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Understanding Equity and Access in the Expansion of Higher Education in Myanmar

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ABSTRACT

In this article, I examine the extent to which higher education has expanded in Myanmar and whether this expansion has widened or narrowed the equity gap in higher education access, using the lenses of the Maximally Maintained Inequality and Rational Choice Model. To achieve this, I employ a parallel mixed-method research design comprising two components: policy analysis and secondary data analysis. I first explore the policy initiatives implemented before 2016 that arguably aimed at promoting equitable access to higher education. Subsequently, using nationally representative data from the Myanmar Multiple Indicator Cluster Survey (2000) and separately the Myanmar Demographic & Health Survey (2015-16), I examine the extent to which socio-economic status and certain background characteristics continue to be related to opportunities of access to higher education. I then examine whether the expansion from 2000 to 2016 narrows the socio-economic status differences in access to higher education. The findings suggest that socio-economic status and other background characteristics such as gender, ethnicity, and area of residence became more strongly associated to higher education following the expansion, suggesting a move away, instead of towards, equitable opportunities of access. Although higher education access increased across all socio-economic groups over the period studied, the expansion widened the educational inequalities. This is particularly evident for students from lower-socio-economic backgrounds, those from rural areas, and ethnic minorities. In addition, gender-based admission policy initiatives appear to fall short of addressing the existing gender disparities. Hence, I conclude that the policy initiatives studied in this research did not promote equity, despite ostensibly looking to do so. I contextualise my findings in the current Myanmar milieu and propose policy initiatives which, once researched appropriately, could serve to address the inequalities in access to higher education in Myanmar.

KEYWORDS

Higher education access; expansion; equity; socio-economic status; Myanmar

Introduction

Many high-income and middle-income countries have experienced exponential growth in providing higher education access since the 1960s (Chatterji, 1998; Greenaway & Haynes, 2003; Marginson & van der Wende, 2007). A growing body of literature also confirms this surge in lower-income countries (Ilie & Rose, 2016; Schendel & McCowan, 2016). However, expansion of access does not necessarily guarantee equity as observed in the UK (Blanden & Machin, 2004; Boliver, 2011), Brazil (McCowan, 2007), Spain (Rahona López, 2009) and low and middle-income countries (Ilie & Rose, 2016). In this article, equity reflects the notion of Roemer's (1998) 'equality of opportunity', which is the pursuit of equal opportunities across different individuals by mitigating the influence of circumstances beyond their control.

Myanmar has experienced a similar pattern of growth in higher education enrolment, particularly after implementing various expansion policies ranging from adopting a low-tuition fee policy to establishing

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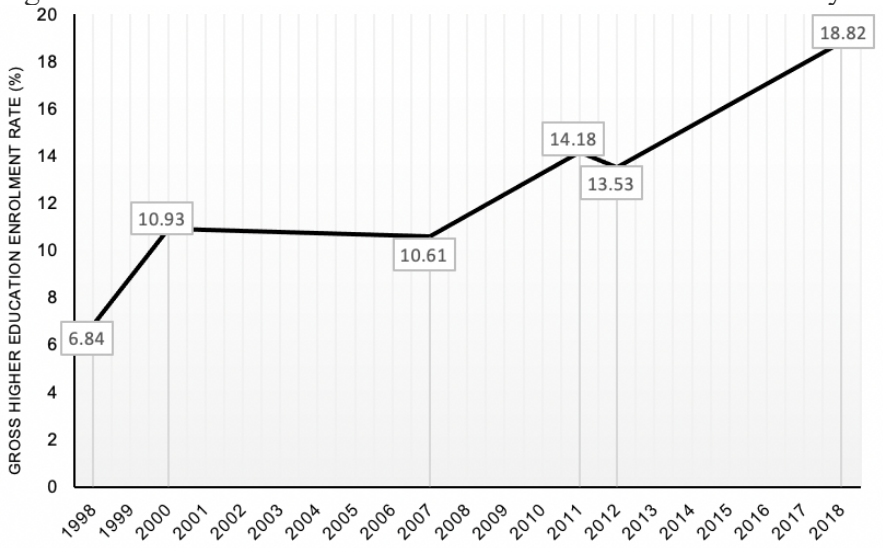
many higher education institutions (HEIs) across different regions. According to the World Bank (2018), the country's gross higher education enrolment ratio has increased from 6.84% in 1998 to 18.82% in 2018 (see Figure 1). However, national reports hint at disparities in higher education access for students from lower socio-economic backgrounds and ethnic minority groups (MoHS & ICF, 2017). Notably, there is still a lack of comprehensive studies which can provide insights into whether the expansion of higher education promotes equitable access in the country.

Figure 1
Higher Education Gross Enrolment Rate from 1998 to 2018 in Myanmar



Note. Data from UNESCO Institute for Statistics (2024).

Against this backdrop, this article seeks to address the following research questions:

- RQ1. How is the expansion of higher education access addressed and driven by policy initiatives in Myanmar?
- RQ2. What are the differences in higher education access by socio-economic backgrounds, as well as by certain other background characteristics at different points during the expansion?
- RQ3. To what extent has the policy-predicated expansion of higher education narrowed the socio-economic differences over time?

Through its findings, this article aims to make two main contributions. First, it explores whether the expansion of higher education access widens or narrows the equity gap in a lower-middle-income country such as Myanmar. Second, it examines the changes in higher education access and educational inequalities before and after a critical point of education reform in Myanmar. As such, it provides insights to understand how different political transitions in the country have shaped the higher education system over the years. Although the study does not examine the current patterns of access due to data limitations, the findings can be used as a baseline for future research and policymaking amid the current political climate following the 2021 military coup.

Contextual Background of Higher Education in Myanmar

Established during British colonial rule, higher education in Myanmar has been plagued by several political and social challenges. However, the most significant challenge materialised following the Ne Win military coup in 1963. Two major reforms are worthy of note. First, General Ne Win introduced the 1964

University Education Law, integrating socialist ideology into the education system and exerting more control over the universities including students and the curriculum (James, 2005). The University Education Law, as amended in 1973, further restricted universities' administrative and financial autonomy, eventually granting the government full control over budget allocations for each university (CESR, 2013). These centralised government interventions and policies led to a deterioration of the educational system and its international benchmarks faded into relative obscurity.

Second, the cumulative effect of persistent corruption and the ineffective state response to economic instability and poverty gave rise to the 1988 nationwide student-led anti-government protests. To prevent students from organising and participating in further demonstrations, universities in Yangon and other locations where protests occurred were repeatedly closed and reopened from 1988 to 2000 (Hong & Kim, 2019). Further, the government introduced a distance higher education system[1] (Koon-Hong, 2014) and relocated many universities and established new ones in rural areas (Lall, 2020), thereby scattering the students across the country. All of these reforms presented significant disruption to students' access to higher education. Not only do students have limited options to pursue their desired majors and universities, but they also have limited opportunities to pursue higher education.

