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EDUCATION AND INEQUALITY IN THE ERA OF GLOBALISATION: COMPARATIVE POLICY INSIGHTS FROM TEN NATIONS

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Abstract
Globalisation has transformed national economies, social structures, and labour markets, presenting new opportunities but exacerbating income inequality and resource accessibility. Education is important to this shift, both as a conduit for social mobility and a factor in economic resilience. This study examines the relationship among globalisation, educational access, and economic inequality through a comparative analysis of 10 nations: the United States, Germany, Poland, Malaysia, Thailand, India, Indonesia, Bangladesh, Brazil, and Georgia. The study integrates secondary macroeconomic data from 2022 to 2023 with qualitative policy analyses. Statistical analysis employing Pearson correlation indicates minimal correlations among Gross Domestic Product (GDP) growth, secondary school enrolment, and income inequality, implying that merely increasing access to education is insufficient for achieving equitable development. Case study findings highlight that aligning education policy with labour market demands, promoting digital inclusion, and implementing decentralised governance structures substantially improves the efficacy of educational investments. India and Poland exemplify effective methods through vocational integration and equity-centered reforms, but enduring disparities in Brazil and Malaysia underscore the shortcomings of access-oriented initiatives. This study highlights the necessity of focussing on education within an integrated framework that encompasses social protection, economic inclusion, and sustainable policy development. It provides evidence-based suggestions consistent with Sustainable Development Goals 4 (Quality Education) and 10 (Reduced Inequalities), promoting inclusive educational systems that effectively address structural disparities exacerbated by globalisation.

Keywords: globalisation, inclusive education, comparative analysis, macroeconomic, education inequality.

1 Introduction

1.1 Background of the study

Globalisation has recognised as a driving force of the 21st century, transforming the economic, social, and cultural landscapes of nations globally. The phenomenon is defined by the increased cross-border flow of goods, services, capital, technology, information, and individuals [4]. While globalisation has stimulated economic expansion and technological advancement, it has also engendered many challenges, particularly the increasing inequality in wealth, opportunity, and resource accessibility both across and within nations [29]. Education functions as a vital intermediary in the impacts of globalisation. Education not only prepares future generations to engage in the global economy but also acts as a vital catalyst for social mobility and innovation [49]. Nonetheless, inequitable access to education and its quality may extend or intensify existing gaps. Nations possessing robust and comprehensive education systems are more adept at capitalising on the advantages of globalisation, whereas those with substantial educational inequalities may be marginalised.

The digital revolution, an offshoot of globalisation, has underscored the need of education. As economies evolve into knowledge-based systems, the demand for highly skilled individuals has escalated[15]. This has intensified the demand on educational systems to adapt, as unequal access to learning opportunities and digital resources has exacerbated a new

kind of inequality, known as the digital divide [40].Rural and marginalised regions sometimes lack the essential infrastructure and resources necessary to compete in this rapidly evolving environment [13]. The interplay among globalisation, education and macroeconomic factors including employment, income inequality, and social mobilityis complex and diverse. Globalisation can create employment opportunities and enhance living conditions; nevertheless, it could additionally eliminate people in areas exposed to international competition [8]. The ability of individuals and communities to adapt to changes depends on the quality and extent of education and training.

Education is widely recognised as a fundamental cornerstone for employment generation, poverty reduction, and inclusive progress. It improves health, gender equality, peace, and social stability, while also acting as a stimulus for sustained economic growth and cohesiveness [30, 31]. Superior early childhood education, lifelong learning, and adaptive skills training are becoming essential for equipping individuals to confront the challenges of a rapidly changing global economy [7, 9]. An extra year of education can elevate an individual's income by roughly 10%, while society reaps advantages from enhanced production, innovation, and civic engagement [26, 31]. These significant returns highlight the necessity for inclusive and equitable educational policy as a primary response to the intricate impacts of globalisation.

Nonetheless, advancements in enrolment have not alleviated the global learning crisis. Over 250 million children and adolescents are either out of school or do not attain fundamental literacy and numeracy skills [39]. The COVID-19 pandemic and climate-related disturbances have exacerbated this difficulty, considerably affecting learning outcomes, lifetime earnings, and labour readiness [45, 46]. Rural and underprivileged areas are particularly susceptible, as the digital gap persists in restricting access to quality education [1, 13, 40].

