Aged 13-18
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Treated Sub-District in	0.044	0.015***	0.094	-0.326***	-0.191**	-0.354	-0.046*	0.001	-0.131
Post-Treatment Period × Male	(0.047)	(0.005)	(0.091)	(0.105)	(0.092)	(0.353)	(0.024)	(0.005)	(0.098)
Treated Sub-District in	0.030*	0.027	-0.031	0.223**	0.366***	0.039	-0.031	-0.023***	0.002
Post-Treatment Period	(0.018)	(0.017)	(0.057)	(0.106)	(0.117)	(0.168)	(0.029)	(0.008)	(0.101)
Male	0.009	-0.036	0.038*	0.191	-0.075	0.552**	0.023***	0.004	0.044***
	(0.012)	(0.029)	(0.020)	(0.138)	(0.311)	(0.261)	(0.008)	(0.018)	(0.013)
Years of Education of the	0.009***	0.002*	0.017***	-0.030***	-0.021**	-0.033**	0.001	0.001	0.001
Household Head's Spouse	(0.001)	(0.001)	(0.002)	(0.008)	(0.009)	(0.013)	(0.001)	(0.001)	(0.001)
Male × Years of Education	0.001	0.000	0.001	-0.016	0.020	-0.060*	-0.002**	-0.000	-0.005***
of the Household Head's Spouse	(0.001)	(0.001)	(0.002)	(0.018)	(0.012)	(0.035)	(0.001)	(0.001)	(0.001)
At least one household	-0.001	-0.009	0.037**	-0.235***	-0.059	-0.448**	0.002	0.005	-0.007
member works in agriculture	(0.011)	(0.011)	(0.017)	(0.089)	(0.063)	(0.191)	(0.007)	(0.007)	(0.013)
At least one household member	-0.006	-0.004	-0.005	0.383**	0.296**	0.427*	0.001	-0.007	0.011
works in agriculture × Male	(0.010)	(0.008)	(0.019)	(0.153)	(0.149)	(0.247)	(0.008)	(0.009)	(0.013)
Age		0.000			0.026*			0.003***	
		(0.003)			(0.014)			(0.001)	
Male × Age		0.003			-0.003			0.000	
		(0.003)			(0.035)			(0.002)	
Constant	0.805***	0.967***	0.583***	6.704***	6.180***	6.937***	0.022***	-0.016	0.031***
	(0.008)	(0.027)	(0.015)	(0.077)	(0.183)	(0.142)	(0.005)	(0.010)	(0.009)
Observations	28327	16148	12096	18776	8933	9766	22916	12711	10136
Mean DV	0.860	0.968	0.713	6.567	6.351	6.770	0.034	0.022	0.048

Notes: All regressions included clustering, fixed effects and sampling weights. All regressions were clustered by sub-district. Fixed effects for wave and sub-district were included. The sampling weights included were cross-sectional weights provided in all IFLS waves. Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table C.24: Binary Treatment Specification with Interaction of Treatment and Male Dummy and Interactions of Male Dummy with Controls: Child Labour Among Secondary Students, Primary School Graduation, Completion of the 7^{th} Grade and Aspirations

	Child Worked During Junior Secondary	Child Worked During Senior Secondary	Primary School Graduation		Completion of One Year of Secondary		Aspirations Gap
			Aged 13-18	Aged 14-18	Aged 13-18	Aged 14-18	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Treated Sub-District in Post-Treatment Period × Male	-0.251***	-0.163***	0.022**	0.017*	-0.102	-0.098	-0.568***
	(0.055)	(0.035)	(0.010)	(0.010)	(0.091)	(0.078)	(0.042)
Treated Sub-District in Post-Treatment Period	0.046***	-0.198***	-0.037	-0.021*	0.027	0.022	0.394**
	(0.014)	(0.032)	(0.029)	(0.012)	(0.018)	(0.027)	(0.089)
Male	0.056**	0.009	-0.045***	-0.041**	-0.065***	-0.071***	-0.089
	(0.025)	(0.039)	(0.016)	(0.018)	(0.021)	(0.023)	(0.058)
Years of Education of the Household Head	-0.004**						
	(0.002)						
Male × Years of Education of the Household Head	0.003						
	(0.003)						
Years of Education of the Household Head's Spouse	0.001	-0.000	0.004***	0.003**	0.015***	0.013***	0.002
	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.005)
Male × Years of Education of the Household Head's Spouse	-0.006**	0.002	0.004**	0.004**	0.003	0.006**	-0.002
	(0.003)	(0.004)	(0.002)	(0.002)	(0.002)	(0.003)	(0.007)
At least one household member works in agriculture	-0.014	-0.036	0.013	0.008	-0.006	0.010	-0.060
	(0.011)	(0.030)	(0.012)	(0.012)	(0.020)	(0.020)	(0.042)
At least one household member works in agriculture × Male	0.038*	0.174***	0.009	-0.005	0.030	0.016	0.082
	(0.020)	(0.047)	(0.015)	(0.016)	(0.021)	(0.021)	(0.055)
Constant	0.067***	0.081***	0.841***	0.887***	0.619***	0.704***	0.808***
	(0.012)	(0.023)	(0.011)	(0.011)	(0.016)	(0.016)	(0.040)
Observations	4697	1578	8709	6459	8709	6459	4049
Mean DV	0.067	0.105	0.859	0.899	0.685	0.765	0.762

Notes: All regressions included clustering, fixed effects and sampling weights. All regressions were clustered by sub-district. Fixed effects for wave and sub-district were included. The sampling weights included were cross-sectional weights provided in all IFLS waves. Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table C.25: Intensity of Treatment Specification with Interaction of Treatment and Male Dummy: School Attendance, Primary School Entry Age and Child Labour Among Primary School Students

	School Attendance			Age Start Primary School			Child Worked During Primary		
	Aged 6-18	Aged 6-12	Aged 13-18	Aged 6-18	Aged 6-12	Aged 13-18	Aged 6-18	Aged 6-12	Aged 13-18
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Male × Intensity of	0.175**	0.039***	0.344**	-0.594**	-0.510***	-0.292	-0.094	0.004	-0.239
Treatment in Post-Treatment Period	(0.085)	(0.011)	(0.138)	(0.264)	(0.146)	(0.648)	(0.076)	(0.011)	(0.227)
Intensity of Treatment in	0.058	0.098***	-0.136	0.563**	0.966***	0.072	-0.116**	-0.055*	-0.098
Post-Treatment Period	(0.058)	(0.027)	(0.095)	(0.262)	(0.221)	(0.461)	(0.048)	(0.029)	(0.174)
Male	0.011*	-0.013***	0.042***	0.249***	0.127**	0.374***	0.011***	0.002	0.021***
	(0.006)	(0.004)	(0.011)	(0.068)	(0.055)	(0.126)	(0.004)	(0.003)	(0.007)
Years of Education of the	0.009***	0.002***	0.017***	-0.038***	-0.010	-0.063***	-0.000	0.000	-0.001
Household Head's Spouse	(0.001)	(0.001)	(0.001)	(0.013)	(0.011)	(0.022)	(0.001)	(0.001)	(0.001)
At least one household	-0.004	-0.010	0.035**	-0.035	0.093*	-0.223	0.002	0.002	-0.001
member works in agriculture	(0.008)	(0.008)	(0.014)	(0.107)	(0.053)	(0.209)	(0.006)	(0.004)	(0.011)
Age		0.002			0.026			0.004***	
		(0.002)			(0.017)			(0.001)	
Constant	0.804***	0.955***	0.581***	6.675***	6.067***	7.030***	0.029***	-0.015*	0.043***
	(0.006)	(0.018)	(0.011)	(0.097)	(0.152)	(0.170)	(0.004)	(0.008)	(0.006)
Observations	28327	16148	12096	18776	8933	9766	22916	12711	10136
Mean DV	0.860	0.968	0.713	6.567	6.351	6.770	0.034	0.022	0.048

Notes: All regressions included clustering, fixed effects and sampling weights. All regressions were clustered by sub-district. Fixed effects for wave and sub-district were included. The sampling weights included were cross-sectional weights provided in all IFLS waves. Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table C.26: Intensity of Treatment Specification with Interaction of Treatment and Male Dummy: Child Labour Among Secondary Students, Primary School Graduation, Completion of the 7^{th} Grade and Aspirations

	Child Worked During Junior Secondary	Child Worked During Senior Secondary	Primary School Graduation		Completion of One Year of Secondary		Aspirations Gap
			Aged 13-18	Aged 14-18	Aged 13-18	Aged 14-18	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Male × Intensity of Treatment in Post-Treatment Period	-0.533***	-0.089	0.060**	0.040**	-0.121	-0.135	-1.327***
	(0.179)	(0.060)	(0.025)	(0.017)	(0.243)	(0.216)	(0.260)
Intensity of Treatment in Post-Treatment Period	0.107***	-0.690***	-0.130***	-0.055*	0.068*	0.068	0.994***
	(0.032)	(0.138)	(0.046)	(0.028)	(0.041)	(0.056)	(0.104)
Male	0.048***	0.073***	-0.020***	-0.021***	-0.034***	-0.032***	-0.070**
	(0.009)	(0.020)	(0.006)	(0.006)	(0.010)	(0.010)	(0.029)
Years of Education of the Household Head	-0.002						
	(0.001)						
Years of Education of the Household Head's Spouse	-0.002	0.000	0.006***	0.005***	0.016***	0.016***	-0.001
	(0.001)	(0.002)	(0.001)	(0.001)	(0.002)	(0.002)	(0.004)
At least one household member works in agriculture	0.005	0.051*	0.018	0.005	0.010	0.018	-0.017
	(0.013)	(0.027)	(0.013)	(0.013)	(0.017)	(0.018)	(0.036)
Constant	0.071***	0.051***	0.828***	0.876***	0.603***	0.683***	0.799***
	(0.011)	(0.019)	(0.009)	(0.009)	(0.013)	(0.013)	(0.033)
Observations	4697	1578	8709	6459	8709	6459	4049
Mean DV	0.067	0.105	0.859	0.899	0.685	0.765	0.762

Notes: All regressions included clustering, fixed effects and sampling weights. All regressions were clustered by sub-district. Fixed effects for wave and sub-district were included. The sampling weights included were cross-sectional weights provided in all IFLS waves. Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table C.27: Intensity of Treatment Specification with Interaction of Treatment and Male Dummy and Interactions of Male Dummy with Controls: School Attendance, Primary School Entry Age and Child Labour Among Primary School Students

	School Attendance			Age Start Primary School			Child Worked During Primary		
	Aged 6-18	Aged 6-12	Aged 13-18	Aged 6-18	Aged 6-12	Aged 13-18	Aged 6-18	Aged 6-12	Aged 13-18
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Male × Intensity of Treatment in Post-Treatment Period	0.177**	0.040***	0.346**	-0.795**	-0.643***	-0.566	-0.091	0.007	-0.240
	(0.083)	(0.012)	(0.136)	(0.386)	(0.180)	(0.950)	(0.080)	(0.014)	(0.242)
Intensity of Treatment in Post-Treatment Period	0.058	0.097***	-0.135	0.669***	1.132***	0.106	-0.120**	-0.059*	-0.104
	(0.057)	(0.029)	(0.094)	(0.251)	(0.269)	(0.426)	(0.050)	(0.031)	(0.180)
Male	0.009	-0.036	0.038*	0.191	-0.075	0.552**	0.023***	0.004	0.044***
	(0.012)	(0.029)	(0.020)	(0.138)	(0.311)	(0.261)	(0.008)	(0.018)	(0.013)
Years of Education of the Household Head's Spouse	0.009***	0.002*	0.017***	-0.030***	-0.021**	-0.033**	0.001	0.001	0.001
	(0.001)	(0.001)	(0.002)	(0.008)	(0.009)	(0.013)	(0.001)	(0.001)	(0.001)
Male × Years of Education of the Household Head's Spouse	0.001	0.000	0.001	-0.016	0.020	-0.060*	-0.002**	-0.000	-0.005***
	(0.001)	(0.001)	(0.002)	(0.018)	(0.012)	(0.035)	(0.001)	(0.001)	(0.001)
At least one household member works in agriculture	-0.001	-0.009	0.037**	-0.235***	-0.059	-0.448**	0.002	0.005	-0.007
	(0.011)	(0.011)	(0.017)	(0.089)	(0.063)	(0.191)	(0.007)	(0.007)	(0.013)
At least one household member works in agriculture × Male	-0.006	-0.004	-0.005	0.383**	0.296**	0.427*	0.001	-0.007	0.011
	(0.010)	(0.008)	(0.019)	(0.153)	(0.149)	(0.247)	(0.008)	(0.009)	(0.013)
Age		0.000			0.026*			0.003***	
		(0.003)			(0.014)			(0.001)	
Male × Age		0.003			-0.003			0.000	
		(0.003)			(0.035)			(0.002)	
Constant	0.805***	0.967***	0.583***	6.704***	6.181***	6.937***	0.022***	-0.016	0.031***
	(0.008)	(0.027)	(0.015)	(0.077)	(0.183)	(0.142)	(0.005)	(0.010)	(0.009)
Observations	28327	16148	12096	18776	8933	9766	22916	12711	10136
Mean DV	0.860	0.968	0.713	6.567	6.351	6.770	0.034	0.022	0.048

Notes: All regressions included clustering, fixed effects and sampling weights. All regressions were clustered by sub-district. Fixed effects for wave and sub-district were included. The sampling weights included were cross-sectional weights provided in all IFLS waves. Standard errors in parentheses.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table C.28: Intensity of Treatment Specification with Interaction of Treatment and Male Dummy and Interactions of Male Dummy with Controls: Child Labour Among Secondary Students, Primary School Graduation, Completion of the 7^{th} Grade and Aspirations

	Child Worked During Junior Secondary	Child Worked During Senior Secondary	Primary School Graduation		Completion of One Year of Secondary		Aspirations Gap
			Aged 13-18	Aged 14-18	Aged 13-18	Aged 14-18	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Male × Intensity of Treatment in Post-Treatment Period	-0.574***	-0.331***	0.047	0.039*	-0.152	-0.156	-1.412***
	(0.200)	(0.089)	(0.032)	(0.023)	(0.247)	(0.210)	(0.295)
Intensity of Treatment in Post-Treatment Period	0.120***	-0.535***	-0.121***	-0.057**	0.080*	0.075	1.028***
	(0.031)	(0.139)	(0.045)	(0.027)	(0.041)	(0.058)	(0.101)
Male	0.055**	0.009	-0.045***	-0.041**	-0.065***	-0.071***	-0.089
	(0.025)	(0.039)	(0.016)	(0.018)	(0.021)	(0.023)	(0.058)
Years of Education of the Household Head	-0.004**						
	(0.002)						
Male × Years of Education of the Household Head	0.003						
	(0.003)						
Years of Education of the Household Head's Spouse	0.001	-0.000	0.004***	0.003**	0.015***	0.013***	0.002
	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.005)
Male × Years of Education of the Household Head's Spouse	-0.006**	0.002	0.004**	0.004**	0.003	0.006**	-0.002
	(0.003)	(0.004)	(0.002)	(0.002)	(0.002)	(0.003)	(0.007)
At least one household member works in agriculture	-0.014	-0.036	0.013	0.008	-0.006	0.010	-0.060
	(0.011)	(0.030)	(0.012)	(0.012)	(0.020)	(0.020)	(0.042)
At least one household member works in agriculture × Male	0.037*	0.173***	0.009	-0.005	0.030	0.015	0.082
	(0.020)	(0.047)	(0.015)	(0.016)	(0.021)	(0.021)	(0.055)
Constant	0.067***	0.081***	0.841***	0.887***	0.619***	0.704***	0.808***
	(0.012)	(0.023)	(0.011)	(0.011)	(0.016)	(0.016)	(0.040)
Observations	4697	1578	8709	6459	8709	6459	4049
Mean DV	0.067	0.105	0.859	0.899	0.685	0.765	0.762

Notes: All regressions included clustering, fixed effects and sampling weights. All regressions were clustered by sub-district. Fixed effects for wave and sub-district were included. The sampling weights included were cross-sectional weights provided in all IFLS waves. Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

D | Main Results: Poor Treatment

Table D.1: Binary Treatment Specification Including Bad Treatment Sub-Districts: School Attendance

