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Does human capital contribute to economic growth in Mauritius?

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Abstract

Purpose – Real gross domestic product (GDP) growth for Mauritius has averaged more than 5 per cent since 1970 and GDP per capita has increased more than tenfold between 1970 and 2012, from less than $500 to more than $9,000. It has often been reported that human capital, along with other growth enablers, has played an important role in this development. The purpose of this paper is to study this nexus.

Design/methodology/approach – A human capital augmented Cobb-Douglas production function is used, where output is also a function of capital and labour. One of the innovations of the present paper is the use of a composite index to proxy human capital. The authors investigate the impact of human capital on economic growth in a dynamic vector error correction modelling (VECM) framework.

Findings – The general results here show that stock, labour and human capital are all significant growth determinants, with human capital having a long-run output elasticity of 0.36. The VECM results generally validated the long-run output elasticity, although a relatively lower elasticity of 0.1 is obtained. Both sets of results tend to point to the fact that human capital has significantly contributed to economic growth in Mauritius.

Research limitations/implications – The current paper paves the way for future work, which can build on the composite HCI developed here and aggregate it with relevant variables representing tertiary education and training, to better analyze and further understand the role of human capital on economic growth in Mauritius.

Originality/value – Here, the authors posit that human capital is an aggregate of health, education and nutrition, and the authors use a composite index along with other contributing factors to study its impact on economic growth, within a VECM framework.

Keywords Human capital, Mauritius, Economic growth, Composite human capital index, Vector error correction modelling (VECM)

Paper type Research paper

1. Introduction

The endogenous growth theory stipulates that the rate of technological progress and subsequently the long rate of economic growth can be influenced by economic factors. This is founded on the precinct that technological change takes place through innovations in the form of new processes, products and institutions. It is acknowledged that human capital is a strong enabler to such innovations, and empirical studies analyzing the impact of human capital on economic growth have mainly focused on education and health as proxies of human capital. From a theoretical perspective,

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human capital is, therefore, a key component in explaining economic growth, as it increases output through various channels. It increases the productivity of labour and the demand for labour, resulting in a rise in output (Bergheim, 2005). This in turn has a positive impact on incomes.

Mauritius has been a success story since independence, moving from a low income to an upper middle-income status. At independence, it inherited a system of free education and health services. The government, engaged in its nation-building strategy, was determined to consolidate the social fabric and, hence, invested in the provision of these social services. The export-oriented strategy of the 1980s was supported by preferential international trade agreements and fuelled by Mauritians who positively responded to opportunities. Indeed, businessmen and women had the human capital, the know-how and the education to exploit market opportunities (Subramanian, 2009). The pool of both unemployed and educated labour was an essential input into this export-led growth strategy. This contributed to an average real output growing at 7 per cent between 1984 and 1988. The social infrastructure comprising free education and health services supported the labour force and was a strong determinant in the observed economic growth. Reported figures relating to the economic performance of Mauritius are impressive. Real gross domestic product (GDP) growth has averaged more than 5 per cent since 1970, and real annual growth in per capita income has also been strong. GDP per capita increased more than tenfold between 1970 and 2012, from less than $500 to more than $9,000. Though a variety of contributory factors have been put forward to explain this growth performance, there is no doubt that the country's focus on international trade has been a critical element, supported by adequate level of human capital. This growth was achieved through sustained, high and consistent investment in social and human development and allowed Mauritius to exploit international market opportunities and maintain its socio-economic growth. It is thus argued that investment in human capital, like investment in other tangible forms of capital generates a stream of future benefits. Despite having witnessed sustained economic growth, successive Mauritian governments have ensured that appropriate policy formulation and investment in human development remained a focal point of their action. As an example, in 2009, the health and public education expenditures as a per cent of GDP were, respectively, 3.6 and 11.38 (World Bank, 2011).