It was only in 2011 that the higher education system was targeted for revitalisation. It was the year that General Thein Sein[2] was appointed as the President of the Myanmar following the widely criticised election, ending the military rule for the first time in 23 years. Under the Thein Sein government, staff from the higher education sector began to re-establish contact with academics and scholars from other countries (Lall, 2020). One of the prominent initiatives of this government was the implementation of the Comprehensive Education Sector Review (CESR) in collaboration with international development partners. This review shed much-needed insights into Myanmar's overall education condition, including access and equity. It also plays a role in drafting and implementing educational policies and practices, including the 2016 National Strategic Education Plan.

A Brief Reflection on the current Higher Education

As witnessed by history, political transitions in Myanmar have shaped educational policies, especially in higher education. The military coup in 2021 could follow the historical trends by leaving their mark, prompting questions such as whether the military junta will reintroduce the "Burmese Way to Socialism" or continue the existing education reform initiated by the previous democratic government.

It is also worth noting that the growing tension between the military junta and, on the other hand, ethnic insurgents and anti-coup forces has several implications for higher education access and equity. While all universities under the military junta were opened in November 2023 (RFA Burmese, 2024), many civilians are reluctant to enrol primarily to show solidarity with Civil Disobedience Movement (Sa Phan, 2024). Running in parallel, the National Unity Government (NUG), the elected government in exile, has opened online university courses, offering a glimpse of hope for education in these unprecedented times, albeit on a small scale and at the risk of enrolled students being arrested. There is also a surge of private universities, which, unfortunately, might be expensive for an average student. While this research cannot encompass the currently evolving situation, I focus on the critical policy transitions on higher education access at a point just before the recent political and social developments to provide insights into what preceded them.

1 Correspondence courses.

2 General Thein Sein was the former prime minister of the military government. After the 2010 election, his government released the democratic leader Aung San Suu Kyi and many other political prisoners and reinstated the major political party National League for Democracy (Campbell, 2012).

Theoretical and Empirical Background

To explain whether expansion in higher education access could alleviate educational inequalities in Myanmar, I draw upon Maximally Maintained Inequality (MMI) and Rational Choice Model (RCM)[3]. Two reasons guide my decision: first, existing empirical studies use these theories to explain the issue of inequalities across different educational contexts, including those of low-income and lower-middle-income countries (Buckner & Abdelaziz, 2023; Shafiq et al., 2018). Second, they discuss how socio-economic status and background characteristics could predict students' participation in higher education, which is the core of RQ2 and RQ3.

The MMI Theory: Proposed by Raftery and Hout (1993), MMI explains educational inequalities at a macro level, contending that educational inequality will persist after the expansion of a given (higher) education system because students from higher social classes would monopolise these new opportunities. Unless these students reach their desired educational attainment level or higher education institutions offer more places than the demand from these students, there will still be a barrier for middle-and-lower class students to participate in higher education.

Based on cross-national comparisons across thirteen high-income countries, Shavit et al. (2007) found that the educational patterns of most countries align with the MMI hypothesis, suggesting that expansion alone cannot mitigate the issue of inequalities. Similar conclusions could be observed in Australia (Chesters & Watson, 2013) and China (Wu et al., 2020). It is worth noting that there is limited research exploring the applicability of the MMI theory in low-income and lower-middle-income countries. The existing studies mainly focus on cross-country comparisons. For instance, Buckner and Abdelaziz (2023) claim that the cross-national patterns of wealth-driven educational inequalities in low-income and lower-middle-income countries support the MMI theory. However, inequality patterns of individual country could not be observed, stressing the need for more country-specific research.

Notably, MMI has been criticised for ignoring the educational choices among various tracks within the education system and quality differences of schools and universities (Breen et al., 2005; Lucas, 2001). In response, Lucas (2001) proposes Effectively Maintained Inequality (EMI), which argues that socio-economically disadvantaged students obtain relatively more opportunities to join a university because those from advantaged backgrounds choose to attend a place that offers better education. Unfortunately, I am unable to apply this theoretical lens in this research since my data sources do not contain information about different tier of universities. Previous empirical research in low and lower-middle-income countries, such as Ilie et al. (2021), encountered similar challenges.

The RCM: Proposed by Breen and Goldthorpe (1997), RCM explains educational choices and inequalities at a micro level, stating how individuals are more concerned with moving down the social ladder rather than climbing up. It further points out that parents desire their children to have a class position that is at least as favourable as their own. Therefore, parents of socio-economically disadvantaged students, who are usually less educated, want their children to earn income as soon as they are ready to avoid being demoted to a lower class (Holm & Jaeger, 2008). Moreover, the cost of pursuing higher education, which includes the opportunity cost of earnings and the risk of social demotion associated with not completing the studies, weighs much more for students from lower socio-economic backgrounds. All these factors play a role in influencing decisions on whether to pursue higher education (Barone & Ruggera, 2018; Stocké, 2007).

Several studies in high-income countries confirm that students from different socio-economic backgrounds express their desire to maintain their social position (Breen et al., 2014; Davies et al., 2002). van de Werfhorst and Hofstede (2007) confirm such findings, revealing that socio-economically disadvantaged students express higher education aspirations but tend not to pursue one because of lack of resources and

3 I am mindful that these theories cannot fully account for the unique socio-political constraints in Myanmar. However, the use of these theoretical lenses is justified because (i) the primary focus of this research is to explore socio-economic inequalities in higher education, not the impact of socio-political constraints, and (ii) the data sources available in Myanmar lack variables that capture these socio-political constraints. Therefore, future research should examine how these socio-political constraints could influence the existing inequality of opportunities across students from different backgrounds.

concerns over being demoted to a lower class. A similar finding has been reported by Jakob and Combet (2020) in El Salvador, a lower-middle-income country. Despite wanting to pursue higher education and maintain their social position, they found that financial constraints prevent socio-economically disadvantaged students from continuing their further studies. Based on these findings, students from different social strata have higher education aspirations. However, the opportunity cost of pursuing higher education weighs more heavily in the decision-making of socio-economically disadvantaged students than their advantaged counterparts.

One common critique of RCM is that individuals make educational decisions to avoid being demoted on the social ladder. Contrary to this assumption, many empirical studies in high-income countries found that educational decisions are driven by both the individual's desire to climb up and their concern to avoid moving down the social ladder (Goldthorpe & McKnight, 2006), an important aspect to consider in the current research.

As noted earlier, Myanmar has experienced expansion in higher education access. However, whether this expansion promotes equity remains to be confirmed. I take the view that applying both MMI and RCM in this research would provide a more comprehensive understanding of (in)equalities before and after the 2012 nationwide education reform.

Method

I adopt a parallel mixed-methods design, where quantitative and qualitative data are analysed in insolation until the data interpretation stage (Creswell et al., 2003; Tashakkori & Teddlie, 1998). I address the RQ1 through a policy analysis and the RQ2 through a nationally representative secondary quantitative data analysis.

Qualitative Component

Policy Documents

Two main criteria guide my selection: first, I include all the publicly available local policy documents[4] that discuss 'equity' and 'access' in higher education. These documents range from policy texts to government reports. Second, I only focus on documents published before 2016 because no individual-level datasets post-2016 are available for quantitative data analysis.

