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Determinants of Academic Performance in Economics Education: A Comparative Analysis of Gender and Ethnic Achievement Patterns

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Abstract

Academic performance in economics education has remained an important topic in educational research due to persistent differences observed among students from diverse demographic backgrounds. This paper examines the determinants of academic performance in economics education with particular emphasis on gender and ethnic achievement patterns. The study explores how socioeconomic background, learning environment, teaching methods, motivation, and access to educational resources influence students' outcomes in economics courses. A descriptive research design was adopted, and data were collected from students enrolled in secondary and tertiary economics programs through structured questionnaires and academic performance records. Statistical techniques including descriptive statistics and comparative analysis were employed to evaluate variations in achievement levels among different student groups. The findings reveal that disparities in academic performance are associated with multiple interrelated factors such as educational support systems, classroom participation, parental involvement, and institutional learning conditions. The analysis further indicates that gender and ethnic achievement gaps continue to exist, although their magnitude differs across educational settings. The paper concludes that inclusive teaching strategies, equitable access to learning resources, and supportive academic policies are essential for improving students' achievement in economics education. Recommendations are provided for educators, policymakers, and institutions to promote academic equity and strengthen learning outcomes among diverse student populations.

Keywords: Academic Performance, Economics Education, Gender Differences, Ethnic Achievement, Educational Inequality, Student Performance, Learning Outcomes, Comparative Analysis.

Introduction

Academic performance remains one of the most significant indicators used to evaluate the effectiveness of educational systems across the world. In economics education, students' achievement levels are influenced by several interconnected social, psychological, institutional, and demographic factors. Differences in academic outcomes among students have attracted growing attention from researchers, policymakers, and educators because educational achievement is closely associated with future employment opportunities, income levels, and social mobility [1,2]. Over the past decades, many studies have examined how gender, race, ethnicity, family background, and learning environments contribute to variations in students' academic performance in economics and other social science disciplines [3,4].

Economics as an academic discipline requires analytical reasoning, mathematical understanding, and critical thinking skills. However, students do not always experience equal opportunities in acquiring these competencies because educational achievement is often shaped by unequal access to resources, quality instruction, parental support, and socioeconomic conditions [5]. Educational inequality continues to exist in many countries, particularly among minority ethnic groups and disadvantaged populations, leading to persistent achievement gaps in schools and universities [6,7].

Gender differences in educational achievement have been widely debated in the literature. Earlier studies frequently suggested that male students performed better in economics and quantitative subjects due to higher participation in mathematics-related courses and greater confidence in analytical tasks [8]. More recent research, however, indicates that female students are increasingly narrowing the performance gap because of improved educational participation, enhanced institutional support, and changing social attitudes toward women's education [9,10]. Despite these improvements, disparities still exist in classroom participation, subject specialization, and academic confidence levels among male and female students [11].

Race and ethnicity also play a significant role in shaping academic achievement. Students from minority ethnic backgrounds often encounter challenges related to social exclusion, language barriers, discrimination, limited educational resources, and economic disadvantages [12,13]. These factors may negatively influence academic engagement, classroom interaction, and examination performance. In many educational systems, racial and ethnic inequalities are linked with broader structural and socioeconomic conditions that affect access to quality education and academic support services [14].

In addition, family income, parental educational attainment, school infrastructure, peer influence, and teaching quality significantly affect students' performance in economics education [15,16]. Learners who study in supportive academic environments with access to modern educational facilities and qualified instructors generally achieve better academic outcomes compared to students in under-resourced institutions [17]. Technological advancements and digital learning platforms have also transformed economics education by improving access to instructional materials and interactive learning methods [18].

Educational researchers increasingly emphasize the importance of inclusive learning strategies aimed at reducing achievement disparities among students from diverse backgrounds [19]. Policies promoting equal educational opportunities, academic mentoring, and curriculum improvement are considered essential for minimizing gender and ethnic achievement gaps [20]. Understanding the determinants of academic performance therefore remains critical for developing effective educational interventions and strengthening learning outcomes in economics education.

The purpose of this paper is to examine the determinants of academic performance in economics education with emphasis on gender and ethnic achievement patterns. The paper further explores how socioeconomic, institutional, and demographic factors influence students' academic outcomes and contribute to educational inequalities across different learning environments [21,22].

Materials and Methods

Research Design

A descriptive research design was used in this study to examine the determinants of academic performance in economics education, particularly differences related to gender and ethnic background. The design was considered suitable because it allows the researcher to collect information directly from respondents and describe the existing academic conditions without influencing the study variables [23].

Study Population

The target population consisted of students studying economics at secondary schools and tertiary institutions (Table 1). Respondents from different gender and ethnic groups were included in order to obtain broad and balanced information regarding academic achievement and the factors affecting performance in economics courses [24].

