



Article Impact of Financial Development and Remittances on Educational Attainment within the Context of Sustainable **Development: A Panel Evidence from Emerging Markets**

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Abstract: Education is one of the Sustainable Development Goals (SDGs) of the United Nations and is also a vital factor for nearly all the other SDGs. Therefore, factors underlying educational attainment are crucial for achieving the SDGs by 2030. In this context, the financial system has become critical in building various schools and covering educational expenditures such as teachers' salaries, teaching materials, and training. This paper uses static and dynamic regression methods to study the impact of financial sector development, remittances, real GDP per capita, information and communications technologies (ICT) development, and globalization on educational attainment in 18 emerging economies over the 2000–2020 period. The results indicate that financial development, remittances, real GDP per capita, ICT development, and globalization positively impact educational attainment. Real GDP per capita, ICT development, globalization, and financial development have the highest impact of these factors. In contrast, remittances have a limited positive influence on educational attainment compared with other variables.

Keywords: financial development; remittances; real GDP per capita; educational attainment; sustainable development; regression analysis

1. Introduction

Education is one of the key factors in achieving the social and economic goals of individuals and societies. Furthermore, education is vital to human capital, innovation, productivity, technological progress, and entrepreneurial activity-critical elements of economic growth theories [1-5]. Therefore, quality education was specified as one of the 17 Sustainable Development Goals (SDGs) by the United Nations (UN) [6]. The 17 SDGs accepted by all UN members in 2015 suggest a course of action to achieve the peace and prosperity and include on a global scale [6]. The quality education (SDG 4) also plays a substantial role in achieving progress toward the other SDGs, such as no poverty (SDG 1), zero hunger (SDG 2), good health and well-being (SDG 3), gender equality (SDG 5), decent work and economic growth (SDG 8), industry, innovation, and infrastructure (SDG 9), reduced inequality (SDG 10), and responsible consumption and production (SDG 12) (see Ali et al. [7]).

The favorable social and economic outcomes of education at the macro and micro levels have made it a priority for all nations. For this reason, demographic, social, institutional, and economic determinants and effects of education have been commonly researched until now. However, scholars have mainly focused on education's economic and



Citation: Sezgin, F.H.; Tekin Turhan, G.; Sart, G.; Danilina, M. Impact of Financial Development and Remittances on Educational Attainment within the Context of Sustainable Development: A Panel Evidence from Emerging Markets. Sustainability 2023, 15, 12322. https://doi.org/10.3390/ su151612322

Academic Editor: Cristina Raluca Gh. Popescu

Received: 7 July 2023 Revised: 8 August 2023 Accepted: 11 August 2023 Published: 13 August 2023



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social impacts [8–11]. Therefore, this study explores the impact of financial development, remittances, and control variables, including real GDP per capita, Information and Communications Technologies (ICT) development, and globalization, on educational attainment as theoretically summarized in Chart 1.



Chart 1. Interaction among financial development, remittances, real GDP per capita, ICT development, globalization, and educational attainment. Source: Authors' research based on the literature.

This article's primary aim is to explore the impact of financial development and remittances on educational attainment. Financial sector development indicates the improvement in access, depth, and efficiency of the financial system and the financial sector has developed remarkably well with economic globalization. Theoretically, a mutually causal relationship between financial development and educational attainment is possible. In this context, financial development can influence educational attainment via different positive and negative channels. First, a financial system with higher access, depth, and efficiency is expected to improve education through financing public, private, and individual educational investments and income and economic growth [12–14]. Yet, some researchers suggest a negative relationship between financial sector development and educational attainment resulting from financial market imperfections, such as asymmetric information problems and transaction costs [15–17]. At the same time, education can also make individuals more informed participants in financial markets and technology and, in turn, affect economic development and stability [18,19].

Remittances consisting of personal transfers and compensation of foreign employees have also grown substantially with globalization and the liberalization process, starting in the 1980s. A mutually causal interplay between remittances and educational attainment is theoretically possible. Remittances can positively influence educational attainment to foster educational investments by households and countries [20]. However, some researchers suggest remittances can negatively impact education because children must be a part of the labor force to compensate for their absent parents [21–23]. Nonetheless, higher educational attainment can increase the probability of working in a foreign country and positively affect remittances.