Table 1
Educational Policy used in the current research

	Document	Author(s)	Description
1	University Education Law (1964, amended 1973, 1975, 1979, 1988)	Ministry of Education (Myanmar)	The 1964 law, a mandate during the military rule under Ne Win government, was introduced to exercise centralised control over higher education and drive the education system to align more with socialist policies (James, 2005). One noticeable aspect of this was the change in the medium of language from English to Burmese, the language of the Bamar ethnic majority. The amendments further restricted universities' administrative and financial autonomy and granted the state complete control to determine budget allocations for each university (CESR, 2013).

4 At the time of writing, there are no publicly available policy documents before 2016 that exclusively and specifically discuss the patterns of access and equity in higher education. Therefore, I examine the policy documents in Table 1, which include policy texts related to higher education access and equity.

Table 1 (Cont.)

2	2008 Constitution (Third Amendment of 1947)	Myanmar Government	The constitution was drafted during the military rule, mainly outlining the structure of the government, the state's obligations, and citizens' rights. Nevertheless, it also includes provisions on education, such as Article 22 and Article 366, which discuss, although quite vaguely, ethnic education rights and access to education for all.
3	10 Points Education Policy (2011)	Myanmar Government	This comprehensive strategy was drafted under the Thein Sein government to address the key challenges within the education sector and help realise education reform initiatives.
4	Comprehensive Education Sector Review (CESR) Phase 1: Rapid Assessment Report (2013)	Collaboration between Ministry of Education (Myanmar), government agencies and international development actors	Following the democratic transition in 2011, the Thein Sein government launched the Comprehensive Education Sector Review (CESR) Phase 1 in 2013, which was a collaboration between the Ministry of Education and international development partners such as the Asian Development Bank (ADB), UNICEF, the UK Department for International Development (DFID) and the Australian Agency for International Development. The main objective of this report is to provide policymakers and international experts with baseline data and information about the overall condition of the educational system in Myanmar, mainly focusing on access and quality.
5	CESR Higher Education Background Education Information Report (2013)	Collaboration between Ministry of Education (Myanmar), government agencies and international development actors	This report offers an overview of Myanmar's higher education – its policies and governance.
6	CESR Phase 2: In-depth Analysis Report (2014)	Collaboration between Ministry of Education (Myanmar), government agencies and international development actors	Phase 2 offers a detailed analysis of the areas identified in Phase 1, including an examination of the effectiveness of the educational policies at that time. It also provides policy recommendations for future education reforms.
7	National Education Law (2014, amended 2015)	Drafted by EPIC and enacted by the Ministry of Education (Myanmar)	The 2014 law was formulated and issued under the Thein Sein government to address persistent issues around quality and access. Following the criticisms from various stakeholders, from students to academics, for its overly centralised control over students, teachers, and university affairs, as well as its lack of academic freedom and inclusivity for ethnic and marginalised communities, the law was later amended 2015.

Data Analysis

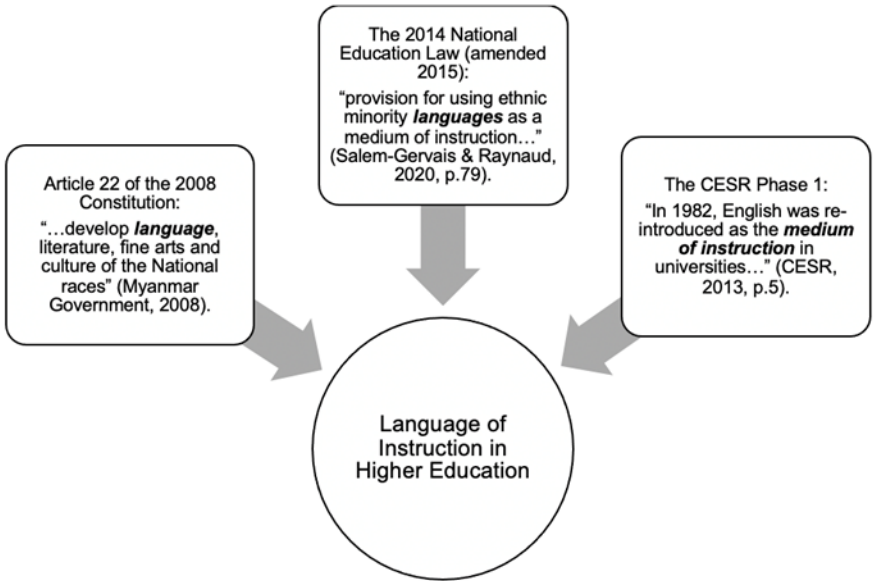
I employ a systematic content analysis of seven policy documents (see Table 1). I first identify the relevant policy segments that contain keywords such as 'equity', 'access', 'higher education', 'university', 'language of instruction' and 'education reform', with reference to previous studies (Heslop, 2019; Kandiko Howson & Lall, 2020; Lall & South, 2014). I then code texts from these segments that address one of the following two criteria: (i) whether they could either discourage or promote equal higher education opportunities or (ii) whether they could prevent certain groups of students from participating in higher education.

I then classify these coded texts that address similar or related topics into the same category. For instance, in Figure 2, I organise the policy texts that make references to 'language' and/or 'medium of instruction' under one category. I repeat this exercise for each category.

I then assess the potential effectiveness of the policies for each category and recommend alternatives, if needed, to address persistent inequalities in higher education. It should also be noted that prior to my policy analysis I was aware of how certain groups of students were discriminated against and oppressed to participate in higher education, especially during military rule. This awareness stemmed from my previous engagement as a volunteer teacher at IDP (Internally Displaced Person) camps and other rural areas in Myanmar, as well as from accounts shared by my students and colleagues. Rather than seeking to dissociate my experiences and insights, I take the view that incorporating them with the existing, yet limited, literature about access and equity in Myanmar would allow me to be more reflexive and critical during the analysis stage. Along with peer-reviewed research and insights from my experiences, I also rely on grey literature such as published media reports to inform my analysis.

Figure 2

Example of how policy texts are categorised in the current research



Quantitative Component

Data

I use nationally representative, individual-level data from the 2000 Myanmar Multiple Indicator Cluster Survey (MMICS) and the 2016 Myanmar Demographic and Health Survey (MDHS) due to lack of longitudinal data and more recent disaggregated data in Myanmar. Nevertheless, these two data sources allow me to examine how the patterns of expansion in higher education access from 2000 to 2016 broadly align with policy initiatives implemented during that time. One should also note that MMICS and MDHS are not educational surveys, but they contain variables such as gender, ethnicity, wealth index, area of residence, region and, most importantly, educational attainment levels for individual respondents, needed for my analysis.

Sample

Both MMICS and MDHS are cross-sectional surveys that used a probability sampling technique that consists of a two-stage stratified cluster sampling. First, these surveys selected clusters from the master sample which was based on the national census. Second, they used equal probability systematic sampling to identify 30 households from the selected clusters. Because these households were not allocated in proportion

to each stratum of the population, the raw sample is not self-weighting at a national level.

However, both surveys contain the sampling weights. I applied these weights to the raw data in my analysis. Hence, the analytical sample reflects the composition of the national census. Given that I only focus on respondents aged 16 to 24[5], the sample is comprised of 22,835 respondents for the MMICS and 7,289 for the MDHS.