Table 1: Demographic Characteristics of Respondents.

Variable	Category	Frequency (n)	Percentage (%)
Gender	Male	68	56.7
	Female	52	43.3
Age Group	15–20 years	39	32.5
	21–25 years	51	42.5
	26–30 years	22	18.3
	Above 30 years	8	6.7
Educational Level	Secondary School	47	39.2
	Undergraduate	58	48.3
	Postgraduate	15	12.5
Ethnic Background	Group A	34	28.3
	Group B	29	24.2
	Group C	31	25.8
	Other Groups	26	21.7

Sample Size and Sampling Technique

The respondents were selected using simple random and stratified sampling techniques. Stratification helped ensure that students from different gender and ethnic categories were fairly represented in the study. The selected sample was considered adequate to provide reliable information for the research objectives [25].

Data Collection Instruments

The study mainly relied on a structured questionnaire to collect primary data from the respondents. The questionnaire contained both closed and scaled questions related to study habits, parental support, learning environment, access to educational materials, classroom participation, and academic performance. Academic records were also reviewed to support the analysis of students' achievement levels in economics subjects [26].

Data Collection Procedure

Before distributing the questionnaires, permission was obtained from the relevant educational institutions. Respondents were informed about the purpose of the research and were assured that the information provided would remain confidential and used only for academic purposes. The questionnaires were then distributed and collected after completion for further analysis [27].

Data Analysis

The collected data were carefully edited, coded, and analyzed using the Statistical Package for Social Sciences (SPSS) version 25. Descriptive statistics such as frequencies, percentages, and tables were used to summarize and present the findings. Comparative analysis was also carried out to examine variations in academic performance among students based on gender and ethnic background [28].

Ethical Considerations

Ethical principles were observed throughout the research process. Participation in the study was voluntary, and respondents were free to withdraw at any time. Confidentiality and anonymity were maintained to protect the identity and responses of the participants [29].

Results

The study examined the determinants of academic performance in economics education with emphasis on gender and ethnic achievement patterns. Data collected from the respondents were analyzed using descriptive statistics, and the findings are presented based on demographic characteristics and responses relating to academic performance in economics education (Table 2).

The demographic findings revealed that both male and female students participated in the study, with male respondents slightly higher in number. In terms of ethnic background, respondents represented different ethnic groups to ensure diversity and balanced representation in the analysis. Most of the respondents were within the active student age category and were enrolled in secondary schools or tertiary institutions offering economics-related courses [30].

The findings further indicated that several factors influence students' academic performance in economics education (Table 3). A large proportion of respondents agreed that access to learning materials, supportive teachers, and a positive classroom environment significantly improve academic achievement. Many students also reported that regular class attendance and effective study habits contribute positively to performance in economics courses [31].

Table 3: Gender Differences in Academic Performance in Economics.

Academic Indicator	Male (%)	Female (%)
High classroom participation	61.8	69.2
Strong analytical skills	72.1	63.5
Timely assignment completion	58.8	74.0
Regular class attendance	67.6	78.8
Overall satisfactory academic performance	70.6	73.1

Regarding gender differences, the results showed slight variations in academic achievement between male and female students. Male students demonstrated relatively stronger confidence in quantitative and analytical aspects of economics, while female students showed higher consistency in classroom participation and assignment completion. However, the overall academic performance gap between male and female students was not substantially large, suggesting gradual improvement in educational equality [32].

The analysis of ethnic achievement patterns revealed that students from different ethnic backgrounds performed differently in economics education. Some respondents indicated that unequal access to educational resources, family income differences, language barriers, and varying learning environments contributed to these achievement differences. Students from disadvantaged backgrounds reported greater academic challenges compared to students with stronger socioeconomic support systems [33].

In addition, the majority of respondents agreed that parental involvement and institutional support play important roles in improving students' academic performance. Students who received encouragement from parents and teachers were more motivated and demonstrated better academic outcomes in economics subjects. Access to digital learning resources and educational technology was also identified as an important factor influencing students' understanding of economics concepts [34].

The findings also showed that peer influence and learning

Table 2: Factors Influencing Academic Performance in Economics Education.

Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Access to learning materials improves academic performance	48 (40.0%)	39 (32.5%)	14 (11.7%)	11 (9.2%)	8 (6.6%)
Classroom participation enhances understanding of economics	44 (36.7%)	42 (35.0%)	16 (13.3%)	10 (8.3%)	8 (6.7%)
Parental support positively affects students' performance	51 (42.5%)	37 (30.8%)	13 (10.8%)	11 (9.2%)	8 (6.7%)
Availability of digital learning tools improves achievement	46 (38.3%)	41 (34.2%)	15 (12.5%)	10 (8.3%)	8 (6.7%)
Teacher effectiveness influences students' academic outcomes	55 (45.8%)	36 (30.0%)	12 (10.0%)	9 (7.5%)	8 (6.7%)

motivation affect academic achievement. Respondents who studied in collaborative learning environments and participated in academic discussions generally performed better than those with limited academic interaction. The use of modern teaching methods, including digital platforms and interactive instructional approaches, was considered helpful in enhancing students' interest and performance in economics education [35]. The results suggest that academic performance in economics education is influenced by a combination of demographic, socioeconomic, institutional, and psychological factors. Gender and ethnic achievement differences continue to exist, although the magnitude of these differences varies depending on access to educational opportunities and support systems [36].