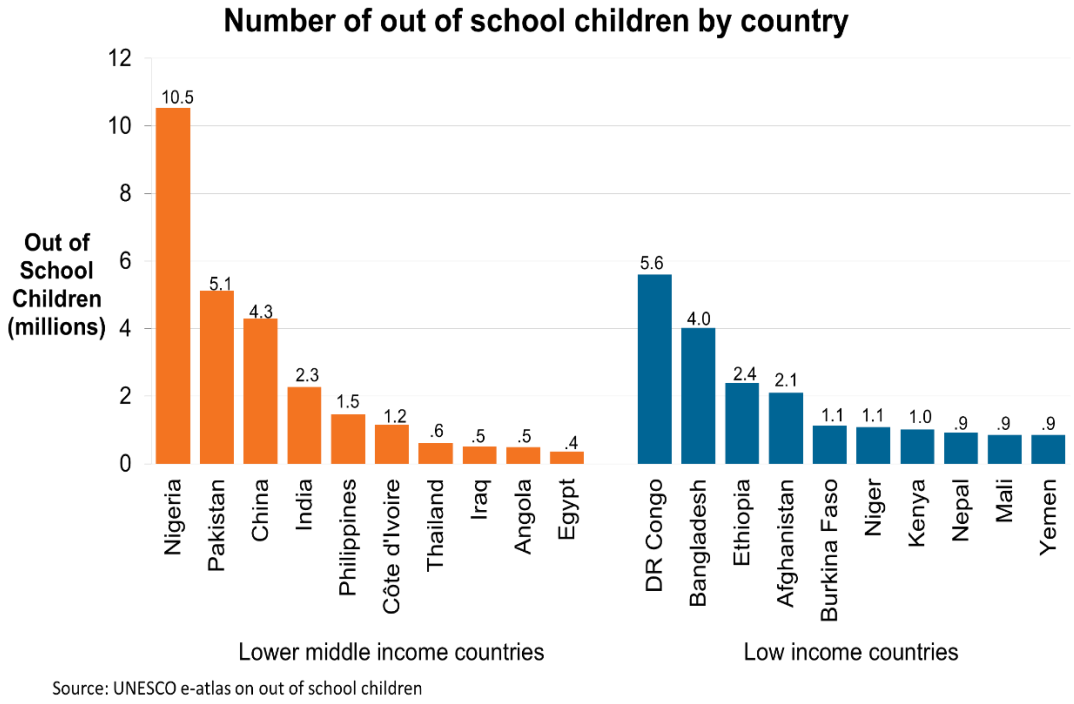

Figure 1: Count of Out-of-School Children by Nation [5]

Figure 1 illustrates the unequal global distribution of children not enrolled in school. Nigeria and Pakistan account for about fifty percent of the out-of-school population in lower middle-income countries. Countries like India and China together represent 23% of the global total. Concurrently, low-income countries such as the Democratic Republic of Congo and Bangladesh represent 37%, with Ethiopia and Afghanistan also facing significant difficulties [5].

This study conducts a comparative analysis of ten countries with varying economic profiles, educational infrastructures, and policy responses to globalisation: The United States, Germany, Poland, Malaysia, Thailand, India, Indonesia, Bangladesh, Brazil, and Georgia to elucidate these disparities. These nations were chosen to exemplify a range of socio-economic circumstances and educational methodologies. The analysis examines how differences in education policy and accessibility affect economic growth, income inequality, and social equity within a globalised framework.

The results indicated that enhancing access to quality education is crucial for human capital development and alleviating the negative impacts of globalisation. To guarantee that the advantages of global integration are equitably distributed, education must be incorporated into comprehensive policy frameworks that tackle structural inequalities. This research provides evidence-based suggestions for promoting equitable and sustainable development, emphasising the essential role of education in empowering individuals and nations to prosper in a progressively linked world [33].

1.2 Significance of the study

The empirical evidence on the influence of globalisation on economic inequality through its effects on access to and the quality of education in both developed and developing economies is presented in this study. The study underscores the vital significance of human capital development in reducing wealth disparities and fostering inclusive economic growth by analysing a diverse range of countries, including the United States, Germany, Poland, Malaysia, Thailand, India, Indonesia, Bangladesh, Brazil, and Georgia. The research emphasises actionable policy measures and macroeconomic statistics, offering crucial insights for policymakers seeking to align national education systems with the changing requirements of a globalised economy while tackling enduring structural inequities.

1.3 Problem identification

Despite substantial global advancements in school attendance and economic development, significant disparities in educational access and quality persist—particularly among marginalised populations and between urban and rural regions. Globalisation has intensified competitiveness in labour markets, but unequal access to education endures, marginalising substantial segments of the population, perpetuating cycles of poverty, and limiting social mobility. In countries such as Brazil and India, substantial disparities in educational opportunities between urban and rural regions endure. Notwithstanding increased enrolment rates in various countries, significant differences in educational results persist. These enduring inequalities restrict the transformative potential of globalisation to foster inclusive and sustainable prosperity.

1.4 Aim

The primary objective of this research is to investigate the influence of globalisation on economic inequality by analysing the relationship between educational access and

macroeconomic variables in selected nations. The study examines the methods by which human capital development, predominantly influenced by education, impacts income distribution and assesses the efficacy of specific educational initiatives in reducing inequality. The research aims to deliver evidence-based policy suggestions to foster sustainable and inclusive economic growth within the framework of globalisation.

2. Literature Review: Education, Economic Inequality and Globalisation

Education is extensively acknowledged in the literature as a fundamental catalyst for human capital development and sustained economic success [9, 30]. Access to quality education enhances labour productivity[27], elevates individual income levels, and improves country competitiveness in the global economy [31]. The intensification of globalisation has heightened the demand for a highly skilled and versatile workforce, as organisations increasingly integrate into global value chains and adapt to rapid technological advancements [9]. The evolving labour market underscores the growing importance of educational systems in fostering adaptability and resilience in the workforce [48].