Measures

Higher education access is the outcome variable of interest. Both MMICS and MDHS contain questions regarding the highest educational level attained by each respondent at the time of the survey. As such, higher education access is coded as binary with a value of '1' if the individual had enrolled in higher education and '0' if otherwise. MMICS and MDHS also do not distinguish universities from other alternatives such as vocational or post-secondary programmes. Therefore, 'higher education' in this article refers to all post-secondary education programmes.

Socio-economic status is the main variable of interest. It is measured using the wealth index. This index is calculated based on household assets and housing characteristics such as possession of televisions and bicycles (Ministry of Health & UNICEF, 2000; Ministry of Health and Sports [MoHS] & ICF, 2017). In both surveys, the index is divided into five quintiles: poorest, poorer, middle, richer, and richest.

The second variable of interest is gender, taking the value of '1' if the respondent is male or '0' if female. Area of residence is also captured as a binary indicator, '1' if the respondent resides in rural or '0' if urban.

Another variable is ethnicity. Neither survey provides explicit data on ethnicity. Therefore, I use the region variable[6] provided in MMICS (2000) and MDHS (2016) to generate two categories – (i) Bamar, the ethnic majority group and (ii) non-Bamar to represent the remaining ethnic groups in the country. This variable is treated as a binary variable, '1' if the respondent is Bamar and '0' otherwise.

Given how HEIs in Myanmar are geographically divided into Upper Myanmar and Lower Myanmar (University Education Law, 1973), I also created an Upper-Lower Myanmar variable using the data from region variables provided in the surveys to understand its effect on higher education access broadly. This variable takes the value of '1' if they are from Lower Myanmar or '0' if Upper Myanmar.

Data Analysis

I employ a linear probability model (LPM) over logit or probit for the following reasons: first, it is much easier to interpret the coefficients, especially when the model includes interaction terms (Bratti et al., 2008). Second, this research aims to examine the relationship between higher education access and socio-economic status and other background characteristics, not to estimate the probability of higher education access (Sánchez & Singh, 2018; Wooldridge, 2010). Third, previous studies using large sample have found LPM results to be similar to that of logit and probit (Betts & Fairlie, 2001; Sánchez & Singh, 2018). Nevertheless, to ensure that the choice of this model does not influence the findings, I run a robustness check using logit estimation in the Appendix 1.

The regression model used in this study takes the following form:

$$Y = \alpha + \beta_1.SES + \beta_2.X + \epsilon$$

Y is the outcome variable, taking the value of '1' if a respondent aged 16-24 has ever enrolled in

5 I set the starting age at 16 because students under the old education system, including respondents from both MMICS 2000 and MDHS 2016, typically enrolled in higher education at that age. I chose 24 as the cut-off age because (i) it presents a more accurate overall coverage of the student population in higher education, considering its relatively closed education system, especially under the military rule, and (ii) the MDHS 2016 only asked questions about the current educational level to respondents from age 5 to 24.

6 In Myanmar, ethnic groups often reside in specific regions (Fike & Androff, 2016). Therefore, categorising Bamar and non-Bamar using region variable is an appropriate approach.

higher education at the time of the survey and '0' if otherwise. SES is a vector of socio-economic status, whereas X is a vector of background characteristics mentioned earlier. The α parameter is the intercept; β is the regression coefficient corresponding to each independent variable. I include the error term ϵ to address the issue of unobserved heterogeneity.

The model is estimated sequentially, with socio-economic status included as the initial predictor. I then examine whether variations in other background characteristics can explain differences in higher education access. Since I also want to examine whether the effect of socio-economic status on higher education access varies across other background characteristics in the model, I add a set of interactions between SES and them.

Ethical Considerations

MMICS and MDHS have obtained ethical clearances for research compliance with national laws. MMICS surveys have been approved by the National Ethical Committee (2000), whereas MDHS surveys were approved by the ICF Institutional Review Board (IRB) and its local and international ethical committees (MDHS, 2016). Further, both surveys safeguarded the confidentiality and anonymity of the respondents. Although the datasets are available for free, we need legitimate research purposes to get access to them.

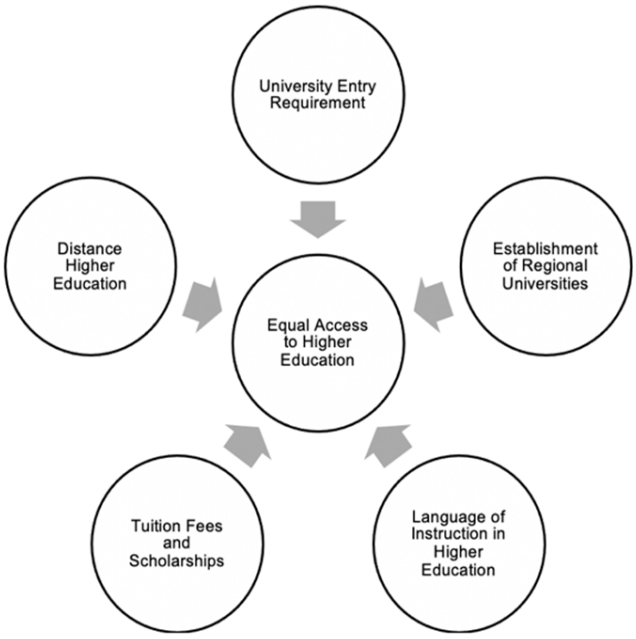
Regarding ethics around policy analysis, Mintrom (2010) states that "policy analysts acting ethically must …be transparent about the choices embodied in their work" (p.39). Therefore, as discussed earlier, I set out criteria to select the policy documents. This selection process helps address the 'unexplained selectivity' bias (Dunkin, 1996). In addition, I make sure that the policy documents are published from the official government and MoE websites and are appropriately translated (Suri, 2019).

Results

Policy Analysis

I discuss five policy initiatives that arguably promote or hinder equal access to higher education in Myanmar (see Figure 3).

Figure 3
Policy initiatives promoting or hindering equal access to higher education



University Entry Requirement

Admission to higher education in Myanmar is solely based on the total scores obtained during the matriculation examination[7] (CESR, 2013). Therefore, students need to pass and obtain a high matriculation score to get accepted into their preferred field of study.

Under the Ministry of Education's (MoE) highly centralised structure, different admission scores are set for men and women, most notably in high-demand fields such as Medicine and Engineering. For instance, the admission scores to join the University of Medicine in 2012-13 were 490 out of 600 for men but 508 for women (CESR, 2013). This gender-based admission scoring continued to be observed in later years (Su, 2019). MoE argues that setting the same admission score could lead to a disproportionate gender composition since women perform significantly better in matriculation examinations. However, to date, there is still no evidence to monitor whether such admission policy has been successful in increasing the higher education enrolment for men.

