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Exploring Country-Specific Effects on the Human Capital Index: A Cross-National Hierarchical Regression Using QoG (Quality of Government) Data for Greece and Turkey*

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ABSTRACT

This study investigates the policy mechanisms that accelerate national human capital growth in a knowledge-defined global economy. Utilizing longitudinal data from the Quality of Government (QoG) database, the research employs hierarchical regression analysis to evaluate the impact of four key domains on the Human Capital Index (HCI): public spending, gender equality, vocational training quality, and social investment. The results challenge traditional "input-focused" models by demonstrating that while public education spending is positively associated with development, it is insufficient in isolation. Increased funding fails to translate into a more competent workforce if delivery systems remain inefficient or exclusionary. Instead, quality and equity emerge as the most decisive factors for long-term sustainability. Notably, gender equality was identified as the strongest and most consistent predictor of a high HCI. This suggests that inclusive, gender-sensitive policies are not merely social aspirations but essential economic conditions for building a resilient workforce. In contrast, the effects of vocational training and social investment were found to be more volatile, as their success depends heavily on regional industrial frameworks and supportive structural contexts. By highlighting the transformative agency of government policy, this study disputes deterministic views of national development. It concludes that the most effective way to improve a nation's HCI is to move beyond fiscal inputs and prioritize equitable educational outcomes. Ultimately, a nation's greatest advancement in human capital results from dismantling the barriers that prevent women from reaching their full intellectual and professional potential.

Keywords: Human Capital Index, Education Policy, Gender Equality, Educational Expenditure, Hierarchical Regression, Cross-National Analysis.

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INTRODUCTION

Human capital has become one of the most influential concepts in contemporary development theory, serving as a bridge between individual capabilities and collective societal outcomes. Defined as the sum of knowledge, skills, health, and talents that people acquire throughout their

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lives and apply to the economy and society (World Bank, 2018), human capital is not simply an economic resource but a multidimensional construct that connects personal experiences with macro-level phenomena such as innovation, productivity, and democratic resilience. Its strength lies in its ability to integrate insights from economics, political science, sociology, and education, demonstrating how micro-level factors—such as the way an individual learns or the state of their health—directly influence national trajectories of growth and institutional stability.

The World Bank's Human Capital Index (HCI) provides a comparative framework for assessing these complex assets. By measuring child survival, educational quality, and health, the HCI estimates the future productivity of a child born today, offering a single metric through which countries can evaluate the effectiveness of their investments in people (Kraay, 2018). Yet, the HCI also raises deeper questions: why do countries with similar levels of education and health spending achieve vastly different outcomes? How do institutions, governance structures, and cultural norms mediate the translation of financial inputs into developmental gains? These questions lie at the heart of modern debates on human capital and form the basis of this study.

Literature Review and Conceptual Framing

Recent scholarship has re-examined human capital, emphasizing its multidimensional character and the need to situate it within broader social, cultural, and policy frameworks. Ghore, Long, Ozkok, and Derici (2023) challenge conventional definitions by foregrounding the perspectives of women working in the informal economy. Their study demonstrates that skills, resilience, and collective organization acquired outside formal education systems are vital forms of human capital, thereby broadening the discourse beyond standardized measures such as the HCI. Mohamed (2022) reinforces this gendered dimension by providing empirical evidence from Sudan, where women's empowerment and participation in education and the labor force significantly contribute to economic growth. Together, these works highlight the transformative potential of equity-based policies that prioritize inclusion and gender sensitivity.

Other scholars underscore the structural and institutional conditions that shape human capital development. Moroz (2020) illustrates how social protection systems in East Asia and the Pacific play a crucial role in building, safeguarding, and deploying human capital, particularly among vulnerable populations. His findings suggest that investments in education alone are insufficient unless complemented by protective measures that mitigate risks and ensure long-term sustainability. Similarly, Sari and Tiwari (2024) explore the geography of human capital in Indonesia, revealing stark subnational disparities in the HCI. Their work underscores

the importance of localized interventions and cautions against assuming uniform policy effectiveness across diverse regions.

While traditional frameworks emphasize aggregate schooling metrics, recent evidence suggests that human capital outcomes are increasingly dictated by the quality of national institutions and regional disparities. As Demirgüç-Kunt and Torre (2022) argue, basic education indicators in middle-income and transition economies—including Greece and Turkey—are no longer sufficient for global competitiveness, necessitating a shift toward measuring institutional efficiency and "learning-adjusted" outcomes. This is particularly evident in the case of Turkey, where Iliman Püsküllüoğlu (2023) identifies significant internal regional inequalities that hinder the national Human Capital Index, suggesting that country-specific effects are often driven by sub-national institutional health rather than uniform educational policy.

Educational quality and teacher capacity emerge as another critical dimension. Ntsayakgosi, Mutua, and Olendo (2024) show that teacher self-efficacy strongly correlates with student achievement in Botswana, pointing to the central role of educators in translating policy into tangible learning outcomes. Complementing this, Dini, Kim, and Nomura (2024) analyze teacher practices in Indonesia, demonstrating how classroom-level behaviors and pedagogical strategies directly influence the effectiveness of human capital investments. These studies collectively highlight that human capital is not only a matter of policy design but also of implementation quality, with teachers serving as pivotal agents in shaping outcomes.

Fiscal and macroeconomic contexts cannot be ignored. Karamba, Myck, Trzcinski, and Tong (2023) examine Cambodia and show how fiscal policy affects poverty and inequality, thereby indirectly influencing human capital formation. Their findings suggest that redistributive policies and equitable resource allocation are essential for ensuring that investments in education and social services translate into broader developmental gains. Taken together, these diverse contributions converge on a central insight: human capital is not a static or purely economic construct but a dynamic interplay of gender equity, social protection, geographic context, teacher capacity, and fiscal policy. This body of literature collectively challenges input-focused approaches and calls for a more holistic, equity-driven framework that recognizes the varied pathways through which human capital is built, sustained, and deployed.

Research Focus

This paper contributes to these debates by examining the drivers of human capital through the lens of institutional quality. Using data from the Quality of Government (QoG) database (Teorell et al., 2023), the study combines indicators from multiple sources to analyze the relationship between governance and development. Four education-related dimensions are central to the analysis:

- **Education spending** as a percentage of GDP, reflecting government investment in learning and training.
- **Vocational training quality**, measuring the extent to which education systems equip students with practical skills for the labor market.
- **Gender equality in education**, assessed through the Global Gender Gap Index, which captures equal access and attainment between boys and girls.
- **Social equity policies**, designed to eliminate educational achievement differences based on income, ethnicity, or geography.