A mutual relationship between economic growth and educational attainment is theoretically possible. In contrast, education is a significant determinant of human capital, innovation, entrepreneurship, productivity, and technological progress, which can influence economic growth [1–5]. Additionally, increased income through economic growth can augment educational investments by governments, firms, and households, leading to an environment encouraging education, which may positively influence educational attainment [24].

Education and ICT development are two variables that influence each other. In this context, ICT development, including fixed line and mobile phone usage, internet accessibility, and server security, can be instrumental in increasing educational efficiency and easing access to education and educational materials [25,26]. However, higher educational attainment can likewise affect ICT development through human capital and ICT awareness. Last, globalization, which refers to the considerable increases in countries' economic, cultural, social, and political dependencies [27], can also be expected to positively influence educational attainment if appropriately used. Globalization can influence education by increasing knowledge sharing, mobility of students and teachers worldwide, access to the newest teaching methods and programs, and technology diffusion due to growing openness among the countries [28,29].

This article studies the effects of financial sector development, remittances, and control variables, including real GDP per capita, ICT development, and globalization, on educational attainment in 18 emerging market economies introduced in the Data and Methods section. All emerging economies have experienced growth in education, financial development, remittances, real GDP per capita, ICT development, and globalization during the study period (see UNDP [30], IMF [31], World Bank [32,33], UNCTAD [34], KOF Swiss Economic Institute [35]). Turkey, Thailand, India, China, and Indonesia achieved greater success, as indicated in the education index, between 2000 and 2020. However, significant increases in financial sector development, real GDP per capita, ICT development, and globalization accompanied improved educational attainment. In this context, the influence of financial sector development, remittances, and control variables on educational attainment is investigated in this study.

In the literature, the economic and social impacts of education have been studied by numerous scholars, but the influence of financial sector development, remittances, real GDP per capita, ICT development, and globalization on educational attainment have been studied by relatively few scholars as seen in the literature research section. Furthermore, a limited number of studies have investigated the influence of real GDP per capita, ICT development, and globalization on education. Therefore, the first contribution of this article is to include the variables of real GDP per capita, ICT development, and globalization in the analyses. The second empirical contribution of the study is to employ more inclusive indicators of education and financial development, unlike the related empirical literature. The third contribution of the article is its sample because this study will be one of the first studies investigating the interaction among financial sector development, remittances, and education in a sample of emerging economies whose shares in the global economy are increasing day by day.

The structure of the article is as follows: Section 2 presents the literature concerning the interplay between financial sector development, remittances, real GDP per capita, and educational attainment; the variables and methods are introduced in Section 3; pre-tests, regression analysis, and evaluation of the findings are outlined in Section 4; and the research ends with the Conclusion.

2. Literature Review

Education is one of the key factors in sustainable economic growth, development, and achievement of multiple SDGs. Therefore, individual, social, institutional, and economic factors underlying education have been empirically analyzed in various countries and country groups with different social and economic characteristics. In this research, the impact of financial sector development, remittances, and control variables, including real GDP per capita, ICT development, and globalization on educational attainment, has been explored; the study considers the inconclusive and limited empirical literature about the interaction between education, financial development, and remittances.

2.1. Financial Development and Educational Attainment

Financial development is multifaceted, including financial system access, depth, and efficiency. However, the studies analyzing the relationship between education and financial development have generally represented financial development by indicators of financial depth, such as domestic private credit to the real sector and total banking assets as percentages of GDP [36–40]. In this study, financial development is proxied by the financial development index of the International Monetary Fund (IMF) [31] based on the financial system's access, depth, and efficiency. Additionally, these studies have proxied educational attainment by various education indicators such as primary, secondary, and tertiary enrollment rates, schooling years, pupil/teacher ratio, and human development.

The empirical studies about the nexus between finance and education have generally produced contrasting results. On the one hand, earlier studies such as Hakeem and Oluitan [36], Nik et al. [37], and Arora [41] discovered a negative impact of financial development on various education indicators. On the other hand, the recent empirical studies, including Sehrawat and Giri [13], Musah and Aawaar [14], Abubakar et al. [38], Kilic and Ozcan [39], Shafiei et al. [40], and Gohari et al. [42], uncovered a positive influence of financial development on various education indicators.