Establishment of Regional Universities

The 1973 University Education Law, amended in 1998, only allowed students to join universities in their respective regions. The 1988 student uprising was the main reason behind this division (CESR, 2013). This policy has created unequal access to better-quality universities, which are mostly in urban areas and Lower Myanmar. These universities also have a significantly lower teacher-student ratio than the regional universities (Lall, 2020; Lwin, 2017). Therefore, establishing universities across different regions has further exacerbated the urban/rural divide, where students from rural areas do not have access to prestigious universities and are most likely to bear the burden of low faculty engagement and inadequate financial and material resources. In response, the Thein Sein government introduced the National Education Law in 2014, which permits students to join any university in the country if they meet the competitive admission score.

Language of Instruction in Higher Education

Burmese[8] and English have been the official languages of instruction across all HEIs since the 1990s. However, these languages hinder ethnic minority students in Myanmar from progressing through the education system (Lall & South, 2014), partly explaining why ethnic minority students are less likely to participate in higher education. This signals the need to integrate ethnic languages in all levels of education. However, the Thein Sein government only permits ethnic languages and literature to be taught in elementary school until Grade 3 (Bertrand, 2022). This language barrier in higher education has consequently remained undiscussed even during the tenure of the NLD government[9] in 2015.

Tuition Fees and Scholarships

Myanmar's higher education system has adopted a low-tuition fee policy to improve higher education access. Nevertheless, the enrolment rate for certain underrepresented groups does not necessarily improve (CESR, 2013). Only a small percentage of students from middle-income backgrounds obtain access to higher education, whereas lower-income students either drop out or join the distance higher education programmes (CESR, 2013).

To encourage students with financial struggles to pursue higher education, one of the priority action plans for higher education being the "(13) Production of outstanding intellectuals in respective subjects through awarding local scholarships" (Department of Population & Ministry of Labour, 2017, p. 5). However, CESR Phase 1 Rapid Assessment Report (2013) states that there are only a few scholarships available and

7 University Entrance Examination is administered to all students in public schools who have completed their upper secondary education.

8 The main language of Bamar majority.

9 National League for Democracy is a political party in Myanmar founded by Daw Aung San Suu Kyi which won the general election in 2015.

those that exist are relatively small (only a few hundred MMK[10] per month) which discourages the students from even applying for them. Therefore, many students, especially those from disadvantaged strata, opt for distance higher education as it allows them to work and study simultaneously.

Distance Higher Education

The number of students participating in distance higher education is around 50 per cent higher than those in regular classes because of the low pass rate in matriculation examinations (CESR, 2013). This disproportionate enrolment rate is primarily due to the low pass rate in matriculation examination. Moreover, students who pass the resit examinations only have the option to attend distance education. Notably, the military government has been an advocate of distance education possibly due to the belief that students are less likely to engage in protest activities if they do not reside in university accommodations (Koon-Hong, 2014). Despite the relatively high levels of enrolment, the CESR Phase 2 (2014) points out that distance education is known for its inefficiency and poor quality. For instance, many students are absent and only attend at the end of the semester to take the examinations (Fawssett & Gregson, 2020).

Overall, it is widely accepted that offering distance higher education as an alternative provides greater opportunities for students from socio-economically disadvantaged backgrounds as it allows them to work simultaneously (Tint, 2012). Nevertheless, it is pertinent to examine whether distance higher education promotes more opportunities for these students to participate in higher education.

Against this policy analysis, I now analyse the quantitative data to examine whether these policy initiatives above broadly narrow the inequity gap, particularly that of socio-economic differences.

Secondary Data Analysis

To examine the trends of higher education access from 2000 to 2016, I first find the rate of ever enrolled in higher education, which is a proxy for the gross higher education enrolment rate (GER)[11]. Table 2 below suggests that there was an expansion in higher education from 2000 to 2016, with approximately an overall increase of 13 percentage points from 2000 to 2016. This increase is, however, not distributed equally across the five wealth quintiles. Individuals from the richest wealth quintile benefit the most from the expansion. The richest-poorest gap in Myanmar noticeably increased by 20 percentage points following the expansion. This pattern suggests that expansion of access widens rather than narrows the disparity among students from different socio-economic backgrounds.

Table 2
Rate of ever enrolled in higher education (%), by wealth quintile (weighted)

Year	Poorest	Poorer	Middle	Richer	Richest	Overall	Gap between riches and poorest (%)
2000	2.02	5.12	13.53	22.84	75.63	22.96	73.61
2016	3.32	13.78	23.15	44.29	94.60	36.29	91.28

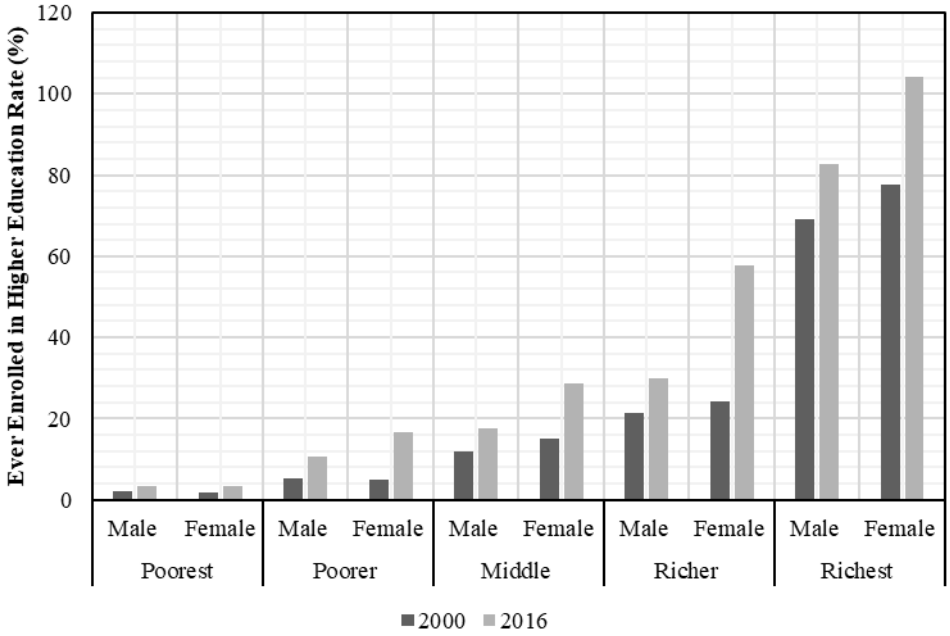
Note. Calculations based on MMICS 2000 and MDHS 2016.

Figure 4 further divides the higher education enrolment rate by socio-economic status and gender. Over time, there is an increase in the enrolment rate for both young men and women across the wealth distribution. The enrolment rates in 2000 and 2016 for both genders also increased as the socio-economic groups moved up the social ladder from poorest to richest groups.

10 For comparison, the price of a 600 ml drinking water in Myanmar is around 450 MMK as of 2024.

11 Since neither MMICS nor MDHS asked respondents over 17 and 24 about their current educational level, I could not calculate the gross higher education enrolment rate (GER), which would provide information about students of all ages enrolled in higher education. However, both surveys asked respondents about the highest educational level they attended. So, I calculated the rate of ever enrolled in higher education instead.

Figure 4
Rate of ever enrolled in higher education, by wealth and gender



Note. Calculations based on MMICS 2000 and MDHS 2016.