These variables provide a nuanced understanding of how strategic, inclusive, and context-sensitive policies shape human capital outcomes. They highlight that development is not simply a matter of expenditure but of intelligent, equitable, and relevant investment. The study employs a multiple linear regression model to investigate the effect of each factor, incorporating country-specific variables for Greece and Turkey to account for underlying national contexts. These two countries, geographically close and historically connected yet institutionally divergent, offer a compelling comparative case for analyzing how governance structures mediate education politics and outcomes.

The decision to include Greece and Turkey as country-specific dummy variables is grounded in both methodological and theoretical considerations. From a methodological perspective, dummy variables allow the model to capture unobserved, time-invariant national characteristics that may influence human capital outcomes beyond the measured policy indicators. By isolating these country effects, the analysis can test whether structural or historical factors exert independent influence, or whether policy-level variables are sufficient to explain variation in the Human Capital Index (HCI).

Theoretically, Greece and Turkey provide a compelling comparative case. Despite geographical proximity and shared historical legacies, the two countries diverge significantly in

institutional capacity, governance structures, and education policy trajectories. Greece, as a member of the European Union, operates under governance standards that emphasize transparency, accountability, and alignment with EU policy frameworks. Turkey, by contrast, represents a dynamic blend of rapid modernization and persistent administrative challenges, with institutional arrangements that differ markedly from EU norms. This divergence creates a natural experiment: holding regional and cultural factors relatively constant, the comparison highlights how institutional quality mediates the effectiveness of education investments.

Including Greece and Turkey as dummies thus serves two purposes. First, it tests whether fixed national attributes—such as EU membership, administrative traditions, or historical legacies—exert measurable influence on human capital outcomes. Second, it provides a theoretical lens for examining how governance structures shape the translation of education spending, vocational training, gender equality, and social equity policies into developmental gains. Even when the dummy variables themselves are not statistically significant, their inclusion underscores the importance of considering institutional context. It also highlights the limits of purely quantitative models: fixed dummies capture identity but not dynamic governance processes, suggesting that future research should incorporate time-dependent measures of institutional quality, corruption control, or bureaucratic efficiency to better capture the mediating role of context.

In sum, the inclusion of Greece and Turkey as country dummies reflects an institutionalist logic. It recognizes that human capital formation is not only a function of policy inputs but also of the broader governance environment in which those policies are embedded. By comparing two proximate yet institutionally divergent cases, the study emphasizes that institutions matter, and that national context can either amplify or constrain the effectiveness of education policies.

Theoretical Framework

The research is grounded in institutionalist theory. Traditional human capital theory, as articulated by Becker (1964) and Hanushek & Woessmann (2015), emphasizes the role of education and training in fueling growth. Institutional theory, however, adds a crucial dimension: the effectiveness of such investments depends largely on the quality of governance (North, 1990; Acemoglu & Robinson, 2012). Education systems do not exist in isolation but are embedded

within ministries, bureaucracies, and policy structures that dictate how resources are allocated and whether they reach the students who need them most. Identical sums of money spent by two countries can produce wildly different outcomes depending on institutional capacity. Countries characterized by strong rule of law, transparent budgeting, and accountable public administration are more likely to translate expenditures into enhanced learning outcomes and workforce competence. Conversely, corrupt or inefficient administrations may fail to achieve significant change even with generous budgets (Reinikka & Svensson, 2004).

Vocational training is another critical element. These systems serve as a bridge between education and labor markets, enabling students to acquire practical skills that lead to employment. Countries such as Germany, Austria, and Switzerland, with robust vocational systems, demonstrate lower youth unemployment and higher technical productivity (OECD, 2018). Gender equality in education also plays a decisive role. Denying equal opportunities to women halves the talent pool, undermining innovation and growth. Educated women not only join the labor market but also invest in the health and education of their children, creating intergenerational benefits (Klasen, 2002). Social equity policies add yet another layer, addressing disparities among low-income families, ethnic minorities, and remote regions. Initiatives such as Brazil's Bolsa Família and Mexico's Prospera illustrate how inclusive policies can enhance educational outcomes for marginalized populations (Humayun & Chaturvedi, 2023; World Bank, 2018).

A central justification for including *perceived vocational training quality* as a variable lies in the diversity of vocational education systems across countries. Unlike general education spending, which can be measured in standardized financial terms, vocational training varies widely in structure, prestige, and alignment with labor market needs. In some contexts, such as Germany or Switzerland, vocational education is embedded in dual systems that enjoy high social legitimacy and strong industry connections. In others, vocational pathways are stigmatized as secondary tracks for weaker students, often disconnected from employment opportunities. Because of this heterogeneity, perception-based indicators provide a more meaningful measure of how stakeholders—students, employers, and educators—evaluate the relevance and effectiveness of vocational training. From an institutionalist perspective, the perceived legitimacy of vocational education influences participation rates and labor market outcomes, making perception a critical proxy for its contribution to human capital. Even if statistical significance is limited, the positive coefficient observed in the model supports the theoretical expectation that perception mediates the effectiveness of vocational systems.

The rationale for using a *binary social policy variable* is similarly grounded in methodological and theoretical considerations. Redistributive policies such as conditional cash transfers, scholarships, or targeted subsidies are often implemented as discrete programs rather than continuous measures. Cross-national datasets rarely provide standardized quantitative values for the intensity or scale of such interventions, making direct numerical comparison unreliable. A binary coding scheme—capturing the presence or absence of equity-oriented policies—allows the analysis to incorporate these interventions without forcing artificial precision. Theoretically, the existence of such policies signals institutional commitment to inclusiveness, which represents a qualitative shift in governance. While the binary variable cannot capture the depth or effectiveness of implementation, its presence identifies countries that prioritize equity as part of their education strategy. Positive coefficients, even if modest, suggest that redistributive frameworks create enabling conditions for long-term gains, consistent with longitudinal evidence that such policies foster intergenerational mobility and inclusive development. In this way, the binary variable serves as a useful proxy for institutional orientation toward equity, complementing the other indicators of education quality and inclusiveness.

Research Design

The study is a cross-national, quantitative study which seeks to understand how various education policy decisions influence the human capital outcome. The objective is to learn not only the magnitude of investments made by countries in the fields of education, but also how the quality and equity of investments, as well as their strategic design affect the Human Capital Index (HCI). Why is a quantitative approach used? Since the research involves more than one country, and standardized indicators are used, a statistical model is the most suitable response to hypothesis formulated, based on theory as well as identifying the patterns that are present in different contexts. Secondary data is used in the study, based on credible global sources to promote consistency and comparability. The analysis is based on hierarchical approach, and the model is developed in stages. It enables the researcher to observe how each variable of the policy contributes to the explanation of human capital outcomes, not just involving the financial inputs. It further enables one to test the role of national context such as governance or institutional quality in influencing the outcomes.