Hakeem and Oluitan [36] investigated the interaction between human capital represented by primary, secondary, and tertiary school enrollment rates and indicators of financial sector development in South Africa from 1965 to 2005 by causality and cointegration tests; their findings showed a weak correlation between indicators of human capital and financial sector development. Nik et al. [37] also examined the effect of financial sector development on human capital proxied by tertiary school enrollment in Iran between 1977 and 2010 through VAR analysis. They discovered the financial sector development's negative effect on human development. Arora [41] explored the interplay between human capital proxied by pupil/teacher ratio and expected schooling years and indicators of financial sector development in developing Asian economies; the study concluded that financial development negatively affected the pupil/teacher ratio, but access to banks positively influenced the expected schooling years.

Moreover, Sehrawat and Giri [13] researched the interaction between financial development indicators, human capital proxied by primary school enrollment, and economic growth in selected Asian countries for the 1984–2013 period via the causality test and Pedroni and Kao cointegration test. The consequences of the causality test uncovered a one-way causal relationship between indicators of financial sector development and economic growth to human capital. The cointegration test results revealed a positive influence of economic growth and financial sector development on human capital.

Musah and Aawaar [14] investigated the effects of financial sector development indicators on educational quality represented by pupil–teacher ratio in 42 Sub-Saharan African states between 1990 and 2019 through the two-step system Generalized Method of Moment (GMM) model. They highlighted that indicators of financial sector development positively affected the quality at all education levels. Thierry and Emmanuel [15] also conducted similar research for the same sample through the two-step system GMM model. They discovered that indicators of financial sector development positively influenced school enrollment at all education levels.

Abubakar et al. [38] studied the role of human capital on the finance–economic growth nexus in ECOWAS (Economic Community of West African States) states from 1980–2011 through a cointegration test. They discovered a positive influence of financial development on human capital accumulation. Kilic and Ozcan [39] investigated the impact of financial sector development on tertiary school enrollment rate and government educational expenditures in 16 emerging economies from 1990–2015; they uncovered a positive effect of financial sector development on both variables. Shafiei et al. [40] studied the effects of financial development on primary education enrollment of males and females in 24 developing economies over the 2016–2020 period via GMM. They demonstrated a positive impact of financial development on the primary education enrollment of males and females.

Gohari et al. [42] studied the influence of financial sector development on human capital in Iran for the 1973–2010 period using the ARDL (Autoregressive Distributed Lag Model) method. The study concluded that financial sector development positively influenced human capital in the short and long run. Sehrawat and Giri [43] explored the interplay between indicators of financial sector development and the human development index in Iran between 1980 and 2012 through the ARDL approach and causality test. They established a unilateral causal relationship from financial to human development.

Based on the literature research, the first hypothesis of the study follows:

Hypothesis 1. *There exists a relationship between financial sector development and educational attainment.*

2.2. Remittances and Educational Attainment

Remittances consist of personal transfers and incomes of individuals working abroad. and can affect educational attainment through diverse channels, but the net effect of remittances on education is unclear in theoretical terms [20–23]. Nevertheless, most scholars studying the interplay between remittances and education have established the positive influence of remittances on education [44–51]. However, Bucheli et al. [20], Hapsari [52], and Kumar [53] demonstrated that remittances had a negative influence on education.

Mansour et al. [44] studied the relationship between human capital and remittances in Jordan and discovered that remittances positively affected human capital. On the other hand, Zhunio et al. [45] also examined the influence of remittances on education in 69 middle and low-income countries. They observed a positive effect of remittances on educational attainment.

Amakom and Iheoma [46] analyzed the effect of remittances on educational outcomes proxied by school enrollment in 18 Sub-Saharan African countries via the regression approach; their study illustrated that remittances positively affected education. Arif et al. [47] investigated the effect of remittances on higher education in eight top remittances-receiving countries between 1994 and 2013 through the ARDL approach. They discovered that remittances positively affected higher education.

Askarov and Doucouliagos [48] studied the influence of remittances on education expenditures in individual households through a meta-analysis of 73 studies from 30 countries; the study unveiled that international remittances positively influenced education expenditures. Similarly, Nájera and Mendoza [49] researched the impact of remittances on education investments in Caltimacán, Hidalgo, and Mexico from 2010 to 2016. They concluded that educational expenditures were relatively higher in the households receiving remittances.

Mawuena and Okey [50] studied the effects of remittances on the education of the recipient households in Togo via the logit model. They discovered that remittances positively influenced the education level of the recipients. Shafiq et al. [51] studied the effects of remittances on education in 90 developing economies from 1991–2020 using a GMM method; the study discovered a corresponding increase in education levels in developing countries with increasing remittances.