A pro-female bias is evident across all quintiles, except the poorest groups, where the pro-male enrolment gap noticed in 2000 becomes less significant in 2016. It is worth noting that young women from the richest group have more than a 100 per cent enrolment rate because the enrolment rate includes students who are either under or over the official school age (age 16 to 24).

Next, I turn to the findings of LPM. Table 3 below indicates the extent to which socio-economic status and certain background characteristics predict eventual access to higher education in 2000 and 2016, respectively. Model 1 in Table 3, which only accounts for socio-economic background (wealth quintile), suggests that a significant wealth gradient can be observed in both years. In 2000, the poorest quintile is approximately 16 percentage points less likely to participate in higher education than the richest group. In 2016, all quintiles are statistically significant although the magnitude of the top two quintiles becomes less pronounced.

I also observe some notable differences after adding other demographics and household characteristics in Model 2. The coefficients of wealth quintiles decrease compared to the poorest group in 2000, indicating how variation previously attributed to wealth is now explained by other background characteristics. Conversely, the coefficients increase in 2016. This suggests that wealth becomes a stronger predictor of higher education access over time.

Consistent with previous national reports, I observe a small yet statistically significant pro-female bias in higher education access in 2000. This gender disparity widens by around 2 percentage points in 2016. Area of residence also appears to be a strong predictor. Conditional upon other variables in the model, individuals in rural areas are seven percentage points less likely to attend higher education than their urban counterparts in 2000. Such a pattern continues to be witnessed in 2016. As for ethnicity, students from ethnicity minority groups (non-Bamar) appear to participate less in higher education compared to Bamar students in both 2000 and 2016. It is also worth noting that students from Lower Myanmar are more likely to enrol in higher education following the expansion. The addition of these background characteristics in Model 2 also increases the R^2 by 2.1% in 2000 and 3.8% in 2016, suggesting that these background characteristics in 2016 contribute more to the variance in higher education access than in 2000.

In Model 3, gender loses statistical significance in 2000 and 2016 after including the interaction

terms, suggesting no meaningful difference in higher education access between young men and women from the poorest quintile. The interaction terms for gender are only statistically significant for the top two wealth quintiles in 2000. Such significance remains in 2016, with a slightly higher coefficient. For instance, in 2000, young women in the richest quintile were 4.5 percentage points more likely to pursue higher education than men from the poorest quintile (reference group), holding everything else constant. In 2016, there is a 4.3 percentage-point increase, implying that gender appears to play a more significant role in shaping the relationship between SES and higher education access over time.

As for the interaction term between socio-economic status and area of residence, there are meaningful differences in higher education access in the top three quintiles in both periods. Rural students from higher socio-economic groups (middle, richer and richest) are less likely to enrol in higher education than the poorest urban students (reference group). This suggests that residing in rural areas is a barrier to higher education among the wealthier groups.

It is also interesting to observe that compared to the poorest Bamar students, students from ethnic minority groups from Richer and Richest quintiles in 2000 were less likely to enrol in higher education. In 2016, the interaction terms for ethnic minority students are not statistically significant across all wealth quintiles except for the Richest group.

Table 3
Factors affecting access to higher education during 2000 and 2016

	MMICS 2000			**MDHS 2016**		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
Socio-economic status (wealth quintile)						
Poorer	0.009 (0.005)	0.006 (0.005)	-0.001 (0.017)	0.021* (0.01)	0.023** (0.01)	0.03 (0.02)
Middle	0.0307*** (0.005)	0.022*** (0.005)	0.064*** (0.016)	0.04*** (0.01)	0.046*** (0.01)	0.069** (0.02)
Richer	0.0619*** (0.005)	0.047*** (0.005)	0.081*** (0.016)	0.057*** (0.01)	0.065*** (0.01)	0.074*** (0.02)
Richest	0.159*** (0.005)	0.126*** (0.005)	0.212*** (0.016)	0.126*** (0.01)	0.133*** (0.01)	0.171*** (0.02)
Female		0.02*** (0.003)	0.002 (0.007)		0.04*** (0.01)	0.002 (0.01)
Rural		-0.073*** (0.004)	-0.126 (0.013)		-0.078*** (0.01)	-0.021 (0.01)
Non-Bamar		-0.028*** (0.003)	-0.004 (0.007)		-0.015** (0.01)	0.003 (0.01)
Lower Myanmar		0.0003 (0.003)	0.007 (0.003)		0.027*** (0.01)	0.007 (0.01)
Interactions						
*Socio-economic status*Sex*						
Poorer*Female			0.003 (0.009)			0.025 (0.02)
Middle*Female			0.014 (0.009)			0.02 (0.02)
Richer*Female			0.024** (0.009)			0.049*** (0.02)
Richest*Female			0.045*** (0.009)			0.088*** (0.02)

Table 3 (Cont.)

*Socio-economic status*Area of Residence*						
Poorer*Rural			0.005 (0.017)			-0.032 (0.02)
Middle*Rural			-0.049** (0.015)			-0.061** (0.02)
Richer*Rural			-0.035** (0.015)			0.077*** (0.02)
Richest*Rural			-0.130*** (0.015)			-0.114*** (0.02)
*Socio-economic status*Ethnicity*						
Poorer*Non-Bamar			-0.008 (0.011)			0.006 (0.02)
Middle*Non-Bamar			-0.005 (0.01)			-0.006 (0.02)
Richer*Non-Bamar			-0.034* (0.01)			-0.016 (0.02)
Richest*Non-Bamar			-0.07*** (0.01)			-0.079*** (0.02)
*Socio-economic status*Lower Myanmar*						
Poorer*Lower Myanmar			0.011 (0.01)			0.006 (0.02)
Middle*Lower Myanmar			-0.001 (0.01)			0.014 (0.02)
Richer*Lower Myanmar			0.001 (0.01)			0.036 (0.02)
Richest*Lower Myanmar			-0.001 (0.01)			0.019 (0.02)
_cons	0.004 (0.003)	0.068*** (0.01)	0.017 (0.014)	0.007 (0.01)	0.027** (0.01)	0.015 (0.01)
Number of observations	22835	22835	22835	7289	7289	7289
R Squared	0.06	0.081	0.093	0.036	0.074	0.09

Note. Standard errors in parentheses, *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$
Source: MICS 2000 and MDHS 2016

Over the 16 years, the interaction terms for Lower Myanmar have not been statistically significant for all the wealth quintiles, indicating that whether students are from Upper or Lower Myanmar does not influence the relationship between socio-economic status and higher education access during these periods.

Integrating the findings from policy analysis and secondary data analysis

I now draw parallel on how the broad set of policy initiatives over time map onto the changing patterns of higher education access from 2000 to 2016.

University Entry Requirement: The use of gender-based admission scoring does not appear to narrow the gender gap as findings from the LPM suggest the pro-female gap even widens by 2 percentage points over time. In addition, the descriptive statistics in Figure 3 reveal that the richest-poorest gap among young women increased after the expansion. There is also no statistically significant difference in pursuing higher education between young men and women from lower wealth quintiles as observed in Model 3 in Table

3. These findings further suggest that different admission scores put women from less affluent backgrounds at a disadvantage as they need to obtain much higher scores to be admitted to the same universities. Based on the MMI theory, it can be argued that these young women do not have the same access to social and cultural capital, such as prior quality education and educational resources, which could affect their performance in matriculation examinations.

