Assessing Education and Productivity

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Education and Productivity

As one of the driving forces in the economy, education allows for a country to increase its productivity through human capital development and innovation, as well as creating productivity improvement and fostering productivity centered behaviours. In a Belgian report Kampelmann et al. (2018), examine how education impacts productivity. The results showed that high and middle educated workers were significantly more productive than workers with lower educational levels. This study highlights the positive correlation between educational levels and productivity.

Similarly, Forbes et al. (2010) found that, a higher educational level is perceived by employers as an indicator for greater productivity through the accumulation of knowledge and skill. This in return helps to create a more productive supply of labour as more emphasis is placed on attaining higher education to be more employable and to earn more. This is evident in economies which have restructured their economy based on improving education. One such example is Singapore which following their independence emphasized the power of education to achieve its developmental goals (Gopinathan & Lee, 2011). Moving from a standardized (one-size-fits-all) approach to a multifaceted approach focusing on academic, polytechnic and technical institutions, Singapore was able to shift its economy from a low-intensive manufacturing to a more capital and skill-based economy driven by improvements in its educational system and institutions (OECD, 2011)

Education and Productivity in the Jamaican Economy

The Jamaica Productivity Centre (2021) reported that Jamaica's labour productivity rate has declined annually from 2001–2019 on average by 0.6%. This occurred as a result of factors such

as low economic complexity (low value-added and unvaried production), lower investment in capital and deficiencies in the educational sector, (Ivey, 2020). This means that the average Jamaican worker has been progressively contributing less to national economic wealth in almost two decades. However, in developed countries such as the United States of America (USA), the labour productivity growth rate from 2001–2019, on average has seen an annual increase of 1.5% (OECD, 2021).

According to report by the Ministry of Labour & Social Security (2018), 47.5% of Jamaica's total population makes up its labour force. Of this, 8% of the total numbers of individuals in the labour force have an associate degree, 19% have a bachelor's degree, 1% has a master's degree and less than 1% of the labour force has a doctorate. Comparatively, statistics obtained from the United States Census Bureau (2018) showed that in the United States of America, 11% of the labour force have an associate degree, 26% have a bachelor's degree while 15% of the labour force had obtained an advanced degree (Masters, doctorate, professional). Therefore, as stated above higher levels of educational attainment within the labour force can be associated with a positive increase in labour productivity rate as evident in the USA economy.

Educational Productivity

In every economy, education paves the way for budding professionals to have access to opportunities enabling them to reach a higher standard of living. Developed educational systems tend to produce a more skilled and productive labour force. A good educational system is based on the inputs and process of schooling to achieve desired outcomes, such as performance, levels of achievement, and awards. This process of achieving these desired outcomes using given inputs is known as Educational Productivity.

According to Hanushek and Ettema (2017), productivity in the educational sector is challenging to define, leading to uncertainty among economists when it comes to measuring it. The challenges that economists normally face, mainly stem from the fact that inputs and outputs in the education sector differ from other firms.

In certain circumstances, productivity has been measured by looking at the total government expenditure as an input while the total number of full-time students at all level of education (Early

childhood, Primary, Secondary, Tertiary) an output factor. Additionally, school quality, attendance records, quality of teaching, and class size have also been used as input measures, while employment, high school graduation, college matriculation/graduation and tests scores are used as proximate measures of outputs (Atkinson, 2004). Although challenging, measuring productivity in education will be key to assessing whether programmes and policies that stress achieving certain outcomes such as number of graduates, students Grade Point Average (GPA) and school's overall pass rate also influence educational systems to use tools more effectively. Productivity improvements in education are not only based on improving the overall outcome, but also on ensuring improvements in outcomes are made relative to each input.

Looking Ahead

Within the educational sector, the emphasis is placed on a system of standardized testing to measure student's performance. However, in trying to meet these standards schools will either find it difficult to achieve these results due to lack of resources or end up creating waste due to underutilization of resources. Therefore, in the process of measuring and assessing educational outcomes, more emphasis should be placed on the efficient use of inputs.

Successful schools are often defined by their unique characteristics; this can be athletics, academics or among other things. With the outbreak of the COVID-19, productivity within the educational sector across the globe has been severely impacted due to closure of schools and the shifts in teaching format. According to Murphy (2020), the prolonged closure of schools will have a lasting impact on the cohort of students experiencing these shifts in educational system. It is believed that early-childhood education will be the most impacted due to the sudden change in teaching and learning environment for younger children. Additionally, students at tertiary and secondary level may lose over 25% of what they learn due to the five (5) months closure of schools (and overall teaching) as compared to the normal three (3) months period during the summer. Also, matriculation rates may decrease leading to an increased number Of dropouts. This can result in the loss of skills within the labour force which can further impact productivity levels. To preserve the academic standards, schools are now faced with a predicament of deciding on ways of improving outcomes while maintaining current costs or maintaining current outcomes at a lower cost. (U.S Department of Education).

Jamaica has put several measures in place to ensure that the academic standards within the educational sector are upheld. With the introduction of technology and different teaching methods, innovators can develop measures to assist teachers to be more effective and efficient when delivering lessons. Lastly, if the quality of our educational system is not maintained through analysing new and revised policies as well as assessing critical areas such as student services, accreditation, curriculum and academic quality, then productivity in the educational sector will be constrained (Austin, 2020). Likewise, if we introduce technology without changing the teaching and learning environment, there we will be no substantial improvement in student learning (McGivney & Foda, 2017).

Similarly, as we seek to recover from the negative impacts of COVID-19 on education and productivity, and as we transition into the Fourth (4^{th}) Industrial Revolution, considerations are needed on how to enhance labour mobility and effectively adopt teaching methods to the changing economy.

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