Local policymakers and observers have claimed that systematic investment in human capital over the past five decades or so has definitely contributed to economic growth in Mauritius. A large body of literature has been generated, with numerous authors investigating and testing the relationship between the various proxies of human capital and economic growth under different country settings. Despite the growing interest in studying the nexus between human capital and economic growth, the empirical evidences are fragile and not necessarily replicable across countries. The generalization of such evidences is often questioned, given the diverse methodological approaches, data sets and measures of human capital used and assumptions made. Additionally, most of the reported studies have investigated the linkages between the different individual indicators of human capital on economic growth. In light of the above, the effect of human capital on economic growth in Mauritius cannot be inferred from the literature. It is consequently important to empirically investigate this important policy-relevant nexus.

Although it has been reported that human capital has been one of the engines of growth for Mauritius (Zafar, 2011), and despite the strong theoretical foundations for a key role of human capital in economic growth, there has not been many studies that have directly investigated this relationship for Mauritius. Odit *et al.* (2010) used the Cobb-Douglas production function with constant returns to scale where human capital is treated as an independent factor of production in the human capital-augmented growth model. Human capital was proxied by the "average years of schooling" and did not include health and nutrition as other complementary variables. The authors used a data set spanning the period 1990 to 2006, and their results reveal that human capital plays an important role in economic growth mainly as an engine for the improvement of the output level.

But here, we posit that human capital is an aggregate of health, education and nutrition, and all three components are positively synergistic. Behrman (2000) thoroughly delves into the interactions between health, education and nutrition and the likely benefits of simultaneously intervening in all three in social development. It is therefore important to take into account human capital as an aggregate factor in modelling and investigate the linkages between a composite aggregate of human capital and economic growth. This nexus between constituents of human capital and economic growth, despite having been one that has been the centre of academic scrutiny in the international sphere has not attracted the same interest in Mauritius. It is therefore important to empirically examine this nexus, as it can inform future investment and policy-making in human capital development. Findings from such analysis are timely, especially as Mauritius now has ambitions to graduate to a high-income country status and it is acknowledged that one important prerequisite to achieving such a status is to further human capital accumulation.

This paper attempts to add to the extant literature by bringing new evidence on the relationship between human capital and economic growth in Mauritius by using a composite index of education, health and nutrition representing human capital. The remainder of this paper is organized as follows: Section 2 briefly reviews the literature surrounding the theoretical and empirical relationships among economic growth and the various constituents of human capital; Section 3 describes the empirical model used to investigate the relationship; and Section 4 presents the findings. We conclude in the last section.

2. Related literature

Human capital can be defined as a set of knowledge, abilities and skills, used in activities, processes and services that contribute to stimulate economic growth. In the economic literature, human capital is accounted for differently in the various theories of economic growth. Solow (1956) and Swan (1956) developed the neoclassical growth theory, whereby the output of an economy grows as a result of increasing input of capital and labour. Under such a scenario, the economy would suffer from the law of diminishing returns and the only way to dampen the effects of diminishing returns and grow such an economy was through an infusion of technological progress. It was assumed that the rate of technological progress was determined by a scientific process that is separate from and independent of economic forces. Neoclassical theory, thus, implies that economists can take the long-run growth rate as exogenously given from the economic system and ignores human capital (Awel, 2013).

In the mid 1980s, it was acknowledged that there are other factors that could explain economic growth and which are not accounted for by the neoclassical exogenous growth models. Romer (1986) disputed the neoclassical viewpoint and developed the "endogenous growth model". Its basis was to fundamentally challenge that the only way to grow an economy was through an infusion of technological progress. It was stressed that the long-run rate of economic growth is also determined by factors endogenous to the economic system. It is argued that a higher pace of economic growth can raise the impact of innovation, through economic policies supporting trade, competition, productivity, education, training and intellectual property.

Romer (1986) coined the expression "endogenous growth models" and extended the concept of capital to include human capital. The argument behind this inclusion was that healthy and educated workers would be able to use existing capital and technology more efficiently. Romer (1986) also illustrated the role of human capital as the main source of increasing returns in growth rates between developed and developing countries. Therefore, the theoretical foundation for the impact of human capital on economic growth takes its roots within the endogenous theory that underlies its role in technological progress and innovation (Gundlach *et al.*, 2001).

