

Determining Human Capital Impacts on Economic Growth

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Abstract

There is debate within development assistance and labor market literature about the impact of investments in human capital and creation of economic growth in lower and middle-income countries. Economists and sociologists often correlate human capital directly with the attainment of education and, have presented various theories supporting human capital linkages to socio-economic mobility. A number of studies support the correlation of educational attainment with better workforce opportunities, and consequently economic growth. There are additional factors influencing returns on investments leading to economic growth. Human capital investments vary, however, shared value approaches providing value-chain linkages prove to be more beneficial to all stakeholders in increasing opportunities, though not necessarily proving a causal relationship between human capital investments and economic growth. Frameworks with adaptive approaches in providing assistance, with regard to human capital investments supporting economic growth and social progress, must be further researched to identify those most successful. Economists and sociologists will then be able to conduct human capital impact studies and assessments based on those successful frameworks and approaches. Further studies will also support the betterment of monitoring and evaluation measurement tools that maximize returns on investments while minimizing risk to investors and foster economic growth.

Keywords: Human Capital, Economic Growth, Workforce Development, Value Chain, Education, Labor Market, Shared Value

JEL Classification: I25, O11, O19, E24

1. Introduction

The major determinants of long run economic growth have become a hot debatable issue during the past three decades with the development of the endogenous growth models. These models directed the attention of economists and policy makers to such important factors as human capital, technology, and research and development. Moreover, the theoretical framework of these models has laid the foundation for a myriad of empirical studies that were based on cross country growth regressions, time series analyses and more recently, panel data methods. Different proxies have been used for measuring human capital, including average years of schooling, enrollment rates, adult literacy levels, and expenditure on education. Despite the consensus in economic literature about the positive impact of investing in human capital on economic growth, the current wealth of empirical analyses has not yet confirmed such relationship on a wide scale. (Abdel-Hakim, 2014)

There is intense debate in development assistance and labor market literature about the relative impact of investments in human capital development and creation of economic growth in lower- and middle-income countries. In developing countries, primary education is often seen as the most important contributor to the development of human capital, while secondary and tertiary education are viewed as important determinants of human capital in middle-income and high-income countries. While the results of most studies and literature provide positive correlates between human capital (realized through educational attainment) and economic development (through market participation), many studies have suggested there to be no direct linkage between countries with higher education levels and the ability to achieve higher rates of economic growth. This review essay investigates the role of investments in human capital in stimulating the economic growth of developing countries, considers additional factors shaping the outcomes of human capital investments, and reviews studies measuring the impacts of human capital investments in determining economic growth in developing countries.

2. Literature Review

2.1 Labor coefficient impacts on human capital research

The inclusion of labor coefficients and variables into economic models dates back at least to 1956, when Robert Solow posited, “the long run rate of economic growth is determined exogenously based on the rate of technological progress and the rate of growth and quality of the labor force.” Solow’s exogenous growth theory triggered a series of debates among economists (as well as sociologists) about the factors influencing (human capital and economic) growth. These debates greatly influenced the works of other great human capital theorists, such as Nobel Laureates Theodore Schultz, who connected human capital to labor productivity, Gary Becker and his ground-breaking work on Human Capital Theory, and later American economist, Paul Romer, who introduced human capital stock linkages to innovation and technology utilization.

2.2 Studies to determine correlates of human capital investments on economic growth

A number of studies illustrate variables, such as physical capital investments, percentages of the working-age population enrolled in secondary/tertiary education, and population growth rates to show the coefficients of human capital investments having positive impacts on a broad sample of some, but not all, developing countries (Abdel-Hakim, 2014). A comprehensive review of literature and studies from 1990-2010 by Rasha Abdel-Hakim (2014) challenged whether countries with higher education levels realize higher rates of economic growth. Her review of the studies noted below revealed a consensus of the positive impacts of investments in human capital in stimulating economic growth, although the empirical analysis offered does not consistently confirm the relationship.