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Aged 6-18								
Treated Sub-District × Post-Treatment Period	0.063***	0.056***	0.065***	0.058***	0.057***	0.052***	0.060***	0.056***
	(0.016)	(0.013)	(0.016)	(0.013)	(0.015)	(0.014)	(0.014)	(0.013)
Treated Sub-District	0.009	0.026	0.011	0.027				
	(0.030)	(0.037)	(0.029)	(0.036)				
Post-Treatment Period	0.061***	0.038***	0.060***	0.037***				
	(0.007)	(0.007)	(0.007)	(0.007)				
Years of Education of the Household Head's Spouse		0.012***		0.013***		0.009***		0.009***
		(0.001)		(0.001)		(0.001)		(0.001)
At least one household member works in agriculture		-0.008		-0.006		-0.001		-0.004
		(0.008)		(0.008)		(0.007)		(0.008)
Constant	0.847***	0.787***	0.848***	0.785***	0.858***	0.810***	0.858***	0.809***
	(0.006)	(0.008)	(0.006)	(0.009)	(0.000)	(0.005)	(0.000)	(0.005)
Observations	30345	28467	30345	28467	30293	28408	30293	28408
Mean DV	0.858	0.860	0.858	0.860	0.858	0.860	0.858	0.860
Panel B: Aged 6-12								
Treated Sub-District × Post-Treatment Period	0.050***	0.047**	0.048***	0.044**	0.040**	0.039*	0.037**	0.035*
	(0.018)	(0.021)	(0.016)	(0.019)	(0.017)	(0.020)	(0.015)	(0.018)
Treated Sub-District	-0.024	-0.016	-0.025	-0.017				
	(0.018)	(0.022)	(0.016)	(0.021)				
Post-Treatment Period	0.010**	0.004	0.011***	0.006				
	(0.004)	(0.005)	(0.004)	(0.005)				
Age		0.005***		0.001		0.004***		0.002
		(0.001)		(0.002)		(0.001)		(0.002)
Years of Education of the Household Head's Spouse		0.002***		0.002***		0.002***		0.002***
		(0.001)		(0.001)		(0.001)		(0.001)
At least one household member works in agriculture		-0.008		-0.009		-0.006		-0.011
		(0.006)		(0.006)		(0.006)		(0.008)
Constant	0.964***	0.912***	0.966***	0.945***	0.966***	0.918***	0.967***	0.948***
	(0.003)	(0.014)	(0.003)	(0.018)	(0.000)	(0.013)	(0.000)	(0.017)
Observations	17124	16257	17124	16257	17064	16195	17064	16195
Mean DV	0.966	0.966	0.968	0.968	0.966	0.966	0.968	0.968
Panel C: Aged 13-18								
Treated Sub-District × Post-Treatment Period	0.058***	0.033	0.053***	0.034	0.063***	0.036**	0.059***	0.034**
	(0.015)	(0.021)	(0.015)	(0.024)	(0.015)	(0.015)	(0.015)	(0.016)
Treated Sub-District	0.070*	0.109**	0.081**	0.119**				
	(0.038)	(0.050)	(0.035)	(0.047)				
Post-Treatment Period	0.127***	0.087***	0.137***	0.091***				
	(0.013)	(0.013)	(0.014)	(0.014)				
Years of Education of the Household Head's Spouse		0.024***		0.027***		0.015***		0.017***
		(0.002)		(0.002)		(0.001)		(0.001)
At least one household member works in agriculture		-0.013		-0.001		0.027**		0.035**
		(0.015)		(0.015)		(0.013)		(0.014)
Constant	0.695***	0.567***	0.687***	0.544***	0.719***	0.623***	0.713***	0.603***
	(0.011)	(0.015)	(0.013)	(0.017)	(0.000)	(0.009)	(0.000)	(0.010)
Observations	13221	12210	13221	12210	13152	12130	13152	12130
Mean DV	0.718	0.718	0.712	0.712	0.719	0.719	0.713	0.713
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

Table D.2: Binary Treatment Specification Including Bad Treatment Sub-Districts: Primary School Entry Age

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Aged 6-18								
Treated Sub-District ×	0.159**	0.193**	0.076	0.153	0.070	0.113	-0.021	0.056
Post-Treatment Period	(0.069)	(0.077)	(0.112)	(0.114)	(0.072)	(0.079)	(0.108)	(0.120)
Treated Sub-District	-0.257***	-0.332***	-0.290***	-0.370***				
	(0.043)	(0.047)	(0.054)	(0.062)				
Post-Treatment Period	-0.435***	-0.375***	-0.341***	-0.322***				
	(0.062)	(0.060)	(0.101)	(0.080)				
Years of Education of the		-0.046***		-0.050***		-0.034***		-0.039***
Household Head's Spouse		(0.008)		(0.010)		(0.009)		(0.013)
At least one household		0.011		0.043		-0.052		-0.031
member works in agriculture		(0.062)		(0.083)		(0.081)		(0.107)
Constant	6.634***	6.887***	6.657***	6.912***	6.521***	6.744***	6.573***	6.803***
	(0.042)	(0.074)	(0.047)	(0.094)	(0.000)	(0.066)	(0.000)	(0.086)
Observations	20500	18910	20500	18910	20439	18848	20439	18848
Mean DV	6.521	6.525	6.573	6.567	6.521	6.525	6.573	6.567
Panel B: Aged 6-12								
Treated Sub-District ×	0.256***	0.293***	0.236***	0.278***	0.191***	0.252***	0.174**	0.241***
Post-Treatment Period	(0.061)	(0.046)	(0.074)	(0.051)	(0.063)	(0.056)	(0.083)	(0.072)
Treated Sub-District	-0.179***	-0.239***	-0.181***	-0.230***				
	(0.051)	(0.047)	(0.062)	(0.051)				
Post-Treatment Period	-0.416***	-0.337***	-0.416***	-0.344***				
	(0.047)	(0.049)	(0.050)	(0.053)				
Age		0.035**		0.033*		0.024		0.025
		(0.017)		(0.017)		(0.017)		(0.017)
Years of Education of the		-0.030***		-0.027***		-0.019**		-0.010
Household Head's Spouse		(0.008)		(0.007)		(0.009)		(0.011)
At least one household		0.118*		0.168**		0.107		0.094*
member works in agriculture		(0.062)		(0.077)		(0.067)		(0.053)
Constant	6.439***	6.225***	6.462***	6.224***	6.313***	6.169***	6.346***	6.132***
	(0.044)	(0.173)	(0.046)	(0.154)	(0.000)	(0.173)	(0.000)	(0.144)
Observations	9713	9033	9713	9033	9654	8973	9654	8973
Mean DV	6.314	6.318	6.346	6.350	6.314	6.319	6.347	6.350
Panel C: Aged 13-18								
Treated Sub-District ×	0.017	0.063	-0.140	-0.007	-0.066	-0.004	-0.218	-0.088
Post-Treatment Period	(0.123)	(0.168)	(0.210)	(0.238)	(0.123)	(0.157)	(0.185)	(0.232)
Treated Sub-District	-0.337***	-0.433***	-0.391***	-0.513***				
	(0.064)	(0.075)	(0.079)	(0.102)				
Post-Treatment Period	-0.370***	-0.333***	-0.184	-0.227				
	(0.116)	(0.113)	(0.200)	(0.158)				
Years of Education of the		-0.059***		-0.071***		-0.048***		-0.065***
Household Head's Spouse		(0.013)		(0.018)		(0.016)		(0.022)
At least one household		-0.083		-0.067		-0.241		-0.213
member works in agriculture		(0.102)		(0.140)		(0.153)		(0.210)
Constant	6.790***	7.161***	6.820***	7.252***	6.709***	7.083***	6.781***	7.227***
	(0.062)	(0.123)	(0.071)	(0.171)	(0.000)	(0.114)	(0.000)	(0.156)
Observations	10787	9877	10787	9877	10713	9798	10713	9798
Mean DV	6.707	6.713	6.778	6.767	6.709	6.715	6.781	6.770
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

Table D.3: Binary Treatment Specification Including Bad Treatment Sub-Districts: Child Labour Among Primary School Students

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Aged 6-18								
Treated Sub-District ×	-0.054***	-0.061***	-0.056***	-0.061***	-0.052***	-0.057***	-0.053***	-0.057***
Post-Treatment Period	(0.004)	(0.014)	(0.004)	(0.013)	(0.005)	(0.016)	(0.004)	(0.015)
Treated Sub-District	0.049***	0.043***	0.054***	0.049***				
	(0.004)	(0.006)	(0.003)	(0.006)				
Post-Treatment Period	-0.013***	-0.011**	-0.013***	-0.012***				
	(0.004)	(0.004)	(0.004)	(0.004)				
Years of Education of the		-0.001*		-0.001		-0.001		-0.000
Household Head's Spouse		(0.001)		(0.001)		(0.001)		(0.001)
At least one household		0.016***		0.013**		0.004		0.003
member works in agriculture		(0.005)		(0.005)		(0.006)		(0.006)
Constant	0.038***	0.038***	0.036***	0.036***	0.036***	0.038***	0.034***	0.035***
	(0.003)	(0.005)	(0.003)	(0.005)	(0.000)	(0.004)	(0.000)	(0.004)
Observations	24710	23051	24710	23051	24649	22990	24649	22990
Mean DV	0.036	0.036	0.034	0.033	0.036	0.036	0.034	0.034
Panel B: Aged 6-12								
Treated Sub-District ×	-0.029**	-0.021***	-0.030**	-0.021***	-0.031***	-0.021***	-0.032***	-0.022***
Post-Treatment Period	(0.011)	(0.006)	(0.012)	(0.007)	(0.011)	(0.006)	(0.012)	(0.007)
Treated Sub-District	0.008	0.001	0.011	0.004				
	(0.011)	(0.005)	(0.012)	(0.006)				
Post-Treatment Period	-0.006	-0.006	-0.005	-0.006				
	(0.004)	(0.005)	(0.004)	(0.005)				
Age		0.006***		0.005***		0.005***		0.004***
		(0.001)		(0.001)		(0.001)		(0.001)
Years of Education of the		0.000		0.001		0.000		0.000
Household Head's Spouse		(0.001)		(0.001)		(0.001)		(0.001)
At least one household		0.007		0.007		-0.001		0.002
member works in agriculture		(0.005)		(0.005)		(0.005)		(0.004)
Constant	0.026***	-0.030***	0.024***	-0.027***	0.025***	-0.019*	0.023***	-0.014*
	(0.003)	(0.009)	(0.003)	(0.008)	(0.000)	(0.010)	(0.000)	(0.008)
Observations	13552	12811	13552	12811	13491	12752	13491	12752
Mean DV	0.025	0.025	0.023	0.022	0.025	0.025	0.023	0.022
Panel C: Aged 13-18								
Treated Sub-District ×	-0.065***	-0.092***	-0.066***	-0.087***	-0.063***	-0.085**	-0.062***	-0.077**
Post-Treatment Period	(0.015)	(0.032)	(0.012)	(0.030)	(0.015)	(0.037)	(0.013)	(0.035)
Treated Sub-District	0.084***	0.079***	0.089***	0.086***				
	(0.010)	(0.010)	(0.006)	(0.008)				
Post-Treatment Period	-0.021***	-0.017***	-0.023***	-0.020***				
	(0.006)	(0.006)	(0.006)	(0.007)				
Years of Education of the		-0.002***		-0.003***		-0.001		-0.001
Household Head's Spouse		(0.001)		(0.001)		(0.001)		(0.001)
At least one household		0.026***		0.019**		0.007		-0.001
member works in agriculture		(0.008)		(0.009)		(0.011)		(0.011)
Constant	0.052***	0.057***	0.051***	0.060***	0.049***	0.052***	0.047***	0.055***
	(0.004)	(0.008)	(0.005)	(0.009)	(0.000)	(0.007)	(0.000)	(0.006)
Observations	11158	10240	11158	10240	11089	10169	11089	10169
Mean DV	0.049	0.050	0.047	0.048	0.049	0.050	0.047	0.048
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

Table D.4: Binary Treatment Specification Including Bad Treatment Sub-Districts: Child Labour Among Secondary Students

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Junior Secondary								
Treated Sub-District ×	-0.088*	-0.113***	-0.096*	-0.125***	-0.067	-0.081***	-0.078	-0.099***
Post-Treatment Period	(0.051)	(0.036)	(0.057)	(0.042)	(0.051)	(0.031)	(0.057)	(0.038)
Treated Sub-District	0.105**	0.102**	0.120**	0.125**				
	(0.044)	(0.043)	(0.052)	(0.052)				
Post-Treatment Period	-0.011	-0.005	-0.016*	-0.010				
	(0.008)	(0.009)	(0.009)	(0.010)				
Years of Education of the		-0.002*		-0.002*		-0.003*		-0.002
Household Head		(0.001)		(0.001)		(0.001)		(0.001)
Years of Education of the		-0.004***		-0.003**		-0.003*		-0.002
Household Head's Spouse		(0.001)		(0.001)		(0.001)		(0.001)
At least one household		0.022**		0.022*		-0.001		0.005
member works in agriculture		(0.011)		(0.011)		(0.010)		(0.013)
Constant	0.073***	0.112***	0.069***	0.100***	0.072***	0.112***	0.065***	0.095***
	(0.006)	(0.012)	(0.005)	(0.012)	(0.000)	(0.009)	(0.000)	(0.010)
Observations	6078	4798	6078	4798	5991	4717	5991	4717
Mean DV	0.071	0.074	0.064	0.066	0.072	0.075	0.065	0.067
Panel B: Senior Secondary								
Treated Sub-District ×	-0.201***	-0.245***	-0.211***	-0.274***	-0.192***	-0.242***	-0.207***	-0.275***
Post-Treatment Period	(0.019)	(0.019)	(0.017)	(0.023)	(0.023)	(0.024)	(0.020)	(0.027)
Treated Sub-District	0.071***	0.094***	0.083***	0.119***				
	(0.014)	(0.015)	(0.011)	(0.022)				
Post-Treatment Period	0.034**	0.033*	0.032*	0.033*				
	(0.016)	(0.019)	(0.017)	(0.020)				
At least one household		0.033*		0.044**		0.040*		0.051*
member works in agriculture		(0.019)		(0.021)		(0.024)		(0.027)
Years of Education of the		-0.002		-0.001		-0.002		-0.000
Household Head's Spouse		(0.002)		(0.002)		(0.002)		(0.002)
Constant	0.096***	0.105***	0.096***	0.091***	0.110***	0.112***	0.109***	0.091***
	(0.010)	(0.018)	(0.011)	(0.019)	(0.000)	(0.016)	(0.000)	(0.017)
Observations	1917	1673	1917	1673	1832	1588	1832	1588
Mean DV	0.107	0.108	0.107	0.106	0.109	0.107	0.108	0.105
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

Table D.5: Binary Treatment Specification Including Bad Treatment Sub-Districts: Primary School Graduation

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Treated Sub-District ×	-0.035*	-0.040	-0.016	-0.021	-0.017	-0.027	-0.014	-0.025
Post-Treatment Period	(0.020)	(0.032)	(0.025)	(0.040)	(0.022)	(0.026)	(0.026)	(0.029)
Treated Sub-District	0.075***	0.104***	0.058**	0.090***				
	(0.020)	(0.020)	(0.026)	(0.024)				
Post-Treatment Period	0.131***	0.112***	0.121***	0.100***				
	(0.008)	(0.009)	(0.008)	(0.008)				
Years of Education of the		0.013***		0.015***		0.006***		0.006***
Household Head's Spouse		(0.001)		(0.002)		(0.001)		(0.001)
At least one household		-0.021		-0.019		0.011		0.018
member works in agriculture		(0.015)		(0.016)		(0.011)		(0.013)
Constant	0.828***	0.759***	0.837***	0.756***	0.860***	0.813***	0.865***	0.817***
	(0.008)	(0.012)	(0.009)	(0.015)	(0.000)	(0.007)	(0.000)	(0.009)
Observations	9634	8802	9634	8802	9572	8740	9572	8740
Mean DV	0.860	0.855	0.866	0.860	0.860	0.854	0.865	0.860
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

Table D.6: Binary Treatment Specification Including Bad Treatment Sub-Districts: Completion of At Least One Year of Secondary School

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Treated Sub-District ×	-0.031	-0.051	-0.031	-0.051	0.003	-0.019	-0.014	-0.041
Post-Treatment Period	(0.067)	(0.058)	(0.068)	(0.058)	(0.067)	(0.073)	(0.070)	(0.077)
Treated Sub-District	0.072***	0.125***	0.062**	0.117***				
	(0.028)	(0.038)	(0.026)	(0.037)				
Post-Treatment Period	0.280***	0.239***	0.278***	0.233***				
	(0.013)	(0.013)	(0.014)	(0.014)				
Years of Education of the		0.028***		0.031***		0.016***		0.016***
Household Head's Spouse		(0.002)		(0.002)		(0.001)		(0.002)
At least one household		-0.044**		-0.038*		0.002		0.010
member works in agriculture		(0.019)		(0.021)		(0.016)		(0.017)
Constant	0.629***	0.486***	0.630***	0.466***	0.696***	0.591***	0.694***	0.584***
	(0.012)	(0.017)	(0.015)	(0.020)	(0.000)	(0.010)	(0.000)	(0.012)
Observations	9634	8802	9634	8802	9572	8740	9572	8740
Mean DV	0.696	0.688	0.694	0.686	0.696	0.688	0.694	0.685
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