Establishment of Regional Universities: Area of residence (urban/rural) is a strong predictor in both 2000 and 2016, but the rural-urban differences become more prominent over time. In addition, students in Lower Myanmar, where better-quality universities such as the University of Yangon are mostly located, have a slight advantage in pursuing higher education in 2016. These findings suggest that the policy of permitting students to join any regional university if they meet the competitive admission score could still disadvantages student, especially those from rural areas and Upper Myanmar. This is in line with the MMI theory, as these students have been denied access to quality primary and secondary education (Lall, 2020), which makes it a challenge for them to compete equally within a standardised testing environment.

Language of Instruction in Higher Education: LPM findings reveal that Bamar students have a small, yet statistically significant, advantage over ethnic minority students to pursue higher education in both 2000 and 2016. The interaction in Model 3 in Table 3 also suggests that ethnic minority students from higher socio-economic backgrounds are less likely to enrol in higher education than poorest Bamar students in 2000. Although the richer group loses its statistical significance in 2016, such patterns continue to be observed between richest ethnic minority student and poorest Bamar. These findings hint at ethnic disparities in higher education access. One possible explanation for access differences could be the language barrier (Lall & South, 2014). This research is not able to explore the relationship between language barrier and higher education access due to data limitations. Therefore, future research is necessary.

Tuition Fees and Scholarship: The growing wealth-driven gaps, as observed earlier, suggest that financial barriers to higher education access appear to remain significant despite these policy efforts. One possible explanation is that students, especially those from disadvantaged backgrounds, could not afford the living and miscellaneous expenses to study away from their families. In line with RCM, these financial challenges are further complicated by the limited number and amount of scholarships (CPER, 2013). Or indeed, the opportunity costs of attending higher education are too great.

Distance Higher Education: As mentioned earlier, the data sources do not differentiate HEIs. Therefore, higher education in this research includes both traditional HE and distance higher education. This lack of differentiation prevents this research from specifically exploring students pursuing distance higher education. Nevertheless, the quantitative findings reveal how socioeconomic status by itself, as well as in interaction with gender and area of residence, appears to widen the inequality gap over time. Therefore, future research should explore which groups of students are benefitting from distance higher education.

Discussion

The issue of inequity associated with the expansion of higher education access has been a topic of discussion among policymakers and scholars for the past few decades. In this article, I delve into whether equitable access to higher education was achieved following the expansion of higher education in Myanmar from 2000 to 2016.

Similar to the previous studies in low and middle-income countries (Ilie et al., 2021; Sanchez & Singh, 2018), the current findings show a common pattern of association between 2000 and 2016 between higher education access and socio-economic status. Background characteristics, particularly gender, area of residence, and ethnicity, also predict higher education access. Moreover, it is intriguing to observe that the magnitude of socio-economic status coefficients increases once gender, ethnicity, area of residence, and Upper-Lower Myanmar are accounted for. This finding indicates that these background characteristics were correlated with socio-economic status.

The findings from policy analysis and secondary data analysis are complementary. Taken together,

they suggest that gaps in higher education access have widened over the period examined in this study. Hence, they support the assumption of the MMI theory, which argues that expansion in higher education benefits socio-economically advantaged students the most. These students would take advantage of their social and cultural capital, such as access to quality prior education and resources – to better access these new educational opportunities. In Myanmar, it is common for students from affluent families to obtain shadow education to achieve higher matriculation scores, the sole university admission requirement.

The rational choice model can also be applied to explain the differences in higher education access by gender, socio-economic background, and ethnicity. Young men, students from lower socio-economic backgrounds and ethnic minority groups are less likely to pursue higher education because of the high opportunity cost associated with it, which includes, but is not limited to, financial constraints, cost of earnings and the risk of failure due to lack of resources and language barriers.

Limitations of the study

There are two main limitations to this study. First, I do not claim that the regression models in this paper are a complete reflection of the effect of socio-economic status on higher education access because the data sources in this research do not provide any school-related information such as school characteristics (Khattab, 2003; Marginson, 2016) and educational learning attainment (Ilie et al., 2021), which could be strong determinants of higher education access. However, such drawback does not invalidate the findings as the main objective of this research is to understand the socio-economic disadvantages on higher education opportunities.

The second limitation arises from the issue of comparability. Due to the limited availability of disaggregated data, I need to use data from two surveys. This limits my ability to account for other unobservable factors, such as political and economic changes. Nevertheless, both surveys are nationally representative. I also ensure that they used the same operational definitions for the variables of interest by comparing their questionnaires and manuals. For instance, MMICS 2000 and MDHS 2016 categorised the educational levels differently (see Appendix 2), so I re-coded these educational levels during the data analysis.

Policy Implications

One of the main findings of this research is that wealth-driven gaps are widening over time, suggesting that financial barriers to higher education access are likely to be significant. To address this issue, the most pressing policy implication is to develop and offer comprehensive financial aid schemes, such as student loans, work-study programmes, and full scholarships, aimed at young men, students from socio-economically disadvantaged backgrounds and rural areas, and ethnic minority students. Some studies in countries offering student loans also point out that students from lower social class are less likely to pursue higher education because they are afraid of incurring debts (Callender & Jackson, 2005). Therefore, future research should address how higher education institutions could efficiently finance these specifically targeted financial aid programmes, given the relatively low current tuition fees. In addition, MoE should gather data on which student groups are mainly funded and whether they are benefiting from the existing scholarships.

The second key finding suggests that a pro-female bias has become more pronounced after the expansion, indicating that gender-based admission scoring does not seem to be effective in addressing the gender disparity. More research is therefore needed to understand and learn more about the needs, experiences, and interests of both high school and university students.

Third, the interaction between socioeconomic status and area of residence reveals that being in rural areas presents significant barriers to pursuing higher education. Instead of merely establishing more regional universities, more attention and efforts could be channelled into improving the quality of these universities through the allocation of resources and teacher support and training.

The final finding is that the Bamar ethnic majority group benefitted more from the expansion than ethnic minorities. To address this, the MoE could introduce a quota system, where some university seats are reserved for ethnic minorities. This approach has already been implemented in low and middle-income

countries such as Brazil (McCowan, 2007) and Malaysia (Mukherjee et al., 2016). Although implementing a quota system discriminates against students based on specific background characteristics, I take the view that it would be necessary in Myanmar as an intermediate step. It could be a cost-efficient policy and the quota system could be dismantled once other changes are implemented.

Conclusion

This research underscores the widening gap of higher education access in Myanmar between 2000 and 2016, influenced largely by socio-economic status, gender, urban-rural divide, geographic division, and ethnicity. Wealth-driven inequalities have increased over time, signalling that limited financial resources continue to hinder higher educational opportunities for students from lower socio-economic status and rural areas. Further, gender-based admission scoring, intended to address gender disparities, appears to disadvantage young women, especially from less affluent backgrounds, highlighting the necessity for a re-evaluation of such admission policies. Notably, regardless of their socio-economic status, higher education opportunities for ethnic minority students remain limited compared to the Bamar majority, with language barriers potentially being the culprit driving such disparities.