Bucheli et al. [20] analyzed the effects of remittances on secondary school enrollment in Ecuador through a bivariate probit model and revealed varied findings about the impact of remittances on schooling. The strongest positive impact existed for the poorer urban males; conversely, an increase in remittances negatively impacted schooling for rural females. The impact of remittances on schooling for children of wealthier households was negative or insignificant.

Hapsari [52] also explored the influence of remittances on the education outcomes of migrant household children in Indonesia with 2014 data through probit estimation. The study discovered a negative impact of remittances on the probability of migrant households' children attending higher education. Last, Kumar [53] studied the influence of remittances on education in Bangladesh with the data of 396 households via regression, showing evidence of a negative influence on education.

Based on the literature research, the second hypothesis of the research study follows:

Hypothesis 2. There exists a relationship between remittances and educational attainment.

2.3. Real GDP per Capita, ICT Development, Globalization and Educational Attainment

The interaction between education and economic growth for different countries and country groups has been analyzed extensively, but scholars have primarily focused on the growth impact of various education indicators [54–57]. However, some scholars have studied the interplay between economic growth and educational attainment and obtained different results. For example, Mekdad et al. [58], Erdem and Tuğcu [59], and Beşkaya et al. [60] established a bilateral causal relationship between educational attainment and economic growth. However, Budsayaplakorn and Sompornserm [61], Triyani [62], and Cvetanoska and Trpeski [63] showed evidence of a unilateral causality from educational attainment to economic growth.

Based on the literature research, the third hypothesis of the study follows:

Hypothesis 3. There exists a relationship between real GDP per capita and educational attainment.

ICT development can positively influence educational attainment through various channels, but only a few researchers have analyzed the interplay between ICT development and educational attainment. In this context, Nisar et al. [64], Aristovnik [65], Fernandez-Gutierrez et al. [66], and Sart et al. [67] discovered that educational attainment, education efficiency, and outcomes increased with ICT development.

Based on the literature research, the fourth hypothesis of the article follows:

Hypothesis 4. There exists a relationship between ICT development and educational attainment.

Globalization influences education via diverse channels. Consequently, a few researchers have studied globalization's impact on education. Sart et al. [67], Kalsoom et al. [68], Liu [69], and Anka [70] discovered a positive influence of the globalization process on various education indicators.

Based on the literature research, the fifth hypothesis of the study follows:

Hypothesis 5. There is a relationship between globalization and educational attainment.

3. Data and Methods

This research studies the impact of financial sector development, remittances, and control variables, including GDP per capita, ICT development, and globalization, on education in 18 emerging markets. Education (EDU) is represented by the annual education index measured by UNDP [30]; the index is calculated as a combination of mean and expected schooling years, and its value lies between 0 and 1 (higher values denote higher education levels). However, most empirical studies have represented education by primary, secondary, and tertiary enrollment rates, schooling years, pupil/teacher ratio, and human development [36–40]. Therefore, the education index is relatively more inclusive considering these proxies.

The overall financial sector development (FD) is represented by the multidimensional financial development index measured by the IMF [31]. The financial development index is multidimensional, unlike the other indicators of financial sector development in the related literature: it is calculated considering the access, depth, and efficiency of the financial

system (see Svirydzenka [71] for the methodology of the financial development index). The financial development index value is between 0 and 1 (higher values denote higher financial development levels). However, other financial development indicators such as the rate of private credit to GDP, liquid liabilities to GDP, M2 money supply indicator, and stock market capitalization used in the empirical literature indicate only the depth of the financial system [37,72–74]. Therefore, recent studies have begun to employ the IMF's financial development index or multidimensional indices formed by themselves, which simultaneously figure the access, depth, and efficiency of the financial system [14,75–77].

The remittances (REMIT) and real GDP per capita (PGDP) are represented by personal remittances as a percentage of GDP and GDP per capita (constant 2015 US\$), respectively; these series are attained from World Bank [32,33]. ICT development is proxied by the ICT score of the United Nations Conference on Trade and Development (UNCTAD) [34], which is calculated based on internet accessibility, mobile phones, fixed-line users, and server security, assigning values between 0 and 100 (higher values denote higher ICT development levels). Last, globalization (GLOB) is represented by the globalization index of KOF Swiss Economic Institute [35]. The globalization index is calculated considering economic, social, and political globalization, assigning values between 0 and 100 (higher values between 0 and 100 is represented by the globalization index is calculated considering economic, social, and political globalization, assigning values between 0 and 100 (higher values represent higher globalization levels) (see Savina et al. [78] for methodological issues about the index).