Numerous studies have shown the growing integration of educational systems into the global economy. Tertiary enrolment rates have steadily risen in recent years, with global participation estimated at 38% in 2022 and exceeding 40% by 2023, driven by international academic collaboration and the proliferation of digital learning platforms. These innovations have improved accessibility and reduced educational inequalitiesamong regions. The World Bank forecasts that each additional year of education can increase individual income by around 10%, thereby substantiating the established correlation between education and productivity. By 2024, it is projected that over fifty percent of worldwide occupations would require advanced skills, underscoring the necessity for educational systems to align curricula with the changing demands of the labour market.

Several studies have highlighted the expanding integration of education systems into the global economy. Tertiary enrolment rates have risen steadily in recent years, with global participation reaching approximately 38% in 2022 and exceeding 40% by 2023, driven by cross-border academic collaboration and the proliferation of digital learning platforms [39]. These developments have contributed to greater accessibility and reduced educational disparities across regions. The World Bank estimates that each additional year of schooling can increase individual income by around 10%, reinforcing the established correlation between education and productivity [45]. By 2024, it is projected that over half of global occupations will require advanced skills, emphasising the need for education systems to align curricula with dynamic labour market demands.

Despite these advancements, extensive research highlights persistent discrepancies in educational access and quality that continually hinder inclusive growth. Marginalised groups frequently experience significant deprivation of educational opportunities, hence constraining their ability for upward mobility and perpetuating cycles of poverty and inequality [14, 26]. Cross-national comparisons reveal that nations exhibiting significant educational gap frequently encounter diminished economic performance andwidening income inequality [47]. Comprehensive research on inequality and development corroborates these trends [3]. In contrast, inclusive education systems are consistently linked to greater social cohesiveness and superior economic outcomes [18, 35].

Financial resources remain a substantial barrier to achieving equitable educational outcomes. The Education Finance Watch 2024 report by UNESCO and the World Bank reveals that 40% of countries allocate under 15% of their total public expenditure and less than 4% of GDP to education, which is below internationally acknowledged criteria. The expenditure gap is particularly evident between high- and low-income nations, with the former investing an average of USD 8,543 per student in 2022, compared to only USD 55 in low-income contexts [39]. In some cases, rising debt service costs, especially in sub-Saharan Africa, have begun to equal or exceed educational budgets. The global share of Official Development Aid (ODA) designated for education declined from 9.3% in 2019 to 7.6% in 2022, raising concerns on the sustainability of international financial support for education.The literature indicates a substantial relationship between macroeconomic performance and educational equity [45]. The calibre and inclusivity of national education systems significantly impact GDP growth and income distribution. The Gini coefficient, *G*, which ranges from 0 to 1—where 0 signifies perfect equality and 1 represents complete inequality—is a commonly utilised metric for assessing income disparity, frequently applied to investigate the correlation between education and social mobility. Lower Gini coefficients frequently signify a more equitable income distribution and are typically linked to enhanced access to quality education. Conversely, higher income disparity frequently restricts access to essential services such as healthcare and education [17], hence sustaining socio-economic disparities and instability.

The disproportionate allocation of globalisation's advantages has intensified educational and economic inequalities. Without strong regulatory frameworks, globalisation has facilitated capital flight and tax evasion via offshore financial systems, undermining national tax bases and constraining public investment in education [29]. The COVID-19 epidemic, as indicated by [34], reversed decades of advancements in diminishing inequality, resulting in the most significant increase in global wealth disparities in over 30 years. Future forecasts indicate that inequality will persist in escalating if the income development of developing nations remains beneath historical averages. Although the association between education and economic performance is widely accepted, current research suggests that this relationship may depend on environmental factors. In rapidly changing or significantly unequal cultures, the benefits of education are not uniformly distributed. Geographical disparities, insufficient digital infrastructure, and limited institutional capacity may hinder the effectiveness of educational reforms, particularly in low- and middle-income countries [1].

This analysis underscores the necessity for additional comparative and policy-focused research at the nexus of globalisation, educational reform, and macroeconomic development. This study analyses the responses of national education systems to global economic forces, thereby enhancing the literature on inclusive growth and providing evidence-based ideas for addressing inequality in diverse socio-economic circumstances.

3. Methodology

3.1 Research design and case selection

A quantitative comparative case study design that integrated statistical correlation analysis with policy-oriented qualitative inquiry was employed in this study. The objective was to explore the relationship between educational policy, economic inequality, and developmental results within the broader context of globalisation.

This study selected ten nations—United States, Germany, Poland, Malaysia, Thailand, India, Indonesia, Bangladesh, Brazil, and Georgia—that represented a diverse spectrum of income

classifications (high, upper-middle, and lower-middle) and educational reform trajectories. The selection of these nations was based on the availability of comparable national-level data and recent education policy interventions pertinent to inequality and development, facilitating both cross-national statistical analysis and context-specific interpretation of reform impacts.