At nation-wide levels, recent periods of sustained growth in total factor productivity (i.e. growth in economic output that is not explained by increases in inputs of physical capital, land or labour hours) are closely associated with improvements in a population's schooling, nutrition and health (Barro and Sala-i-Martin, 1995).

With the emergence of endogenous growth theories, the relationship between human capital and economic growth has become a theoretically studied, theoretically debated and empirically tested issue. Existing literature on the relationship between human capital and economic growth revolves around three principal proxies for human capital.

Education is probably the most important human capital determinant (Bergheim, 2005). It has thus more often been proxied by an education variable, the most common one being schooling enrolment or attainment. Mankiw *et al.* (1992) examined the Solow growth model with and without human capital as a factor of production and found that the human capital-augmented Solow model better explained cross-country income variations. Barro (1991) found that the growth rate of real per capita GDP is positively related to initial human capital (proxied by school enrolment rates) for 98 countries over the period 1960-1985. Bils and Klenow (2000) studied the human capital-economic growth nexus for a cross-section of countries over the period 1960 to 1990. Their main finding was that an additional year of schooling enrolment was associated with a 0.3 per cent faster annual growth over the same period. Abbas (2001) investigated the effect of human capital on economic growth in Pakistan and Sri Lanka, using a human capital production function covering the period 1970 to 1994. Human capital was found to be positively related to economic growth for both countries. Ganegodage and Rambaldi (2011) also investigated the impact of education investment on Sri Lankan economic growth and found that the returns to education were positive but were lower than those found from other countries, mainly because war negatively affected output. Using a longer time series data, Ljunberg and Nilsson (2009) found that human capital was a causal factor for economic growth since industrialization in Sweden but not significantly so after 1975. Most of the above studies have found education being positively related to economic growth, but in some cases, this causality did not exist (Berthelemy and Varoudakis, 1996) or was not significant over the whole time series

period under study. A relatively new strand of investigation has been the impact of the quality of education on economic growth. Hanushek (2013) stresses on the need to include proxies for cognitive skills in human capital studies.

Most of the above-reported studies have concentrated on education and health as proxies of human capital. Health is an important factor for determining the level of returns from education as a healthier person can learn more than an unhealthy one from a given level of education. The health component also facilitates economic growth by improving labour productivity, and according to Gong *et al.* (2012), health services also increase an agent's utility. Teixeira and Fortuna (2003) examined the human capital–innovation growth nexus for Portugal using time series data from 1960 to 2001. Estimates based on vector autoregression and co-integration analysis seemed to confirm that human capital was important to the economic growth process, particularly through the innovation channel. Aka and Dumont (2008) re-examined the long-run relationships and causality between education, health and economic growth in the USA over the period 1929 to 1997. They found a long-run relationship between economic growth, health and education and a bi-directional causality between health and education. Adelakun (2011) examined the relationship between GDP and human capital in Nigeria. Human capital was proxied by total government expenditure on education and health and the enrolment of primary, secondary and tertiary schools. He concluded that there was a strong relationship between human capital development and economic growth.

In general, reported studies have focused on education and health as measures of human capital. In a few cases though, nutrition has also been included as a proxy. Nutrition is linked with productivity, as a person who intakes nutritious food is likely to be more productive owing to higher vigour and strength. Nutrition is therefore linked to output and subsequently economic growth. Dube and Phiri (2015) modelled the relationship between nutrition and economic growth for South Africa and found a bi-directional causality between the two variables. Neeliah and Shankar (2008) also modelled this nexus, but their findings supported the neutrality hypothesis, that is, there was no evidence of causality running in either directions. These authors only investigated on the impact of nutrition on economic growth. Wheller (1980), on the other hand, adopted a three-stage least squares on a large sample of cross-sectional data and found that changes in health, nutrition and education were strong contributors to change in labour productivity and conversely. We borrow from this philosophy and constitute an aggregate index of human capital and model its impact on economic growth in Mauritius within a VECM framework.

