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Gender Disparities in Access to and Flow Rates of Secondary Schooling in Ethiopia: The case of Gamo and Gofa Zones

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Abstract

This study employed large-scale archival datasets to examine gender disparities in access to and flow rates of secondary schooling, particularly in Gamo and Gofa zones in Ethiopia. In this aspect, the numerical datasets were employed to compute the proportions of the gender gaps in enrolment, dropout, repetition, and promotion rates. Subsequently, this study revealed where boys and girls have gender advantages and disadvantages while the overall status of gender disparities has been closing in secondary schooling. Hence, this study investigated that boys were advantageous over girls in promotion rates but boys were at risk compared to girls in dropout and repetition rates in grades 9-12 classroom exams for 2015-2018. Yet, in grades 10 and 12 national exam scores, male students were advantageous over female students except for the low scorers (<50%) in the grade 12 natural sciences stream. To conclude, the overall gender disparity advantage favors male over female students; nevertheless, male students are at learning risk compared to female students in resonating wastage in secondary schooling.

Keywords: Gender; Gender Disparities; Access; Flow Rates; Secondary Schooling

1. Introduction

1.1. Background of the Study

In education, understanding the gender disparity issues is essential to formulate schooling policy in which the learning inputs support closing the gender gaps in secondary schooling processes. Nevertheless, in Ethiopian schooling, the observed gender gap closing reasonable attempts seem to focus on supporting female students rather than supporting the needy girls and boys in schools. In this aspect, the regulatory and legislative policy dimensions concerning gender have declared to protect the advantage of both girls and boys on an equal base. Moreover, authors observed secondary schools usually support female students in the form of affirmative action to close the gender gap in schooling, in which the notion is to employ equity education policy value, whereas the country's constitutions have declared that males and females have an equal chance in education matters (FDRE, 1995; PDRE, 1987). Furthermore, the notion of affirmative action towards gender is to support the disadvantaged group, whether it is male or female; or else, both the disadvantaged males and females.

On the contrary, schools usually arrange tutorial programs to support female students without incorporating needy male students. In this sense, the concept of gender and gender disparities in secondary schooling appears disobedient and the gender mainstreaming roles could or could not support the needy boys or girls at risk of learning success. Consequently, this study revealed where the disadvantaged gender group (boys or girls) needs learning support in secondary schooling.

In this concern, sociologists distinguish between gender and sex in the social setting. Gender is the perceived or projected masculinity or femininity of a person or characteristic (Ganguli, 2011; Ho, et al., 1992). On the other hand, scholars as a dichotomous state or identity, conventionally perceived sex for most biological purposes, such that a person can only be female or male (Reeves & Baden, 2000). This definition emphasizes male and female differences in chromosomes, anatomy, hormones, reproductive systems, and other physiological components. Besides, authors usually interpret men's or women's categorization as a natural fact of their biological features. However, these biological differences cannot explain why patriarchal or matriarchal societies were fashioned. To understand and challenge the cultural value placed on someone's biological sex, and unequal power hierarchies, we need to study the relationship between men and women that is the concept of 'gender' (Ganguli, 2011;

Ho, et al., 1992; Reeves & Baden, 2000). Thus, gender means the socially determined ideas and practices of being female or male. With this conception of gender, authors noticed the way authors interpret the gender disparities to examine the gender gap in access to and flow rates of secondary schooling in Gamo and Gofa zones in Southern Nations Nationalities People Region (SNNPR), Ethiopia.

In this respect, the world economic forum (WEF) in which Ethiopia is an active member, yearly published a "global gender gap report." The report used economic participation and opportunity, political empowerment, health, and life survival in social settings, and education attainment at all subsectors as a pillar to compute the gender parity index (GPI) reports for member countries (WEF, 2020). In this particular focus, the GPI report shows that the gender advantage in education attainment favors male students over female students at the national level in Ethiopia. The WEF (2020) report aligns with the empirical studies before years in some areas of Ethiopia. Thus, this study employed education attainments and achievements as pillars to measure the gender gap in the secondary education sub-sector.

In Ethiopia, empirical studies focused on gender disparity in primary, secondary, and tertiary education subsectors (Andualem, 2009; Semela, 2006; Wale, 1997). These studies reported that the overall gender-related advantages in schooling were for male students compared to female students. Nevertheless, in urban primary schooling in Adama city administration, the advantage of schooling reported to females against males (Mekonen, 2007). In the previous studies, however, scholars examined the gender disparity causes, issues, and challenges in all education sub-sectors using perceptual types data that inform the perceptual reality. The present study aimed to examine the gender gap in secondary schooling from the natural, large-scale archival dataset holding the enrollments and achievement scores. Consequently, the results inform the objective reality of gender inequalities in access to and flow rates of secondary schooling processes of the sample zones.

Moreover, there were gender gap studies in the literature, which have been undertaken by combining three or two of the gender gap pillars, such as social, economic, and political affairs, to examine gender disparities within the education subsectors around the globe. Among the studies around the globe, some directly address the gender gap in education, which is the pillar of the social sector (Eirich ,

2010; Hausmann et al., 2011; Kleinfeld, 2009; Buchmann et al., 2008; Legewie & DiPrete ,2008; Duryea et al.,2007). These scholars have noticed that gender gaps in education partly favor females over males, even in developed countries. However, in most studies, scholars concentrated on qualitative inquiries to investigate gender disparities in the education subsectors. This is because gender disparity issues are usually outstretched from sociocultural settings, which can be justifiable through qualitative inquiry. Nevertheless, the numerical status of the gender gap in access to and flow rates of secondary schooling can be scrutinized quantitatively.

So far, authors preferred the quantitative inquiry to address the objective reality of the gender gap in access to and flow rates of secondary schooling from the aggregate archival datasets of enrolments, dropouts, repetitions, and promotions from 2015- 2018 in the sample zones. Besides, the study employed legal documents and ministry of education (MoE) statistical reports to compare the status of gender disparities in access to and flow rates of secondary schooling in the study area context.