Table D.7: Binary Treatment Specification Including Bad Treatment Sub-Districts: Secondary School Graduation

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Treated Sub-District ×	-0.238***	-0.451***	-0.275***	-0.465***	-0.294***	-0.356***	-0.332***	-0.347***
Post-Treatment Period	(0.053)	(0.063)	(0.054)	(0.074)	(0.040)	(0.046)	(0.037)	(0.047)
Treated Sub-District	-0.013	-0.017	0.049	0.025				
	(0.043)	(0.051)	(0.045)	(0.065)				
Post-Treatment Period	0.152***	0.092**	0.137***	0.073*				
	(0.036)	(0.039)	(0.036)	(0.038)				
Years of Education of the		0.033***		0.034***		0.028***		0.029***
Household Head's Spouse		(0.004)		(0.004)		(0.005)		(0.006)
At least one household		-0.055		-0.064*		0.014		-0.018
member works in agriculture		(0.035)		(0.035)		(0.048)		(0.047)
Constant	0.299***	0.106***	0.281***	0.093***	0.336***	0.140***	0.315***	0.129***
	(0.019)	(0.031)	(0.020)	(0.031)	(0.000)	(0.038)	(0.000)	(0.041)
Observations	1174	1015	1174	1015	1090	933	1090	933
Mean DV	0.337	0.316	0.317	0.297	0.335	0.313	0.315	0.295
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

Table D.8: Binary Treatment Specification Including Bad Treatment Sub-Districts: Aspirations

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Treated Sub-District ×	-0.006	0.134	-0.012	0.116	0.009	0.146	0.008	0.128
Post-Treatment Period	(0.173)	(0.131)	(0.181)	(0.137)	(0.192)	(0.155)	(0.199)	(0.158)
Treated Sub-District	-0.180***	-0.172***	-0.192***	-0.195***				
	(0.059)	(0.059)	(0.066)	(0.068)				
Post-Treatment Period	0.857***	0.849***	0.834***	0.837***				
	(0.034)	(0.036)	(0.036)	(0.039)				
Years of Education of the		0.005		0.003		0.002		0.001
Household Head's Spouse		(0.003)		(0.003)		(0.004)		(0.004)
At least one household		-0.072***		-0.051*		-0.026		-0.018
member works in agriculture		(0.027)		(0.030)		(0.030)		(0.036)
Constant	0.529***	0.523***	0.549***	0.547***	0.768***	0.743***	0.784***	0.760***
	(0.016)	(0.031)	(0.019)	(0.032)	(0.001)	(0.026)	(0.000)	(0.029)
Observations	4663	4137	4663	4137	4579	4065	4579	4065
Mean DV	0.768	0.744	0.782	0.760	0.768	0.744	0.784	0.762
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

E | PTA Testing

Table E.1: Pre-Trends Testing Between 2000 and 2007: PS Entry Age, School Attendance and Child Labour during PS

	Primary School Entry Age			School Attendance			Child Worked During Primary		
	Aged 6-12	Aged 13-18	Aged 6-18	Aged 6-12	Aged 13-18	Aged 6-18	Aged 6-12	Aged 13-18	Aged 6-18
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Pre-Trend	1.075***	-0.141	-0.018	-0.073	0.023	-0.024**	0.122**	0.154***	0.081***
	(0.069)	(0.193)	(0.180)	(0.068)	(0.097)	(0.011)	(0.048)	(0.044)	(0.025)
Age	0.052***			0.017***			0.004*		
	(0.018)			(0.002)			(0.002)		
Years of Education of the Household Head's Spouse	-0.007	-0.029***	-0.023***	0.002*	0.021***	0.012***	0.001	-0.001	-0.000
	(0.007)	(0.004)	(0.004)	(0.001)	(0.002)	(0.001)	(0.003)	(0.001)	(0.001)
At least one household member works in agriculture	0.012	-0.073*	-0.031	0.004	0.032	0.002	-0.008	0.008	0.003
	(0.076)	(0.038)	(0.036)	(0.009)	(0.023)	(0.012)	(0.010)	(0.012)	(0.008)
Constant	5.797***	6.650***	6.517***	0.782***	0.565***	0.768***	0.005	0.063***	0.053***
	(0.212)	(0.033)	(0.027)	(0.022)	(0.017)	(0.009)	(0.022)	(0.009)	(0.009)
Observations	2691	3879	6645	5801	4659	10527	2765	4019	6853

Notes: Only those in the 6 to 12 age group displayed a statistically significant difference in age therefore this covariate was only controlled for in Columns (1), (4) and (7). All regressions were clustered by sub-district. Fixed effects for wave and sub-district were included. The sampling weights included were cross-sectional weights provided in all IFLS waves. Standard errors in parentheses. $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table E.2: Pre-Trends Testing for Outcome Variables Between 2000 and 2007: Primary and Secondary Graduation, Completion of At Least One Year of Secondary School, Child Labour Among Junior And Senior Secondary Students and Aspirations

	Primary School Graduation (1)	Secondary School Graduation (2)	Completion of One Year of Secondary (3)	Child Worked During Junior Secondary (4)	Child Worked During Senior Secondary (5)	Aspirations Gap (6)
Pre-Trend	0.003	0.198	0.020	0.300***	0.270**	-0.042
	(0.013)	(0.256)	(0.015)	(0.099)	(0.128)	(0.113)
Years of Education of the Household Head's Spouse	0.008***	0.028***	0.020***	-0.004*	0.000	0.003
	(0.002)	(0.007)	(0.002)	(0.002)	(0.002)	(0.004)
At least one household member works in agriculture	0.021	-0.026	0.032	0.016	0.039	-0.002
	(0.015)	(0.049)	(0.023)	(0.019)	(0.027)	(0.039)
Years of Education of the Household Head				-0.001		
				(0.002)		
Constant	0.868***	0.118***	0.617***	0.108***	0.079***	0.527***
	(0.012)	(0.044)	(0.019)	(0.015)	(0.019)	(0.030)
Observations	4637	689	4637	2576	1076	2983

Notes: Treatment and control groups exhibited differences in the years of education of the household head's spouse and whether they came from an agricultural household. However those of junior secondary also exhibited differences in the the years of education of the household head as well. All regressions were clustered by sub-district. Fixed effects for wave and sub-district were included. The sampling weights included were cross-sectional weights provided in all IFLS waves. Standard errors in parentheses. $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table E.3: Event Study: Primary School Starting Age, School Attendance and Child Labour Among Primary School Students

	Age Start Primary School			School Attendance			Child Worked During Primary		
	Aged 6-12	Aged 13-18	Aged 6-18	Aged 6-12	Aged 13-18	Aged 6-18	Aged 6-12	Aged 13-18	Aged 6-18
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Treated Sub-District in Wave 1	-0.044	-0.396*	-0.061	0.003	-0.002	-0.031	-0.013	-0.174***	-0.093***
	(0.333)	(0.212)	(0.249)	(0.065)	(0.044)	(0.038)	(0.019)	(0.036)	(0.026)
Treated Sub-District in Wave 2	-0.426**	-0.454**	-0.413**	0.071	0.022	0.031**	-0.018*	-0.083	-0.054*
	(0.213)	(0.230)	(0.202)	(0.075)	(0.048)	(0.013)	(0.010)	(0.065)	(0.029)
Treated Sub-District in Wave 3	-1.284***	0.245	0.068	0.075	-0.019	0.023**	-0.093**	-0.162***	-0.084***
	(0.197)	(0.224)	(0.185)	(0.072)	(0.097)	(0.010)	(0.040)	(0.045)	(0.026)
Age	0.033			-0.000			0.004***		
	(0.024)			(0.002)			(0.001)		
Years of Education of the Household Head's Spouse	-0.011	-0.084***	-0.051***	0.002**	0.019***	0.010***	0.001	-0.001	-0.000
	(0.015)	(0.024)	(0.014)	(0.001)	(0.002)	(0.001)	(0.001)	(0.001)	(0.001)
At least one household member works in agriculture	0.065	-0.236	-0.037	-0.010	0.036**	-0.006	0.000	-0.002	0.001
	(0.067)	(0.257)	(0.133)	(0.009)	(0.015)	(0.009)	(0.005)	(0.013)	(0.007)
Constant	6.180***	7.387***	6.951***	0.964***	0.573***	0.799***	-0.013	0.059***	0.037***
	(0.197)	(0.178)	(0.099)	(0.019)	(0.011)	(0.006)	(0.008)	(0.007)	(0.004)
Observations	6443	7891	14425	13595	10220	23925	10206	8260	18560

Notes: Only those in the 6 to 12 age group displayed a statistically significant difference in age therefore this covariate was only controlled for in Columns (1), (4) and (7). All regressions were clustered by sub-district. Fixed effects for wave and sub-district were included. The sampling weights included were cross-sectional weights provided in all IFLS waves. Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table E.4: Event Study: Primary and Secondary Graduation, Completion of At Least One Year of Secondary School, Child Labour Among Junior And Senior Secondary Students and Aspirations

	Primary School Graduation (1)	Secondary School Graduation (2)	Completion of One Year of Secondary (3)	Child Worked During Junior Secondary (4)	Child Worked During Senior Secondary (5)	Aspirations Gap (6)
Treated Sub-District in Wave 1	0.069		-0.047			
	(0.217)		(0.068)			
Treated Sub-District in Wave 2	-0.060**		-0.149**	-0.331***		
	(0.026)		(0.070)	(0.112)		
Treated Sub-District in Wave 3	0.015	-0.198	-0.012	-0.299***	-0.270**	0.042
	(0.014)	(0.256)	(0.015)	(0.099)	(0.128)	(0.113)
Years of Education of the Household Head's Spouse	0.007***	0.028***	0.019***	-0.003	0.000	0.003
	(0.001)	(0.007)	(0.002)	(0.002)	(0.002)	(0.004)
At least one household member works in agriculture	0.027*	-0.026	0.021	0.010	0.039	-0.002
	(0.014)	(0.049)	(0.019)	(0.015)	(0.027)	(0.039)
Years of Education of the Household Head				-0.001		
				(0.002)		
Constant	0.786***	0.120***	0.511***	0.095***	0.080***	0.526***
	(0.010)	(0.044)	(0.015)	(0.012)	(0.019)	(0.030)
Observations	6852	689	6852	3310	1076	2983

Notes: In Columns (2), (5) and (6) dummy variables for Waves 1 and 2 are omitted because data on secondary school graduation, working senior secondary students and the aspirations gap were only available from the Wave 3 onward. In Column(4), the treatment dummy for Wave 1 was omitted because data on working junior secondary students was available from Wave 2 onward. All regressions are clustered by sub-district. Fixed effects for wave and sub-district were included. The sampling weights included were cross-sectional weights provided in all IFLS waves. Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

F | Robustness: Omitting Wave 3 & Earlier

Table F.1: School Attendance Omitting Wave 3 and Earlier: Respondents Aged 6 to 12 Years OId

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Binary Treatment Specification								
Treated Sub-District ×	0.106*	0.075	0.095*	0.066	0.093	0.066	0.080	0.055
Post-Treatment Period	(0.057)	(0.061)	(0.055)	(0.057)	(0.057)	(0.061)	(0.054)	(0.057)
Treated Sub-District	-0.079	-0.039	-0.072	-0.032				
	(0.057)	(0.066)	(0.055)	(0.063)				
Post-Treatment Period	0.068***	0.056***	0.066***	0.058***				
	(0.007)	(0.007)	(0.007)	(0.006)				
Age		0.032***		0.032***		0.033***		0.033***
		(0.003)		(0.003)		(0.003)		(0.003)
Years of Education of the		0.003***		0.003***		0.003**		0.002**
Household Head's Spouse		(0.001)		(0.001)		(0.001)		(0.001)
At least one household		-0.023**		-0.022**		-0.021**		-0.022**
member works in agriculture		(0.010)		(0.009)		(0.010)		(0.010)
Constant	0.906***	0.601***	0.911***	0.606***	0.938***	0.628***	0.942***	0.631***
	(0.007)	(0.029)	(0.007)	(0.031)	(0.001)	(0.025)	(0.000)	(0.028)
Observations	5913	5295	5913	5295	5857	5238	5857	5238
Mean DV	0.939	0.938	0.943	0.942	0.939	0.937	0.943	0.941
Panel B: Intensity of Treatment Specification								
Post-Treatment Period ×	0.347***	0.269***	0.325***	0.247***	0.320***	0.248**	0.290***	0.219**
Intensity of Treatment	(0.065)	(0.086)	(0.069)	(0.086)	(0.079)	(0.097)	(0.085)	(0.100)
Intensity of Treatment	-0.274***	-0.178	-0.259***	-0.159				
	(0.080)	(0.116)	(0.083)	(0.120)				
Post-Treatment Period	0.068***	0.056***	0.066***	0.058***				
	(0.007)	(0.007)	(0.007)	(0.006)				
Age		0.032***		0.032***		0.033***		0.033***
		(0.003)		(0.003)		(0.003)		(0.003)
Years of Education of the		0.003***		0.003***		0.003**		0.002**
Household Head's Spouse		(0.001)		(0.001)		(0.001)		(0.001)
At least one household		-0.022**		-0.022**		-0.021**		-0.022**
member works in agriculture		(0.010)		(0.009)		(0.010)		(0.010)
Constant	0.906***	0.602***	0.911***	0.606***	0.937***	0.628***	0.942***	0.631***
	(0.007)	(0.029)	(0.007)	(0.031)	(0.000)	(0.025)	(0.000)	(0.028)
Observations	5913	5295	5913	5295	5857	5238	5857	5238
Mean DV	0.939	0.938	0.943	0.942	0.939	0.937	0.943	0.941
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

Table F.2: Primary School Entry Age Omitting Wave 3 and Earlier: Respondents Aged 6 to 12 Years OId

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Binary Treatment Specification								
Treated Sub-District ×	0.102	0.172	0.103	0.192	0.126	0.210	0.127	0.202
Post-Treatment Period	(0.084)	(0.124)	(0.086)	(0.130)	(0.090)	(0.138)	(0.085)	(0.126)
Treated Sub-District	-0.025	-0.087	-0.048	-0.116				
	(0.097)	(0.127)	(0.099)	(0.133)				
Post-Treatment Period	-0.212***	-0.210***	-0.200***	-0.201***				
	(0.050)	(0.052)	(0.038)	(0.040)				
Age		0.033***		0.036***		0.025***		0.026***
		(0.007)		(0.009)		(0.007)		(0.009)
Years of Education of		-0.015***		-0.015***		-0.009***		-0.004
the Household Head's Spouse		(0.004)		(0.005)		(0.004)		(0.004)
At least one household		0.087**		0.108**		0.140		0.096**
member works in agriculture		(0.040)		(0.053)		(0.086)		(0.048)
Constant	6.235***	6.016***	6.247***	5.974***	6.124***	5.922***	6.144***	5.900***
	(0.050)	(0.070)	(0.039)	(0.084)	(0.001)	(0.081)	(0.000)	(0.112)
Observations	5599	5005	5599	5005	5539	4945	5539	4945
Mean DV	6.127	6.133	6.146	6.150	6.126	6.133	6.145	6.150
Panel B: Intensity of Treatment Specification								
Post-Treatment Period ×	0.196	0.318	0.193	0.367	0.254	0.424	0.250	0.400
Intensity of Treatment	(0.246)	(0.366)	(0.259)	(0.412)	(0.279)	(0.416)	(0.287)	(0.411)
Intensity of Treatment	0.038	-0.095	-0.012	-0.159				
	(0.238)	(0.334)	(0.263)	(0.377)				
Post-Treatment Period	-0.212***	-0.209***	-0.200***	-0.201***				
	(0.050)	(0.052)	(0.038)	(0.040)				
Age		0.033***		0.036***		0.025***		0.026***
		(0.007)		(0.009)		(0.007)		(0.009)
Years of Education of the		-0.015***		-0.015***		-0.009***		-0.004
Household Head's Spouse		(0.004)		(0.005)		(0.004)		(0.004)
At least one household		0.086**		0.107**		0.139		0.096**
member works in agriculture		(0.040)		(0.053)		(0.086)		(0.048)
Constant	6.235***	6.015***	6.246***	5.974***	6.125***	5.923***	6.145***	5.901***
	(0.050)	(0.070)	(0.039)	(0.084)	(0.001)	(0.081)	(0.000)	(0.112)
Observations	5599	5005	5599	5005	5539	4945	5539	4945
Mean DV	6.127	6.133	6.146	6.150	6.126	6.133	6.145	6.150
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

G Robustness: Omitting New Households

Table G.1: Baseline Testing Covariates: Omitting New Households

For Individuals Aged 6 to 18 Years Old			
Variable	Control Mean	Treatment Mean	p-value
Gender (Male)	0.507	0.558	0.349
Age	11.593	11.686	0.819
Urban Residence	0.604	0.547	0.2682
Agricultural Household	0.347	0.756	0.000*
Household Head is Female	0.106	0.058	0.148
Years of Education of the Household Head	7.000	6.383	0.188
Years of Education of the Household Head's Spouse	6.525	4.821	0.000*
For Individuals Aged 6 to 12 Years Old			
Variable	Control Mean	Treatment Mean	p-value
Gender (Male)	0.514	0.574	0.413
Age	8.889	8.362	0.075*
Urban Residence	0.600	0.511	0.215
Agricultural Household	0.340	0.851	0.000*
Household Head is Female	0.100	0.043	0.189
Years of Education of the Household Head	7.237	6.682	0.379
Years of Education of the Household Head's Spouse	6.734	5.256	0.019*
For Individuals Aged 13 to 18 Years Old			
Variable	Control Mean	Treatment Mean	p-value
Gender (Male)	0.497	0.538	0.609
Age	15.460	15.692	0.405
Urban Residence	0.609	0.590	0.807
Agricultural Household	0.359	0.641	0.000*
Household Head is Female	0.115	0.077	0.455
Years of Education of the Household Head	6.666	6.027	0.360
Years of Education of the Household Head's Spouse	6.218	4.286	0.005*
For Individuals Aged 15 to 18 Years Old			
Variable	Control Mean	Treatment Mean	p-value
Gender (Male)	0.503	0.556	0.592
Age	16.531	16.704	0.427
Urban Residence	0.617	0.593	0.794
Agricultural Household	0.347	0.704	0.000*
Household Head is Female	0.112	0.074	0.531
Years of Education of the Household Head	6.712	6.222	0.549
Years of Education of the Household Head's Spouse	6.192	3.739	0.004*

Notes: Statistically significant differences in values denoted by $*$.