3. Methodology and analysis

This paper investigates the relationship between human capital and economic growth in Mauritius, with capital and labour as other control variables. We use annual data spanning the period 1970 to 2011 to build and use a multi-dimensional composite human capital index that allows health, education and nutrition to be aggregated and to be used to investigate the relationship among the various variables in a dynamic vector error correction modelling (VECM) framework. We attempt to verify whether the hypothesis that economic growth in Mauritius follows the endogenous growth model holds true.

3.1 Econometric model

To examine the significance of human capital and to derive an estimated model, a production function is posited as a function of capital stock and labour, as follows:

$$y = f(K, L) \tag{1}$$

The theoretical foundation of the human capital-growth link has been discussed above, and we extend the above Cobb-Douglas function to include a human capital variable, as an additional explanatory variable to essentially represent the quality of labour. Thus, equation (1) is augmented into:

$$y = f(K, L, H) \tag{2}$$

The Cobb-Douglas functional form is adopted to represent the production function; equation (2) is, therefore, transformed into:

$$Y = K^a H^b L^c \tag{3}$$

where $a + b + c \leq 1$ to represent constant elasticity of substitution. Taking logarithms for equation (3) and where the lowercase variables are the natural log of the respective uppercase variable and t stands for time:

$$y_t = \alpha + \beta_1 k_t + \beta_2 l_t + \beta_3 h_t + \varepsilon_t \tag{4}$$

Equation (4) is also consistent with Seetanah and Rojid (2011), who adopted the same methodology to model economic growth for a sample of African economies including Mauritius.

3.2 Data sources

Output was measured by the GDP. Capital was the stock of physical capital of the island and was constructed using the Perpetual Inventory approach (Khadaroo and Seetanah, 2008 for additional information), and the variable labour was proxied by the employment level. Output, capital and employment level are annual data retrieved from Statistics Mauritius covering the period from 1971 to 2011, while data for GDP were taken from the World Bank Development Indicators, 2011. Our focus in the present study is the use of a composite index to proxy human capital, comprising education, health and nutrition. We here assume that these human capital components are not perfect substitutes and interact to constitute a human capital index.

The innovation of our study is the construction of a multi-dimensional composite index for human capital that allows the various components of human capital to be aggregated. The index comprises an education variable (proxied by secondary school enrolment), a health variable (proxied by life expectancy) and, finally, a nutrition variable (proxied by calories intake). Individual human capital variables were indexed over 100 and averaged to constitute the composite human capital index. Figure 1 presents the time series for the individual indices and also the composite human capital index and real GDP over the period 1971 to 2011.

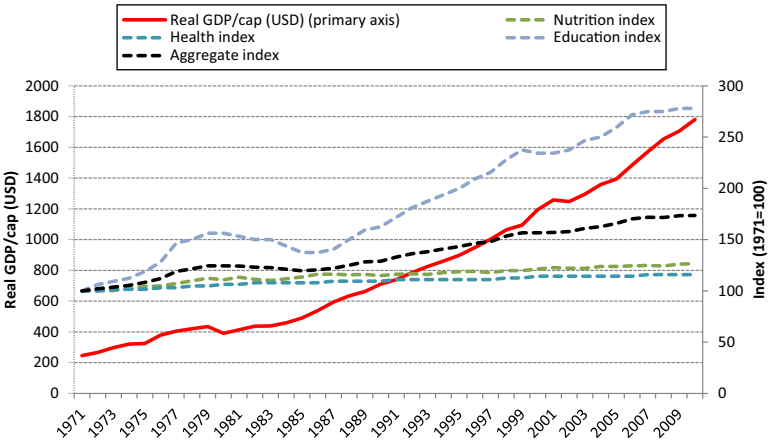

Figure 1.
Trend of real gross domestic product and human capital indices (1971-2011)

3.3 The econometric model and preliminary tests

Stationary series have basic statistical properties which are invariant with respect to time. They have constant mean and constant finite variance and co-variances between observations that depend only upon their distance apart in time. Practically most economic time series data are not stationary but are rather integrated or non-stationary. There is need to ensure stationarity before making use of the respective series in econometric modelling. To determine the order of respective series, unit root tests are conducted. The tests include the augmented Dickey-Fuller (ADF) test, Phillips-Perron (PP) test and the Kwiatkowski–Phillips–Schmidt–Shin (KPSS) test. Test for stationarity shows that all our variables are integrated of order 1 but stationary in first difference.