3.2 Data sources

Secondary data for the year 2022-2023 were obtained from reputable international organisations, primarily the World Bank, UNESCO Institute for Statistics, and national government policy websites. The key indicators gathered for the years 2022–2023 (or the most recently accessible) are:

a. Gross Domestic Product (GDP) growth rate (%) –as an indicator of economic development
b. Secondary school enrolment rate (%) – as a indicatorof educational access
c. Gini coefficient (G) – as a measure of income inequality.

Reliable statistics from 2019 to 2021 were employed, maintaining methodological consistency across sources in the absence of direct data from 2022 to 2023. All data points were validated for reliability and comparability.

3.3Data processing

To enable robust cross-national comparison, data harmonisation was conducted through the alignment of measurement units and timeframes. When discrepancies occurred, the most methodologically sound and consistent figures were prioritised.

3.4 Analytical approach

A Pearson product-moment correlation analysis, performed with Microsoft Excel 365, to assess the relationship between GDP growth rates(%), secondary school enrolment rates(%), and income inequality, indicated by the Gini coefficient (*G*) to determine the strength and direction of relationships among economic advancement, educational accessibility, and income inequality in the selected nations was employed in this study.

3.5 Case study integration

A qualitative comparative case study component was integrated into the methodology to enhance the statistical analysis. This entailed a rigorous examination of national education policies and changes across the ten chosen nations, utilising policy papers, scholarly literature, and institutional reports. The qualitative aspect concentrated on ascertaining:

a. Strategies for reform and implementation frameworks (e.g., India's National Education Policy 2020, Germany's Vocational Education and Training system, Malaysia's Education Blueprint)
b. Structural facilitators and limitations affecting policy efficacy (e.g., decentralisation, digital equity, vocational integration)
c. Contextual elucidations for the disparity between statistical metrics and actual developmental results.

This dual methodology facilitated the triangulation of data, wherein statistical patterns were analysed in relation to policy design, governance capacity, and socio-economic frameworks. The amalgamation of qualitative and quantitative insights facilitated a more profound

comprehension of the reasons behind the correlation between enhanced educational access and its impact on inequality reduction or economic development improvement.

4. Result

4.1 Education policy, income inequality and development outcomes: A comparative policy analysis

Table 1 provides a cross-national review of educational policy orientations, income inequality (assessed through the Gini coefficient), and GDP growth across ten nations ranging from lower-middle to high-income groups. Although secondary school enrolment has risen dramatically, the extent to which this access leads to equitable development varies considerably, influenced by labour market alignment, social protections, and governance structures.

Among high income nations, the United States, Germany, and Poland exhibit secondary enrolment rates surpassing 90%. Nonetheless, income inequality endures. In the United States, despite federal reforms such as Every Student Succeeds Act and the STEM Education Act, a Gini index of 0.411 indicates that increased access has not adequately alleviated structural inequality. This can be ascribed to racialised labour fragmentation, inequitable healthcare, and geographic variations in educational quality.

The Dual Vocational Education and Training (VET) system in Germany, which integrates classroom learning with industry-based apprenticeships, is linked to a lower Gini coefficient of 0.314, indicating a more effective alignment with labour market requirements. Poland, being a high-income country, has enacted EU-supported reforms focused on digitisation, vocational relevance, and teacher training. A Gini coefficient of 0.302, the lowest within the high-income group, underscores the potential effects of continuous public investment and synchronised reform initiatives.

Upper-middle-income nations, such as Malaysia, Thailand, Brazil, and Georgia [44], exhibit more varied outcomes. Malaysia's Education Blueprint (2013–2025) emphasises fairness and quality; nonetheless, enduring rural-urban disparities result in a Gini coefficient of 0.407. Thailand's offering of 15 years of complimentary education, inclusive of outreach to stateless children, is laudable; yet, gaps in resource distribution and instructional quality persist (G = 0.350). Brazil, nonetheless, social inclusion initiatives like Bolsa Família, demonstrates the highest inequality in this sample (G = 0.520), indicating persistent structural disparities. Georgia, a post-socialist economy, has implemented decentralised, equity-oriented reforms such as the IEQL Project, resulting in an enrolment rate of 95.9% and a Gini index of 0.348, indicating favourable reform trajectories.

India, Indonesia, and Bangladesh pursue divergent trajectories within the lower-middle-income category [44]. The National Education Policy (NEP) 2020 of India underscores fundamental literacy, vocational integration, and inclusive accessibility. The sample's lowest Gini coefficient (0.255) indicates efficient redistribution via schooling. Indonesia has implemented advanced vocational reforms and digital upskilling for educators; yet, moderate inequality (G = 0.389) indicates execution disparities. Bangladesh has emphasised gender equity and post-COVID recovery, evidenced by a Gini coefficient of 0.324 and enhanced retention policies bolstered by foreign investment.

These findings emphasise that merely increasing access to education is inadequate for diminishing inequality. Successful outcomes are more strongly associated with the alignment of educational policy with labour market requirements, digital capabilities, and structural inclusion [12, 36].