1.2. Statement of the Problem

Recognizing the gender gap in access to and flow rates of secondary schooling is essential to address the equity, equality, and quality dimensions of education policy values during the attempts to close the gender gap in secondary schooling. However, empirical studies that show the gender disparities in access to and flow rates of secondary schooling were scant; or else, less identified in the study area context. In Ethiopian secondary schooling, however, the GPI for the national (0.91) was closer than for SNNPR (0.82) (MoE, 2017). In the same year, the national GPI for grades 9-10 (0.92) and grades 11-12 (0.86) showed that females were advantageous over males in the first cycle of secondary schooling compared to the second cycle. Nevertheless, the SNNPR's GPI for grades 9-10 (0.81) and grades 11-12 (0.84) was shown that the gender gap was closed in the second cycle compared to the first cycle of secondary schooling (MoE, 2017). Later, the secondary schooling GPI (0.78) for SNNPR was wider than the GPI (0.87) for national secondary schooling in the 2018 academic year (MoE, 2019). This means the proportion of girls leaving secondary schools in SNNPR was higher than that of girls leaving secondary school at the entire national level. However, the authors could not identify the published legal, statistical reports and empirical studies that show gender disparity in secondary schooling at zonal and district levels in SNNPR. In this concern, the status of gender disparity in secondary schooling processes in the Gamo and Gofa zones was unclear. Moreover, the studies that

show gender advantages in secondary schooling processes were scarce or not identified in the study area context. Thus, this study intended to examine the status of the gender gap in access to and flow rates of secondary schooling in the Gamo and Gofa zones in the SNNPR context.

In these zones, no empirical studies were identified that show gender gaps in access to and flow rates of secondary schooling. However, the raw data archived in the dataset helped conduct the present study. In this focus, gender-related studies in Ethiopia noticed the gender gap in education favoring males over females schooling (Andualem, 2009; Semela, 2007). For these scholars, the increase in the gender gap appears as the grade level stretches higher and higher. In line with this report, Wale (1997 discovered that male achievement scores were more remarkable than female achievement scores. However, these gender disparity studies were not employed large-scale assessments based on the archived education dataset in their study area context. In this focus, the objective reality of the gender gap in enrollment, retention, and promotion rates in secondary schooling could not be measured using survey data alone. Instead, employing census data or archived datasets helps compute the real gender gap in secondary schooling for one particular area.

In the literature, scholars have noticed that the advantages of gender disparities have been changing from male schooling to female schooling since 1982 (Buchmann et al, 2008). The trends of the gender disparities in college completion in the U.S. and Germany show a close-up in Germany that of the U.S. Unlike the U.S., gender inequality in tertiary degree attainment overtakes men against women (Legewie & DiPrete, 2008). According to McDaniel et al (2010), gender inequalities in educational attainment were higher in blacks than whites. In this aspect, Eirich (2010) also studied gender gaps within American families. As a result, he found that families favored sons over daughters, but upon closer examination, only high socio-economic status (SES) families generated more highly educated sons than daughters.

In contrast, low SES families produced equally educated sons and daughters. This shows that the gender disparity in schooling is closer in low-income families than in high-income families. In this regard, the empirical studies that show the influence of SES of families on gender disparities in secondary schooling of the study area were limited in the study area context.

More importantly, Kleinfeld (2009) identified that American boys were in crisis compared to girls. He described the crisis of boys in a very swaying manner. Further, he noticed that the boys worried about low rates of literacy, lower grades and engagement in school, high dropout rates, placement in special education, especially in the more subjective areas of emotional disturbance and learning disabilities, more suspension and expulsions from school and lower rates of postsecondary entrance and completion. As he distinguished, gender inequality studies around the globe revealed that the learning crisis was severe for boys' schooling compared to girls' schooling. In this focus, the reported issues that let boys in learning crisis in the study of Kleinfeld (2009) were partially noticeable in the study area, particularly in a semi-urban low-income area context. However, the study area did not document empirical studies showing the learning crisis of boys compared to girls in secondary schools. Nevertheless, there have been observed issues that allowed secondary school boys to learn about crises in the study area context.

In Ethiopia, female schooling is usually considered disadvantageous in school flow rates and the disadvantage of female schooling increases as the grade level increases (Wale, 1997). Moreover, affirmative action usually holds up a female's advantage ignoring the disadvantaged males in schooling. As evidence, there were study reports and legal documents at the national level that show primary school boys' crises in educational achievement compared to females' schooling in urban areas (Mekonen, 2007; MoE, 2019). There were also urban boys observed around the street, making trouble in the community, harassing opposite-sex groups, quitting class, and being victims of the local alcoholic drinks. The problems of boys observed in this study area were partly shared with those of boys in the report described by Kleinfeld (2009). Therefore, there is a need to investigate the gender gaps in secondary schooling to recognize if the observed issues influence the gender advantage of learning in the study area context.

In general, the gender advantage in flow rates of primary education in Ethiopia seems higher for girls than for boys (MoE, 1999, 2011). In contrast, the advantage slightly reversed to that of boys over girls (MoE, 2017). On the other hand, throughout the academic years from 1999 to 2017, the gender advantages in the primary schooling process favored males over females in secondary schooling in Ethiopia (MoE, 1999, 2011, 2017). According to gender-related studies and legal and statistical documents, the advantages of female schooling in primary schooling have been declining to the

advantage of males in both secondary and tertiary education at the national level in Ethiopia (MoE, 2017; Andualem, 2009; Semela, 2006). However, the empirical studies and legal document reports that show the real gender disparities in access to and flow rates of secondary schooling were scarce in the context of Gamo and Gofa zones, SNNPR. Therefore, this study intended to examine the gender disparities in access to and flow rates of secondary schooling in the Gamo and Gofa zones context.

1.3 Research Questions

We designed a leading research question that utters, "Who has an advantage in access to and flow rates of secondary schooling in the study area context, male or female?" We further dissected the leading research question into specific research questions, as noticed next.

1. What is the status of the gender gap in access to secondary schooling in the Gamo and Gofa zones?
2. What is the status of the gender gap in dropout and repetition rates in secondary schooling in the Gamo and Gofa zones?
3. What is the status of the gender gap in the promotion rate in secondary schooling in the Gamo and Gofa zones?