American macroeconomist, Robert Barro (1991), deduced that the number of school years had a significant positive effect on the growth of GDP per capita for a number of countries in the period 1960-90; Barro along with Columbia University economics professor, Xavier Sala-i-Martin (1995), concluded that human capital alone is not a major determinant of growth trends; Lant Pritchett (2001), Professor of the Practice of International Development at Harvard University’s Kennedy School of Government, showed that the impact of the growth of human capital (measured as the average years of schooling of the labor force) on economic growth is significant but negative due to the growth impacts of education being consistently less than expected; David Bloom, David Canning and Jaypee Sevilla’s (2001) National Bureau of Economic Research paper utilized panel data for 104 countries for the periods 1970-1980 and 1980-1990, showing positive effects of human capital investments on productivity and hence on income growth; Economist Mans Soderbom and Francis Teal (2003) found that using log GDP per capita as the dependent variable instead of the growth rate of GDP per capita indicates a stronger significant impact of human capital investments on economic activity; Ben-Gurion University of the Negev economists, Aamer Abu-Qarn and Suleiman Abu-Bader (2006), conducted research on the main determinants of growth for 11 MENA countries from 1960-2001. Their study found human capital investments do not always stimulate economic growth, noting that in Egypt, labor market participation fell from 1990-1998.

2.3 Shaping the growth of human capital

Economists and sociologists often correlate human capital directly with the attainment of education and have presented various theories supporting human capital linkages to socio-economic mobility. Educate a Child (2013) labeled primary education as a key component of development strategies (Akukwe, 2014). However, the preemptor to an individual’s ability to capitalize on human capital opportunities (leading to economic growth) maybe significantly predetermined by the cultural capital gains made throughout early childhood development (Bourdieu, 1986; Flora & Flora, 2013; Stevdsen & Stevdsen, 2012). Cultural capital shapes our understanding of the environment and ecological system, and equally importantly, our role within the socio-economic system in which we reside (Flora & Flora, 2013). Values derived through early-childhood interactions will largely determine the perceived value of participation in activities to increase human capital throughout the later stages of life. The Floras (2013) suggest there are three key influencers that impact cultural capital in underrepresented populations: A place to live (providing safety), means to earn a living (standard of living), and personal fulfillment (quality of life). Investors that better understand individual and community needs, can better target investments in programs that will support beneficiary objectives and expand economic growth opportunities (Nestlé, 2013). Additionally, individuals and communities with denser networks, prove to be in better positions to promote “buy-in,” participation, and capitalization on those opportunities presented through human capital investments (Bolton, 2011).

2.4 Determining the potential for successful human capital investments

Communities offering and providing adequate housing, a market for commerce (i.e. that can be better accessed with good education) and quality of life services (e.g. health), are richer investment prospects to public and private sector donors looking to capitalize on economic opportunities resulting from their investments. Consider

however, that prior to their investing with an intent to deepen human capital, investors should first determine the cultural capital assets of potential stakeholders. The level of individual and consequently community “buy-in” to a development program may be predetermined based upon perceived and/or actual levels (and qualities) of those services being provided by local and national government associations. Large corporations, such as GE Africa, evaluate a community’s readiness for investment by “flag planting” evaluators within potential communities (J. Ireland, personal correspondence, January 19, 2015). Part of the process in determining a market’s potential is determining whether potential market participants’ understand the intrinsic value of capitalizing on the investment opportunity (Farquharson, Torres de Mästle & Yescombe, with Encinas, 2011; Hills, Russell, Borgonovi, Doty & Iyer, 2012; J. Ireland, personal correspondence, January 19, 2015). As part of its Creating Shared Value Approach (2013), Nestlé regularly engages stakeholders at the community level to ensure community needs are understood and addressed by investing and implementing in programs to fulfil beneficiary needs. Nestlé understands that supporting community development will also expand market access for its business. The thorough contextual understanding of the ecological environment creates sustainable growth opportunities in developing countries (Hernandez, 2015). In this regard, cultural capital investments (seen as strategic social investments) can be pivotal in shaping the outcomes of human capital investments on economic growth.