Country	**GDP Growth Rate** （%）	**Secondary School EnrolmentRate(%)**	**Gini Coefficient (*G*)**	**Key Educational Policy**
United States	≈2.9	≈ 91.0	0.411	Every Student Succeeds Act (ESSA, 2015): decentralisation of accountability to states, focus on equity, access to Advanced Placement and STEM programs. The STEM Education Act (2014) broadened STEM curriculum, enhanced teacher certification, and provided assistance to high-need schools. [41]
Germany	≈0.2	≈ 100.0	0.314	Dual Vocational Education and Training (VET) system combining apprenticeships with academic education. Amendments to the Skilled Immigration Act (Fachkräfteeinwanderungsgesetz), effective March 1, 2024: expedited acknowledgement of international occupational qualifications, implementation of "chance card," lowered salary requirements, and mitigated language obstacles (to A2 German or B2 English) [42].
Poland	≈0.6	≈ 96.0	0.302	Post-1990 Vocational Reform: implementation of a uniform foundation year, access to Maturaexamination for technical students, and the establishment of sectoral skills councils. The EU Recovery Plan allocates €1.4 billion for digital infrastructure, skills centres, and lifelong learning within the Polish Recovery and Resilience Plan (RRP) [6].
Malaysia	4.2	≈ 72.2	0.407	Malaysia Education Blueprint (2013–2025): reforms aimed at enhancing STEM performance,

				teacher quality, technology integration, and addressing rural–urban educational gaps; emphasis on digital equity[24].
Thailand	2.5	≈ 78.0	0.350	15-Year Free Education Policy (since 2009): comprehensive coverage from pre-primary to Grade 12, encompassing tuition, textbooks, and uniforms. Rural retention has improved, however quality problems remain [38].
India	6.3	≈ 78.7	0.255	National Education Policy 2020 and the legacy of Rashtriya Madhyamik Shiksha Abhiyan (RMSA): Reorganises curriculum into a 5+3+3+4 framework; requires occupational exposure starting in Grade 6, aiming for 50% exposure by 2025; advocates for comprehensive, interdisciplinary degrees and credit mobility; backed by RMSA to enhance access and school retention [22, 23].
Indonesia	5.1	≈ 78.7	0.389	Vocational integration is strengthened by improved Technical and Vocational Education and Training (TVET) reforms, including industry-aligned curricula, teaching-factory models, vocational certification, pilot four-year tracks, and AI/coding streams for future-ready competencies [25].
Bangladesh	5.7	≈ 66.6	0.324	Education Policy 2010 and post-COVID retention strategies: compulsory primary education, emphasis on females' secondary retention; World Bank-funded recovery programs facilitating occupational access and incentives for school completion [19, 20].
Brazil	2.9	≈ 90.5	0.520	*Bolsa Família:* conditional cash transfers associated with school attendance; growth of technical secondary schools (ETECs) aligned with labour market requirements, promoting social

				inclusion and upward mobility [21, 28, 32].
Georgia	7.5	≈ 95.9	0.348	The Enhanced School Autonomy and Innovations for Education Quality Improvement (IEQL) Project, sponsored by World Bank reforms, emphasis on inclusive education, a revamped curriculum incorporating digital and civic capabilities, and targeted assistance for rural and underprivileged pupils [37, 43].

Table 1: Economic Growth, Secondary School Enrolment and Income Inequality across Selected Countries

4.2Statistical analysis

A Pearson product-moment correlation analysis was performed to empirically evaluate the relationships between economic growth, educational access, and income inequality, utilising data from ten countries (refer to Table 2). The factors analysed included: GDP growth rate (2023), secondary school enrolment rate, and the Gini coefficient (income inequality). The findings are represented in the correlation matrix presented below.

Indicators	**GDP Growth Rate (%)**	**Secondary School Enrolment Rate (%)**	**Gini Coefficient (G)**
GDP Growth Rate (%)	1.000	-0.465	-0.090
Secondary School Enrolment (%)	-0.465	1.000	0.045
Gini Coefficient (G)	-0.090	0.045	1.000

Table 2: Correlation Matrix among GDP Growth Rate (%), Secondary School Enrolment Rate (%)and Income Inequality (Gini Coefficient, *G*)

The relationship between GDP growth and secondary enrolment is notably negative (r = -0.465), indicating that an increase in school enrolment does not necessarily align with improved economic growth. This may signify a lag between educational investment and production outcomes, or discrepancies in the efficiency with which economies utilise educated individuals.The correlation between GDP growth and the Gini coefficient is somewhat negative (r = -0.090), suggesting that income inequality has a minimal relationship with economic prosperity. The correlation between secondary school enrolment and the Gini coefficient is mildly positive (r = 0.045), corroborating the assertion that increased enrolment does not inherently lead to a more egalitarian distribution of income [11].

The statistical analysis indicated that the structural integration and quality of reforms, rather than solely enrolment rates, determine equal outcomes.