1.4 Significance of the Study

Gender is a policy issue, and gender disparity in education is a timely, important research topic in line with the AMU research priority area. Education policy issues have been given priority because of their importance to the development of one country and the development of the academic world. Accordingly, the study is timely and significant to redevelop education policy with respect to closing gender gap in education. This is because the output of the study is to disclose the ongoing gender disparity status and its implication is to the development of the social community in the country. Further, it adds a quantum of innovative ideas to the academic world that shows where the gender advantages and disadvantages persisting in secondary education sub-sector. In sum, the result of the study is important for policymakers, strategic planners, researchers, and academicians who need to examine the ongoing gender disparity closing attempts in secondary schooling processes and to rethink the development of future prospect gender-related policy in schooling.

1.5 Conceptual Frameworks of the Study

We constructed the conceptual framework for this study from the theoretical framework of the education production functions (inputs, process, and outputs) with a focus on gender inequality in the education sector/subsectors (access, dropouts, repetitions, and promotions). The education production processes of Hanushek (1987), the education system indicators as noticed in the works of Kemmerer (1994), and the gender inequality principles reported in the works of Lareau (2002) and Jacobs (1996) were the guiding concepts to construct the conceptual framework for the present study. In line with the theories, we incorporated the national and regional education management information systems framework to build the stated conceptual framework. Accordingly, the conceptual framework to study "gender disparities in secondary education" includes GER/NER to measure the gender gap in access to secondary education. Likewise, the dropout and repetition rates measure the gender gap in retention rates. In contrast, promotion rates employ to measure the gender gap in learning success in secondary schooling production functions. Using the theoretical framework of production functions for secondary schooling, we organized, computed, and analyzed the numerical data collected from the archival datasets of secondary education in the two sample zones' education disks.

2. Methodology

The study employed large-scale archival numerical datasets to examine the status of the gender gap in access to and flow rates of secondary schooling in the Gamo and Gofa zones. Until 2017, the two sample zones, Gamo and Gofa zones were one, namely, the Gamo-Gofa zone. Based on the country's law, the Southern Region separated in 2017/18; the two zones have two separate names, the Gamo and Gofa zones. In this aspect, we collected secondary schools' numerical data for the two zones from 2015-2017 from the Gamo zone education disk recorded as the Gamo-Gofa zone. In contrast, the numerical recorded dataset for the 2018 academic year was collected from the Gamo and Gofa zones separately. Finally, using the collected data from archival datasets, the authors described the line graphs to make the gender gap easily observable. Further, they computed the gender gap proportions for both parties to examine the status of gender disparities in enrollment, dropout, repetition, and promotion rates in secondary schooling for the specified years. Further, the study employed the

national and regional archival datasets of the secondary schooling gender parity index (GPI) to compare with the status of the gender gap in secondary schooling processes in the study area context.

2.1 Method

2.1.1 Materials

In this part, we employed the four consecutive years (2015-2018) recorded archival datasets in education offices of the two adjacent sample zones about secondary schools (Grades 9-12) enrollments, dropouts, and classroom assessment exam scores. The large-scale data collected from the archival datasets were carefully organized and analyzed in Microsoft excel 2010 to describe line charts that show gender disparities in secondary schooling processes. Further, the authors computed the proportions of the two parties to scrutinize the status of gender gaps in access to and flow rates of secondary schooling in the sample zones. For comparison, authors employed the grade 10 Ethiopian General Secondary Education Certificate Examination (EGSECE) results and grade 12 national entrance exam results to examine the gender gap in national exam scores in secondary schools in the sample zones for the same years, 2015-2018.

Further, the authors examined the Ethiopian ministry of education (MoE) legal documents and reports including education statistics annual abstracts (ESAA) from 1999 to 2019. In this category, authors employed the national exam scores data to compare the status of gender disparities in secondary schooling outputs of the sample zones along with the status of gender disparities in secondary schooling overall outputs of the region and the national levels. Finally, the authors employed the country's education policies, education sector development plans, and constitutions to interpret the policy attempts to close the gender gap in secondary schooling processes in sample zones, SNNPR, and country contexts.

2.1.2 Procedures

The authors collected the relevant large-scale numerical data for the entire secondary schooling in Gamo and Gofa zones. Using Excel software 2010, the authors organized and computed the collected large-scale numerical datasets of elements and achievement cores to determine the status of gender gap proportions in access to and flow rates of secondary schooling in the sample zones. Further, the authors reviewed the legal documents, MoE reports, and ESAA reports (1999-2019) to compare the

study area gender gap results with the national and regional status of the gender gap in secondary schooling processes. Finally, the authors employed the overall collected secondary schooling gender-related numerical data to investigate the gender advantage in access to enrollments, dropouts, retention rates, and promotion rates in secondary schools in the study area context.

3. Results and Discussions

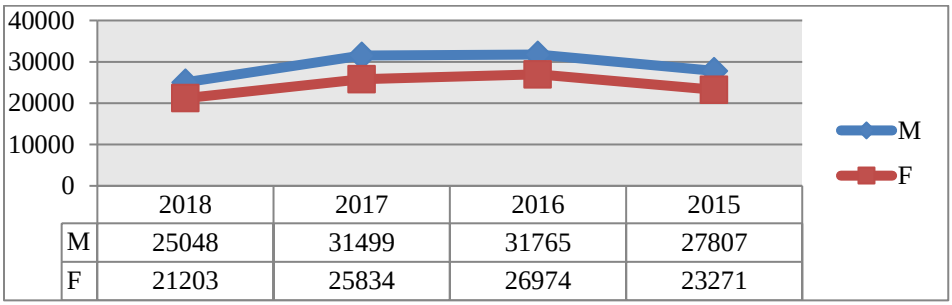
3.1 Results

3.1.1 Gender Disparities in Access to Secondary Schooling

In education, the measurement of access to secondary schooling usually focuses on the proportion of gross enrollment rate (GER) and net enrollment rate (NER) for grades 9 - 12 admittance. The GER computed the total number of students who have enrolled in grades 9-12, irrespective of their age, as a proportion of the secondary school age (15-18 years) population. Whereas NER computes the proportions, which are from 15-18 years old, enrolled in secondary schooling to the official secondary school-age population in the census. Although NER is better than GER in describing access to education, the enrollment data collected from the sample zones approach the GER. In this wisdom, authors computed the gender disparity in access to secondary schools based on the data collected from the sample zones for the academic years from 2015-2018.