The study sample consists of 18 emerging markets (Brazil, China, Colombia, Czechia, Egypt, Greece, Hungary, India, Indonesia, Republic of Korea, Malaysia, Mexico, Peru, Philippines, Poland, South Africa, Thailand, and Turkey) based on the Morgan Stanley Capital International (MSCI) [79] classification. The study period is specified as 2000–2020 because the ICT index is available as of 2000, and the globalization index and financial development indicators are available until 2020. The Stata 17.0 program has been employed for econometric analyses.

The impact of financial sector development, remittances, real GDP per capita, ICT development, and globalization on educational attainment has been investigated using regression analysis. The dependent variable is the education index (EDU), and the explanatory variables are the financial development index (FD), personal remittances as a percent of GDP (REMIT), real GDP per capita based on 2015 USD (PGDP), ICT index (ICT), and globalization index (GLOB). The following model has been formed to analyze the influence of financial development, remittances, and control variables on educational attainment:

$$EDU_{it} = \alpha_i + \beta_1 FD_{it} + \beta_2 REMIT_{it} + \beta_3 PGDP_{it} + \beta_4 ICT + \beta_5 GLOB_{it} + \varepsilon_{it}$$
(1)

To estimate the model, fixed-effect estimation is employed, considering the findings of the Hausman test. Furthermore, the general least squares (GLS) estimation method has been used to address the problems of autocorrelation within countries and variance among countries [29]. Last, the system GMM method is applied to deal with possible endogeneity problems for robustness [29].

4. Results

The descriptive characteristics of EDU, FD, REMIT, PGDP, ICT, and GLOB are introduced in Table 1. The average values of the education and financial development indexes are 0.651 and 0.442, respectively. Neither series exhibits variation in the sample. The mean values of remittances and real GDP per capita are 1.798% of GDP and USD 8039.593, respectively. The series of real GDP per capita exhibits a considerable variation during the study period, but remittances indicate moderate variation during the same period. Furthermore, the average values of the ICT index and globalization index are 41.755 and 68.606, respectively, but both the ICT index and globalization index denote remarkable variation during the study period.

Descriptive Characteristics	EDU	FD	REMIT	PGDP	ICT	GLOB
Mean	0.651	0.442	1.798	8039.593	41.755	68.606
Median	0.640	0.418	0.994	6336.950	42.158	67.000
Maximum	0.937	0.849	12.784	31,640.21	78.258	85.000
Minimum	0.332	0.139	0.033	586.175	9.339	46.000
Std. Dev.	0.127	0.145	2.403	6126.869	16.075	8.655
Skewness	0.008	0.721	2.547	1.427	-0.022	0.223
Kurtosis	2.452	3.151	9.433	4.971	2.152	2.278

Table 1. Main characteristics of the series.

All variables are defined in the Data and Methods section.

The correlation matrix among variables is introduced in Table 2. This table shows that the correlation coefficients between EDU and all explanatory variables are positive and significant. The highest correlation coefficient is 0.461 between the PGDP and FD. Furthermore, the relatively low correlation levels between the explanatory variables of the study denote the absence of a multicollinearity problem.

Table 2. Correlation matrix among the variables.

	EDU	FD	PGDP	REMIT	ICT	GLOB	VIF
EDU	1						
FD	0.109 **	1					2.89
PGDP	0.298 **	0.461 **	1				3.11
REMIT	0.075 **	0.355 **	0.174 **	1			2.07
ICT	0.216 **	0.426 **	0.458 **	0.143 **	1		1.98
GLOB	0.237 **	0.327 **	0.382 **	0.213 **	0.411 **	1	1.76
44 1 101	. =0/ 1 1						

** significant at 5% level.

The impact of financial development, remittances, real GDP per capita, ICT development, and globalization on educational attainment is investigated by fixed effect estimation (FEM) and generalized least square (GLS) estimators; the estimation findings are outlined in Table 3. The coefficients by both estimators indicate that financial development, remittances, real GDP per capita, ICT development, and globalization positively influence educational attainment. However, the sizes of the coefficients reveal that real GDP per capita produces the most significant impact on educational attainment, followed by ICT development, globalization, and financial development. The impact of remittances on educational attainment is relatively weak compared to the other variables.