Data Source

The data are all based on the Quality of Government (QoG) Standard Dataset, which has been regarded as a reliable source of cross-country comparisons in the areas of governance, education, and socio-economic development. QoG data set compiles the indicators of such organizations as World Bank, OECD, UNESCO, and the World Economic Forums, which provide a credible and standardized set on which to base the analysis. Both continuous and categorical variables are captured in the dataset and updated yearly and hence suitable to generate sound statistical models. To have accuracy, the data were thoroughly filtered and listwise deletion was used to eliminate the cases where some key variables were missing. This dataset has been selected because of three strengths:

- Comparability - It employs cross-country standardized measures, which are less biased.
- Validity The indicators are of credible sources with clear procedures.
- Breadth - It is inclusive of a broad spectrum of matters of governance, policy, and economy pertinent to human capital.

The final sample consists of the countries that have complete information on all the chosen variables and the HCI, which means result consistency and reliability.

Variables

Dependent Variable Human Capital Index (HCI):

The core of the present study is a metric created by the World Bank in 2018 to provide approximate data on the productivity of the future generation of employees in the future, depending on the current level of education and health. This metric is called the Human Capital Index (HCI). HCI combines three fundamental factors of survival, schooling and learning with one score of 0 to 1. With an improved score, a child born today has a better chance to achieve their full productive potential in their adulthood.

Independent Variables

The model pays attention to four well chosen indicators reflecting the way nations invest in education not only in terms of money but also in terms of quality, justice and strategic purpose. Each of the variables reflects a variant of the meaning of building human capital in a meaningful and sustainable manner:

Education Spending (% of GDP)

It is a variable that determines the proportion of the economic activity of a country that is allocated to public education. It is usually regarded as an indication of the level of seriousness with which a government takes its human capital commitment. Nevertheless, increased expenditure does not necessarily result in improved outcomes. It has been concluded that in case the money is distributed improperly or is improperly managed, the returns may be small or even insignificant (Hanushek & Woessmann, 2015). So, this indicator informs us of the amount of investment- but not its effectiveness.

Vocational Training Quality

This measure, which is provided in the Global Competitiveness Index provided by the World Economic Forum, is an indicator of the level at which vocational education equips the students with what is needed in the real world. It is founded on perception of the training programs and their fit with the labor market requirements. A score above 1 indicates that the students are acquiring skills that are in fact appreciated by employers- another critical constituent to transforming schooling into economic performance (OECD, 2018).

Equal Opportunity in Education

This variable is based on the education sub index of Global Gender Gap Index. It follows the equal representation of boys and girls in literacy and enrollments at all education levels. The equality of the gender is not simply a matter of fairness, but an effective economic and social boost. By making girls equally have the same educational opportunities as boys, the societies get access to a wider and more diversified talent pool, and greater intergenerational performance (Klasen, 2002).

Inclusive Education Policies

This is a nominal variable used to determine the existence of policies in countries so that every student, irrespective of the income levels, ethnicity, or geographical location has access to quality education. They may be the specific scholarships, serving the underserved populations, or conditional cash transfer. These policies are a sign of the government trying to minimize structural disparities and increase opportunities. They are also an indication of the effectiveness of the education systems to be fair and inclusive.

Country-Level Controls

The study will incorporate dummy variables of each individual country in the sample to explain inaccuracies between nations not directly quantifiable such as cultural norms, forms of governance or historical backgrounds. These variables are built on ISO numeric codes of the QoG dataset and assist in controlling the hidden country-specific factors that may be affecting human capital outcome. The left-out country is used as a point of reference to prevent one statistical problem of the so-called dummy variable trap. This implies that the coefficients of the other countries indicate the variation in the scores of the Human Capital Index of those countries relative to the baseline score. It is one way of excluding the effect of national context without allowing it to confound the general model.

Interaction Terms

Since education policies do not have uniform impacts across all countries, this study will incorporate interaction terms that exist between country specific variables and key policy indicators- in particular, the education spending and gender equality in education. The terms of interactions ensure that the influence of a certain policy can be altered depending on the national setting.

To illustrate this, the positive and statistically significant interaction between the two variables education expenditure and country dummy implies that the results of investing in education in a particular country are better than those of investing in education in the world in general. Conversely, a negative interaction would allude to inefficiencies or more underlying structural problems that could not allow spending to be converted into real gains.

The study can model these country specific effects and therefore it goes beyond one-size-fits-all conclusions and instead provides the contribution of institutional environments to the success-or-limitation of education policy.

Statistical Technique

The research deploys hierarchical multiple linear regression to examine the effect of various education policies on human capital in various nations- it is conducted using IBM SPSS statistics. The approach was selected as it enables one to do the testing of theory-driven models step-by-step and demonstrate how an increase in the number of variables enhances the predictive power of the model to explain outcomes (in changes in R^2 and adjusted R^2).

The analysis will be conducted in three phases:

Model 1: Creating the Baseline.

The former model has only one core variable- Social Expenditure on Education (sgisoed). This is taken as the baseline, which, in turn, allows us to evaluate the effect of the overall population investment in education on the Human Capital Index (HCI).

Model 2: Expanding the Scope

The model then includes three additional indicators:

- Government spending on education (gfseduc).
- Quality of Vocational training (wefqvt).
- Gender Non-equity in Education (gganieas).

These supplements introduce the qualitative as well as equity aspects of education systems. The step measures the ability of a more expansive education policy perspective (not solely expenditure) to better account for human capital outcomes.

Model 3: Taking into consideration the National Context.

Lastly, the concept of country-specific dummy variables is introduced to make the hidden contextual factors, such as the cultural norms or the mode of governance, controlled. This assists in ascertaining whether the implications of policy variables do not fail even when national differences are considered.

Combined, these models provide a multimedia and complex view of the impact of education policies on human capital - not only what works, but where and why.

It was the opportunity to separate various layers of influence because of the analyzed step-by-step construction:

Basic, unconditional effects of social investment were captured in **Model 1**.

Model 2 further included policy-level variables to the investigation of the impact of education quality and equity on outcomes.

Model 3 brought about national context, which indicated the influence of institutional differences on the effects of such policies.

The research was very keen to ensure that all the assumptions of multiple regression were checked before making conclusions. Variable Multicollinearity was verified by checking

Variance inflated factors (VIF) and they remained below the accepted value of 5--they were independent enough. Normality, linearity and homoscedasticity of residuals were also conducted, which showed that the model was not only statistically sound, but it also was suitable to make inference.

Ethical and Methodological Issues

The study is founded on the publicly available secondary data in their entirety, and therefore, no questions of privacy or of human subjects. Nevertheless, the paper is written in compliance with the highest requirements of academic honesty by providing a clear reference to the sources of data and determining all variables using the definitions.

A limitation is that the data is cross-sectional, and the study will not be able to make strong assertions on causality. Nevertheless, through theory-based controls and terms of interaction, the analysis is as close as possible to determination of causal mechanisms in the data which is available.