The Southern Region education bureau has not published its ESAA for about five years, and the zones have not published the age-specific population data for the schooling process within the zones. Nevertheless, the schooling process numerical data collected from Gamo and Gofa Zones helps to recognize the gender disparities in its secondary schools. However, as shown in the census of the Southern Region, the overall secondary schools registered male and female students from the 2015-2018 academic years, which has given an advantage for male students compared with the female students in Gamo and Gofa Zones.

Figure 3 Gender gap in enrolments in secondary schools of the sample zones, 2015-2018



	2018	2017	2016	2015
M	25048	31499	31765	27807
F	21203	25834	26974	23271

In this aspect, the computed ratios of female over male students from the data in Figure 1 were 0.84, 0.85, 0.82, and 0.85 for the 2015, 2016, 2017, and 2018 academic years respectively. In secondary schooling in Gamo and Gofa Zones, the data collected and computed results revealed that boys were advantageous compared with female students. Therefore, the gender disparity results in secondary schools of the Gamo and Gofa zones (0.85) was slightly wider than the gender disparity results in secondary schools at the national level (0.87) in 2018 (MoE, 2019).

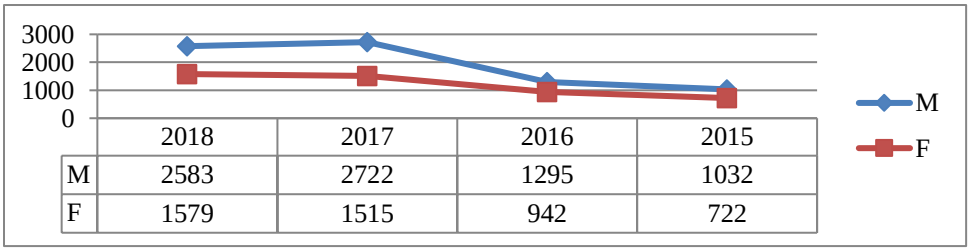
Moreover, the authors computed the secondary schools' GPI values that ranged from wider (0.82) in 2017 up to relatively closer (0.85) in 2018 for the four consecutive years (2015-2018) in the sample zones. In the computed result, even the study area secondary schools' GPI (0.85) in 2018 was slightly wider than the national secondary schools' GPI (0.87) actual value and closer than the Southern regional secondary school GPI (0.78) in 2018 while the national GPI target goal for secondary schools in 2018 was 0.98 (MoE, 2019). Therefore, in access to secondary education, the computed results of GPIs at the national (0.87), regional (0.78), and sample zones (0.85) levels were not achieved the target goal intended for 2018 secondary schools' GPI (0.98). Any how, in access to secondary schooling, the gender gap advantage favors male students over female students. With this wisdom, the authors examined further the gender disparity status in secondary schooling flow rate that focuses on retention and completion rates in sample zones' secondary schooling context.

3.1.2 Gender Disparities in Dropout and Repetition Rates

In Gamo and Gofa Zones, the dropout rates for secondary schooling escalated from 2015 up to the 2018 academic years, as presented in Figure 4. In these sample Zones' secondary schooling, the overall dropout rates increased from 3.4% in 2015 to 9% approximately in 2018. For the stated academic

years in Figure 4 shows secondary school dropouts; female students were better than male students. In 2015, the proportion of female students (45.6%) and male students (54.4%) during registration made the male students advantageous compared to the female students. In contrast, the proportions of female dropouts (41.2%) and male dropouts (58.8%) revealed that female students were better than male students in attending secondary schooling in the study area context.

Figure 4 Gender disparity trends in secondary schools dropout rates



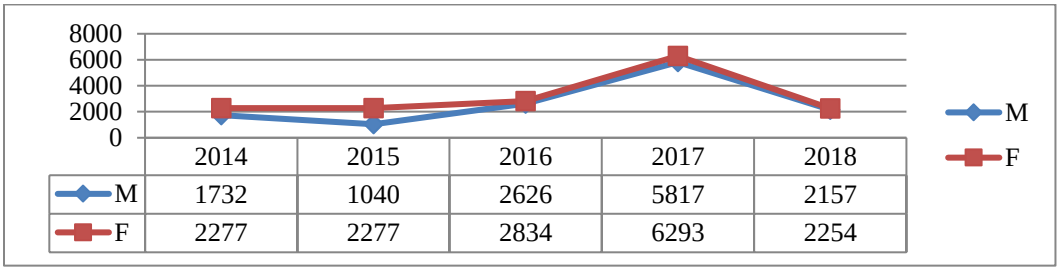
	2018	2017	2016	2015
M	2583	2722	1295	1032
F	1579	1515	942	722

After the years, in 2018, the proportions of female students (45.8%) and male students (54.2%) who registered for secondary schools still maintained the advantage of male students compared to female students. Nevertheless, the dropout proportions of both secondary schools' female students (37.9%) and male students (62.1%) show the gap between the two parties. Accordingly, the secondary school boys were at risk of completing secondary schooling compared to female students for the academic years 2015-2018. More importantly, a higher female students dropout rate was observable in urban and semi-urban area secondary schools. On the other hand, authors observed a higher male students dropout rate in rural area secondary schools.

Unequivocally, the proportions of the male and female students in repetition rates examine the gender disparities at all school levels. However, the gender disparity variable has lacked empathy for the secondary school level at the national ESAA and in the study area context. In this concern, the students who scored below 50% were considered detained based on the country's education and training policy; article 3.3.3 declared the promotion policy (FDRE, 1994). According to the organized data presented in Figure 2, authors noticed the proportions of males (1.5%) and females (1.4%) who repeated the classes in the secondary schools from 2015-2018 in the sample zones. In this aspect, the secondary school female students were better than male students in the study area's grades 9-12 classroom

assessment scores. Next, the grade 10 EGSECE below two score points was used to examine gender disparities in repetition rates.