Table G.2: Baseline Testing Covariates Between Treated and Control After Omitting New Households: 18 Year Olds, Junior and Senior Secondary Students

For Individuals Aged 18 Years Old			
Variable	Control Mean	Treatment Mean	p-value
Gender (Male)	0.491	0.556	0.705
Urban Residence	0.685	0.444	0.128
Agricultural Household	0.289	0.556	0.084*
Household Head is Female	0.145	0.111	0.779
Years of Education of the Household Head	7.122	7.444	0.820
Years of Education of the Household Head's Spouse	6.325	3.333	0.078*
Junior High School Students			
Variable	Control Mean	Treatment Mean	p-value
Gender (Male)	0.482	0.485	0.972
Age	15.615	16	0.193
Urban Residence	0.642	0.545	0.251
Agricultural Household	0.320	0.667	0.000*
Household Head is Female	0.118	0.091	0.634
Years of Education of the Household Head	7.356	5.935	0.059*
Years of Education of the Household Head's Spouse	6.891	3.828	0.000*
Senior High School Students			
Variable	Control Mean	Treatment Mean	p-value
Gender (Male)	0.470	0.462	0.949
Age	17.168	17.385	0.359
Urban Residence	0.743	0.615	0.302
Agricultural Household	0.251	0.692	0.000*
Household Head is Female	0.128	0.154	0.781
Years of Education of the Household Head	8.325	6.923	0.209
Years of Education of the Household Head's Spouse	7.840	2.778	0.000*

Notes: Those considered in Panel A are those aged between 13 and 18 with between 7 to 12 years of education. Those in Panel B are those aged between 15 and 18 with between 10 to 12 years of education. Statistically significant differences in values denoted by $*$. Note that the number of observations falls when restrict the ages of children included in the sample.

Table G.3: School Attendance Omitting New Households: Binary Treatment Specification

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Aged 6-18								
Treated Sub-District ×	0.083***	0.085***	0.082***	0.084***	0.075***	0.079**	0.076***	0.079***
Post-Treatment Period	(0.030)	(0.030)	(0.029)	(0.029)	(0.029)	(0.031)	(0.027)	(0.028)
Treated Sub-District	0.009	0.026	0.011	0.027				
	(0.030)	(0.037)	(0.029)	(0.036)				
Post-Treatment Period	0.060***	0.038***	0.060***	0.037***				
	(0.007)	(0.007)	(0.007)	(0.007)				
Years of Education of the		0.012***		0.013***		0.009***		0.009***
Household Head's Spouse		(0.001)		(0.001)		(0.001)		(0.001)
At least one household		-0.008		-0.006		-0.002		-0.004
member works in argiculture		(0.008)		(0.008)		(0.007)		(0.008)
Constant	0.847***	0.787***	0.848***	0.785***	0.858***	0.810***	0.858***	0.809***
	(0.006)	(0.008)	(0.006)	(0.009)	(0.000)	(0.005)	(0.000)	(0.005)
Observations	30240	28378	30240	28378	30188	28319	30188	28319
Mean DV	0.858	0.860	0.858	0.860	0.858	0.860	0.858	0.860
Panel B: Aged 6-12								
Treated Sub-District ×	0.050***	0.048**	0.048***	0.045**	0.040**	0.039*	0.037**	0.035*
Post-Treatment Period	(0.018)	(0.021)	(0.016)	(0.020)	(0.017)	(0.020)	(0.015)	(0.019)
Treated Sub-District	-0.024	-0.016	-0.025	-0.017				
	(0.018)	(0.022)	(0.016)	(0.021)				
Post-Treatment Period	0.010**	0.003	0.011***	0.006				
	(0.004)	(0.005)	(0.004)	(0.005)				
Age		0.005***		0.001		0.004***		0.002
		(0.001)		(0.002)		(0.001)		(0.002)
Years of Education of the		0.002***		0.002***		0.002***		0.002***
Household Head's Spouse		(0.001)		(0.001)		(0.001)		(0.001)
At least one household		-0.007		-0.009		-0.006		-0.011
member works in agriculture		(0.006)		(0.006)		(0.006)		(0.008)
Constant	0.964***	0.913***	0.966***	0.945***	0.966***	0.919***	0.968***	0.948***
	(0.003)	(0.014)	(0.003)	(0.018)	(0.000)	(0.013)	(0.000)	(0.017)
Observations	17070	16205	17070	16205	17010	16143	17010	16143
Mean DV	0.966	0.966	0.968	0.968	0.966	0.967	0.968	0.968
Panel C: Aged 13-18								
Treated Sub-District ×	0.108***	0.105***	0.095***	0.093***	0.107***	0.097**	0.097***	0.086**
Post-Treatment Period	(0.039)	(0.029)	(0.035)	(0.025)	(0.041)	(0.040)	(0.037)	(0.036)
Treated Sub-District	0.070*	0.109**	0.081**	0.119**				
	(0.038)	(0.050)	(0.035)	(0.047)				
Post-Treatment Period	0.127***	0.087***	0.137***	0.091***				
	(0.013)	(0.013)	(0.014)	(0.014)				
Years of Education of the		0.025***		0.027***		0.015***		0.017***
Household Head's Spouse		(0.002)		(0.002)		(0.001)		(0.001)
At least one household		-0.013		-0.001		0.026**		0.035**
member works in agriculture		(0.015)		(0.015)		(0.013)		(0.014)
Constant	0.695***	0.567***	0.687***	0.544***	0.718***	0.622***	0.712***	0.603***
	(0.011)	(0.015)	(0.013)	(0.017)	(0.000)	(0.010)	(0.000)	(0.010)
Observations	13170	12173	13170	12173	13101	12093	13101	12093
Mean DV	0.718	0.718	0.711	0.711	0.719	0.719	0.713	0.713
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

Table G.4: School Attendance Omitting New Households: Intensity of Treatment Specification

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Aged 6-18								
Post-Treatment Period ×	0.263***	0.262***	0.265***	0.264***	0.240***	0.244***	0.245***	0.248***
Intensity of Treatment	(0.022)	(0.026)	(0.020)	(0.020)	(0.029)	(0.031)	(0.027)	(0.028)
Intensity of Treatment	-0.011	0.024	-0.006	0.027				
	(0.067)	(0.090)	(0.065)	(0.088)				
Post-Treatment Period	0.060***	0.038***	0.060***	0.037***				
	(0.007)	(0.007)	(0.007)	(0.007)				
Years of Education of the		0.012***		0.013***		0.009***		0.009***
Household Head's Spouse		(0.001)		(0.001)		(0.001)		(0.001)
At least one household		-0.007		-0.006		-0.002		-0.004
member works in agriculture		(0.008)		(0.008)		(0.007)		(0.008)
Constant	0.847***	0.787***	0.848***	0.785***	0.858***	0.810***	0.858***	0.809***
	(0.006)	(0.008)	(0.006)	(0.009)	(0.000)	(0.005)	(0.000)	(0.005)
Observations	30240	28378	30240	28378	30188	28319	30188	28319
Mean DV	0.858	0.860	0.858	0.860	0.858	0.860	0.858	0.860
Panel B: Aged 6-12								
Post-Treatment Period ×	0.159***	0.153***	0.152***	0.147***	0.133***	0.130***	0.125***	0.121***
Intensity of Treatment	(0.015)	(0.022)	(0.013)	(0.021)	(0.021)	(0.026)	(0.019)	(0.027)
Intensity of Treatment	-0.086***	-0.069*	-0.086***	-0.071*				
	(0.027)	(0.040)	(0.023)	(0.037)				
Post-Treatment Period	0.010**	0.003	0.011***	0.006				
	(0.004)	(0.005)	(0.004)	(0.005)				
Age		0.005***		0.001		0.004***		0.002
		(0.001)		(0.002)		(0.001)		(0.002)
Years of Education of the		0.002***		0.002***		0.002***		0.002***
Household Head's Spouse		(0.001)		(0.001)		(0.001)		(0.001)
At least one household		-0.007		-0.008		-0.006		-0.011
member works in agriculture		(0.006)		(0.006)		(0.006)		(0.008)
Constant	0.964***	0.913***	0.966***	0.945***	0.966***	0.919***	0.968***	0.948***
	(0.003)	(0.014)	(0.003)	(0.018)	(0.000)	(0.013)	(0.000)	(0.017)
Observations	17070	16205	17070	16205	17010	16143	17010	16143
Mean DV	0.966	0.966	0.968	0.968	0.966	0.967	0.968	0.968
Panel C: Aged 13-18								
Post-Treatment Period ×	0.327***	0.300***	0.303***	0.279***	0.326***	0.296***	0.301***	0.267***
Intensity of Treatment	(0.041)	(0.038)	(0.037)	(0.046)	(0.045)	(0.049)	(0.044)	(0.048)
Intensity of Treatment	0.139	0.226	0.170	0.255*				
	(0.110)	(0.152)	(0.104)	(0.147)				
Post-Treatment Period	0.127***	0.088***	0.137***	0.091***				
	(0.013)	(0.013)	(0.014)	(0.014)				
Years of Education of the		0.024***		0.027***		0.015***		0.017***
Household Head's Spouse		(0.002)		(0.002)		(0.001)		(0.001)
At least one household		-0.013		-0.001		0.026**		0.035**
member works in agriculture		(0.015)		(0.015)		(0.013)		(0.014)
Constant	0.695***	0.568***	0.687***	0.544***	0.718***	0.622***	0.712***	0.603***
	(0.011)	(0.015)	(0.013)	(0.017)	(0.000)	(0.010)	(0.000)	(0.010)
Observations	13170	12173	13170	12173	13101	12093	13101	12093
Mean DV	0.718	0.718	0.711	0.711	0.719	0.719	0.713	0.713
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

Table G.5: Primary School Entry Age Omitting New Households: Binary Treatment Specification

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Aged 6-18								
Treated Sub-District ×	0.164**	0.189**	0.081	0.147	0.074	0.114	-0.019	0.055
Post-Treatment Period	(0.068)	(0.078)	(0.111)	(0.113)	(0.072)	(0.081)	(0.107)	(0.121)
Treated Sub-District	-0.258***	-0.332***	-0.290***	-0.370***				
	(0.043)	(0.047)	(0.055)	(0.062)				
Post-Treatment Period	-0.436***	-0.375***	-0.340***	-0.322***				
	(0.062)	(0.060)	(0.101)	(0.080)				
Years of Education of the		-0.046***		-0.050***		-0.034***		-0.039***
Household Head's Spouse		(0.008)		(0.010)		(0.010)		(0.013)
At least one household		0.011		0.043		-0.053		-0.031
member works in agriculture		(0.062)		(0.083)		(0.081)		(0.107)
Constant	6.635***	6.888***	6.658***	6.913***	6.522***	6.745***	6.573***	6.804***
	(0.042)	(0.074)	(0.047)	(0.094)	(0.000)	(0.067)	(0.000)	(0.086)
Observations	20404	18830	20404	18830	20343	18768	20343	18768
Mean DV	6.522	6.526	6.573	6.567	6.522	6.526	6.573	6.568
Panel B: Aged 6-12								
Treated Sub-District ×	0.271***	0.293***	0.251***	0.278***	0.206***	0.258***	0.189**	0.250***
Post-Treatment Period	(0.062)	(0.046)	(0.076)	(0.049)	(0.064)	(0.054)	(0.084)	(0.070)
Treated Sub-District	-0.181***	-0.240***	-0.181***	-0.230***				
	(0.051)	(0.047)	(0.062)	(0.051)				
Post-Treatment Period	-0.417***	-0.338***	-0.416***	-0.345***				
	(0.047)	(0.049)	(0.050)	(0.053)				
Age		0.035**		0.033*		0.024		0.025
		(0.017)		(0.017)		(0.017)		(0.017)
Years of Education of the		-0.030***		-0.027***		-0.019**		-0.010
Household Head's Spouse		(0.008)		(0.007)		(0.009)		(0.011)
At least one household		0.116*		0.167**		0.107		0.094*
member works in agriculture		(0.062)		(0.078)		(0.068)		(0.053)
Constant	6.440***	6.228***	6.462***	6.225***	6.314***	6.173***	6.347***	6.133***
	(0.044)	(0.173)	(0.046)	(0.154)	(0.000)	(0.173)	(0.000)	(0.144)
Observations	9666	8988	9666	8988	9607	8928	9607	8928
Mean DV	6.315	6.320	6.346	6.350	6.315	6.320	6.347	6.351
Panel C: Aged 13-18								
Treated Sub-District ×	0.007	0.053	-0.151	-0.020	-0.080	-0.005	-0.235	-0.094
Post-Treatment Period	(0.122)	(0.173)	(0.208)	(0.239)	(0.121)	(0.166)	(0.183)	(0.237)
Treated Sub-District	-0.338***	-0.432***	-0.392***	-0.512***				
	(0.065)	(0.075)	(0.079)	(0.102)				
Post-Treatment Period	-0.369***	-0.332***	-0.183	-0.226				
	(0.116)	(0.114)	(0.200)	(0.159)				
Years of Education of the		-0.059***		-0.071***		-0.048***		-0.065***
Household Head's Spouse		(0.013)		(0.018)		(0.016)		(0.022)
At least one household		-0.082		-0.067		-0.241		-0.213
member works in agriculture		(0.102)		(0.140)		(0.154)		(0.210)
Constant	6.791***	7.159***	6.820***	7.252***	6.711***	7.083***	6.782***	7.227***
	(0.062)	(0.124)	(0.072)	(0.171)	(0.000)	(0.114)	(0.000)	(0.156)
Observations	10738	9842	10738	9842	10664	9763	10664	9763
Mean DV	6.709	6.714	6.779	6.768	6.710	6.716	6.781	6.770
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

Table G.6: Primary School Entry Age Omitting New Households: Intensity of Treatment Specification