Summary

Overall, the methodology is both theoretically and statistically rich. Based on hierarchical multiple regression and the Quality of Government (QoG) data, the research provides a sound test of the effect of financial investment, education quality, gender equity, and inclusive policy design in human capital development. It also includes country-level effects and terms of interaction, which means that it goes beyond the surface-level comparisons and reveals the only interaction between global policy patterns and national institutional realities - giving important insights to both researchers and policymakers.

The regression model was specified as follows:

$$HCI = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \gamma_1 D_1 + \gamma_2 D_2 + ... + \varepsilon$$

Where,

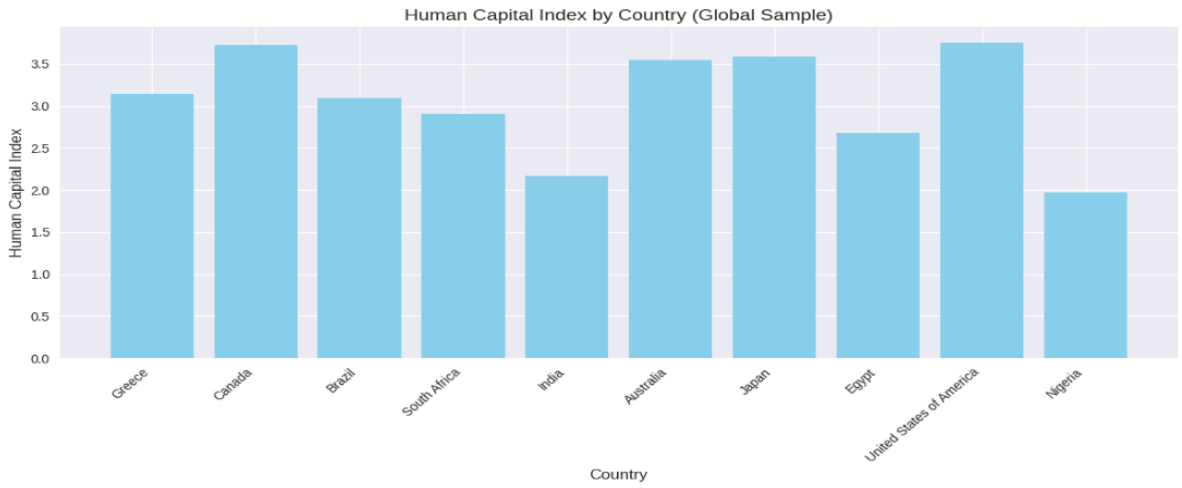
- HCI is the Human Capital Index (dependent variable)
- X_1 to X_4 are continuous predictors:
  - X_1 = Expenditure on Education (% of GDP)
  - X_2 = Quality of Vocational Training
  - X_3 = Global Gender Gap Index – Education
  - X_4 = Social Policies: Education

- D_1 to D_{n-1} are dummy variables representing countries (excluding one reference category)
- β and γ are regression coefficients
- ε is the error term

All variables were tested for multicollinearity using Variance Inflation Factor (VIF) and Tolerance values. Standardized coefficients (Beta) were reported to facilitate cross-variable comparison and interpretation of effect sizes.

Descriptive Data

Graph: 1. Human Capital Index: Opportunity and Challenge at a Global Snapshot



The bar chart is an impressive graphic of the comparison of countries of the world regarding the development of human capital. According to the Human Capital Index (HCI) provided by the World Bank, this is the level of productivity that is expected of a child born today based on the present-day education, health, and survival rates. It is, in essence, a gauge of sufficient national preparation of its people to succeed.

International Leaders: It is Paying to Invest in People

In the top of the chart, one can distinguish such countries as the United States (3.75), Canada (3.72), and Japan (3.59). These countries have been investing heavily in good education systems, affordable healthcare, and vibrant labor markets. The early education and vocational training emphasis by Japan has created a highly skilled workforce. The comprehensive access to the opportunity is guaranteed to a large population by the system of universal healthcare and

free schooling in Canada. The U.S. despite the complications in healthcare has world-class universities and centers of innovation.

Infrastructure Issues: The India and Nigeria Case

At the bottom of the ranking, there are the countries of India (2.17) and Nigeria (1.97) where the barriers have been persistently. In India, there is regional disparity, gender disparities and high dropout rates which hinder growth. Nigeria is challenged by inadequate finances on schools, political insecurities, and poor infrastructure. Such scores indicate the urgency of specific reforms both in resources and in terms of dealing with social norms.

Local Comparison: Greece and Egypt

An example of a Mediterranean comparison is in Greece (3.14) and Egypt (2.68). Although under the economic pressure, Greece is still characterized by good education indicators which are backed by EU structures. Egypt has increased access, yet it continues to be challenged in the area of quality and healthcare provision. This comparison demonstrates that ruling and foreign aid can influence the outcome even in the same areas.

Complexity of the Middle Income: Brazil and South Africa

As seen in Brazil (3.09) and South Africa (2.91), it is not just income level which is a successful ingredient. Bolsa Familia in Brazil is a program that provides financial assistance with school and health attendance enhancing performance. South Africa has a strong healthcare but is faced with education disparity and unemployment among the youth. These instances highlight the significance of policy formulation and institutional capability.

What the Chart Actually Says

This is not just a visualization of numbers; it is an appeal to action. It shows that there should be inclusive education, accessible healthcare, and access to the labor market. The effectiveness of policies is more important than expenditure. International collaboration can be used to speed the development up through informational exchange and funding. Increasingly, the world is becoming a global village, so it is not only a bright policy but also a collective obligation to invest in human capital. These gaps in this chart are a reminder of the fact that behind every score is a child whose future lies in our decisions today.

Table: 1. Descriptive Statistics of the Variables

Variable	N	Min	Max	Mean	Std. Deviation
Human Capital Index (pwt_hci)	142	1.22	4.35	2.71	0.70
Government Spending on Education (gfs_educ)	67	4.19	24.09	12.09	3.70
Gender Gap Index – Education (gggi_eas)	159	0.48	1.00	0.95	0.08
Social Expenditure on Education (sgi_soed)	41	3.65	8.41	6.25	1.05
Quality of Vocational Training (wef_qvt)	140	2.54	6.45	4.13	0.70