Figure 5 Gender disparities in grade 10 EGSECE < 2 scorers in Gamo and Gofa Zones

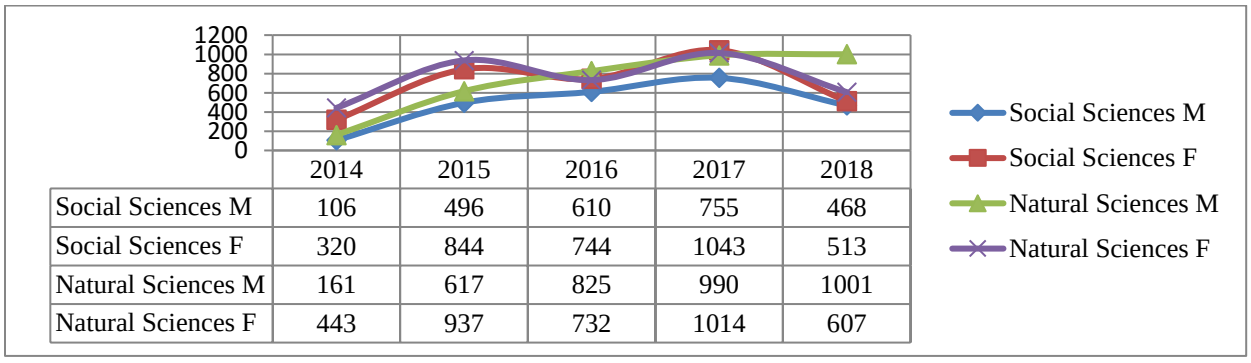


	2014	2015	2016	2017	2018
M	1732	1040	2626	5817	2157
F	2277	2277	2834	6293	2254

Hint*: The 2018 organized Grade 10 EGSECE data were not incorporated the data in the Gofa zone*

As presented in Figure 3, unlike classroom assessment scores, the gender disparity in scores below 2-grade points in grade 10 EGSECE favor male students (45.6%) over female students (54.4%) in the study area for the five years average results in the study area. The observed advantage of females over males at lower-level achievement scores in the secondary school classroom assessment result was not visible at the national grade 10 EGSECE scores in the study area. This requires further qualitative investigation to understand why the stated grade 10 EGSECE advantages favor male students over female students, unlike the classroom exam scores in the study area context.

Figure 6 Gender Disparities in grade 12 National exam below 50% scorers by streams



	2014	2015	2016	2017	2018
Social Sciences M	106	496	610	755	468
Social Sciences F	320	844	744	1043	513
Natural Sciences M	161	617	825	990	1001
Natural Sciences F	443	937	732	1014	607

In grade 12 national exam results for five consecutive years (2014-2018), the gender disparity advantage varied by academic streams for the below-average scorers in the study area. As described in Figure 4 for social sciences stream below average scorers, the gender disparity advantage favors

male students over female students in grade 12 national placement examinations for five consecutive years in Gamo and Gofa zones. In the natural sciences academic stream, however, the gender disparity advantage partly reversed to female students over male students in achieving below average in the same academic years. Here, the natural sciences students require hard work to succeed, whereas most rural area male students usually engage in work and schooling simultaneously. In this regard, the natural sciences stream grade 12 male students require support at the same level as female students to reduce the proportion of low achievers. This means employing affirmative action for needy students rather than the trend for only female students for all education sub-sectors.

To sum up, there were gender disparity studies, in which most showed the advantage of male over female students in access to and survival of schooling in several contexts (Wale, 1997; Andualem, 2009). However, in classroom exam scores, this study revealed the gender disparities in dropout and repetition rates of secondary schools, in which the advantage was for female over male students in the Gamo and Gofa zones context. This result informs that male students were at risk compared to female students in secondary schooling of the sample zones. Next, the authors analyzed the gender disparities in promotion rates of secondary schooling using classroom assessment results and national exam results from 2015 up to 2018 recorded data in the sample zones.

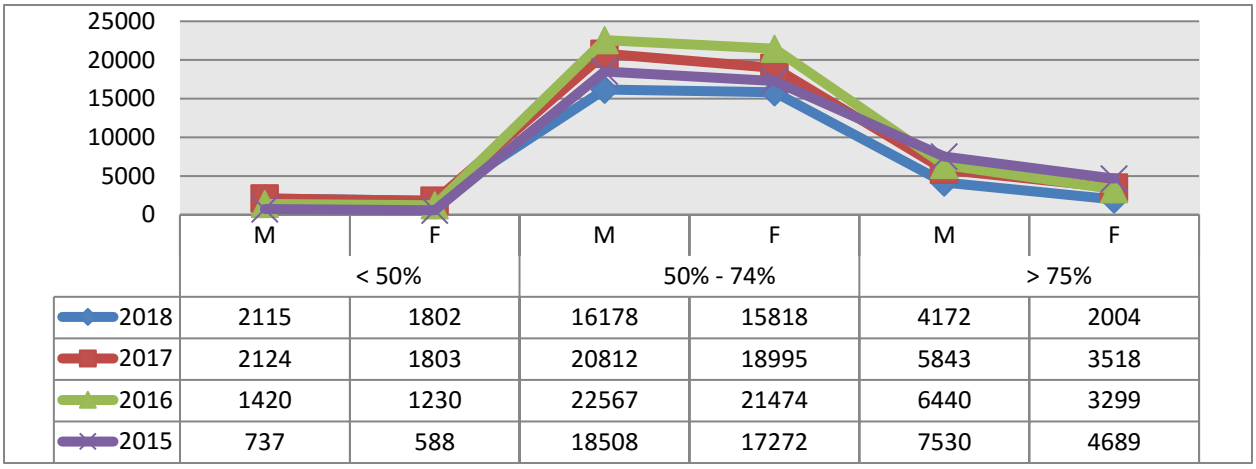
3.1.3 Gender Disparities in Promotion Rates

In secondary schooling (Grades 9 -12), authors examined the four years trend of the gender gap in current performance scores of male and female students in Gamo and Gofa zones, as shown in figure 6. In the classroom exam scores from 2015 – 2018, those who scored below 50% were 45.9% female students and 54.1% male students. In this regard, the achievement scores were better for females than males in the stated academic years. On the contrary, in the achievement scores from 50% up to 74%, the proportion of male students (51.5%) was better than the proportion of female students (48.5%). In this concern, the gender disparity (94%) in the medium achievement scores (50% up to 74%) was somewhat closed. However, the advantage was still for male over female students in secondary schools of the study area.