5. Discussion

The comparative analysis highlights the intricate relationship among globalisation, education policy, and economic inequality. Although globalisation has facilitated the expansion of

educational access and curriculum reform in numerous nations, these modifications do not consistently result in equitable socio-economic outcomes.

The slight negative correlation between GDP growth and school enrolment (r = –0.465) indicates a temporal delay between human capital investment and observable economic performance. Discrepancies between graduate competencies and labour market requirements—especially in rapidly evolving economies—exacerbate this divergence [10].

The weak correlation between secondary enrolment and income inequality (r = 0.045) increased access alone is insufficient to meaningfully address entrenched economic disparities.The policy study illustrates that nations such as India have successfully integrated educational access with equity-focused vocational reform, leading to enhanced outcomes. Conversely, Brazil's enduring inequality, despite extensive enrolment and cash transfer initiatives, exemplifies the inadequacies of non-structural remedies.

Third, nations with integrated vocational routes, decentralised governance, and stable finance (e.g., Germany, Poland) demonstrate enhanced efficacy in converting education into equity. These platforms enable more seamless transitions from education to employment and more effectively adapt to changes in the global labour market. In contrast, countries experiencing regional disparities, like Malaysia and Brazil, persist in contending with inequities stemming from geographic, digital, and institutional factors.

This analysis substantiates the assertion that education, while a significant equaliser, is not an independent remedy for economic inequality. It must be integrated with social protection programs, labour market reforms, and inclusive government. Effective educational policy necessitates coordination among sectors, sustained investment, and a dedication to digital and rural equity [12, 36].

6.Limitations

This research possesses multiple limitations. The study mostly relies on secondary data from international organisations such as the World Bank and UNESCO. Diverse methodologies for data collecting and reporting between countries may result in differences in these findings among nations. Secondly, the analysis employs aggregated, national-level metrics including GDP growth, secondary school enrolment, and the Gini coefficient. This technique could neglect critical local issues, such as the disparity between rural and urban areas or the differences in household income. Third, it examines only a small number of nations, hence the results may not be applicable to other nations with diverse economic or social circumstances. The sample size of the statistical study (n = 10) is rather small, which diminishes statistical power and complicates the identification of significant correlations. The relationships identified in this study should be considered exploratory rather than definitive. Finally, the study does not examine certain social elements that could also influence education and inequality, such as cultural or communal differences.

7. Conclusion

This study demonstrates that the influence of globalisation on economic inequality is significantly associated with macroeconomic conditions and access to education. This analysis indicates that while economic expansion may offer opportunities for development, the relationships between GDP growth, secondary school enrolment, and income disparity are weak and statistically insignificant. The data specifically imply that more economically

developed countries exhibit higher secondary school enrolments and reduced income disparity; nonetheless, there is limited evidence of a correlation between education and inequality within this sample. This finding aligns with [2]'s assertion that the impact of education on inequality is mediated by institutional frameworks and labour market dynamics, which determine the conversion of educational achievement into economic results. Furthermore, research from [3] emphasises that the interplay of growth, inequality, and poverty is highly contextual and nonlinear, indicating that growth alone is inadequate to mitigate inequality without associated with redistributive policies and inclusive institutions. Nevertheless, the findings from this study should be considered as preliminary due to the limited sample size, which may influence statistical significance. The results align with the objectives of Sustainable Development Goal 4 (Quality Education) and Goal 10 (Reduced Inequalities), which prioritise inclusive and equitable education as well as the reduction of income and opportunity disparities [1, 35].Proactive initiatives, including financial assistance for impoverished children and the development of inclusive educational frameworks, are essential to address ongoing inequalities. The persistence of significant inequality in many rapidly growing economies underscores the necessity for integrative policies that address both economic and social dimensions. Given the limitations of this research, additional studies utilising bigger and more representative samples are essential to draw more robust conclusions on the relationship between globalisation, education, and inequality. A coordinated effort involving educational reform, prudent macroeconomic governance, and equitable globalisation strategies is essential to mitigate inequality and attain equitable, sustainable growth, as outlined in the 2030 Agenda for Sustainable Development. Moreover, policymakers must account for the mental health challenges faced by students in inequitable educational systems, as ongoing stress and insufficient psychosocial assistance can detrimentally affect learning results and the development of long-term human capital.

8. Future Recommendation

Future research should aim to expand the analytical scope by including a more diverse and representative cohort of countries, especially from under-represented regions like Sub-Saharan Africa and the Middle East, to enhance the external validity and cross-regional applicability of findings. Longitudinal study approaches are essential for documenting the dynamic and cumulative impacts of globalisation and educational policy reforms on income inequality and human capital development across time. The implementation of multilevel modelling techniques that incorporate family, school, and community data would provide a more detailed analysis of intra-national differences typically obscured by aggregated national statistics. Considering the increasing impact of digital technologies and Artificial Intelligence (AI) on educational systems and labour markets, future research should evaluate the equity ramifications of digital access, AI-augmented learning environments, and the technological preparedness of educational institutions. Moreover, strengthened academic focus should be allocated to the nexus of education and mental health, specifically regarding how psychosocial stressors and emotional well-being influence academic performance and long-term developmental results in socioeconomically disadvantaged groups [16]. Comparative policy evaluations examining interventions like conditional cash transfer programs, rural education incentives, and digital inclusion initiatives across varied economic and cultural contexts may provide significant insights into the efficacy and adaptability of targeted reforms. Future research should adopt an interdisciplinary research framework and intentionally align with global development agendas, especially the Sustainable Development Goals (SDGs), to guarantee that academic outputs are both theoretically robust and practically relevant to the intricate issues of global educational and economic inequality.