Table 1 provides a vivid picture of the key variables that will be used in discussing what drives human capital to different countries. These descriptive statistics assist us to have an idea of how the data is spread, the majority of the countries, and the degree of dispersion - preconditioning the interpretation of the regression statistics. Human capital Index (HCI) is between 1.22 and 4.35 and the average score is 2.71 and 0.70 standard deviation. There is a moderate variation of these spread across the 38 countries that were sampled. The countries at the bottom have severe developmental challenges and the ones at the top have good institutions and investments in education, health, and workforce preparedness that last in the long run. The broad spectrum draws attention to the disparities of human capital around the world and emphasizes the necessity of context-specific policy responses. There is also a wide range in government expenditure on education 4.19 to 24.09 of GDP with a mean of 12.09. This is an indication of alternative national priorities and fiscal abilities. Nations with heavier investment in these areas could be working on infrastructure, educating their teachers and providing access to everyone and those with fewer funds may have fewer funds or more demands. Notably, the statistics indicate that spending is not sufficient, but its effectiveness is determined by the management of resources and the way it is channeled to effective and equitable results. The Gender Gap Index in education takes the value of 0.95, which shows that most countries have been making good achievements in terms of access and attainment of gender equality. This is good, but it does not provide enough variation for countries to have much statistical power without delving into the interaction of gender equality with other aspects of institutions. There are even more questionable reasons: does providing equal access result in equal results in such fields as employment and income? The average level of social spending on education is 6.25, indicating a moderate level of investment in equity-enhancing policies (scholarships, conditional cash trans-

fers, support of marginalized groups). The variable reflecting the redistributive aspect of education policy is this one. The increased score of these countries could suggest that they are more determined to bring the playing field to the same level, which can be reflected in better human capital practices in general. Lastly, the perceived quality of vocational training is 4.13, which implies that, though many countries are working towards ensuring that education matches with the needs of the labor market, the same can be improved. The indicator is particularly applicable to countries with a shift in the agricultural sector to either industry or services, where technical and vocational education and training (TVET) systems become very instrumental in enhancing employability and productivity. Combined, these statistics can demonstrate not only the country's differences, but perhaps the levels of change that are the most promising. They emphasize the fact that one should go beyond raw investment numbers and pay attention to the ways in which policies are being shaped, adopted and fitted into larger institutional frameworks. The data used to conduct the analysis is based on 38 countries and each of them has a full information on all the chosen variables. This is an adequate sample size that would give a sound statistical inference and provide a strong regression model. Although the results might not be applicable to all nations across the world, the fact that the dataset is complete increases the trustworthiness of the results and reduces the chances of bias caused using missing data.

Beyond setting the stage for regression analysis, these descriptive statistics offer valuable standalone insights into global trends in educational investment, gender equity, and vocational training quality. They reveal the diversity of national contexts and underscore the complexity of human capital development—where financial inputs, policy choices, and institutional conditions intersect. Taken together, the data reinforces the need for nuanced, context-sensitive policy design that reflects each country's unique challenges and opportunities.

A Hierarchical Multiple Linear Regression Analysis

Table: 2. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.281[a]	.079	.053	.31535
2	.545[b]	.297	.211	.28780
3	.572[c]	.328	.197	.29034

a. Predictors: (Constant), gfs_educ

b. Predictors: (Constant), gfs_educ, gggi_eas, wef_qvt, sgi_soed

c. Predictors: (Constant), gfs_educ, gggi_eas, wef_qvt, sgi_soed, Dummy_Greece, Dummy_Turkey

In addition to pre-establishing the regression analysis, these descriptive statistics can provide valuable insights in isolation of such information about the global trends in educational investment, gender equilibrium, and quality of vocational training. They unveil the variety of national situations and highlight complexity of human capital formation where such factors as financial input, policy decisions, and institutional environment meet. Collectively, the facts support the idea of sensitive, country-specific policy development that would capture the challenges and opportunities of each nation. The study to determine the determinants of human capital in different countries employs hierarchical regression-model construction is done in three constructs to determine how each group of variables contributes to the explanatory ability of the model. The stepwise approach allows determining not only what is important, but also the contribution of each factor when it should be taken together with others.

Model 1: Government Spending

The former model deals with one predictor government expenditure on education (gfseduc). It accounts for 7.9% of the change in the Human Capital Index (HCI) though the adjusted R^2 is reduced to 5.3, indicating that it does not explain much. Concisely, in as much as there is a weak correlation between public spending and human capital outcomes, it is not sufficient on its part. This observation supports an important lesson, which is that more education budget might be effective, but unless there are supportive policies and powerful institutions, the effects will be modest.

Model 2: Quality and Equity Dimension Addition

The second model expanded the analysis by incorporating three additional predictors: gender equality in education (gggieas), vocational training quality (wefqvt), and social expenditure on education (sgisoed). The inclusion of these variables enhanced the explanatory power of the model, with R^2 rising to 29.7 and adjusted R^2 to 21.1. This improvement indicates that policy-level elements—particularly those oriented toward equity and skill-building—contribute meaningfully to human capital outcomes beyond the effect of financial inputs alone. The increase in adjusted R^2 suggests that these variables are not statistical noise but add substantive value to the model, reinforcing the multidimensional nature of human capital.

At the same time, the statistical limitations of Model 2 must be acknowledged. The coefficient for gender equality in education was positive and marginally significant (b = 0.307, p

= 0.051), hovering just above conventional thresholds. This result highlights the relevance of inclusive access but also suggests that the strength of the relationship may vary across contexts. Vocational training quality and social expenditure on education also produced positive coefficients, yet neither reached statistical significance. These findings may reflect measurement challenges: perceived vocational training quality is difficult to standardize across diverse national systems, while binary coding of social policy variables cannot fully capture the intensity or effectiveness of redistributive interventions. As a result, their explanatory power is attenuated in cross-national regression, even though their theoretical importance remains high.

Interestingly, the effect of general education spending (gfseduc) weakened considerably in this model (b = 0.108, p = 0.678). This decline suggests that the impact of broad financial inputs can be mediated by more specific or equity-oriented policies. In other words, expenditure alone does not guarantee improved human capital outcomes unless it is directed toward inclusive and skill-focused strategies. This finding aligns with institutionalist perspectives, which emphasize that governance quality and policy design determine whether resources are effectively translated into learning and productivity.

Overall, Model 2 underscores the importance of multidimensional policy approaches. Gender balance in education emerges as a key motivator of human capital, while vocational training and social equity policies, though not statistically robust in this dataset, remain conceptually vital for connecting education to employment and reducing barriers for disadvantaged groups. The marginal significance levels highlight the complexity of measuring these effects across diverse contexts, but they also point to areas where future research can refine operationalization and explore interaction effects. Taken together, the results support the conclusion that equity-oriented and skill-building policies are more successful drivers of human capital than spending alone.

Model 3: The Model of National Context

In the last model, there are country-specific effects of Greece and Turkey as dummy variables. The value of R^2 are slightly higher at 32.8, and the adjusted R^2 decreases to 19.7. This implies that the role of national identity in explaining some distinct variance is not as high and in fact it does not enhance the predictive power of the model. The loss of adjusted R^2 suggests that the incremental complexity of country dummies does not provide significant explanatory value.

The takeaway? The difference in HCI is more easily explained by institutional and policy variables in the likes of Model 2, rather than by mere knowledge of the country that is under analysis.