In this matter, the assessment scores were slightly close up for medium scorers' gender disparity proportion (94%) to the advantage of male over female students compared to the lower-level

achievement scorers (<50%) gender disparity proportion (84.8%) to the advantage of female over male students. In addition, the computed gender disparities in the higher-level assessment scorers' (>75%) proportion (56.3%) was more expansive than the gender disparities in the medium assessment scorer's (50-74%) proportion (94%), in which the advantage was for male over female students in the study area context.

Figure 7 Gender disparity trends in grades 9 - 12 classroom assessment scores



	M	F	M	F	M	F
	< 50%		50% - 74%		> 75%	
2018	2115	1802	16178	15818	4172	2004
2017	2124	1803	20812	18995	5843	3518
2016	1420	1230	22567	21474	6440	3299
2015	737	588	18508	17272	7530	4689

As shown in figure 5, in the assessment scores above 75%, the proportion of male students (64%) scores was higher than that of female students (36%). In this alarm, the higher achievers' gender disparity proportion (56.3%) was substantially wider to the advantage of male students than female students. On the other hand, the proportion (45.7%) of female students and the proportion (54.3%) of male students with achievement scores below 50% showed that secondary school boys were at risk compared to secondary school girls in the present study area.

In the classroom's current performance for the four consecutive years, the secondary schooling advantage was for male students compared to female students in Gamo and Gofa zones. Nevertheless, in the range of lower achievement scores, secondary school male students were at risk compared to secondary school female students in the study area context, such as Gamo and Gofa zones. In sum, the gender disparity advantage in secondary schooling was still in the hands of male students compared to female students. In contrast, the male students were also at risk of prescription compared to the status of female students in secondary schooling in the study area context.

Moreover, in Ethiopia, MoE has declared in the ESDP-V about the proportion target goal in the transition from the first cycle secondary schools to the second cycle secondary schools as the target set to achieve after five years. The target set to be achieved by 2018 was noticed that "After Grade 10, 20% of students will enter preparatory education; the remainder will be eligible for teacher education and TVET" (MoE, 2015:50). Besides, the ESDP-V has set a target goal for grade 10 students taking the EGSECE at the national level. Accordingly, students who score 2.0 or above (pass mark) in EGSECE female should raise from the baseline (64%) in 2013/14 to 84% in 2018/19; as well, for students who score 2.0 or above (pass mark) in EGSECE male should raise from the baseline (76%) in 2013/14 to 87% in 2018 (MoE, 2019).

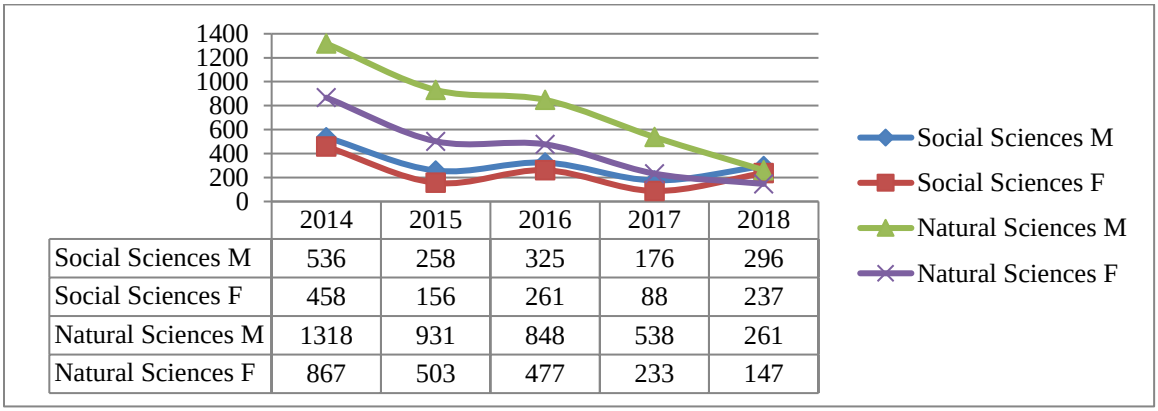
Consequently, the authors gathered numerical data from Gamo and Gofa zones towards the grade 10^{th} and 12^{th} national examination results for the target set in ESDP-V for the 2018 academic year. Further, the authors computed the recoded numerical data to recognize the gender disparity advantage in achieving the national examination target goal in the study area context.

In this acumen, the computed trends of grade 10 EGSECE results showed that the proportion of students who scored ≥ 2, pass marks in the Gamo zone was about 62.5%. Because of this, the proportion of female students (58.6%) who scored ≥ 2, pass marks in EGSECE females and the proportion of male students (65.8%) who scored ≥ 2, pass marks in EGSECE males have not achieved the target set by 84% for female and 87% for male in ESDP-V in Ethiopia. In this emphasis, the computed results for both female (58.6%) and male (65.8%) students did not meet the target set for the female (84%) and male (87%) in the 2019 academic year.

In the same document, ESDP-V, MoE set the target for the 2019/20 achievement goal(MoE, 2016). The targeted declaration was "90% of Grade 12 students will enter university" (MoE, 2015:50). In this aspect of achieving the goal, the computed proportion of grade 12 students (26.7%) who achieved the scores that help them to enter university in Gamo zone, has not achieved the target proportion (90%) goal intended to promote from grade 12 to the university in 2019. Moreover, the proportion of grade 12 national exam scores of males that support male students (27.5%) and scores of females that support female students (25.5%) to enter university favor male students over female students in the same target year, 2018, in the study area. More importantly, the gender disparities in flow rates for those who

scored above average marks in grade 12 national exit exams from 2014-2018 provide evidence to judge who did better, male or female students in the study area context.

Figure 8 Gender Disparities in Grade 12 national exam above 50% scorers



	2014	2015	2016	2017	2018
Social Sciences M	536	258	325	176	296
Social Sciences F	458	156	261	88	237
Natural Sciences M	1318	931	848	538	261
Natural Sciences F	867	503	477	233	147

As presented in Figure 6, the gender disparities in flow rates for above-average scorers in grade 12 national exams results indicated the advantage of male students over female students in the study area context. In this concern, the gender disparities in flow rates of attaining above average scores in grade 12 national exam from 2014 up to 2018 were nearly coming to close up in the natural sciences stream and partly closed in the social sciences stream, as offered in Figure 6.