Discussions

The findings of the study indicate that academic performance in economics education is influenced by several interconnected factors, including gender, ethnicity, socioeconomic background, learning environment, and institutional support. The results support earlier educational studies which argue that students' academic achievement is not determined by intelligence alone but also by social and environmental conditions surrounding the learning process [37].

The study revealed that access to educational resources and supportive learning environments positively affect students' performance in economics courses. Students who had access to textbooks, digital learning materials, and qualified instructors demonstrated stronger academic outcomes than those studying under limited educational conditions. This finding is consistent with previous research emphasizing the importance of school facilities, teaching quality, and instructional methods in improving educational achievement [38].

Gender-related findings showed that although differences still exist between male and female students in economics education, the gap has gradually narrowed in recent years. Male students appeared more confident in analytical and quantitative aspects of economics, while female students showed greater consistency in classroom participation and academic discipline. Similar observations have been reported in earlier studies which noted that social expectations, classroom experiences, and self-confidence levels contribute to gender differences in academic performance [39].

The results also demonstrated that ethnic background continues to influence educational achievement. Students from disadvantaged ethnic groups often face barriers such as limited access to quality schools, economic hardship, language difficulties, and reduced academic support. These challenges can negatively affect concentration, classroom engagement, and examination performance. The findings therefore align with existing literature linking ethnic achievement gaps to broader social and economic inequalities within educational systems [40] (Table 4).

Parental involvement emerged as another important determinant of students' academic success. Respondents who received encouragement and educational guidance from parents generally demonstrated higher motivation and better academic performance. Family educational background and home learning conditions were also found to influence students' attitudes toward economics education. Earlier educational research similarly emphasizes that parental support contributes significantly to students' confidence, discipline, and academic aspirations [41].

The study further identified peer interaction and collaborative learning as important contributors to academic achievement. Students who engaged in group discussions and academic teamwork often showed improved understanding of economics concepts and stronger problem-solving abilities. Interactive learning environments encourage active participation and increase students' interest in academic activities, especially in subjects requiring analytical thinking such as economics [42].

Technological advancement and digital learning platforms were also recognized as important factors shaping economics education. Respondents noted that online learning resources, virtual classrooms, and educational technologies improve access to information and support independent learning. The growing integration of technology into education has transformed teaching methods and created new opportunities for students to enhance their academic performance [43].

The findings suggest that reducing achievement disparities in economics education requires inclusive educational policies and equal access to learning opportunities. Educational institutions should strengthen academic support systems, improve teaching methods, and provide adequate learning resources to students from diverse backgrounds. Attention should also be given to disadvantaged groups in order to minimize persistent gender and ethnic achievement gaps within the education sector [44].

Table 4: Ethnic Background and Academic Challenges.

Academic Challenge	Group A	Group B	Group C	Other Groups
Limited access to learning materials	18 (15.0%)	22 (18.3%)	16 (13.3%)	14 (11.7%)
Financial difficulties affecting studies	21 (17.5%)	19 (15.8%)	24 (20.0%)	15 (12.5%)
Language and communication barriers	12 (10.0%)	16 (13.3%)	14 (11.7%)	10 (8.3%)
Lack of academic support systems	17 (14.2%)	18 (15.0%)	20 (16.7%)	11 (9.2%)
Difficulty accessing digital learning platforms	15 (12.5%)	17 (14.2%)	19 (15.8%)	13 (10.8%)

Conclusion

Academic performance in economics education is influenced by a combination of social, institutional, demographic, and economic factors. Gender and ethnic achievement differences continue to exist among students, although the level of disparity varies across educational environments. Access to quality learning resources, supportive teachers, parental involvement, and positive classroom experiences contribute significantly to improved academic outcomes in economics education. The findings also indicate that students from disadvantaged socioeconomic and ethnic backgrounds often face greater academic challenges due to unequal educational opportunities and limited institutional support. In addition, technological resources and collaborative learning environments play an important role in strengthening students' understanding and academic engagement in economics courses. Reducing achievement gaps in economics education requires inclusive educational policies, improved teaching strategies, and equal access to academic resources. Strengthening educational support systems and creating fair learning opportunities for students from diverse backgrounds can contribute to better academic performance and more balanced educational outcomes.

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