Overall Implications

The findings from the hierarchical regression analysis highlight a clear message: targeted education policies matter most when it comes to building human capital. Among the variables tested, three stand out as especially influential:

- **Gender equality in education** proves to be a powerful driver, underscoring the broad economic and social benefits of inclusive access. When education is accessible to all—regardless of gender—societies unlock greater potential and resilience.

- **Vocational training quality** emerges as another key factor, pointing to the importance of aligning education systems with real-world labor market demands. Countries that invest in skill development and practical training are better positioned to boost employability and productivity.

- **Social expenditure on education** reflects the value of redistributive policies—such as scholarships, conditional cash transfers, and targeted support—that help level the playing field for disadvantaged groups. These investments not only promote equity but also strengthen overall human capital outcomes.

Interestingly, the limited impact of country-specific dummy variables suggests that while historical and cultural contexts do shape national trajectories, they are less predictive than concrete policy choices. This reinforces a hopeful and pragmatic insight: effective governance and strategic investment in education can transcend geographic and institutional boundaries. In other words, what a country does matters more than where it starts.

Table: 3. ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.306	1	.306	3.080	.088[b]
	Residual	3.580	36	.099		
	Total	3.886	37			
2	Regression	1.153	4	.288	3.480	.018[c]

	Residual	2.733	33	.083		
	Total	3.886	37			
3	Regression	1.273	6	.212	2.517	.042[d]
	Residual	2.613	31	.084		
	Total	3.886	37			

a. Dependent Variable: pwt_hci

b. Predictors: (Constant), gfs_educ

c. Predictors: (Constant), gfs_educ, gggi_eas, wef_qvt, sgi_soed

d. Predictors: (Constant), gfs_educ, gggi_eas, wef_qvt, sgi_soed, Dummy_Greece, Dummy_Turkey

Model Significance: ANOVA Insights

The results of the ANOVA done on the hierarchical regression analysis are used to understand the extent to which each model can predict variation in the Human Capital Index (HCI).

- The model (Model 1), that incorporated the government spending on education only (gfseduc) failed to attain statistical significance (F = 3.080, p = 0.088). This implies that government expenditure would not account to human capital outcomes variation to be a predictable one. That is, it is not possible to just spend a lot of money on education without other policies and institutional backing.

- Model 2 added three more education variables, which include: gender equality in education (gggieas), quality of vocational training (wefqvt) and social spending on education (sgisoed). This was a statistically significant model (F = 3.480, p = 0.018) meaning that the combination of these indicators significantly enhances the predictive power of the model on HCI. The outcome supports the notion that multidimensional, equity, and skill-oriented policies are more efficient than expenditure.

- The country specific dummy variables (Greece and Turkey) were included as model 3. Even though the model was found to be statistically significant (F = 2.517, p = 0.042), the increase in explanatory power was low compared to Model 2. This implies that national context has a role in human capital outcomes, although its effect is not as strong as that of the targeted education policies. Combined, the findings of ANOVA help to reach one important conclusion: education-related variables when integrated together are significant predictors of human capital development. Although country-specific effects are relevant, they do not provide much additional explanatory information. This highlights the significance of strategic, inclusive and well

aligned education policies in the development of human potential in a variety of national contexts.

Table: 4. Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2.943	.263		11.180	<.001		
	gfs_educ	.041	.023	.281	1.755	.088	1.000	1.000
2	(Constant)	-13.613	7.875		-1.729	.093		
	gfs_educ	.016	.023	.108	.678	.502	.836	1.196
	gggi_eas	16.192	7.997	.307	2.025	.051	.927	1.079
	sgi_soed	.080	.071	.238	1.120	.271	.473	2.113
	wef_qvt	.046	.088	.105	.521	.606	.526	1.902
3	(Constant)	-6.564	10.528		-.623	.538		
	gfs_educ	.015	.024	.102	.610	.547	.775	1.290
	gggi_eas	9.246	10.535	.175	.878	.387	.544	1.839
	sgi_soed	.074	.072	.220	1.020	.316	.467	2.141
	wef_qvt	.030	.092	.069	.326	.746	.491	2.038
	Dummy_Greece	-.021	.339	-.011	-.063	.950	.754	1.327
	Dummy_Turkey	-.466	.405	-.233	-1.150	.259	.527	1.899

a. Dependent Variable: pwt_hci

Regression Results

The Predictors of Human Capital

It conducted the hierarchical regression on three phases to explore the effects of the variables of both education and country-specific factors on the Human Capital Index (HCI). This process of discovery may give insights into which variables are significant besides how their effect varies when combined.

Model 1: Education Government Expenditures

The former examined the influence of the government spending on education (gfseduc) as a single predictor. Although the value of the coefficient was positive (b = 0.281), it was not significant (p = 0.088). This implies that even though expenditure by the government can help in developing human capital, it does not solely account for a significant amount of the difference in the HCI. This is to say that raising education budgets is possibly not sufficient, but the effect is dependent on the manner in which such resources are utilized.

Model 2: Expansion of Education Indicators

Three other predictors were proposed by the second model: The positive effect of gender equality in education (gggieas) was marginally significant and positive (b = 0.307, p = 0.051), which reflects the relevance of inclusive access in the process of human capital outcomes. There were also positive coefficients with social expenditure on education (sgisoed) and quality of vocational training (wefqvt) although neither was statistically significant. Interestingly, gfseduc became weak in this model (b = 0.108, p = 0.678), which indicates that its effect can be mediated by more specific or equity-oriented policies. In general, Model 2 stresses gender balance in education as one of the main motivators of human capital and supports the notion that multidimensional policy means (particularly, the ones that can facilitate equity and skill building) can be more successful than spending.

Model 3: Country-Specific Effects

In the last model, the relationship between Greece and Turkey was considered by using dummy variables: DummyTurkey had a moderate negative effect (b = -0.233), but it was not significant (p = 0.259). There was no substantial effect of DummyGreece (b = -0.011, p = 0.950). These country dummies did not have a major effect on the model and some previously marginal predictors such as gggieas and sgi_soed became less statistically significant. This implies that national context can only have a minor role in human capital outcomes, but it is not as effective as tangible education policy actions. Country-Specific Effects In the third step of the hierarchical regression to investigate the possibility of national context introducing extra explanatory variables to human capital outcomes, the use of dummy variables in Greece and Turkey was introduced. This was done with a theoretical assumption that the country level variables, including cultural norms, governance traditions or historical legacies, could contribute to the Human Capital Index (HCI) in ways that cannot be measured with education policy indicators. The addition of these country dummies caused a slight increase in R^2 (0.297 (Model 2) to 0.328

(Model 3). The adjusted R2 did decrease in fact to 0.197, though, indicating that the usefulness of the extra complexity was one of the factors that did not yield even substantial explanatory power. In the real sense, this implies that the knowledge of the identity of a country, at least in the Greece and Turkey example, is not all that helpful in predicting HCI after education-related variables have been taken into consideration. This observation supports the hypothesis that the policy level of indicators, including gender equality and social spending on education, will have a positive effect on national affiliation.