In fact, in the study area's overall contexts, the proportion of male was higher than that of female students, as the authors noticed in the gender disparities in access to secondary schooling. In addition, the proportions of those who registered for grade 10 and grade 12 national examinations were higher for male students than female students in the study area. In this regard, the gender disparities in flow rates might provide an advantage for male and female students. Nevertheless, in Figure 6, the gender disparities in flow rates were coming to close up for those who scored above an average result in grade 10 and 12 national examinations in the specified years.

To sum up, the overall gender disparities in access to and flow rates of secondary schooling were to the advantage of male students over female students for the specified years in the study area context. Nevertheless, in the secondary schools' classroom assessments, results for those who scored below average revealed that male students were at risk compared to female students. Although the national

exam scores favor male students over female students, in the natural sciences grade 12 national exams below average results, female students took the advantage over male students in 2016 and 2018.

Hence, the present study investigated where the gender disparities in secondary schooling were distinctly favoring the male and female students in the study area context. Next, the authors discussed the investigated results of gender disparities in secondary schooling access and flow rates, particularly in the study area context.

3.2 Discussions

In this section, the authors disscussed the results with respect to legal documents, statistical reports, and related literature reviews to distinguish where boys and girls have gender advantages and disadvantages in secondary schooling processes.

3.2.1 Gender disparities in Access to Secondary Schooling

In this focus**,** authors computed the gender disparities in secondary schooling (Grades 9-12) for the academic years of 2015-2018 in the study area. The ratios of the registered female students over male students per year were 0.84 in 2015 and 0.85 in 2018 in Gamo and Gofa zones, shown in figure 4. In this area, the gender disparity in access to secondary schools was wider (0.82) in 2017 compared to the remaining years from 2015-2018. In access to secondary schooling, the noticed advantage of male over female students in Gamo and Gofa zones was nearly the same advantage with the national and SNNP regional levels. However, the computed GPI (0.85) for 2018 was slightly wider than the national level GPI (0.87) but closer than the SNNP regional level GPI (0.78) in the same target year (2018), in which the ESDP-V set a target goal for secondary school GPI attainment being 0.98 (MoE, 2019). In this aspect, the ESDP-V intended GPI target goal for secondary schooling was not achieved in the sample zones, regions, and national levels, except in Addis Ababa city (1.10) and Amhara region (1.05), which scored above the intended GPI (0.98) for 2018 target year.

In this honor, from 2008-2018 years at the national level, the access to secondary schooling (11-12) advantage favored male students over female students, except in 2016/17 year which slightly showed the advantage of females (13.4%) over males (12.5%). The statistical report witnessed that the favor of males over females in access to first-cycle secondary schooling (Grades 9-10) was continuing in access to second-cycle secondary schooling but slightly wider GPI in the second cycle (Grades 11-12)

(MoE, 2019). In this wisdom, there were advantages of males over females in access to secondary schools (Grades 9-12) at the national and regional levels, except Addis Ababa city and Amhara region.

The secondary schooling gender disparity still favored male students over female students in Gamo and Gofa zones. The gender disparity advantage in access to secondary schooling was nearly the same and in line with the SNNPR and at the national levels gender disparity advantage in access to secondary school. The result is in line with Wale's (1997) report that noticed that as the school grade level increases, the gender disparities increase to the advantage of male over female students.

Nevertheless, scholars studied several dimensions of gender disparity variables, including education, for 40 countries using micro-level data (Ganguli et al., 2011). Consequently, these scholars verified that the gender gap in education has closed or reversed to the advantage of females in many countries. In contrast, the gender gap in education has not closed in developing countries. In our study, access to secondary schooling still provides an advantage for male students over female students at the local, regional, and national levels in Ethiopia, a developing country. Thus, concerning gender disparities in education, this study's results partly agree with the scholarly study reports (Ganguli et al., 2011).

Regarding gender disparity in flow rates of secondary schooling, the authors examined the gender advantage based on the current classroom performance results from grades 9-12. As well the authors examined the gender disparities in the achievement scores of grade 10 and grade 12 national examinations result from 2015 up to 2018 in the sample zones.

3.1.4 Gender Disparities in Dropout and Repetition Rates

Gender disparities in dropout rates: In this concern, secondary schooling provides an advantage for female students compared to male students from 2015 to 2018 in Gamo and Gofa zones. In this sense, boys might be at risk of completing secondary education compared to female students attending secondary schooling in the Gamo and Gofa zones. More importantly, the higher female students dropout rate was visible in the urban and semi-urban area secondary schools. Nevertheless, authors observed a higher dropout rate of male students in rural area secondary schools. In this concern, some senior male and female teachers said that the dropout problem was severe for rural areas of male students compared to rural female students. This might be because of the male roles compared to the female roles in the agrarian society. In the agrarian society, boys usually engage in both agricultural

work and school activities simultaneously, while females engage in the same but fewer activities. As Ganguli et al. (2011) noticed, the gender advantage in dropouts is to the female students compared to the male students in rural areas secondary schooling contexts.

Gender disparities in repetition rates: In this aspect, secondary schooling partly provides an academic advantage for female students over male students. Nevertheless, the classroom exam scores numerical data were not enough to compute the repetition rate of the victim male and female students in secondary schooling because of the COVID-19 influences in the study area context. There were no students in the repeated classroom in secondary schools (Grades 9th and 11th) during the long recess with self-learning opportunities because of COVID-19 in the study area context. The decision was made because the government officially announced that all students should promote from one grade level to the next grade level without the weight of exam scores in Ethiopia. Nevertheless, the data recorded from the classroom and national exam scores below 50% towards secondary schooling (Grades 9-12) inform the less successful male and female students, which were equivalent interpretations to repetitions. Accordingly, authors interpreted the results based on the former Ethiopian education and training policy enacted minimum score (50%) of the promotion policy that helps to decide the promotion rates to transfer from a particular grade level to the next grade level since 1994 (MoE, 1994).