References:

1. Afzal, A., Khan, S., Daud, S., Ahmad, Z., & Butt, A. (2023). Addressing the digital divide: Access and use of technology in education. Journal of Social Sciences Review, 3(2), 883-895.
2. Breen, R., & Chung, I. (2015). Income inequality and education. Sociological Science, 2, 454-477.
3. Cerra, V., Lama, R., & Loayza, N. V. (2021). Links between growth, inequality, and poverty. International Monetary Fund, 68, 1-54.
4. Copeland, B. R., Shapiro, J. S., & Taylor, M. S. (2021). Globalization and the environment (NBER Working Paper No. 28797). National Bureau of Economic Research.
5. Education Policy and Data Center. (2012). Where are the out of school children? Retrieved from https://www.epdc.org/node/1339.html
6. European Commission, Directorate-General for Education, Youth, Sport and Culture. (2024). Education and training monitor 2024: Country report – Poland (Catalogue No. NC-AN-24-021-EN-Q; ISBN 978-92-68-19220-7; ISSN 2466-9997; DOI 10.2766/593052). Publications Office of the European Union. Retrieved from https://op.europa.eu/webpub/eac/education-and-training-monitor/en/country-reports/poland.html
7. Goczek, Ł., Witkowska, E., & Witkowski, B. (2021). How does education quality affect economic growth? Sustainability, 13(11), 6437.
8. Gogoi, A. (2023). The impact of globalization on labour market especially focusing on wage inequality and job displacement: A theoretical analysis. Theoretical and Applied Economics, 30(3(636)), 333–342.
9. Hanushek, E. A., & Woessmann, L. (2020). Education, knowledge capital, and economic growth. The Economics of Education, 171-182.
10. Itō, K. (2021, August). The impact of economic globalisation on firm performance and the labour market: Evidence from Japan. In S. Urata & H. T. T. Doan (Eds.), Globalisation and its Economic Consequences: Looking at APEC Economies (pp. 103–128). Routledge.
11. Gimba, O. J., Seraj, M., & Ozdeser, H. (2021). What drives income inequality in sub-Saharan Africa and its sub-regions? An examination of long-run and short-run effects. African Development Review, 33(4), 729–741.
12. Khusaini, K., Remi, S. S., Fahmi, M., & Purnagunawan, R. M. (2020). Measuring the inequality in education: Educational Kuznets Curve. Jurnal Ekonomi Malaysia, 54(3), 59–76.
13. Kormos, E., & Wisdom, K. (2021). Rural schools and the digital divide: Technology in the learning experience. Theory & Practice in Rural Education, 11(1), 25–39.
14. Leone, J., & Cascio, J. L. (2020). Income gaps: Education and inequality. Economics and Business Review, 6(4), 27–50.
15. Levinson, M. (2020). Outside the box: How globalization changed from moving stuff to spreading ideas. Princeton University Press.
16. Lin, D., & Liu, Z. (2024). How does educational inequality affect residents' subjective well-being?—Evidence from China. Frontiers in Psychology, 15, 1432789.
17. Luptáčik, M., Nežinský, E. (2019). Measuring income inequalities beyond the Gini coefficient. Central European Journal of Operations Research, 28, 561–578.
18. Mezzanotte, C. (2022). The social and economic rationale of inclusive education: An overview of the outcomes in education for diverse groups of students. UNESCO