3.4 Co-integration issues

Stock (1987) still argued that even when variables are non-stationary but stationary in first difference; they may be co-integrated. The Johansen (1988) procedure is thus used to determine the presence of co-integration in a VECM of capital, labour and human capital. The VECM can be expressed in a vector for the first difference as follows:

$$\Delta Z_t = \mu + \Gamma_1 \Delta Z_{t-1} + \Gamma_2 \Delta Z_{t-2} \ldots\ldots + \Gamma_{k-1} \Delta Z_{t-k+1} + \Pi Z_{t-1} + \eta_t \qquad (5)$$

Variable [as in equation (4)]	β (output equation)	Physical capital stock equation	Labour equation	Human capital equation
Output	1	0.42*	0.54**	0.573*
k	0.69**	1	0.43*	0.36*
L	0.27**	0.23*	1	0.12
H	0.36**	0.34**	0.34*	1

Notes: *Significant at 10% level; **significant at 5% level

Table I.
Estimated co-integrating vector (Long-run estimates)

where Z = [k, l, hc]. The lag order of the VECM is selected on the basis of the Schwarz Information Criterion. The trace test and the maximal eigenvalue test are considered while determining the number of co-integrating vectors in the system. In the presence of co-integration, the matrix Π has non-zero but less-than-full rank and can be decomposed into $\alpha\beta'$, where β is a matrix of long-run parameters and α is a matrix of short-run adjustment parameters. The VECM also allows the examination of the direct and the potential indirect effects. A test for co-integration is undertaken using the Johansen procedure. At the 10 per cent level, trace value and maximum eigenvalue test both show that there is one co-integrating vector. The coefficients attached to the different explanatory variables are all significant with the required theoretical signs (Table I).

4. Research findings

Overall, the outcomes of this study show that the coefficients attached to the different inputs of the growth function have their theoretical signs and are significant. There is therefore a significant long-run relationship between output, capital stock, labour and human capital (Table I).

4.1 Determinants of growth

The general results here show that stock, labour and human capital are all significant growth determinants in Mauritius, with capital stock being the relatively most important ingredient with an output elasticity of 0.69. This finding is in line with Khadaroo and Seetanah (2008) and Neeliah and Seetanah (2012), who also found that capital stock was the main growth determinant for Mauritius in the long run. More interestingly, for our current running hypothesis, human capital has an output elasticity of 0.36. This implies that a 1 per cent increase in the human capital index would potentially result in a corresponding 0.36 per cent increase in output level in Mauritius. This is in line with the theoretical underpinning discussed earlier and confirms that human capital (including education, health and nutrition) remains an important ingredient for economic performance. Moreover, our findings generally concur with Adelakun (2011), Aka and Dumont (2008), Bils and Klenow (2000) and Wheller (1980) for the case of various countries and with Khadaroo and Seetanah (2008) for Mauritius in the long run. It is noteworthy that our estimates are based on a proxy of human capital that innovatively includes education, health and nutrition as a composite index.

Interestingly, VAR modelling also allows us to investigate and discuss the possibility of other indirect and feedback effects, for instance, from the long run estimates human capital also has indirect effects on growth through the capital accumulation channel. Physical capital is the main determinant of growth, and it can be seen from the "Physical capital stock equation" (from Table I) that human capital encourages physical capital accumulation. Thus, it can be argued that a better labour force may be a better incentive for domestic and foreign direct investment, due to potentially higher efficiency of labour, the latter in turn significantly boosting up the growth levels. We argue that there are interesting indirect effects of human capital on growth via the physical capital accumulation channel. Our findings concur with those of Abubakar *et al.* (2015) and Qadri and Waheed (2014), who, respectively, came to similar conclusions for Pakistan and the Economic Community of West African States (ECOWAS) countries, thus giving further credence to both the direct and indirect growth-enhancing properties of human capital.