The system GMM estimation has also been applied in the study to address possible endogeneity problems and ensure robustness. The estimation findings are recorded in Table 4. The coefficients estimated by the system GMM also establish that financial development, remittances, real GDP per capita, ICT development, and globalization positively impact educational attainment. The instrument variables of ICT development and globalization positively influence educational attainment. Therefore, both variables should be included in the model, and it is appropriate to have them as instrument variables in the robustness test result.

X7 1. 1	FEM	GLS	
Variables	Coeff (Std. Error)	Coeff (Std. Error)	
FD	0.1286 (0.023) ***	0.1305 (0.030) ***	
REMIT	0.0336(0.007) **	0.0455 (0.011) **	
PGDP	0.2571(0.039) ***	0.2674 (0.044) ***	
ICT	0.2105 (0.065) ***	0.2281 (0.054) **	
GLOB	0.1893 (0.065) ***	0.1932 (0.062) **	
Cons	1.4835 (0.231) ***	3.9562 (0.741) ***	
R-square	0.672		
Wald test (<i>p</i> -value)		0.000	

Table 3. Results of fixed effect estimation and generalized least square.

*** and ** denote that the values are significant at 1% and 5%, respectively.

 Table 4. Robustness test-system GMM estimation results.

Variables	Model 1	Model 2	Model 3	
variables	Coeff (Std. Error)	Coeff (Std. Error)	Coeff (Std. Error)	
FD	0.1258 (0.031) **	0.1427 (0.029) ***	0.1384 (0.034) ***	
PGDP	0.2513 (0.055) **	0.2673 (0.050) **	0.2712 (0.042) ***	
REMIT	0.0299 (0.010) **	0.0367 (0.011) **	0.0483 (0.011) **	
ICT	-	0.2371 (0.059) ***	0.2561 (0.056) **	
GLOB	-	-	0.1877 (0.032) **	
Cons	4.762 (0.871) ***	3.994 (0.528) ***	1.583 (0.189) ***	
Arellano-Bond Autocorrelation Test/AR(2) (<i>p</i> -value)	0.189	0.213	0.278	
Hansen J (p-value)	0.125	0.316	0.449	

*** and ** denote that it is significant at 1% and 5%, respectively.

The GMM estimator is based on the assumptions of the absence of second-order autocorrelation and the validity of instrumental variables. These assumptions are tested through the Arellano-Bond autocorrelation test/AR(2) and the Hansen J test, which are, therefore, performed to ensure the appropriation of the system GMM approach. The *p*-values of both tests for the three models are found to be higher than 10%, so the model's validity is not rejected. As a consequence, the models are revealed to be consistent.

5. Discussion

This research investigates the influence of financial development, remittances, real GDP per capita, ICT development, and globalization on educational attainment via static and dynamic regression approaches. The estimated coefficients by three estimators (FEM, GLS, and system GMM) establish that financial development, remittances, real GDP per capita, ICT development, and globalization positively impact educational attainment. Consequently, our results are consistent with theoretical and empirical expectations and support the five hypotheses of the study.

Financial sector development has the potential to positively influence educational attainment via financing educational investments, income, and economic growth; nevertheless, the adverse effects of financial development on educational attainment seem possible owing to imperfections of financial markets [12–17]. Empirical studies investigating the relationship between financial development and educational attainment have obtained different results in line with the theoretical considerations [13,14,36–42]. However, most

empirical studies have established that financial sector development positively affects educational attainment [13,14,38–40,42]. In this context, a well-regulated financial system with moderate access, depth, and efficiency is a critical factor in the correlation between financial development and educational attainment. Therefore, a positive influence of financial sector development on educational attainment in samples of emerging market economies is in line with the related theoretical considerations and results of Sehrawat and Giri [13], Musah and Aawaar [14], Abubakar et al. [38], Kilic and Ozcan [39], Shafiei et al. [40], and Gohari et al. [42].

Additionally, remittances are also anticipated to enhance educational attainment because they lead to income growth of individuals and countries [20]. Nevertheless, remittances can also result in a negative impact on education because children are forced to be a part of the labor force to compensate for their absent parents [21–23]. However, most scholars have uncovered a positive influence of remittances on education [44–51], although the correlation between remittances and education is unclear. A weak positive effect of remittances on educational attainment discovered by this study is compatible with the related empirical literature. The authors propose that this minor positive influence of remittances on educational attainment might have resulted from relatively lower remittance inflows.