International Bureau of Education. Retrieved from https://unesdoc.unesco.org/ark:/48223/pf0000381949.
19. Ministry of EducationBangladesh, Directorate of Secondary and Higher Education. (2013). Secondary Education Sector Investment Program (SESIP, 2013–2023). Dhaka: Ministry of Education.
20. Ministry of EducationBangladesh. (2022). Mid-term education plan for vocational and digital education (FY 2021–22 to 2023–24). Dhaka: Ministry of Education.
21. Ministry of Education Brazil. (2024). National policy to expand Federal Institutes and technical secondary education by 2026. Brasília: Ministry of Education Brazil.
22. Ministry of Education India. (2020). National Education Policy 2020 (English). New Delhi: Ministry of EducationIndia.
23. Ministry of Education India (2025). Rashtriya Madhyamik Shiksha Abhiyan (RMSA). Retrieved from https://www.education.gov.in/en/rmsaNew Delhi: Ministry of Education India.
24. Ministry of Education Malaysia. (2013). Malaysia Education Blueprint 2013–2025: Preschool to post-secondary education. Kuala Lumpur: Ministry of Education Malaysia.
25. Ministry of National Development Planning. (2022). Presidential Regulation No. 68/2022 on the National Strategy for Vocational Education and Training Reform. Jakarta: Government of Indonesia.
26. Munir, K., & Kanwal, A. (2020). Impact of educational and gender inequality on income and income inequality in South Asian countries. International Journal of Social Economics, 47(8), 1043–1062.
27. Olssen, M. (2004). Neoliberalism, globalisation, democracy: Challenges for education. Globalisation, Societies and Education, 2(2), 231–275.
28. Organisation for Economic Co-operation and Development (OECD). (2021). Engaging employers in vocational education and training in Brazil. Paris: OECD Publishing.
29. Petersen, L. (2024). Globalization and income inequality: Assessing economic disparities in the 21st century. Journal of Economics and Economic Education Research, 25(6), 1–3.
30. Piao, X., & Managi, S. (2023). The international role of education in sustainable lifestyles and economic development. Scientific Reports, 13(1), Article 8733.
31. Psacharopoulos, G., & Patrinos, H. A. (2018). Returns to investment in education: A decennial review of the global literature. Education Economics, 26(5), 445–458.
32. República Federativa do Brasil. (2017). Federal Law No. 13,415 of 2017 on Secondary Education Reform. Brasília: Presidency of the Republic.
33. Rocha, O., Kamphambale, D., macmahon, C., Coetzer, J.-H., & Morales, L. (2023). The power of education in a globalised world: Challenging geoeconomic inequalities. Peace Review, 35(4), 708–723.
34. Rojas, D. C. G., Yonzan, N., & Lakner, C. (2025). Global inequality and economic growth: The three decades before Covid-19 and three decades after (World Bank Policy Research Working Paper No. 11093). World Bank. Retrieved from https://hdl.handle.net/10986/43004.
35. Shaeffer, S. (2019). Inclusive education: A prerequisite for equity and social justice. Asia Pacific Education Review, 20(2), 181–192.
36. Sultani, G., & Usmonjon, H. (2024). Stages of integration of the educational system in the development of globalization. Education and economy. Masters, 2(9), 74-79.

37. United Nations Children's Fund (UNICEF) Georgia. (2023). Partnership initiative highlights support provided for strengthening inclusive education in Georgia. Retrieved from https://www.unicef.org/georgia/press-releases/partnership-initiative-highlights-support-provided-strengthening-inclusive-education
38. United Nations Children's Fund (UNICEF) Thailand. (2019). Education knows no border: A collection of good practices and lessons learned on migrant education in Thailand. UNICEF Thailand. Retrieved from https://www.unicef.org/thailand/reports/education-knows-no-border
39. United Nations Educational, Scientific and Cultural Organization.(UNESCO) (2024, October 31). 251 M children and youth still out of school, despite decades of progress (UNESCO report). UNESCO. Retrieved from https://www.unesco.org/en/articles/251m-children-and-youth-still-out-school-despite-decades-progress-unesco-report
40. Van De Werfhorst, H. G., Kessenich, E., & Geven, S. (2022). The digital divide in online education: Inequality in digital readiness of students and schools. Computers and Education Open, 3, 100100.
41. Weaver, P., Cothran, D., Dickinson, S., & Frey, G. (2018). Physical therapists' perspectives on importance of the early intervention competencies to physical therapy practice. Infants & Young Children, 31(4), 261–274.
42. Wolff, R. V., Struck, O., & Osiander, C. (2025). Skilled labour immigration: A vignette analysis on the willingness to accept migrants from outside the EU. Journal for Labour Market Research, 59, Article 14.
43. World Bank. (2022). Transformative World Bank investment in human capital to help Georgia toward greater economic prosperity. Retrieved fromhttps://www.worldbank.org/en/news/press-release/2022/03/22/transformative-world-bank-investment-in-human-capital-to-help-georgia-toward-greater-economic-prosperity.
44. World Bank. (2023). World Bank country and lending groups: Country classification by income. Retrieved fromhttps://assets.website-files.com/613f568daaa1552c8518f71c/655202fe15d19a1d54a1f5b7_World%20Bank%20classification%20by%20income.pdf
45. World Bank & UNESCO. (2023). Education Finance Watch 2023. World Bank & UNESCO. Retrieved from https://thedocs.worldbank.org/en/doc/83e58d3341493b223668bb9d6cb7e9c2-0140022023/related/EFW-2023-Report-oct9v2.pdf
46. World Bank. (n.d.). Education overview. World Bank. Retrieved from https://www.worldbank.org/en/topic/education/overview
47. Zafar, I. (2024). Educational inequality and social mobility: Perspectives from social science research. Physical Education, Health and Social Sciences, 2(2), 30–39.
48. Žalėnienė, I., & Pereira, P. (2021). Higher education for sustainability: A global perspective. Geography and Sustainability, 2(2), 99–106.
49. Zalli, E. (2024). Globalization and education: Exploring the exchange of ideas, values, and traditions in promoting cultural understanding and global citizenship. Interdisciplinary Journal of Research and Development, 11(1S1), 55.