2.5 Social investments shaping human capital opportunities

Philanthropic and private sector organization investments that will impact social issues, also positively influence cultural capital (Hernandez, 2015; Strickland, 2014). In its annual letter (2015), the Bill and Melinda Gates Foundation (Gates Foundation) referenced a UNICEF release highlighting that pharmaceutical companies’ contributions in 2013 allowed 800 million people to receive free vaccines, medication and medical care. Continued contributions of this kind will not only lower the death rates in children under the age of five from one in 20 to one in 40 by 2030 in developing countries, but will also shape a new generation’s perception of development investment impacts in other sectors such as education and economic growth. Likewise, Nestlé’s primary global development efforts seek to improve the overall health and wellness of children under age 12 (Nestlé, 2013). The Gates Foundation and Nestlé understand, as discussed by Ambassador James Michel in *Linking Growth and Governance for Inclusive Development and Effective International Cooperation* (2014), that investments into the health sector, particularly benefiting children, will impact abilities to capitalize on human capital opportunities, namely in education, in the future (Hernandez, 2015). Ambassador Michel also writes, that the impairment of a child’s abilities to attain the necessary tools and education, due to poor health and nutrition, negatively impacts their human capital and future economic opportunities (Michel, 2014). Large private sector enterprises clearly see the intrinsic value in health sector investments having an indirect influence on education sector investment outcomes.

2.6 Determining returns on human capital investments

A number of studies, similar to the Global Business Coalition for Education, Brookings Institution and Accenture (2013) study, support the positive correlation of educational attainment, better workforce opportunities, and consequently economic growth. A 2014 American Institutes for Research (AIR) paper, as part of the Inter-Agency Network for Education in Emergencies Working Group on Education and Fragility, estimated educational returns on investments to yield \$53USD for every \$1USD invested, while also citing research that attributed stalled economic growth to a lack of primary education (Akukwe, 2014). Educational investments supported by the Gates Foundation (2015) are primarily focused on providing better access to online education and technology courses to close the literacy gap between males and females, thereby opening new opportunities to women within the market. The World Bank (2014) estimates that the equaling of employment levels in India and Africa may raise their respective Gross Domestic Product (GDP) 12% over the next 15 years (Gates & Gates, 2015). A study by Global Business Coalition for Education, Brookings Institution and Accenture (2013) estimates that India could realize a 42% annual return on educational investments. Nestlé’s human capital investments through education and training initiatives have impacted over 733,000 women in developing communities throughout the world in efforts expand market access. However, there are additional factors that influence whether educational returns on investments will lead to economic growth. These factors include rule of law (or lack thereof) within the geographical space around the investment, the potential of localized talent to integrate into select value-chains (through educational and workforce development) that will function as part of a larger market, and the recognition by beneficiaries of the increased opportunities resulting from active participation in the invested program (Farquharson et al., 2011; Hernandez, 2015; Hills et al., 2012).

2.7 Approaches to human capital investments

There are three distinct approaches driving human capital investments based on the desired outcomes of investors: The approach of governments and multilateral development organizations (including US, EU, USAID,

World Bank), the approach of the private sector (such as GE Africa, Nestlé, Coca-Cola) and lastly, the approach of philanthropic donors (like Global Citizen, Bill and Melinda Gates Foundation). Government and multilateral development organization investments are influenced by national security policies, and are seen as strategic resources to prevent and manage conflicts likely arising from poor economic conditions (Baker, 2014; Hernandez, 2015). Private sector participation is largely driven by those potential profit opportunities stemming from market growth as a result of their investments (Hills et al., 2012). Philanthropic organization approaches are aimed at benefiting poor populations and countries around the world by improving the health, educational and economic opportunities of those less fortunate (Gates & Gates, 2015; Hernandez, 2015). Each investor's approach varies in design; however, those considered to be the most successful at providing sustainable value-chain linkages (through human capital investments to stimulate economic growth) consider "shared value approaches" to be the most optimal method in achieving desired outcomes (Akukwe, 2014; Farquharson et al., 2011; Gates & Gates, 2015; Hills et al., 2012; Nestlé, 2013; Strickland, 2014). Though providing better value-chain linkages can prove to be more beneficial to all stakeholders in increasing education and economic growth opportunities, shared value approaches do not necessarily prove a causal relationship between human capital investments and economic growth.

2.8 Adaptive education and workforce development program trends to stimulate economic growth

The World Bank's Skills toward Employability and Productivity framework articulates an adaptive approach used to provide assistance to its partnering countries with regard to the challenges of workforce development. The broader concept sets forth a holistic model encompassing five components for human development to support economic and social progress: (a) starting right in early childhood (cultural capital investments through programs improving upon social issues); (b) laying a strong foundation in basic and secondary education (human capital investments through education); (c) building and upgrading job-relevant skills (workforce development); (d) fostering innovation and entrepreneurship (identifying gaps within the market); and (e) matching skills to meet market demands (value-chain linkages) based on relevant data (Wright, 2010). Globally, there is recognition of the value of education in achieving sustainable development programs. From 2005-2014, the United Nations Decade of Education for Sustainable Development (USESCO) primary goal was to create sustainable development initiatives that would be central to education and training, across all sectors, by refining and promoting the transition to a sustainable future through all forms of education, public awareness, and training (Wright, 2010).