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Aged 6-18								
Post-Treatment Period ×	0.460***	0.560***	0.234	0.465*	0.247	0.370**	0.026	0.257
Intensity of Treatment	(0.168)	(0.163)	(0.296)	(0.258)	(0.172)	(0.172)	(0.289)	(0.287)
Intensity of Treatment	-0.694***	-0.881***	-0.796***	-1.003***				
	(0.151)	(0.203)	(0.147)	(0.204)				
Post-Treatment Period	-0.436***	-0.376***	-0.341***	-0.322***				
	(0.062)	(0.060)	(0.101)	(0.080)				
Years of Education of the		-0.046***		-0.050***		-0.034***		-0.039***
Household Head's Spouse		(0.008)		(0.010)		(0.010)		(0.013)
At least one household		0.011		0.043		-0.053		-0.031
member works in agriculture		(0.062)		(0.083)		(0.081)		(0.107)
Constant	6.634***	6.887***	6.657***	6.912***	6.522***	6.745***	6.573***	6.804***
	(0.042)	(0.074)	(0.047)	(0.094)	(0.000)	(0.067)	(0.000)	(0.086)
Observations	20404	18830	20404	18830	20343	18768	20343	18768
Mean DV	6.522	6.526	6.573	6.567	6.522	6.526	6.573	6.568
Panel B: Aged 6-12								
Post-Treatment Period ×	0.807***	0.812***	0.788***	0.805***	0.624***	0.709***	0.619***	0.728***
Intensity of Treatment	(0.143)	(0.206)	(0.139)	(0.167)	(0.149)	(0.192)	(0.183)	(0.198)
Intensity of Treatment	-0.532***	-0.666***	-0.562***	-0.669***				
	(0.131)	(0.188)	(0.129)	(0.157)				
Post-Treatment Period	-0.417***	-0.338***	-0.416***	-0.345***				
	(0.047)	(0.049)	(0.050)	(0.053)				
Age		0.035**		0.033*		0.024		0.025
		(0.017)		(0.017)		(0.017)		(0.017)
Years of Education of the		-0.030***		-0.027***		-0.019**		-0.010
Household Head's Spouse		(0.008)		(0.007)		(0.009)		(0.011)
At least one household		0.116*		0.167**		0.107		0.094*
member works in agriculture		(0.062)		(0.078)		(0.068)		(0.053)
Constant	6.440***	6.228***	6.462***	6.225***	6.314***	6.173***	6.347***	6.134***
	(0.044)	(0.173)	(0.046)	(0.154)	(0.000)	(0.173)	(0.000)	(0.144)
Observations	9666	8988	9666	8988	9607	8928	9607	8928
Mean DV	6.315	6.320	6.346	6.350	6.315	6.320	6.347	6.351
Panel C: Aged 13-18								
Post-Treatment Period ×	0.045	0.279	-0.399	0.093	-0.149	0.123	-0.536	-0.051
Intensity of Treatment	(0.314)	(0.385)	(0.590)	(0.621)	(0.320)	(0.383)	(0.523)	(0.604)
Intensity of Treatment	-0.885***	-1.115***	-1.031***	-1.332***				
	(0.194)	(0.264)	(0.204)	(0.304)				
Post-Treatment Period	-0.369***	-0.333***	-0.183	-0.227				
	(0.116)	(0.113)	(0.200)	(0.159)				
Years of Education of the		-0.059***		-0.071***		-0.048***		-0.065***
Household Head's Spouse		(0.013)		(0.018)		(0.016)		(0.022)
At least one household		-0.083		-0.067		-0.242		-0.213
member works in agriculture		(0.102)		(0.140)		(0.154)		(0.210)
Constant	6.790***	7.158***	6.820***	7.251***	6.710***	7.083***	6.782***	7.227***
	(0.062)	(0.123)	(0.072)	(0.171)	(0.000)	(0.114)	(0.000)	(0.156)
Observations	10738	9842	10738	9842	10664	9763	10664	9763
Mean DV	6.709	6.714	6.779	6.768	6.710	6.716	6.781	6.770
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

Table G.7: Child Labour Among Primary School Students Omitting New Households: Binary Treatment Specification

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Aged 6-18								
Treated Sub-District ×	-0.063***	-0.061***	-0.064***	-0.060***	-0.061***	-0.056***	-0.061***	-0.055***
Post-Treatment Period	(0.010)	(0.015)	(0.009)	(0.014)	(0.011)	(0.017)	(0.010)	(0.016)
Treated Sub-District	0.049***	0.043***	0.054***	0.049***				
	(0.004)	(0.006)	(0.003)	(0.006)				
Post-Treatment Period	-0.013***	-0.010**	-0.013***	-0.012***				
	(0.004)	(0.004)	(0.004)	(0.004)				
Years of Education of the		-0.001*		-0.001		-0.001		-0.000
Household Head's Spouse		(0.001)		(0.001)		(0.001)		(0.001)
At least one household		0.016***		0.013**		0.004		0.003
member works in agriculture		(0.005)		(0.005)		(0.006)		(0.006)
Constant	0.038***	0.038***	0.036***	0.036***	0.036***	0.038***	0.034***	0.035***
	(0.003)	(0.005)	(0.003)	(0.005)	(0.000)	(0.004)	(0.000)	(0.004)
Observations	24612	22969	24612	22969	24551	22908	24551	22908
Mean DV	0.036	0.036	0.034	0.033	0.036	0.036	0.034	0.034
Panel B: Aged 6-12								
Treated Sub-District ×	-0.029**	-0.022***	-0.030**	-0.022***	-0.031***	-0.022***	-0.033***	-0.022***
Post-Treatment Period	(0.011)	(0.006)	(0.012)	(0.007)	(0.011)	(0.006)	(0.012)	(0.007)
Treated Sub-District	0.008	0.001	0.011	0.004				
	(0.011)	(0.005)	(0.012)	(0.006)				
Post-Treatment Period	-0.006	-0.006	-0.005	-0.006				
	(0.004)	(0.005)	(0.004)	(0.005)				
Age		0.006***		0.005***		0.005***		0.004***
		(0.001)		(0.001)		(0.001)		(0.001)
Years of Education of the		0.000		0.001		-0.000		0.000
Household Head's Spouse		(0.001)		(0.001)		(0.001)		(0.001)
At least one household		0.007		0.007		-0.001		0.002
member works in agriculture		(0.005)		(0.005)		(0.005)		(0.004)
Constant	0.026***	-0.030***	0.024***	-0.027***	0.025***	-0.019**	0.023***	-0.014*
	(0.003)	(0.009)	(0.003)	(0.008)	(0.000)	(0.010)	(0.000)	(0.008)
Observations	13504	12765	13504	12765	13443	12706	13443	12706
Mean DV	0.025	0.025	0.023	0.022	0.025	0.025	0.023	0.022
Panel C: Aged 13-18								
Treated Sub-District ×	-0.085***	-0.090***	-0.084***	-0.085***	-0.082***	-0.082**	-0.080***	-0.074**
Post-Treatment Period	(0.031)	(0.034)	(0.028)	(0.030)	(0.032)	(0.038)	(0.028)	(0.035)
Treated Sub-District	0.084***	0.079***	0.089***	0.086***				
	(0.010)	(0.010)	(0.006)	(0.008)				
Post-Treatment Period	-0.021***	-0.017***	-0.023***	-0.020***				
	(0.006)	(0.006)	(0.006)	(0.007)				
Years of Education of the		-0.002***		-0.003***		-0.001		-0.001
Household Head's Spouse		(0.001)		(0.001)		(0.001)		(0.001)
At least one household		0.026***		0.019**		0.008		-0.001
member works in agriculture		(0.008)		(0.009)		(0.011)		(0.011)
Constant	0.052***	0.057***	0.051***	0.060***	0.049***	0.052***	0.047***	0.055***
	(0.004)	(0.008)	(0.005)	(0.009)	(0.000)	(0.007)	(0.000)	(0.006)
Observations	11108	10204	11108	10204	11039	10133	11039	10133
Mean DV	0.049	0.050	0.047	0.048	0.049	0.050	0.047	0.048
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

Table G.8: Child Labour Among Primary School Students Omitting New Households: Intensity of Treatment Specification

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Aged 6-18								
Post-Treatment Period ×	-0.179***	-0.178***	-0.181***	-0.177***	-0.176***	-0.168***	-0.180***	-0.168***
Intensity of Treatment	(0.014)	(0.011)	(0.015)	(0.011)	(0.015)	(0.014)	(0.019)	(0.014)
Intensity of Treatment	0.133***	0.120***	0.143***	0.134***				
	(0.020)	(0.013)	(0.025)	(0.017)				
Post-Treatment Period	-0.013***	-0.010**	-0.013***	-0.012***				
	(0.004)	(0.004)	(0.004)	(0.004)				
Years of Education of the		-0.001*		-0.001		-0.001		-0.000
Household Head's Spouse		(0.001)		(0.001)		(0.001)		(0.001)
At least one household		0.016***		0.013**		0.004		0.003
member works in agriculture		(0.005)		(0.005)		(0.006)		(0.006)
Constant	0.038***	0.038***	0.036***	0.036***	0.036***	0.038***	0.034***	0.035***
	(0.003)	(0.005)	(0.003)	(0.005)	(0.000)	(0.004)	(0.000)	(0.004)
Observations	24612	22969	24612	22969	24551	22908	24551	22908
Mean DV	0.036	0.036	0.034	0.033	0.036	0.036	0.034	0.034
Panel B: Aged 6-12								
Post-Treatment Period ×	-0.066	-0.054**	-0.069	-0.053*	-0.071	-0.053**	-0.077	-0.054*
Intensity of Treatment	(0.042)	(0.024)	(0.047)	(0.028)	(0.045)	(0.024)	(0.052)	(0.029)
Intensity of Treatment	0.009	-0.004	0.015	0.002				
	(0.029)	(0.012)	(0.034)	(0.017)				
Post-Treatment Period	-0.006	-0.006	-0.005	-0.006				
	(0.004)	(0.005)	(0.004)	(0.005)				
Age		0.006***		0.005***		0.005***		0.004***
		(0.001)		(0.001)		(0.001)		(0.001)
Years of Education of the		0.000		0.001		-0.000		0.000
Household Head's Spouse		(0.001)		(0.001)		(0.001)		(0.001)
At least one household		0.007		0.007		-0.001		0.002
member works in agriculture		(0.005)		(0.005)		(0.005)		(0.004)
Constant	0.026***	-0.030***	0.024***	-0.027***	0.025***	-0.019**	0.023***	-0.014*
	(0.003)	(0.009)	(0.003)	(0.008)	(0.000)	(0.010)	(0.000)	(0.008)
Observations	13504	12765	13504	12765	13443	12706	13443	12706
Mean DV	0.025	0.025	0.023	0.022	0.025	0.025	0.023	0.022
Panel C: Aged 13-18								
Post-Treatment Period ×	-0.255***	-0.271***	-0.247***	-0.254***	-0.250***	-0.255***	-0.245***	-0.237***
Intensity of Treatment	(0.029)	(0.031)	(0.030)	(0.033)	(0.030)	(0.043)	(0.028)	(0.044)
Intensity of Treatment	0.226***	0.214***	0.234***	0.227***				
	(0.023)	(0.022)	(0.032)	(0.030)				
Post-Treatment Period	-0.021***	-0.017***	-0.023***	-0.020***				
	(0.006)	(0.006)	(0.006)	(0.007)				
Years of Education of the		-0.002***		-0.003***		-0.001		-0.001
Household Head's Spouse		(0.001)		(0.001)		(0.001)		(0.001)
At least one household		0.026***		0.019**		0.007		-0.001
member works in agriculture		(0.008)		(0.009)		(0.011)		(0.011)
Constant	0.052***	0.057***	0.051***	0.060***	0.049***	0.052***	0.047***	0.055***
	(0.004)	(0.008)	(0.005)	(0.009)	(0.000)	(0.007)	(0.000)	(0.006)
Observations	11108	10204	11108	10204	11039	10133	11039	10133
Mean DV	0.049	0.050	0.047	0.048	0.049	0.050	0.047	0.048
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

Table G.9: Child Labour Among Secondary School Students Omitting New Households: Binary Treatment Specification

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Junior Secondary								
Treated Sub-District ×	-0.135***	-0.147***	-0.136***	-0.153***	-0.116***	-0.115***	-0.124***	-0.129***
Post-Treatment Period	(0.020)	(0.018)	(0.027)	(0.024)	(0.020)	(0.015)	(0.027)	(0.021)
Treated Sub-District	0.105**	0.102**	0.120**	0.124**				
	(0.044)	(0.043)	(0.052)	(0.052)				
Post-Treatment Period	-0.010	-0.004	-0.016*	-0.009				
	(0.008)	(0.009)	(0.009)	(0.010)				
Years of Education of		-0.002*		-0.002*		-0.002*		-0.002
the Household Head		(0.001)		(0.001)		(0.001)		(0.001)
Years of Education of the		-0.004***		-0.003**		-0.003**		-0.002
Household Head's Spouse		(0.001)		(0.001)		(0.001)		(0.001)
At least one household		0.023**		0.022*		0.001		0.006
member works in agriculture		(0.011)		(0.011)		(0.010)		(0.013)
Constant	0.073***	0.112***	0.069***	0.100***	0.072***	0.111***	0.065***	0.095***
	(0.006)	(0.012)	(0.005)	(0.012)	(0.000)	(0.009)	(0.000)	(0.010)
Observations	6044	4775	6044	4775	5957	4694	5957	4694
Mean DV	0.071	0.074	0.064	0.066	0.072	0.075	0.065	0.067
Panel B: Senior Secondary								
Treated Sub-District ×	-0.202***	-0.247***	-0.212***	-0.274***	-0.196***	-0.244***	-0.208***	-0.273***
Post-Treatment Period	(0.019)	(0.019)	(0.018)	(0.022)	(0.023)	(0.023)	(0.020)	(0.027)
Treated Sub-District	0.071***	0.094***	0.083***	0.119***				
	(0.014)	(0.015)	(0.011)	(0.022)				
Post-Treatment Period	0.035**	0.034*	0.032*	0.034*				
	(0.017)	(0.019)	(0.017)	(0.020)				
At least one household		0.032*		0.044**		0.040*		0.051*
member works in agriculture		(0.019)		(0.021)		(0.024)		(0.027)
Years of Education of the		-0.002		-0.001		-0.002		-0.000
Household Head's Spouse		(0.002)		(0.002)		(0.002)		(0.002)
Constant	0.095***	0.105***	0.096***	0.091***	0.110***	0.112***	0.109***	0.091***
	(0.010)	(0.018)	(0.011)	(0.019)	(0.000)	(0.016)	(0.000)	(0.017)
Observations	1901	1662	1901	1662	1816	1577	1816	1577
Mean DV	0.108	0.108	0.107	0.106	0.110	0.107	0.109	0.105
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

Table G.10: Child Labour Among Secondary School Students Omitting New Households: Intensity of Treatment Specification

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Junior Secondary								
Post-Treatment Period ×	-0.332***	-0.362***	-0.327***	-0.373***	-0.279***	-0.282***	-0.295**	-0.313***
Intensity of Treatment	(0.115)	(0.122)	(0.121)	(0.133)	(0.093)	(0.072)	(0.117)	(0.099)
Intensity of Treatment	0.225	0.218	0.252	0.267				
	(0.150)	(0.154)	(0.167)	(0.177)				
Post-Treatment Period	-0.011	-0.004	-0.016*	-0.010				
	(0.008)	(0.009)	(0.009)	(0.010)				
Years of Education of		-0.002*		-0.002*		-0.002*		-0.002
the Household Head		(0.001)		(0.001)		(0.001)		(0.001)
Years of Education of the		-0.004***		-0.003**		-0.003**		-0.002
Household Head's Spouse		(0.001)		(0.001)		(0.001)		(0.001)
At least one household		0.023**		0.022*		0.000		0.005
member works in agriculture		(0.011)		(0.011)		(0.010)		(0.013)
Constant	0.074***	0.113***	0.069***	0.101***	0.072***	0.111***	0.065***	0.095***
	(0.006)	(0.012)	(0.005)	(0.012)	(0.000)	(0.009)	(0.000)	(0.010)
Observations	6044	4775	6044	4775	5957	4694	5957	4694
Mean DV	0.071	0.074	0.064	0.066	0.072	0.075	0.065	0.067
Panel B: Senior Secondary								
Post-Treatment Period ×	-0.517***	-0.636***	-0.554***	-0.726***	-0.500***	-0.621***	-0.549***	-0.724***
Intensity of Treatment	(0.123)	(0.125)	(0.115)	(0.118)	(0.129)	(0.128)	(0.121)	(0.119)
Intensity of Treatment	0.172***	0.256***	0.208***	0.329***				
	(0.057)	(0.060)	(0.045)	(0.048)				
Post-Treatment Period	0.035**	0.034*	0.032*	0.034*				
	(0.017)	(0.019)	(0.017)	(0.020)				
At least one household		0.032*		0.044**		0.039		0.051*
member works in agriculture		(0.019)		(0.021)		(0.024)		(0.027)
Years of Education of the		-0.002		-0.001		-0.002		-0.000
Household Head's Spouse		(0.002)		(0.002)		(0.002)		(0.002)
Constant	0.096***	0.105***	0.096***	0.091***	0.110***	0.112***	0.109***	0.091***
	(0.010)	(0.018)	(0.011)	(0.019)	(0.000)	(0.016)	(0.000)	(0.017)
Observations	1901	1662	1901	1662	1816	1577	1816	1577
Mean DV	0.108	0.108	0.107	0.106	0.110	0.107	0.109	0.105
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