Real GDP per capita can also foster educational attainment by financing individual and national education investments through income growth. However, few researchers have analyzed the influence of real GDP per capita on educational attainment, though they have evidenced a significant influence of economic growth on educational attainment (see Budsayaplakorn and Sompornserm [61], Triyani [62], and Cvetanoska and Trpeski [63]). The strong positive influence of real GDP per capita on educational attainment reflected in this study's results is consistent with theoretical expectations and the results of these empirical studies.

ICT development can also positively influence educational attainment through multiple channels [25,26]. Therefore, a strong positive effect of ICT development on education is theoretically expected. Still, only a few researchers, including Nisar et al. [64], Aristovnik [65], Fernandez-Gutierrez et al. [66], and Sart et al. [67] have analyzed the interplay between ICT development and educational attainment. They have discovered that ICT development positively influences educational attainment, education efficiency, and outcomes. Hence, the strong positive influence of ICT development on educational attainment established in this study is accordant with theoretical expectations and the related empirical results.

Globalization can also influence education via diverse channels [28,29]. However, a few researchers, including Sart et al. [67], Kalsoom et al. [68], Liu [69], and Anka [70], have analyzed the influence of globalization on educational attainment. They have discovered that the globalization process positively influences various education indicators. This study establishes globalization's strong positive impact on educational attainment, a finding which aligns with the related literature.

6. Conclusions

Education is a critical factor for sustainable economic growth and development, influencing both through multiple channels. Therefore, education was specified as one of the 17 SDGs since it has the potential to impact nearly all the other SDGs. Identifying the parameters to improve education is essential to accomplish the SDGs and other social and economic objectives in this context.

Researchers have mainly focused, however, on the social and economic implications of various education indicators, although the determinants of education have not yet been sufficiently researched. Therefore, the impact of financial development, remittances, real GDP per capita, ICT development, and globalization on educational attainment in a sample of emerging market economies, which are the drivers of the global economy during recent years, has been investigated through regression analysis. The related data subsistence confines us to analyze the data for 18 emerging market economies for 2000–2020.

Unlike the related empirical literature, this study uses relatively more inclusive variables of education, financial, and ICT development indexes in the econometric analyses. Furthermore, using static and dynamic regression estimators has increased the robustness of the findings. Last, very few empirical studies have simultaneously investigated the impact of financial development, remittances, ICT development, and globalization on educational attainment. Therefore, this study has the potential to contribute to empirical literature due to the considerations above.

The results of static and dynamic regression analyses demonstrate that financial development, remittances, real GDP per capita, ICT development, and globalization positively affect educational attainment. However, real GDP per capita, ICT development, globalization, and financial development strongly affect educational attainment in line with the related theoretical and empirical literature. Additionally, the relatively weak effect of remittances on educational attainment is likely due to these countries' low levels of remittances during the study period.

The impact of real GDP per capita, ICT development, and globalization on educational attainment is relatively higher than that of financial sector development because these three variables can potentially foster educational attainment via more channels. Furthermore, the financial sector's regulation, access, depth, and efficiency are vital for the interaction between financial development and educational attainment because financial market imperfections can negatively affect educational attainment.

The study results indicate that real GDP per capita, ICT development, globalization, and financial development are significant factors for educational attainment. Therefore, policies to foster economic growth, ICT development, integration with the world, and the efficient functioning of the financial sector also positively influence educational attainment. As a result, the findings of the study are directly significant for achievement of quality education (SDG 4) and indirectly significant for achievement of no poverty (SDG 1), zero hunger (SDG 2), good health and well-being (SDG 3), gender equality (SDG 5), decent work and economic growth (SDG 8), industry, innovation, and infrastructure (SDG 9), reduced inequality (SDG 10),and responsible consumption and production (SDG 12). Future studies can investigate the role of financial market imperfections on the nexus between financial sector development and educational attainment.

Author Contributions: Conceptualization, F.H.S., G.T.T., G.S. and M.D.; methodology, F.H.S. and G.T.T.; formal analysis, F.H.S., G.T.T., G.S. and M.D.; investigation, F.H.S., G.T.T., G.S. and M.D.; writing—review and editing, F.H.S., G.T.T., G.S. and M.D. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: The data for the research has been acquired from UNDP, UNCTAD, KOF Swiss Economic Institute, World Bank, and IMF in the form of open access. Further requests can be directed to the corresponding author/s.

Conflicts of Interest: The authors declare no conflict of interest.

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