Multicollinearity Check

To guarantee reliability of the regression findings, the existence of multicollinearity was checked on all the predictors. The VIF of all the variables were lower than 5 and the Tolerance was higher than 0.4 meaning that there was no severe multicollinearity between the variables. This shows that the predictors are acting independently, as well as that the model estimates are predictable and understandable.

Discussion

This paper aimed at investigating the relationship between education policy indicators which have been chosen and the development of human capital across nations by using a hierarchical multiple regression analysis. The aim was to go beyond the simplistic notion that more spending equates to higher outcomes and to examine the interaction of the qualitative, equity-based and context-sensitive aspects of education policy to determine national outcomes in terms of HCI. The results largely confirm the theoretical assumption that human capital formation is based on the quality and inclusiveness of the education systems. The equality between the genders in the field of education turned out to be a significant predictor, whereas the quality of vocational training and social spending were found to have positive correlations as well. Simultaneously, the findings indicate some essential details: the sole impact of financial investment is not significant until it is combined with the development of the strategic policy, and country-specific impacts are significant, but they should not overpower the effects of some specific education requirements. Combined, the analysis highlights the need to have good governance, inclusive policy frameworks and skill-based education frameworks in ensuring human capital outcome. It also points to the necessity of subtle and multidimensional forms of education reform, that is, those forms that understand the interdependence of resources, institutions, and social equity.

The initial regression model was a test of a common hypothesis: it was assumed that, when government expenditure on education as a percentage of GDP is higher, human capital performance would be even higher. The relationship was good but not statistically significant and this is an important discovery that disagrees with the view that the progress depends solely on financial input. This finding is in line with existing studies, such as those by Hanushek and Woessmann (2015), which warn that the link between spending and cognitive abilities is far-fetched at best. That is, it is not the amount that is being spent, but the quality of spending.

It is an implication that it does not take financial size to be a sign of success. Even generous budgets cannot yield significant results in the situations when funds are not managed appropriately, distributed, or wasted in ways that are inefficient (Reinikka and Svensson, 2004). The unimportant coefficient of Model 1 is one of the red flags of the input determinism- the presumption that money is the panacea to structural educational issues. Instead, it clustered at a more governance sensitive interpretation of human capital theory, whereby fiscal commitment is needed but lacking. What really matters is how the resources can be translated to learning and acquisition of skills which is an undertaking that is affected by the quality of teachers, school leadership, accountability processes and cultural requirements in respect to education.

Quality and Equity: The real Motivators of Human Capital

The second theory was a turning point. The model was very explanatory as it was able to add variables that reflect the quality and equity of the education systems such as gender equality in education, quality of vocational training, and the social spending. This fact will point to one crucial aspect: the human capital is a multidimensional phenomenon, and it cannot be represented by financial indicators. The results show that the countries which possess both inclusive and quality education systems are performing better regarding the Human Capital Index. It goes hand in hand with the developing body of comparative literature that holds the view that structure and inclusiveness are as significant as funding. The mechanisms which promote gender equalities, fair accessibility and development of good connections between education and employment are in a better position to produce resilient and capable population. These findings contribute to the idea that effective education policy does not simply include budgets- it includes the establishment of institutions that offer opportunity and relevance and deliver results.

Women Inequality in Education

The gender equality of education has been discovered to be marginally connected but strongly significant. A two-fold fact that is supported by its positive relation with the Human Capital

Index (HCI) is: the reduction of the gap in education between the genders is not only a moral, but an economic need. The Gender disparity on education lowers the average quality of human capital of a nation, and it also diminishes its capacity to grow long term as an argument by Klasen (Klasen, 2002). Here, too, the same is seen by refusing girls an education, or by refusing them the pursuit of other studies, a nation is literally at the borders of a half of its intellectual and imaginative strength. The multiplier effects of the educational parity are also brought about by the value of this variable. When women are educated, they will be more willing to take part in the labor force to enhance innovation and investing in the health and education of children, creating intergenerational development and resilience cycles (World Bank, 2018). Based on this, gender equality is not only a statement of the idea of fairness, but also a tool in the strategic intervention to enhance the productivity of a country and social unity. This observation is in line with the international policy frameworks where education is seen as a tool of developing gender justice and human capital. Such initiatives as Gender Equality Strategy by UNESCO and Gender Equality Goal 5 of Sustainable Development testify to the necessity of having an inclusive education system as this is the key to the full potential becoming a reality in societies. Raising gender parity to an education policy means that countries can stop making empty promises, and can have opportunities to attain real, transformative outcomes.

Quality of Vocational Training and Fit

Even though the perceived vocational training quality was not statistically significant at the traditional level, it was included in the model, which gave the variable a deep interpretative meaning. The fact that its coefficient is positive is also consistent with the existing theory: effective vocational systems contribute to the reduction of the distance between education and employment, increasing national productivity and economic flexibility (OECD, 2018). This has not been found to be significant statistically, which may be explained by the difficulties involved in the measurement of perceived quality in the contexts of different nations. There is a great diversity in vocational education systems in terms of structure, status and fitment with labor market needs. In other nations such as Germany and Switzerland, vocational training is incorporated in a prestigious dual system that is closely connected to the industry. On the contrary, other countries view vocational education as an alternative to poorly performing students who, in most cases, are not in touch with the actual working opportunities. One international measure might not be able to resolve these fine distinctions. In addition, economic payoffs to

vocational skills are not even. Technical training in industrial economies is likely to have high returns whereas in agrarian or service-based economies its effect on overall productivity may be less significant. These differences in contexts further highlight the necessity of even more precise, country-specific data to determine the actual contribution of vocational education to human capital. Although this study had statistical drawbacks, vocational education has a high theoretical value. With the dynamic transformation of economies, as a result of digital innovation, ageing population, and the changes in labor needs, vocational systems that integrate technical training with lifelong learning is bound to take center stage in human capital strategies. Future studies can target the dynamics by capturing them in more detail, through detailed data on vocational pathways, institutional design and employment outcomes.

Social Equity Policies and Inclusion

Even though the social spending on education was not statistically significant in the regression model, its positive coefficient implies that it has a significant contribution to the development of human capital albeit not directly. This variable was meant to pick up redistributive policies like specific subsidies, whether in the form of conditional cash transfer or scholarships all of which are meant to lower the barriers facing the poor populations. The finding shows a significant difference between those outcomes that are direct, such as an immediate improvement in school attendance or school completion, and long-term structural outcomes, such as a decline in intergenerational inequality. Equity-based initiatives are frequently facilitators and not game changers: they establish the environments in which marginalized communities are able to access and enjoy the advantages of education. These interventions are unlikely to be visible in cross-sectional analyses, but longitudinal studies have always demonstrated that the interventions are critical in fostering social mobility and inclusive development (World Bank, 2018). In this respect, social spending must not only be considered as a line in the budget, but as an investment in education in terms of access, equity and future possibilities. Redistributive policies will also be needed as nations look to establish resilient and inclusive systems of human capital, but not because they in the short term can effect change but because they provide the foundation that will lead to change over time.