Referring to the "Human capital equation" (Table I), it is interesting to note that the output of the country as measured by GDP is also a main determinant of human capital. As such, there is a bi-causal relationship between the two variables, that is, human capital causes economic growth and vice versa.

4.2 Vector error correction modelling estimates

Given that the variables under consideration were only stationary in first difference and co-integrated, we formulated and estimated a VECM. The estimated error-correction equations pass the residual autocorrelation at the 5 per cent significance level and are presented in Table II. The variables in the system are all endogenous, given that the lagged error-correction terms in all the equations of the VECM are significant.

To check for model specification, four diagnostic tests are imposed. First, the Lagrange Multiplier test for residual serial correlation finds no evidence of serial correlation even though the lag is extended to 8. The residuals are also multivariate normal. Null hypothesis of normality fails to be rejected for skewness, kurtosis and Jarque-Bera tests. Besides that, the homoscedasticity of the residuals also fails to be rejected for both joint and individual tests.

The VECM results generally validated the previous results, even though in the short run, relatively lower coefficients are obtained (or at times even insignificant but with the same size). It can be argued that a 1 per cent increase in the growth rate of the human capital index leads to a 0.1 per cent increase in the growth rate of output after one year. It confirms a positive and significant contribution of human capital to output in the short run. Interestingly, it is also shown that human capital has favourable impact on physical capital accumulation, thus indicating possible indirect effects via this channel. In fact, a 1 percentage point increase in the growth rate of human capital leads to a 0.14 percentage point increase in the growth rate of physical capital after one year. In turn, we also note that a 1 percentage point increase in the growth rate of physical capital leads to a 0.23 percentage point increase in the growth rate of output after one year. The two elasticities taken together imply that a 1 percentage point increase in the growth rate of energy leads to a 0.032 (0.14×0.23) percentage point increase in the growth rate of output after two years. This is an estimate of the indirect effect of energy on output in the short run via the physical capital channel. Interestingly, the coefficient of the lagged error correction term is -0.36, indicating that about 36 per cent of the disequilibrium in our model is corrected in the next period. Furthermore, VAR modelling also validated the existence of bi-causality and indirect effect, similar to the case of the long run as discussed earlier.

Variable [as in equation (5)]	ΔOutput	Δk	Δl	Δh
$\Delta Output_{t-1}$	0.53*	0.42*	0.54**	0.233*
ΔK_{t-1}	0.23*	0.75*	0.33*	0.23*
ΔL_{t-1}	0.45**	0.13	0.64*	0.05
ΔH_{t-1}	0.1**	0.14**	0.34*	0.77*
Ect_{t-1}	−0.356	−0.643	−0.345	−0.23
R^2	0.7	0.65	0.53	0.56

Table II.
Estimated error-correction equations

Notes: *Significant at 10% level; **significant at 5% level

5. Discussion

A reasonable stock of human capital is necessary to enable a country to reap the benefits of its innovation efforts. It has often been proclaimed and hypothesized that it is through high, consistent and equitable investment in social welfare and human capital development that Mauritius has been able to exploit international market opportunities and sustain its economic development. This paper quantitatively investigates the relationship between human capital and economic growth in Mauritius, within an endogenous growth framework with capital and labour as other control variables. We use annual data spanning the period 1970 to 2011 to build and use a composite human capital index including health, education and nutrition to investigate the nexus in a dynamic VECM framework.