Table G.11: Primary School Graduation Omitting New Households: Binary Treatment Specification

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Treated Sub-District ×	-0.034*	-0.035	-0.016	-0.017	-0.014	-0.024	-0.011	-0.022
Post-Treatment Period	(0.020)	(0.031)	(0.025)	(0.038)	(0.022)	(0.026)	(0.026)	(0.029)
Treated Sub-District	0.075***	0.104***	0.059**	0.090***				
	(0.020)	(0.020)	(0.026)	(0.024)				
Post-Treatment Period	0.131***	0.112***	0.121***	0.100***				
	(0.008)	(0.009)	(0.008)	(0.008)				
Years of Education of the		0.013***		0.015***		0.006***		0.006***
Household Head's Spouse		(0.001)		(0.002)		(0.001)		(0.001)
At least one household		-0.020		-0.018		0.012		0.018
member works in agriculture		(0.015)		(0.016)		(0.011)		(0.013)
Constant	0.828***	0.758***	0.837***	0.755***	0.860***	0.812***	0.865***	0.817***
	(0.008)	(0.012)	(0.009)	(0.015)	(0.000)	(0.007)	(0.000)	(0.009)
Observations	9589	8768	9589	8768	9527	8706	9527	8706
Mean DV	0.860	0.855	0.865	0.860	0.860	0.854	0.865	0.859
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

Table G.12: Primary School Graduation Omitting New Households: Intensity of Treatment Specification

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Post-Treatment Period ×	-0.114***	-0.134***	-0.068	-0.086	-0.063	-0.091**	-0.060	-0.093*
Intensity of Treatment	(0.031)	(0.047)	(0.049)	(0.077)	(0.042)	(0.044)	(0.054)	(0.056)
Intensity of Treatment	0.221***	0.296***	0.181***	0.260***				
	(0.021)	(0.034)	(0.032)	(0.033)				
Post-Treatment Period	0.131***	0.112***	0.121***	0.100***				
	(0.008)	(0.009)	(0.008)	(0.008)				
Years of Education of the		0.013***		0.015***		0.006***		0.006***
Household Head's Spouse		(0.001)		(0.002)		(0.001)		(0.001)
At least one household		-0.021		-0.018		0.012		0.018
member works in agriculture		(0.015)		(0.016)		(0.011)		(0.013)
Constant	0.828***	0.759***	0.837***	0.756***	0.860***	0.812***	0.865***	0.817***
	(0.008)	(0.012)	(0.009)	(0.015)	(0.000)	(0.007)	(0.000)	(0.009)
Observations	9589	8768	9589	8768	9527	8706	9527	8706
Mean DV	0.860	0.855	0.865	0.860	0.860	0.854	0.865	0.859
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

Table G.13: Completion of At Least One Year of Secondary School Omitting New Households: Binary Treatment Specification

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Treated Sub-District ×	-0.042	-0.049	-0.043	-0.050	-0.010	-0.024	-0.026	-0.046
Post-Treatment Period	(0.070)	(0.063)	(0.071)	(0.062)		(0.071)	(0.075)	(0.073)
(0.078)								
Treated Sub-District	0.073***	0.125***	0.062**	0.117***				
	(0.028)	(0.038)	(0.026)	(0.037)				
Post-Treatment Period	0.280***	0.239***	0.278***	0.234***				
	(0.013)	(0.013)	(0.015)	(0.014)				
Years of Education of the		0.028***		0.031***		0.016***		0.016***
Household Head's Spouse		(0.002)		(0.002)		(0.001)		(0.002)
At least one household		-0.044**		-0.038*		0.002		0.010
member works in agriculture		(0.019)		(0.021)		(0.016)		(0.017)
Constant	0.629***	0.486***	0.629***	0.466***	0.695***	0.592***	0.693***	0.584***
	(0.012)	(0.017)	(0.015)	(0.020)	(0.000)	(0.010)	(0.000)	(0.012)
Observations	9589	8768	9589	8768	9527	8706	9527	8706
Mean DV	0.696	0.688	0.694	0.686	0.695	0.687	0.693	0.685
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

Table G.14: Completion of At Least One Year of Secondary School Omitting New Households: Intensity of Treatment Specification

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Post-Treatment Period ×	-0.028	-0.060	-0.024	-0.055	0.060	0.026	0.019	-0.026
Intensity of Treatment	(0.169)	(0.161)	(0.175)	(0.155)	(0.152)	(0.164)	(0.175)	(0.194)
Intensity of Treatment	0.160*	0.288**	0.137*	0.267**				
	(0.094)	(0.144)	(0.081)	(0.133)				
Post-Treatment Period	0.279***	0.239***	0.278***	0.234***				
	(0.013)	(0.013)	(0.014)	(0.014)				
Years of Education of the		0.028***		0.031***		0.016***		0.016***
Household Head's Spouse		(0.002)		(0.002)		(0.001)		(0.002)
At least one household		-0.044**		-0.038*		0.002		0.010
member works in agriculture		(0.019)		(0.021)		(0.016)		(0.017)
Constant	0.629***	0.487***	0.630***	0.467***	0.695***	0.592***	0.693***	0.584***
	(0.012)	(0.017)	(0.015)	(0.020)	(0.000)	(0.010)	(0.000)	(0.012)
Observations	9589	8768	9589	8768	9527	8706	9527	8706
Mean DV	0.696	0.688	0.694	0.686	0.695	0.687	0.693	0.685
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

Table G.15: Secondary School Graduation Omitting New Households: Binary Treatment Specification

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Treated Sub-District ×	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Post-Treatment Period	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)
Treated Sub-District	-0.011	-0.018	0.050	0.025				
	(0.043)	(0.051)	(0.045)	(0.065)				
Post-Treatment Period	0.153***	0.090**	0.138***	0.072*				
	(0.036)	(0.039)	(0.036)	(0.038)				
Years of Education of the		0.033***		0.034***		0.028***		0.029***
Household Head's Spouse		(0.004)		(0.004)		(0.005)		(0.006)
At least one household		-0.054		-0.064*		0.014		-0.018
member works in agriculture		(0.035)		(0.035)		(0.048)		(0.047)
Constant	0.296***	0.106***	0.280***	0.093***	0.333***	0.138***	0.314***	0.129***
	(0.019)	(0.031)	(0.020)	(0.032)	(0.000)	(0.038)	(0.000)	(0.041)
Observations	1161	1007	1161	1007	1079	927	1079	927
Mean DV	0.336	0.317	0.316	0.297	0.333	0.313	0.314	0.295
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

Table G.16: Secondary School Graduation Omitting New Households: Intensity of Treatment Specification

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Post-Treatment Period ×	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Intensity of Treatment	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)
Intensity of Treatment	0.017	-0.112	0.170**	-0.013				
	(0.090)	(0.106)	(0.075)	(0.157)				
Post-Treatment Period	0.153***	0.089**	0.138***	0.072*				
	(0.036)	(0.039)	(0.036)	(0.038)				
Years of Education of the		0.033***		0.034***		0.028***		0.029***
Household Head's Spouse		(0.004)		(0.004)		(0.005)		(0.006)
At least one household		-0.054		-0.064*		0.014		-0.018
member works in agriculture		(0.036)		(0.035)		(0.048)		(0.047)
Constant	0.296***	0.107***	0.280***	0.093***	0.333***	0.138***	0.314***	0.129***
	(0.019)	(0.031)	(0.020)	(0.031)	(0.000)	(0.038)	(0.000)	(0.041)
Observations	1161	1007	1161	1007	1079	927	1079	927
Mean DV	0.336	0.317	0.316	0.297	0.333	0.313	0.314	0.295
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

Table G.17: Aspirations Gap Omitting New Households: Binary Treatment Specification

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Treated Sub-District ×	-0.142	-0.019	-0.136	-0.015	-0.141	-0.023	-0.137	-0.022
Post-Treatment Period	(0.112)	(0.057)	(0.113)	(0.062)	(0.131)	(0.076)	(0.131)	(0.080)
Treated Sub-District	-0.179***	-0.172***	-0.191***	-0.195***				
	(0.059)	(0.059)	(0.066)	(0.068)				
Post-Treatment Period	0.860***	0.852***	0.835***	0.838***				
	(0.034)	(0.036)	(0.036)	(0.039)				
Years of Education of the		0.005		0.003		0.002		0.001
Household Head's Spouse		(0.003)		(0.003)		(0.004)		(0.004)
At least one household		-0.072***		-0.051*		-0.025		-0.017
member works in agriculture		(0.027)		(0.030)		(0.030)		(0.036)
Constant	0.528***	0.522***	0.549***	0.547***	0.767***	0.742***	0.784***	0.760***
	(0.016)	(0.031)	(0.019)	(0.032)	(0.000)	(0.026)	(0.000)	(0.029)
Observations	4637	4118	4637	4118	4553	4046	4553	4046
Mean DV	0.766	0.743	0.781	0.760	0.766	0.743	0.783	0.762
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

Table G.18: Aspirations Gap Omitting New Households: Intensity of Treatment Specification

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Post-Treatment Period ×	-0.263	0.014	-0.287	0.001	-0.216	0.020	-0.209	0.027
Intensity of Treatment	(0.329)	(0.134)	(0.357)	(0.153)	(0.364)	(0.173)	(0.386)	(0.193)
Intensity of Treatment	-0.534***	-0.522***	-0.560***	-0.580***				
	(0.054)	(0.062)	(0.062)	(0.071)				
Post-Treatment Period	0.859***	0.852***	0.834***	0.838***				
	(0.034)	(0.036)	(0.036)	(0.039)				
Years of Education of the		0.005		0.003		0.002		0.001
Household Head's Spouse		(0.003)		(0.003)		(0.004)		(0.004)
At least one household		-0.071***		-0.051*		-0.025		-0.017
member works in agriculture		(0.027)		(0.030)		(0.030)		(0.036)
Constant	0.528***	0.522***	0.549***	0.546***	0.767***	0.742***	0.784***	0.760***
	(0.016)	(0.031)	(0.019)	(0.032)	(0.000)	(0.026)	(0.000)	(0.029)
Observations	4637	4118	4637	4118	4553	4046	4553	4046
Mean DV	0.766	0.743	0.781	0.760	0.766	0.743	0.783	0.762
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

H | Robustness: Buleleng District

Table H.1: Baseline Testing Covariates Buleleng District Only

For Individuals Aged 6 to 18 Years Old			
Variable	Control Mean	Treatment Mean	p-value
Gender (Male)	0.429	0.617	0.034*
Age	10.969	11.702	0.297
Urban Residence	0.653	1	0.000*
Agricultural Household	0.694	0.681	0.875
Household Head is Female	0.031	0.043	0.715
Years of Education of the Household Head	5.733	7.568	0.007*
Years of Education of the Household Head's Spouse	4.438	5.419	0.165
For Individuals Aged 6 to 12 Years Old			
Variable	Control Mean	Treatment Mean	p-value
Gender (Male)	0.387	0.625	0.048*
Age	8.516	7.958	0.245
Urban Residence	0.677	1	0.001*
Agricultural Household	0.677	0.750	0.517
Household Head is Female	0.032	0.000	0.379
Years of Education of the Household Head	5.462	7.545	0.021*
Years of Education of the Household Head's Spouse	4.689	5.870	0.232
For Individuals Aged 13 to 18 Years Old			
Variable	Control Mean	Treatment Mean	p-value
Gender (Male)	0.5	0.609	0.423
Age	15.194	15.609	0.405
Urban Residence	0.611	1	0.000*
Agricultural Household	0.722	0.609	0.371
Household Head is Female	0.028	0.087	0.321
Years of Education of the Household Head	6.147	7.591	0.177
Years of Education of the Household Head's Spouse	4	4.9	0.370
For Individuals Aged 15 to 18 Years Old			
Variable	Control Mean	Treatment Mean	p-value
Gender (Male)	0.550	0.625	0.661
Age	16.6	16.625	0.950
Urban Residence	0.650	1.000	0.007*
Agricultural Household	0.7	0.625	0.647
Household Head is Female	0.050	0.063	0.875
Years of Education of the Household Head	6.650	7.938	0.337
Years of Education of the Household Head's Spouse	4.100	4.308	0.872

Statistically significant differences in values denoted by $*$. Note that the number of observations falls when restrict the ages of children included in the sample. For 18 year old respondents, few observations were recorded for the years of education of the head's spouse, hence the p-value could not be produced.

Table H.2: Baseline Testing Covariates Buleleng District Only: 18 Year Olds Junior and Senior Secondary Students

For Individuals Aged 18 Years Old			
Variable	Control Mean	Treatment Mean	p-value
Gender (Male)	0.571	0.750	0.599
Urban Residence	0.714	1.000	0.282
Agricultural Household	0.571	0.250	0.353
Household Head is Female	0.143	0.250	0.695
Years of Education of the Household Head	7	12	0.034*
Years of Education of the Household Head's Spouse	5.285	9	.
Junior High School Students			
Variable	Control Mean	Treatment Mean	p-value
Gender (Male)	0.500	0.556	0.716
Age	15.4333	16	0.284
Urban Residence	0.633	1	0.003*
Agricultural Household	0.733	0.667	0.632
Household Head is Female	0.033	0.111	0.291
Years of Education of the Household Head	6.172	7.647	0.229
Years of Education of the Household Head's Spouse	4.103	4.2	0.932
Senior High School Students			
Variable	Control Mean	Treatment Mean	p-value
Gender (Male)	0.5	0.5	1
Age	17.3	17.25	0.903
Urban Residence	0.7	1	0.100
Agricultural Household	0.5	0.625	0.621
Household Head is Female	0.1	0.125	0.876
Years of Education of the Household Head	5.8	8.5	0.161
Years of Education of the Household Head's Spouse	4.3	2.8	0.414

Note: Those considered in Panel A are those aged between 13 and 18 with between 7 to 12 years of education. Those in Panel B are those aged between 15 and 18 with between 10 to 12 years of education. Statistically significant differences in values denoted by $*$.

Table H.3: School Attendance Buleleng District Only: Binary Treatment Specification

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Aged 6-18								
Treated Sub-District ×	0.041	0.056	0.049	0.058	0.040	0.071*	0.051	0.073*
Post-Treatment Period	(0.055)	(0.028)	(0.051)	(0.030)	(0.057)	(0.025)	(0.047)	(0.025)
Treated Sub-District	0.017	-0.019	0.014	-0.017				
	(0.047)	(0.015)	(0.045)	(0.019)				
Post-Treatment Period	0.101	0.141***	0.092	0.127***				
	(0.055)	(0.016)	(0.051)	(0.017)				
Male		0.061*		0.059		0.063*		0.060
		(0.025)		(0.030)		(0.023)		(0.029)
Urban Residence		-0.110**		-0.095**		-0.146*		-0.120
		(0.025)		(0.026)		(0.059)		(0.064)
Years of Education of		0.008		0.008		0.007		0.007
the Household Head		(0.006)		(0.006)		(0.006)		(0.006)
Constant	0.799***	0.793***	0.806***	0.786***	0.830***	0.845***	0.833***	0.831***
	(0.047)	(0.044)	(0.045)	(0.045)	(0.004)	(0.061)	(0.003)	(0.062)
Observations	689	629	689	629	689	629	689	629
Mean DV	0.833	0.825	0.836	0.829	0.833	0.825	0.836	0.829
Panel B: Aged 6-12								
Treated Sub-District ×	0.094	0.137**	0.094	0.133**	0.098	0.149***	0.098	0.148***
Post-Treatment Period	(0.063)	(0.035)	(0.063)	(0.038)	(0.056)	(0.020)	(0.058)	(0.024)
Treated Sub-District	-0.042*	-0.075*	-0.040*	-0.071**				
	(0.017)	(0.024)	(0.017)	(0.022)				
Post-Treatment Period	-0.009	0.020	-0.012	0.012				
	(0.063)	(0.041)	(0.063)	(0.043)				
Male		0.029		0.030		0.025		0.025
		(0.020)		(0.022)		(0.022)		(0.024)
Urban Residence		-0.101		-0.091		-0.148**		-0.143**
		(0.051)		(0.046)		(0.040)		(0.041)
Years of Education of		-0.000		0.001		0.003		0.004
the Household Head		(0.002)		(0.002)		(0.002)		(0.003)
Constant	0.956***	1.002***	0.958***	0.992***	0.942***	0.996***	0.944***	0.988***
	(0.017)	(0.051)	(0.017)	(0.044)	(0.003)	(0.013)	(0.003)	(0.010)
Observations	388	356	388	356	388	356	388	356
Mean DV	0.948	0.944	0.950	0.945	0.948	0.944	0.950	0.945
Panel C: Aged 13-18								
Treated Sub-District ×	-0.063	-0.030	-0.050	-0.028	-0.058	-0.013	-0.039	-0.006
Post-Treatment Period	(0.050)	(0.051)	(0.040)	(0.047)	(0.040)	(0.064)	(0.028)	(0.065)
Treated Sub-District	0.143	0.117	0.140	0.124				
	(0.072)	(0.064)	(0.065)	(0.066)				
Post-Treatment Period	0.260**	0.283***	0.244***	0.258***				
	(0.050)	(0.038)	(0.040)	(0.035)				
Urban Residence		-0.090		-0.060		-0.108		-0.084
		(0.073)		(0.072)		(0.123)		(0.133)
Constant	0.573***	0.634***	0.586***	0.627***	0.689***	0.757***	0.696***	0.750***
	(0.072)	(0.091)	(0.065)	(0.094)	(0.003)	(0.078)	(0.002)	(0.084)
Observations	301	301	301	301	301	301	301	301
Mean DV	0.684	0.684	0.693	0.693	0.684	0.684	0.693	0.693
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