3. Conclusion and Implications

Though there are correlates between investments in human capital stimulating economic growth, there are other factors influencing whether those investments lead to successful or unsuccessful outcomes. Due to the varying results of empirical studies looking to determine linkages between investments in human capital and economic growth, additional studies need to be conducted by economists, as well as sociologists. The data is inconclusive, and studies have not always found consistent correlations. More empirical research is needed in this area to provide policy directions, especially for developing countries. Programs with government and/or community "buy-in" are generally considered to be more successful due to their shared value approaches. Further studies to determine and develop a common framework and adaptive approaches to shared value investments would prove to be most useful to potential donors and beneficiaries. Economists and sociologists would also be able to conduct human capital impact studies and assessments based on those most successful frameworks and approaches. This research would also support the betterment of monitoring and evaluation measurement tools for maximizing returns and minimizing risks on investments for all stakeholders.

3.1 Value of cultural capital in determining human capital investment outcomes

By correlating human capital to educational attainment, one assumes that human capital will begin to grow only upon entering the educational system (or workforce development and skills training programs). Cultural capital, however, is grown throughout early childhood development, before entering the education system. The successes and failures of social programming (determined by the ability to meet the needs of the populace) shape stakeholders attitudes and perceived value of their future participation within the social ecosystem. Donors and investors considering human capital investment opportunities to impact economic growth must consider the cultural capital assets of stakeholders when projecting market potential (Bourdieu, 1986; Hernandez & Bolton, 2015; Michel, 2014).

3.2 Linking investment approaches to positive returns on investments

Focusing on investment approaches that will create sustainable value-chains within markets is central to economic growth. Donor investments are designed to better health, improve education, and build those skills that support all stakeholders' economic prospects. An outcome resulting in a sustainable value-chain process with

community “buy-in” (through the recognition of the increased opportunities for beneficiaries) creates a larger footprint within the market for future investments, and/or a more stable environment for other development objectives. Stable and sustainable environments provide greater opportunities for positive returns on investments for all stakeholders and investors (Akukwe, 2014; Hills et al., 2012; Michel, 2014).

3.3 Adaptive education and workforce development policies to deepen human capital

In the 1960's, South Korea was able to enroll 100% of the eligible population in primary education. Consequently, a number of economists have determined that maximum participation and enrollment in primary education should be the primary means of increasing human capital within a geographic cluster of people. Once universal primary education is achieved, investments in secondary and tertiary education (growing additional human capital) should be guided by market demand. A successful education and workforce development strategy will not only deepen human capital in later adult years, but is vital in supplying the required technical skills for economic growth and market inclusion along value-chains, as previously discussed. By providing opportunities for beneficiaries to upgrade their skills throughout their lives, regardless of their age, stakeholders will be empowered to maintain their positions along market value-chains. Determining market demand for those specialized and technical skills required for research and development is equally important (Abdel-Hakim, 2014; Akukwe, 2014). Equipping the workforce (through continued human capital investments) with the skills required for the jobs of today and those of tomorrow is a strategic concern for continuing growth and development outlooks of developing countries.

3.4 Collaboration within the education sector to increase stakeholder participation

A strategy for strong, sustainable, and balanced growth within the education sector addresses strategic issues and can be leveraged to encourage maximum stakeholder participation among institutions, enterprises, and field experts (Wright, 2010). In various countries, the collaborative efforts by public and private investors in education have shown a propensity to ensure a more efficient use of resources, encourage beneficiary contributions, and increase the likelihood of investments by other donors, particularly from within the private sector. Public-private partnerships done right are a powerful tool for development, providing enduring solutions to some of development's greatest challenges. Fostering increases in private sector participation also requires the need to increase transparency and accountability, reduce overlapping of responsibilities, and build the capacities of local governments without being seen as a substitute for effective governance (World Bank, 2009). Organized approaches in meeting those challenges faced by the development community will increase the likelihood of investment success, while limiting the risks of implementing programs outside the capabilities or absorptive capacities of beneficiaries.

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