These findings have broad implications for policies promoting equity in higher education access. They suggest that socio-economic status and other background characteristics can not only manifest as individual obstacles, but also interact, compounding barriers for certain groups of students. This suggests a need for policy initiatives targeting each obstacle individually, as well as a more holistic approach that addresses them collectively. In addition, there is a need for further studies and education-focused data to comprehensively explore all the potential explanations for widening disparities in the country over time. I also reiterate the importance of further work being able to explore language barriers affecting educational attainment among ethnic minorities as well as to disentangle between traditional higher education and distance higher education.

Amid Myanmar's ongoing battle with escalating political upheaval, this research contributes to a deeper understanding of recent trends in the development of higher education access in the country, particularly from an equity perspective and the potential impact of policies on this. The findings from this study could provide a baseline to inform policy and future research aimed at preventing the existing educational inequalities from widening.

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Appendices

Appendix 1. Robustness Check using Logit Specification

	MMICS						MDHS 2016					
	Model 1		Model 2		Model 3		Model 1		Model 2		Model 3	
	Coefficient	*M.E. (dy/dx)*	*Coefficient*	*M.E. (dy/dx)*	*Coefficient*	*M.E. (dy/dx)*	*Coefficient*	*M.E. (dy/dx)*	*Coefficient*	*M.E. (dy/dx)*	*Coefficient*	*M.E. (dy/dx)*
Socio-economic status (Wealth Quintile)												
Poorer	1.112***	0.009***	1.053***	0.01***	-0.35	0.008**	1.396***	0.021***	1.388***	0.02***	1.216	0.019***
	(0.264)	(0.002)	(0.265)	(0.002)	(0.719)	(0.003)	(0.350)	(0.01)	(0.352)	(0.01)	(0.982)	(0.004)
Middle	2.103***	0.031***	1.95***	0.031***	1.46*	0.031***	1.927***	0.04***	2.011***	0.041***	2.218*	0.041***
	(0.245)	(0.003)	(0.246)	(0.003)	(0.622)	(0.003)	(0.334)	(0.01)	(0.337)	(0.01)	(0.931)	(0.006)
Richer	2.771***	0.062***	2.54***	0.058***	1.73***	0.059***	2.262***	0.057***	2.409***	0.061***	2.1*	0.063***
	(0.239)	(0.004)	(0.241)	(0.003)	(0.61)	(0.004)	(0.328)	(0.01)	(0.332)	(0.01)	(0.923)	(0.007)
Richest	3.780***	0.159***	3.325***	0.122***	2.78***	0.115***	3.069***	0.126***	3.219***	0.128***	3.278***	0.126***
	(0.236)	(0.006)	(0.239)	(0.005)	(0.601)	(0.006)	(0.319)	(0.01)	(0.324)	(0.01)	(0.898)	(0.009)
Female			0.414***	0.195***	0.527	0.019***			0.857***	0.039***	0.392	0.04***
			(0.062)	(0.003)	(0.489)	(0.003)			(0.116)	(0.01)	(0.639)	(0.005)
Rural			-1.013***	-0.053***	-1.509**	-0.053***			-1.329***	-0.077***	-3.303**	-0.074***
			(0.065)	(0.005)	(0.533)	(0.004)			(0.112)	(0.01)	(1.037)	(0.007)
Non-Bamar			-0.667***	-0.028***	-1.76	-0.0284			-0.376**	-0.017**	0.603	-0.016**
			(0.079)	(0.003)	(0.993)	(0.003)			(0.136)	(0.01)	(0.684)	(0.005)
Lower Myanmar			-0.051	-0.002	-0.038	-0.002			0.418***	0.02***	1.09	0.021***
			(0.069)	(0.003)	(0.069)	(0.003)			(0.127)	(0.01)	(0.79)	(0.006)
Interactions												
Socio-economic status* Sex												
Poorer*Female					-0.147	0.005					0.771	0.025**
					(0.554)	(0.004)					(0.783)	(0.004)
Middle*Female					-0.033	0.018*					0.18	0.024*
					(0.516)	(0.006)					(0.174)	(0.011)
Richer*Female					-0.1	0.026***					0.574	0.055***
					(0.504)	(0.007)					(0.600)	(0.013)
Richest*Female					-0.166	0.038***					0.505	0.093***
					(0.497)	(0.009)					(0.505)	(0.018)
Socio-economic status * Area of Residence												
Poorer*Rural					1.073	-0.007					1.15	-0.06**
					(0.632)	(0.007)					(1.108)	(0.012)
Middle*Rural					0.170	-0.061***					1.668	-0.081***
					(0.556)	(0.009)					(1.07)	(0.016)
Richer*Rural					0.831	-0.046***					1.995	-0.091***
					(0.547)	(0.009)					(1.06)	(0.018)
Richerest*Rural					0.3489	-0.144***					2.317*	-0.118***
					(0.541)	(0.11)					(1.07)	(0.021)
Socio-economic status * Non-Bamar												
Poorer*Non-Bamar					0.609	-0.012***					-0.159	0.012
					(1.072)	(0.003)					(0.77)	(0.012)
Middle*Non-Bamar					1.437	-0.011					-0.63	-0.001
					(0.17)	(0.006)					(0.75)	(0.013)
Richer*Non-Bamar					1.002	-0.038***					-0.757	-0.009
					(0.831)	(0.007)					(0.73)	(0.015)
Richerest*Non-Bamar					1.089	-0.060***					-1.5*	-0.083***
					(0.349)	(0.009)					(0.72)	(0.016)
Socio-economic status * Lower Myanmar												
Poorer*Lower Myanmar					1.167	0.01**					-0.0601	0.011
					(0.559)	(0.004)					(0.87)	(0.008)
Middle*Lower Myanmar					0.383	-0.003					-0.555	0.022
					(0.515)	(0.006)					(0.84)	(0.011)
Richer*Lower Myanmar					0.442	-0.001					-0.3	0.045*
					(0.504)	(0.007)					(0.83)	(0.013)
Richerest*Lower Myanmar					0.415	-0.004					-0.877	0.022**
					(0.498)	(0.009)					(0.81)	(0.017)
_cons	-5.415***		-4.602***		-4.002***		-4.941***		-4.951***		-5.001***	
	(0.232)		(0.245)		(0.593)		(0.31)		(0.339)		(0.877)	
Number of observations	23247		23247		23247		7460		7460		7460	
Pseudo R2	0.130		0.1729		0.1739		0.0818		0.167		0.177	

standard errors in parentheses
* p < 0.05, ** p < 0.01, *** p < 0.001

Source: MICS 2000 and MDHS 2016

Appendix 2. Summary of how grade and educational levels are coded by MICS (2000) and DHS (2015-16)

Myanmar MICS (2000)		**Myanmar DHS (2016)**	
Grade	Education level	Grade	Education level
1 to 4	Primary	1 to 5	Primary
5 to 8	Secondary	6 to 11	Secondary
9 to 10	Higher		
11	College/ Universities	Bachelor's degree and above	Higher

Note. Higher in Myanmar MICS (2000) refers to higher secondary education.