According to the education and training policy of Ethiopia's MoE (1994) sub-article 3.3.3, students (males or females) should have a minimum of 50% achievement to promote from one level to the next level of schooling. Then, those students who achieved below 50% in grades 9 – 12 from 2015 up to 2018 may inform a lower chance of repetition for the male and female students. In this concern, 45.9% of female students and 54.1% of male students have scored below 50%, and cannot be promoted from their grade levels to the next in line to the country's minimum score restricted (50%) in its education promotion policy. In the national exam below average scores for grade 10 and grade 12, the advantage favors male students except for the natural science stream below average scorers. In the natural science stream, the gender disparity advantage partly reversed to female over male students for the scores below average in the same academic years.

Regarding the achievement scores, some authors noticed a deeper understanding of the association between school absenteeism and academic achievement by focusing on specific reasons for school absences (Birioukov, 2012; Klein et al., 2022; Roorda & Koomen, 2021). For these authors, the behavior, health conditions, and psychological ways account for absenteeism and low academic achievements, and the authors verified that absenteeism was negatively associated with academic achievements (Birioukov, 2012). Accordingly, the reasons align with our study results, in which school attendance influences masculine against feminine schooling. Therefore, unlike girls, the boys who experienced quitting class and absenteeism logically arrived at lower academic achievements in secondary schools.

In this sense, the study area boys were the victims of the learning crisis against girls, and the result was in line with the literature reviewed about boys learning crisis even in developed countries (Buchmann et al, 2008; Kleinfeld, 2009; Jacob, 1996). In this favor, in the experiences of dropouts and repeating classes in grades 9-12, the proportion of male students was higher than female students in the study area. The noticed consequence that has support in the literature logically lets male students at risk than female students in academic success in secondary schooling. Therefore, the authors justified that male students were the victim of secondary school dropouts and classroom repetitions compared to female students in secondary schools in the Gamo and Gofa zones.

3.1.5 Gender Disparities in Promotion Rates

In this focus, male students have an advantage over female students in the secondary schooling of the study area from 2015 up to 2018. The gender disparity was wider (56.3%) for scorers above 75%, whereas the gender disparity for medium scores (50%-74%) was coming to closing (94%). This is progress to diminish the gender gap in the promotion rate of secondary schooling. In national exam scores, the computed pass mark (≥ 2) results for both female (58.6%) and male (65.8%) students did not meet the national target set for the female (84%) and male (87%)(MoE, 2019). Nevertheless, the computed grade 10 national exam "pass mark" scorers' proportion of gender disparity (89.1%) was ending for the study area context. In the same way, the proportions of grade 12 national exam scores of males that support male students (27.5%) and scores of females that support female students (25.5%) to enter university favored male students over female students in the same target years. The

proportion of gender disparity (92.7%) was closing in grade 12 national exam results for the 2018 academic year (MoE, 2019).

Conversely, in the achievement scores below 50%, the proportion of male students (54%) was higher than female students' promotion rates (46%) for the years 2015 up to 2018 in the study area context. In this aspect of achievement scores, boys are at risk compared to girls in the study area secondary schools. In this aspect, some of the teachers' (female and male) reflections showed that female students scored higher than male students did in secondary schooling. Nevertheless, the overall recorded data have justified that gender disparity in promotion rate provides an advantage for male students over female students in secondary schools. Thus, affirmative action should be administered for needy boys or girls rather than administrating for girls, which discourages the learning morals of female students.

In Ethiopia, some scholars verified the advantage of male students over female students in achievement scores. The scholars agreed that along with increasing grade levels, gender disparity also increases (Wale, 1997; Semela, 2007; Andualem, 2009). Unlike this, an empirical study report noticed the advantage of female students over male students in primary school achievement scores in the Adama City Administration (Mekonen, 2007). The two dimensions of gender gap results may raise questions if the nature of urban and rural areas influences the gender gap in the school system. In this concern, Jacobs (1996) reported the female advantage over male students in achievement scores of secondary and above schooling in the United States context. In our study area, however, the advantage of female students over male students was not substantially visible in the sample secondary except in repetition and promotion rates schools context.

The secondary school-specific age (15-18) male students frequently walk on the road, engage in small business, create conflict within or out of school, and drive a motorcycle for business in the transport service provisions. This observation aligned with study reports about boys learning crises in the literature (Buchmann et al, 2008; Kleinfeld, 2009; Jacob, 1996). In such acts of male students, boys frequently face learning risks that impede them from achieving higher scores counter to the girls' learning experience in secondary schools. The consequence may further reverse the achievement advantage from male to female in secondary schooling. Therefore, the ongoing gender disparity in promotion rate may reverse through time as that of the United States students. However, it takes time

to turn the achievement advantage from male to female in secondary schooling in the study area context. In sum, although the gender gaps in secondary schools were closing, the intended gender disparities target goals at the national level were not attainable in the national, regional, and study area contexts.

4. Conclusions

This study intended to investigate the gender disparities in access to and flow rates of secondary schooling in some selected zones in the Southern region of Ethiopia. The authors employed quantitative inquiry to examine gender disparities in secondary schooling processes in the study area context. In this wisdom, authors conclude a gender disparity in the secondary schooling process is closing, but still, the advantage is to male students over female students. However, secondary school male students are at risk compared to female students' completion rates in the study area context.

Specifically, in Gamo and Gofa zones, there is gender disparity in access to secondary schooling to the advantage of males over females. However, the status of gender disparity in access to secondary schools is not achieved the national target goal for 2018 in ESDP-V. Besides, the authors verify that gender disparities in dropout rates and repetition rates of secondary schooling provide advantages to females over males. In this aspect, compared to girls, boys are at risk of scoring above average in one way and leaving in secondary schools in the other ways. It means the proportion of educational wastage is higher for male students than for female students in secondary schooling. Nevertheless, the gender disparity in the secondary schooling promotion rate favors males over females. In secondary schooling, the overall gender disparity advantage favors males over females, except for the gender gap in dropout rates and repetition rates where male students are at risk compared to female students. It means, in attending and scoring below average, the male students are at risk compared to the female students in the study area context. To conclude, the overall gender disparities advantage favors male over female students; nevertheless, male students are at learning risk compared to female students in wasting learning time and energy in secondary schooling in the study area context.

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