We provide evidence that human capital formation was an important growth factor for the Mauritian economy over the period under study, hence bringing additional credence to the endogenous growth theory, and also supports our initial hypothesis that human capital has positively contributed to economic growth in Mauritius over the past four decades or so. The specific results here show that the stock of physical capital, labour and human capital are all significant growth determinants in Mauritius, with human capital having a long-run output elasticity of 0.36. In the long run, we could interpret that a 1 per cent increase in the human capital index would increase GDP by 0.36 per cent. We also found that output also positively affect human capital in the long run. Indeed, higher level of output would imply more tax revenue for government, and as the inputs for human capital (especially for education and health) is essentially government-financed, more resources can be allocated to them. Such results tally with Asghar *et al.* (2012), who also found bi-directional causality between human capital and economic growth in Pakistan but not with Mehara and Musai (2011), who found a unidirectional effect running from GDP to health expenditure.

The VECM results generally validated the long-run output elasticity, although a relatively lower coefficient of 0.1 is obtained. The short-term estimates show that a 1 per cent point increase in the growth rate of the human capital index leads to a 0.1 per cent point increase in the growth rate of GDP after one year. The lower coefficient could be explained by the fact that building of human capital is essentially a long-term endeavour. We argue that it takes time for the effects to fully ripple through the economy and, thus, have their full impact. As far as we are concerned, the human capital index is a composite one comprising education, health and nutrition and these components are positively synergistic. But policies implemented to improve education, health and nutrition may operate with different lags and may only attain their desired effects after a period of time.

Both long-run and short-run results tend to point to the fact that human capital has significantly contributed to economic growth in Mauritius, and one can further conjecture that human capital development policies and subsequent programmatic actions need to focus on education, health and nutrition. Sustained growth at national level has spilled into the wider economy and has generally grown household incomes. These have consequently improved the quality of life and were also reinvested into human capital at a micro level. Such efforts at micro level complemented those supported by the government investment. It can be argued that overall, human capital expenditure and subsequent human capital development has had a definite long-run impact on economic growth in Mauritius and that such investment needs to be

reinforced so that the country can transit into the next phase of its development as a high-income country. As Mauritius tries to get out of the middle income country trap and aspires to graduate to a high-income economy, it has to focus on the further development of knowledge-based sectors. A knowledge-based economy focuses on the role that the creation and management of knowledge play in its economy. Human capital development, more specifically higher skills, are seen as one of the main enablers to support this protracted development, but the role of skills in economic development in Mauritius has not been investigated in an econometric framework. An emerging research strand (Zhang and Zhang, 2011; Ganegodage and Rambaldi, 2011) is to focus on the different levels of education and their relevant impact on economic growth. It is reported that due to the capital-skill complementarity, tertiary education and skilled labour have a stronger effect on growth. Therefore, if a country aspires to increasingly use technology and knowledge sectors to foster growth, then the contribution of higher skills through tertiary education needs to be studied. This gap paves the way for future research, which can build on the composite HCI developed here and aggregate it with relevant variables representing tertiary education, to better analyze and further understand the role of human capital on economic growth in Mauritius. Such findings could guide future education expenditures.

This study has looked into the impact of human capital on economic growth from a macro-perspective, but the mechanics of translation of this human capital accumulation into productivity and performance is through improved human resource practices at meso and micro levels. Training in the workplace and behavioural food consumption in the household are practices which unfortunately have not been controlled for in the present analysis. Their essential role within a human capital-augmented growth model could be an area for future investigation.

6. Conclusion

We attempted to fully investigate the human capital–economic growth nexus for Mauritius within a VECM framework. The main findings of this study are that human capital is key to the short- and long-run economic growth of Mauritius. In contrast to many of previous studies investigating the above nexus where human capital is typically treated as a homogeneous concept, we use an aggregate index of education, health and nutrition to proxy human capital. We found a bi-directional relationship between human capital and economic growth. From a policy perspective, the confirmation of the feedback hypothesis provides credence to increasing human capital formation and its subsequent positive impact on economic growth. Given its importance to the economy, any shock or sub-optimum development in the human capital stock could harm economic growth. It is thus suggested that Mauritius judiciously increases the individual constituents in the mix of variables constituting the human capital index to promote to economic growth *ceteris paribus*.

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