Table H.4: School Attendance Buleleng District Only: Intensity of Treatment Specification

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Aged 6-18								
Post-Treatment Period ×	0.090	0.122	0.107	0.127	0.087	0.156*	0.111	0.160*
Intensity of Treatment	(0.121)	(0.062)	(0.112)	(0.067)	(0.125)	(0.056)	(0.102)	(0.055)
Intensity of Treatment	0.036	-0.043	0.031	-0.037				
	(0.104)	(0.034)	(0.098)	(0.042)				
Post-Treatment Period	0.101	0.141***	0.092	0.127***				
	(0.055)	(0.016)	(0.051)	(0.017)				
Male		0.061*		0.059		0.063*		0.060
		(0.025)		(0.030)		(0.023)		(0.029)
Urban Residence		-0.110**		-0.095**		-0.146*		-0.120
		(0.025)		(0.026)		(0.059)		(0.064)
Years of Education of		0.008		0.008		0.007		0.007
the Household Head		(0.006)		(0.006)		(0.006)		(0.006)
Constant	0.799***	0.793***	0.806***	0.786***	0.830***	0.845***	0.833***	0.831***
	(0.047)	(0.044)	(0.045)	(0.045)	(0.004)	(0.061)	(0.003)	(0.062)
Observations	689	629	689	629	689	629	689	629
Mean DV	0.833	0.825	0.836	0.829	0.833	0.825	0.836	0.829
Panel B: Aged 6-12								
Post-Treatment Period ×	0.207	0.301**	0.206	0.293**	0.215	0.327***	0.217	0.326***
Intensity of Treatment	(0.139)	(0.077)	(0.139)	(0.083)	(0.124)	(0.044)	(0.129)	(0.052)
Intensity of Treatment	-0.092*	-0.165*	-0.088*	-0.156**				
	(0.038)	(0.053)	(0.037)	(0.048)				
Post-Treatment Period	-0.009	0.020	-0.012	0.012				
	(0.063)	(0.041)	(0.063)	(0.043)				
Male		0.029		0.030		0.025		0.025
		(0.020)		(0.022)		(0.022)		(0.024)
Urban Residence		-0.101		-0.091		-0.148**		-0.143**
		(0.051)		(0.046)		(0.040)		(0.041)
Years of Education of		-0.000		0.001		0.003		0.004
the Household Head		(0.002)		(0.002)		(0.002)		(0.003)
Constant	0.956***	1.002***	0.958***	0.992***	0.942***	0.996***	0.944***	0.988***
	(0.017)	(0.051)	(0.017)	(0.044)	(0.003)	(0.013)	(0.003)	(0.010)
Observations	388	356	388	356	388	356	388	356
Mean DV	0.948	0.944	0.950	0.945	0.948	0.944	0.950	0.945
Panel C: Aged 13-18								
Post-Treatment Period ×	-0.138	-0.066	-0.109	-0.062	-0.128	-0.029	-0.087	-0.014
Intensity of Treatment	(0.110)	(0.113)	(0.089)	(0.102)	(0.088)	(0.141)	(0.063)	(0.142)
Intensity of Treatment	0.314	0.256	0.307	0.272				
	(0.158)	(0.141)	(0.144)	(0.145)				
Post-Treatment Period	0.260**	0.283***	0.244***	0.258***				
	(0.050)	(0.038)	(0.040)	(0.035)				
Urban Residence		-0.090		-0.060		-0.108		-0.084
		(0.073)		(0.072)		(0.123)		(0.133)
Constant	0.573***	0.634***	0.586***	0.627***	0.689***	0.757***	0.696***	0.750***
	(0.072)	(0.091)	(0.065)	(0.094)	(0.003)	(0.078)	(0.002)	(0.084)
Observations	301	301	301	301	301	301	301	301
Mean DV	0.684	0.684	0.693	0.693	0.684	0.684	0.693	0.693
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

Table H.5: Primary School Entry Age Buleleng District Only: Binary Treatment Specification

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Aged 6-18								
Treated Sub-District ×	0.073	0.096*	0.112	0.141**	0.113*	0.107*	0.148**	0.148*
Post-Treatment Period	(0.054)	(0.033)	(0.068)	(0.041)	(0.047)	(0.038)	(0.046)	(0.047)
Treated Sub-District	-0.079	-0.071	-0.113	-0.109				
	(0.053)	(0.058)	(0.067)	(0.068)				
Post-Treatment Period	-0.306**	-0.330***	-0.303**	-0.326***				
	(0.054)	(0.022)	(0.068)	(0.043)				
Male		0.011		0.010		0.011		0.011
		(0.056)		(0.055)		(0.039)		(0.037)
Urban Residence		0.019		0.015		0.074		0.060
		(0.067)		(0.071)		(0.130)		(0.134)
Years of Education of		-0.011		-0.012*		-0.006		-0.006
the Household Head		(0.005)		(0.005)		(0.004)		(0.004)
Constant	6.440***	6.503***	6.441***	6.514***	6.299***	6.295***	6.292***	6.303***
	(0.053)	(0.078)	(0.067)	(0.081)	(0.005)	(0.108)	(0.004)	(0.096)
Observations	471	416	471	416	471	416	471	416
Mean DV	6.310	6.332	6.306	6.327	6.310	6.332	6.306	6.327
Panel B: Aged 6-12								
Treated Sub-District ×	0.093	0.099	0.102	0.119	0.082	0.074	0.103	0.103
Post-Treatment Period	(0.054)	(0.068)	(0.082)	(0.085)	(0.039)	(0.071)	(0.065)	(0.094)
Treated Sub-District	-0.050	-0.035	-0.060	-0.054				
	(0.038)	(0.020)	(0.060)	(0.040)				
Post-Treatment Period	-0.187**	-0.188	-0.182	-0.176				
	(0.054)	(0.095)	(0.082)	(0.134)				
Male		-0.053		-0.055		-0.039		-0.036
		(0.144)		(0.141)		(0.139)		(0.135)
Urban Residence		0.012		-0.014		0.023		-0.005
		(0.150)		(0.188)		(0.199)		(0.225)
Years of Education of		-0.007		-0.008*		-0.003		-0.005
the Household Head		(0.003)		(0.003)		(0.002)		(0.003)
Constant	6.269***	6.335***	6.268***	6.359***	6.172***	6.205***	6.170***	6.230***
	(0.038)	(0.130)	(0.060)	(0.142)	(0.004)	(0.160)	(0.007)	(0.155)
Observations	222	193	222	193	221	192	221	192
Mean DV	6.185	6.197	6.185	6.197	6.181	6.193	6.181	6.193
Panel C: Aged 13-18								
Treated Sub-District ×	0.085	0.072	0.135	0.127	0.097	0.052	0.144	0.103
Post-Treatment Period	(0.110)	(0.131)	(0.111)	(0.133)	(0.091)	(0.084)	(0.080)	(0.080)
Treated Sub-District	-0.158	-0.148	-0.196	-0.191				
	(0.079)	(0.093)	(0.086)	(0.101)				
Post-Treatment Period	-0.385**	-0.394**	-0.377**	-0.383**				
	(0.110)	(0.088)	(0.111)	(0.093)				
Urban Residence		0.041		0.026		0.138		0.129
		(0.165)		(0.159)		(0.111)		(0.121)
Constant	6.589***	6.560***	6.583***	6.565***	6.413***	6.318***	6.397***	6.309***
	(0.079)	(0.159)	(0.086)	(0.164)	(0.008)	(0.072)	(0.007)	(0.079)
Observations	249	249	249	249	249	249	249	249
Mean DV	6.422	6.422	6.410	6.410	6.422	6.422	6.410	6.410
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

Table H.6: Primary School Entry Age Buleleng District Only: Intensity of Treatment Specification

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Aged 6-18								
Post-Treatment Period ×	0.161	0.212*	0.246	0.311**	0.249*	0.236*	0.326**	0.326*
Intensity of Treatment	(0.120)	(0.072)	(0.151)	(0.091)	(0.103)	(0.084)	(0.100)	(0.104)
Intensity of Treatment	-0.174	-0.155	-0.248	-0.241				
	(0.116)	(0.127)	(0.148)	(0.149)				
Post-Treatment Period	-0.306**	-0.330***	-0.303**	-0.326***				
	(0.054)	(0.022)	(0.068)	(0.043)				
Male		0.011		0.010		0.011		0.011
		(0.056)		(0.055)		(0.039)		(0.037)
Urban Residence		0.019		0.015		0.074		0.060
		(0.067)		(0.071)		(0.130)		(0.134)
Years of Education of		-0.011		-0.012*		-0.006		-0.006
the Household Head		(0.005)		(0.005)		(0.004)		(0.004)
Constant	6.440***	6.503***	6.441***	6.514***	6.299***	6.295***	6.292***	6.303***
	(0.053)	(0.078)	(0.067)	(0.081)	(0.005)	(0.108)	(0.004)	(0.096)
Observations	471	416	471	416	471	416	471	416
Mean DV	6.310	6.332	6.306	6.327	6.310	6.332	6.306	6.327
Panel B: Aged 6-12								
Post-Treatment Period ×	0.204	0.217	0.225	0.263	0.180	0.163	0.226	0.227
Intensity of Treatment	(0.120)	(0.150)	(0.180)	(0.188)	(0.086)	(0.156)	(0.143)	(0.207)
Intensity of Treatment	-0.110	-0.076	-0.131	-0.119				
	(0.083)	(0.043)	(0.131)	(0.089)				
Post-Treatment Period	-0.187**	-0.188	-0.182	-0.176				
	(0.054)	(0.095)	(0.082)	(0.134)				
Male		-0.053		-0.055		-0.039		-0.036
		(0.144)		(0.141)		(0.139)		(0.135)
Urban Residence		0.012		-0.014		0.023		-0.005
		(0.150)		(0.188)		(0.199)		(0.225)
Years of Education of		-0.007		-0.008*		-0.003		-0.005
the Household Head		(0.003)		(0.003)		(0.002)		(0.003)
Constant	6.269***	6.335***	6.268***	6.359***	6.172***	6.205***	6.170***	6.230***
	(0.038)	(0.130)	(0.060)	(0.142)	(0.004)	(0.160)	(0.007)	(0.155)
Observations	222	193	222	193	221	192	221	192
Mean DV	6.185	6.197	6.185	6.197	6.181	6.193	6.181	6.193
Panel C: Aged 13-18								
Post-Treatment Period ×	0.186	0.158	0.296	0.279	0.214	0.114	0.316	0.227
Intensity of Treatment	(0.242)	(0.287)	(0.245)	(0.293)	(0.200)	(0.185)	(0.177)	(0.177)
Intensity of Treatment	-0.348	-0.326	-0.431	-0.419				
	(0.173)	(0.206)	(0.189)	(0.222)				
Post-Treatment Period	-0.385**	-0.394**	-0.377**	-0.383**				
	(0.110)	(0.088)	(0.111)	(0.093)				
Urban Residence		0.041		0.026		0.138		0.129
		(0.165)		(0.159)		(0.111)		(0.121)
Constant	6.589***	6.560***	6.583***	6.565***	6.413***	6.318***	6.397***	6.309***
	(0.079)	(0.159)	(0.086)	(0.164)	(0.008)	(0.072)	(0.007)	(0.079)
Observations	249	249	249	249	249	249	249	249
Mean DV	6.422	6.422	6.410	6.410	6.422	6.422	6.410	6.410
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

Table H.7: Child Labour Among Primary School Students Buleleng District Only: Binary Treatment Specification

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Aged 6-18								
Treated Sub-District ×	-0.064**	-0.088**	-0.059**	-0.085**	-0.065***	-0.082**	-0.064***	-0.081**
Post-Treatment Period	(0.012)	(0.016)	(0.013)	(0.016)	(0.011)	(0.017)	(0.010)	(0.015)
Treated Sub-District	0.038**	0.046**	0.033**	0.041**				
	(0.009)	(0.008)	(0.008)	(0.010)				
Post-Treatment Period	-0.006	-0.009	-0.011	-0.017				
	(0.012)	(0.016)	(0.013)	(0.016)				
Male		-0.008		-0.000		-0.011		-0.005
		(0.015)		(0.017)		(0.017)		(0.018)
Urban Residence		0.004		0.009		-0.008		-0.011
		(0.016)		(0.019)		(0.020)		(0.020)
Years of Education of		0.001		0.001		-0.001		-0.001
the Household Head		(0.002)		(0.002)		(0.002)		(0.002)
Constant	0.053***	0.047	0.058***	0.044	0.063***	0.078***	0.066***	0.079**
	(0.009)	(0.027)	(0.008)	(0.029)	(0.001)	(0.013)	(0.001)	(0.014)
Observations	557	501	557	501	557	501	557	501
Mean DV	0.057	0.054	0.060	0.058	0.057	0.054	0.060	0.058
Panel B: Aged 6-12								
Treated Sub-District ×	-0.033	-0.047	-0.023	-0.039	-0.036	-0.038	-0.033	-0.032
Post-Treatment Period	(0.025)	(0.027)	(0.024)	(0.026)	(0.023)	(0.019)	(0.021)	(0.019)
Treated Sub-District	-0.023*	-0.015	-0.033**	-0.026**				
	(0.008)	(0.007)	(0.006)	(0.006)				
Post-Treatment Period	0.014	0.004	0.006	-0.004				
	(0.025)	(0.022)	(0.024)	(0.021)				
Male		0.015		0.023		0.018		0.027
		(0.034)		(0.036)		(0.038)		(0.041)
Urban Residence		0.019		0.018		-0.018		-0.034
		(0.013)		(0.010)		(0.037)		(0.041)
Years of Education of		0.004***		0.005**		0.004*		0.005*
the Household Head		(0.001)		(0.001)		(0.001)		(0.002)
Constant	0.042**	-0.001	0.050***	-0.001	0.040***	0.020*	0.044***	0.022
	(0.008)	(0.024)	(0.006)	(0.021)	(0.002)	(0.008)	(0.002)	(0.013)
Observations	293	262	293	262	293	262	293	262
Mean DV	0.038	0.034	0.041	0.038	0.038	0.034	0.041	0.038
Panel C: Aged 13-18								
Treated Sub-District ×	-0.073***	-0.064***	-0.070***	-0.066***	-0.073***	-0.062*	-0.071***	-0.064**
Post-Treatment Period	(0.007)	(0.008)	(0.003)	(0.006)	(0.008)	(0.020)	(0.005)	(0.016)
Treated Sub-District	0.080**	0.073***	0.079**	0.075**				
	(0.018)	(0.012)	(0.016)	(0.014)				
Post-Treatment Period	-0.030**	-0.023*	-0.033***	-0.029**				
	(0.007)	(0.008)	(0.003)	(0.007)				
Urban Residence		-0.027		-0.015		-0.029		-0.019
		(0.016)		(0.019)		(0.038)		(0.036)
Constant	0.067**	0.085**	0.068**	0.078**	0.086***	0.104**	0.086***	0.098**
	(0.018)	(0.017)	(0.016)	(0.020)	(0.001)	(0.024)	(0.000)	(0.023)
Observations	264	264	264	264	264	264	264	264
Mean DV	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

Table H.8: Child Labour Among Primary School Students Buleleng District Only: Intensity of Treatment Specification