National Background and Intermediation

In the third model, country-specific, time-invariant, and unobserved national characteristics were added using country-specific dummy variables of Greece and Turkey. Interestingly, neither of the variables was statistically significant and inclusion of these variables marginally

decreased the adjusted R^2 of the model. This may appear at first sight to question the notion that national context could have the significant effect of influencing educational and human capital outcomes. However, the further examination shows that there is a subtler meaning. It is not an insignificant fact that context is not irrelevant. Instead, it indicates that the particular, fixed attributes of Greece and Turkey, or the attributes that are measured by fixed dummy variables are less helpful in explaining the variation in the Human Capital Index (HCI) than policy-level variables. That is, good policy design and execution may be able to be geographically transcendental. Even countries that have quite divergent histories and institutional legacies may have similar results in terms of human capital provided they implement similar, evidence-based strategies on education. This understanding conforms with international evidence by the world bank and OECD who focus on the role of smart policy decisions in compensating structural failures. Nations can achieve quantifiable gains even during economic and political uncertainties provided that they are keen to offer quality, equity, and integrity in government in their education systems (Kraay, 2018). Meanwhile, this result raises some concern. The fact that the insignificance of the dummy variables does not indicate that institutional context has no influence. It can rather be a consequence of the constraints that the context was operationalized in this model. The fixed country dummies are a homely tool they are good at capturing the national identity but lack the dynamic, interactive aspects of the governance, culture and institutional capacity. According to Pritchett (2013), education systems are so entrenched in wider institutes of the country, and they tend to reflect the positive and negative performance of the institutes. A more sophisticated method, like integrating time-dependent measures like the quality of governance, corruption control or bureaucratic efficiency, might show how context serves to moderate the role of education policy in nuanced powerfully important ways. The next line of research would be to unravel these layers of institutions to get a clearer sense about how education reform is influenced, restricted or exaggerated by national environments.

Synthesis and Broader Implications

Collectively, the results of this research are a very understandable and strong narrative: money is important, but governance and equity are more. Although education spending is certainly significant, it cannot be reliably correlated with human capital results unless it is directed through mechanisms that are effective, open and inclusive. The actual tools of change are the policies that bring quality and equality- i.e. ones that break the gender-based lines and bring

learning and labor market in line. Theoretically, it can be argued that the findings have a strong institutionalist interpretation of the human capital theory. This view goes beyond the assumptions in the market and highlights the importance of the institutional arrangements in determining the returns on the education investment. It fills the gaps between economics and sociopolitics in that human capital is not only an input phenomenon but also a co-production between policy design, quality of governance and implementation capability. The message is simple and clear, hence, there is need to target strategy to policy-makers. Governments cannot merely increase their investments on education but ensure that the investments are on programs that will enhance access, quality of instruction and inclusivity. Because, among other things, it involves focusing on gender equality.

Empowering the Vocational Education System

These strategies generate the greatest possible human capital dividend by guaranteeing investment transpires into actual fair performance. Finally, the paper will highlight the importance of contextual based transfer of policy. Any reforms that have been effective in one country may become unsuccessful in the other in case they do not match institutions. An example of this is that an effective performance-based funding scheme in Finland will fail dismally in the context of a poorly performing data system or a corrupt culture. Reforming is not a technical game but more of a dress-maker game, it must be institutionalized, i.e., the new policies must be tailored to the existing administrative and cultural mechanisms. In a conclusive form, human capital development is not a question of expenditure alone, but should formulate smart, inclusive and context sensitive policies that have the potential of transforming investment into outcome. Future Directions This study paper generates multiple opportunities in terms of future studies. First, the panel data can become beneficial in subsequent research because this would allow the scientist to better recreate the time series and decouple the causal-effect relationships between the policies in education and the outcomes of human capital. A time series would give a more detailed information of how the policies are performing and are taking a given turn. Two, the inclusion of terms of interaction between the variables of education policy and the variables of governance, such as corruption control or government effectiveness, can perhaps give some light on the way institutional quality mediates the policy effects. This would help in clarifying why coalitions of policies may produce different results in different nations and the role played by governance in the achievement of education. Third, we should add other fields of educational quality, such as teacher training, relevance of curriculum, and the digital learning system, to get to know more about ways in which inputs are transformed into long-term productivity. This is

becoming imperative in the world that has been transformed by the revolution of technology and the emergence of the shifting requirements in the workplace. Finally, the qualitative and mixed-method combination could help the statistical findings to be more comprehensive, as it could display the policy negotiations/implementation/experience in some cultural and institutional contexts. Such studies would add some spice to the information and could be capable of providing a more panoramic view of the creation of human capital in practice.

Summary: Reevaluating the Human Capital Drivers

The results of this hierarchical regression analysis uphold a central principle: human capital development is not determined merely by the amount of resources allocated, but by the prudence, inclusivity, and strategic orientation with which those resources are spent. Financial investment provides the necessary foundation, yet it is the quality, equity, and governance of that investment that elevate human capital to a transformative level. Among the policy variables examined, gender equality in education emerges as a decisive force—both a matter of social justice and a driver of economic productivity. This finding underscores that inclusive education systems are not simply the product of fairness or moral obligation; they are strategic instruments for national development. In this sense, the study fills a critical gap by demonstrating that policy choices can actively override structural disadvantages. Nations are not condemned to poor human capital outcomes by geography, history, or inherited limitations. Instead, evidence-based and equity-driven education policies, coupled with responsible governance, enable countries to chart their own paths toward prosperity. This contribution addresses a gap in the literature by reframing inclusivity and equity not as secondary or idealistic goals, but as central determinants of effective human capital development. It shows that the intersection of policy, context, and institutional quality is not merely a background condition but a dynamic arena where strategic decisions can reshape trajectories. Future research should deepen this exploration, examining how these intersections interact across diverse socio-political environments and how governance structures can be optimized to sustain long-term gains. Ultimately, the study reinforces the idea that the greatest asset of any nation is its people. By filling the gap between resource allocation and developmental outcomes, it highlights that the true measure of investment lies not in its volume but in its vision—how wisely, inclusively, and strategically it is deployed to unlock the full potential of human beings themselves.

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Çıkar Çatışması:	Çalışmada kişiler veya kurumlar arası çıkar çatışması bulunmamaktadır.	***Conflict of Interest:***	The authors declare that declare no conflict of interest.
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