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Aged 6-18								
Post-Treatment Period ×	-0.141**	-0.194**	-0.129**	-0.187**	-0.142***	-0.179**	-0.142***	-0.178**
Intensity of Treatment	(0.026)	(0.034)	(0.028)	(0.036)	(0.023)	(0.037)	(0.021)	(0.033)
Intensity of Treatment	0.083**	0.102**	0.073**	0.090**				
	(0.019)	(0.018)	(0.018)	(0.022)				
Post-Treatment Period	-0.006	-0.009	-0.011	-0.017				
	(0.012)	(0.016)	(0.013)	(0.016)				
Male		-0.008		-0.000		-0.011		-0.005
		(0.015)		(0.017)		(0.017)		(0.018)
Urban Residence		0.004		0.009		-0.008		-0.011
		(0.016)		(0.019)		(0.020)		(0.020)
Years of Education of		0.001		0.001		-0.001		-0.001
the Household Head		(0.002)		(0.002)		(0.002)		(0.002)
Constant	0.053***	0.047	0.058***	0.044	0.063***	0.078***	0.066***	0.079**
	(0.009)	(0.027)	(0.008)	(0.029)	(0.001)	(0.013)	(0.001)	(0.014)
Observations	557	501	557	501	557	501	557	501
Mean DV	0.057	0.054	0.060	0.058	0.057	0.054	0.060	0.058
Panel B: Aged 6-12								
Post-Treatment Period ×	-0.072	-0.103	-0.050	-0.085	-0.079	-0.083	-0.073	-0.070
Intensity of Treatment	(0.056)	(0.060)	(0.053)	(0.058)	(0.051)	(0.042)	(0.046)	(0.042)
Intensity of Treatment	-0.050*	-0.033	-0.073**	-0.058**				
	(0.018)	(0.016)	(0.013)	(0.014)				
Post-Treatment Period=1	0.014	0.004	0.006	-0.004				
	(0.025)	(0.022)	(0.024)	(0.021)				
Male		0.015		0.023		0.018		0.027
		(0.034)		(0.036)		(0.038)		(0.041)
Urban Residence		0.019		0.018		-0.018		-0.034
		(0.013)		(0.010)		(0.037)		(0.041)
Years of Education of		0.004***		0.005**		0.004*		0.005*
the Household Head		(0.001)		(0.001)		(0.001)		(0.002)
Constant	0.042**	-0.001	0.050***	-0.001	0.040***	0.020*	0.044***	0.022
	(0.008)	(0.024)	(0.006)	(0.021)	(0.002)	(0.008)	(0.002)	(0.013)
Observations	293	262	293	262	293	262	293	262
Mean DV	0.038	0.034	0.041	0.038	0.038	0.034	0.041	0.038
Panel C: Aged 13-18								
Post-Treatment Period ×	-0.161***	-0.142***	-0.155***	-0.144***	-0.161***	-0.137*	-0.156***	-0.141**
Intensity of Treatment	(0.015)	(0.017)	(0.006)	(0.013)	-0.161***	-0.137*	-0.156***	-0.141**
Intensity of Treatment	0.176**	0.160***	0.173**	0.165**				
	(0.039)	(0.027)	(0.036)	(0.031)				
Post-Treatment Period	-0.030**	-0.023*	-0.033***	-0.029**				
	(0.007)	(0.008)	(0.003)	(0.007)				
Urban Residence		-0.027		-0.015		-0.029		-0.019
		(0.016)		(0.019)		(0.038)		(0.036)
Constant	0.067**	0.085**	0.068**	0.078**	0.086***	0.104**	0.086***	0.098**
	(0.018)	(0.017)	(0.016)	(0.020)	(0.001)	(0.024)	(0.000)	(0.023)
Observations	264	264	264	264	264	264	264	264
Mean DV	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

Table H.9: Child Labour Among Secondary School Students: Binary Treatment Specification

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Junior Secondary								
Treated Sub-District ×	0.115	0.121**	0.112	0.117*	0.069	0.080***	0.074	0.082**
Post-Treatment Period	(0.056)	(0.037)	(0.058)	(0.041)	(0.047)	(0.013)	(0.045)	(0.018)
Treated Sub-District	-0.160*	-0.159**	-0.167*	-0.164**				
	(0.063)	(0.033)	(0.064)	(0.034)				
Post-Treatment Period	-0.142*	-0.113	-0.146*	-0.122				
	(0.056)	(0.053)	(0.058)	(0.055)				
Urban Residence		-0.086		-0.087		-0.131		-0.125
		(0.078)		(0.083)		(0.067)		(0.069)
Constant	0.275**	0.325**	0.284**	0.338**	0.157***	0.255**	0.164***	0.259**
	(0.063)	(0.060)	(0.064)	(0.066)	(0.007)	(0.052)	(0.006)	(0.054)
Observations	162	162	162	162	162	162	162	162
Mean DV	0.167	0.167	0.174	0.174	0.167	0.167	0.174	0.174
Panel B: Senior Secondary								
Treated Sub-District ×	0.150	0.150	0.173	0.173	0.234	0.234	0.223	0.223
Post-Treatment Period	(0.229)	(0.229)	(0.219)	(0.219)	(0.160)	(0.160)	(0.160)	(0.160)
Treated Sub-District	-0.221	-0.221	-0.241	-0.241				
	(0.264)	(0.264)	(0.254)	(0.254)				
Post-Treatment Period	-0.304	-0.304	-0.350	-0.350				
	(0.229)	(0.229)	(0.219)	(0.219)				
Constant	0.375	0.375	0.418	0.418	0.147***	0.147***	0.174***	0.174***
	(0.264)	(0.264)	(0.254)	(0.254)	(0.022)	(0.022)	(0.022)	(0.022)
Observations	50	50	50	50	50	50	50	50
Mean DV	0.180	0.180	0.204	0.204	0.180	0.180	0.204	0.204
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

Notes: There were no differences in baseline characteristics for senior secondary students therefore no control were included in regressions for these secondary students.

Table H.10: Child Labour Among Secondary School Students: Intensity of Treatment Specification

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Junior Secondary								
Post-Treatment Period ×	0.253	0.265**	0.247	0.258*	0.151	0.176***	0.163	0.181**
Intensity of Treatment	(0.123)	(0.081)	(0.128)	(0.089)	(0.103)	(0.028)	(0.100)	(0.039)
Intensity of Treatment	-0.352*	-0.350**	-0.367*	-0.360**				
	(0.138)	(0.072)	(0.140)	(0.075)				
Post-Treatment Period	-0.142*	-0.113	-0.146*	-0.122				
	(0.056)	(0.053)	(0.058)	(0.055)				
Urban Residence		-0.086		-0.087		-0.131		-0.125
		(0.078)		(0.083)		(0.067)		(0.069)
Constant	0.275**	0.325**	0.284**	0.338**	0.157***	0.255**	0.164***	0.259**
	(0.063)	(0.060)	(0.064)	(0.066)	(0.007)	(0.052)	(0.006)	(0.054)
Observations	162	162	162	162	162	162	162	162
Mean DV	0.167	0.167	0.174	0.174	0.167	0.167	0.174	0.174
Panel B: Senior Secondary								
Post-Treatment Period ×	0.329	0.329	0.381	0.381	0.514	0.514	0.490	0.490
Intensity of Treatment	(0.504)	(0.504)	(0.481)	(0.481)	(0.353)	(0.353)	(0.352)	(0.352)
Intensity of Treatment	-0.487	-0.487	-0.529	-0.529				
	(0.582)	(0.582)	(0.558)	(0.558)				
Post-Treatment Period	-0.304	-0.304	-0.350	-0.350				
	(0.229)	(0.229)	(0.219)	(0.219)				
Constant	0.375	0.375	0.418	0.418	0.147***	0.147***	0.174***	0.174***
	(0.264)	(0.264)	(0.254)	(0.254)	(0.022)	(0.022)	(0.022)	(0.022)
Observations	50	50	50	50	50	50	50	50
Mean DV	0.180	0.180	0.204	0.204	0.180	0.180	0.204	0.204
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

Notes: There were no differences in baseline characteristics for senior secondary students therefore no control were included in regressions for these secondary students.

Table H.11: Primary School Graduation Buleleng District Only: Binary Treatment Specification

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Treated Sub-District ×	-0.061	-0.064	-0.048	-0.061	-0.049	-0.045	-0.057	-0.053
Post-Treatment Period	(0.026)	(0.030)	(0.029)	(0.028)	(0.029)	(0.023)	(0.026)	(0.024)
Treated Sub-District	0.061	0.063	0.048	0.056				
	(0.026)	(0.029)	(0.029)	(0.027)				
Post-Treatment Period	0.131**	0.127**	0.120**	0.106*				
	(0.026)	(0.035)	(0.029)	(0.035)				
Urban Residence		0.014		0.054		-0.015		-0.015
		(0.054)		(0.045)		(0.027)		(0.020)
Constant	0.869***	0.861***	0.880***	0.845***	0.930***	0.940***	0.934***	0.944***
	(0.026)	(0.041)	(0.029)	(0.033)	(0.003)	(0.020)	(0.002)	(0.015)
Observations	241	241	241	241	241	241	241	241
Mean DV	0.925	0.925	0.929	0.929	0.925	0.925	0.929	0.929
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

Table H.12: Primary School Graduation Buleleng District Only: Intensity of Treatment Specification

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Post-Treatment Period ×	-0.133	-0.141	-0.105	-0.133	-0.108	-0.098	-0.125	-0.116
Intensity of Treatment	(0.058)	(0.066)	(0.065)	(0.062)	(0.065)	(0.050)	(0.057)	(0.053)
Intensity of Treatment	0.133	0.139	0.105	0.122				
	(0.058)	(0.063)	(0.065)	(0.059)				
Post-Treatment Period	0.131**	0.127**	0.120**	0.106*				
	(0.026)	(0.035)	(0.029)	(0.035)				
Urban Residence		0.014		0.054		-0.015		-0.015
		(0.054)		(0.045)		(0.027)		(0.020)
Constant	0.869***	0.861***	0.880***	0.845***	0.930***	0.940***	0.934***	0.944***
	(0.026)	(0.041)	(0.029)	(0.033)	(0.003)	(0.020)	(0.002)	(0.015)
Observations	241	241	241	241	241	241	241	241
Mean DV	0.925	0.925	0.929	0.929	0.925	0.925	0.929	0.929
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

Table H.13: Completion of At Least One Year of Secondary School Buleleng District Only: Binary Treatment Specification

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Treated Sub-District ×	-0.078	-0.086	-0.054	-0.072	-0.069	-0.064	-0.066	-0.061
Post-Treatment Period	(0.075)	(0.081)	(0.076)	(0.082)	(0.072)	(0.048)	(0.071)	(0.048)
Treated Sub-District	0.097	0.102	0.070	0.081				
	(0.069)	(0.077)	(0.068)	(0.076)				
Post-Treatment Period	0.411**	0.402**	0.390**	0.370**				
	(0.075)	(0.095)	(0.076)	(0.099)				
Urban Residence		0.033		0.077		-0.016		-0.017
		(0.131)		(0.127)		(0.104)		(0.101)
Constant	0.570***	0.550**	0.593***	0.543**	0.733***	0.743***	0.738***	0.749***
	(0.069)	(0.107)	(0.068)	(0.101)	(0.007)	(0.074)	(0.006)	(0.074)
Observations	241	241	241	241	241	241	241	241
Mean DV	0.726	0.726	0.732	0.732	0.726	0.726	0.732	0.732
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

Table H.14: Completion of At Least One Year of Secondary School Buleleng District Only: Intensity of Treatment Specification

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Post-Treatment Period ×	-0.172	-0.189	-0.118	-0.157	-0.152	-0.141	-0.144	-0.134
Intensity of Treatment	(0.165)	(0.178)	(0.167)	(0.180)	(0.158)	(0.105)	(0.157)	(0.105)
Intensity of Treatment	0.212	0.225	0.155	0.179				
	(0.152)	(0.169)	(0.149)	(0.166)				
Post-Treatment Period	0.411**	0.402**	0.390**	0.370**				
	(0.075)	(0.095)	(0.076)	(0.099)				
Urban Residence		0.033		0.077		-0.016		-0.017
		(0.131)		(0.127)		(0.104)		(0.101)
Constant	0.570***	0.550**	0.593***	0.543**	0.733***	0.743***	0.738***	0.749***
	(0.069)	(0.107)	(0.068)	(0.101)	(0.007)	(0.074)	(0.006)	(0.074)
Observations	241	241	241	241	241	241	241	241
Mean DV	0.726	0.726	0.732	0.732	0.726	0.726	0.732	0.732
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

Table H.15: Secondary School Graduation Buleleng District Only: Binary Treatment Specification

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Treated Sub-District ×	-0.142	-0.289	-0.179	-0.293	-0.147	-0.262	-0.165	-0.259
Post-Treatment Period	(0.191)	(0.219)	(0.187)	(0.223)	(0.231)	(0.271)	(0.235)	(0.284)
Treated Sub-District	0.175**	0.150*	0.227**	0.190*				
	(0.050)	(0.063)	(0.049)	(0.071)				
Post-Treatment Period	0.009	0.080	-0.007	0.047				
	(0.191)	(0.221)	(0.187)	(0.225)				
Years of Education of		0.036**		0.032*		0.044**		0.040**
the Household Head		(0.010)		(0.011)		(0.012)		(0.011)
Constant	0.158**	-0.055	0.151*	-0.031	0.232***	-0.028	0.237***	-0.006
	(0.050)	(0.083)	(0.049)	(0.085)	(0.027)	(0.101)	(0.025)	(0.099)
Observations	42	40	42	40	42	40	42	40
Mean DV	0.214	0.225	0.220	0.231	0.214	0.225	0.220	0.231
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

Table H.16: Secondary School Graduation Buleleng District Only: Intensity of Treatment Specification

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Post-Treatment Period ×	-0.313	-0.635	-0.393	-0.645	-0.323	-0.576	-0.363	-0.569
Intensity of Treatment	(0.420)	(0.482)	(0.412)	(0.491)	(0.508)	(0.597)	(0.517)	(0.626)
Intensity of Treatment	0.386**	0.331*	0.499**	0.418*				
	(0.109)	(0.139)	(0.108)	(0.156)				
Post-Treatment Period	0.009	0.080	-0.007	0.047				
	(0.191)	(0.221)	(0.187)	(0.225)				
Years of Education of		0.036**		0.032*		0.044**		0.040**
the Household Head		(0.010)		(0.011)		(0.012)		(0.011)
Constant	0.158**	-0.055	0.151*	-0.031	0.232***	-0.028	0.237***	-0.006
	(0.050)	(0.083)	(0.049)	(0.085)	(0.027)	(0.101)	(0.025)	(0.099)
Observations	42	40	42	40	42	40	42	40
Mean DV	0.214	0.225	0.220	0.231	0.214	0.225	0.220	0.231
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

Table H.17: Aspirations Gap Buleleng District Only: Binary Treatment Specification

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Treated Sub-District ×	0.178	0.154	0.175	0.148	0.195	0.168	0.214	0.186
Post-Treatment Period	(0.268)	(0.249)	(0.266)	(0.246)	(0.264)	(0.243)	(0.264)	(0.243)
Treated Sub-District	-0.167	-0.158	-0.167	-0.160				
	(0.097)	(0.108)	(0.098)	(0.107)				
Post-Treatment Period	0.883**	0.859*	0.875**	0.858**				
	(0.268)	(0.273)	(0.266)	(0.264)				
Urban Residence		0.114		0.120		0.108		0.115
		(0.091)		(0.079)		(0.118)		(0.124)
Constant	0.440**	0.365*	0.446**	0.362*	0.680***	0.605***	0.667***	0.583***
	(0.097)	(0.119)	(0.098)	(0.117)	(0.025)	(0.095)	(0.023)	(0.099)
Observations	126	126	126	126	126	126	126	126
Mean DV	0.698	0.698	0.686	0.686	0.698	0.698	0.686	0.686
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes

Table H.18: Aspirations Gap Buleleng District Only: Intensity of Treatment Specification

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Post-Treatment Period ×	0.392	0.338	0.384	0.326	0.429	0.370	0.470	0.410
Intensity of Treatment	(0.589)	(0.549)	(0.584)	(0.542)	(0.582)	(0.535)	(0.580)	(0.535)
Intensity of Treatment	-0.368	-0.347	-0.368	-0.352				
	(0.212)	(0.237)	(0.216)	(0.235)				
Post-Treatment Period	0.883**	0.859*	0.875**	0.858**				
	(0.268)	(0.273)	(0.266)	(0.264)				
Urban Residence		0.114		0.120		0.108		0.115
		(0.091)		(0.079)		(0.118)		(0.124)
Constant	0.440**	0.365*	0.446**	0.362*	0.680***	0.605***	0.667***	0.583***
	(0.097)	(0.119)	(0.098)	(0.117)	(0.025)	(0.095)	(0.023)	(0.099)
Observations	126	126	126	126	126	126	126	126
Mean DV	0.698	0.698	0.686	0.686	0.698	0.698	0.686	0.686
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Sampling Weights	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes