

Challenges and Solutions of Higher Education in the Eastern Caribbean States

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Abstract

Higher education is considered as one of the most essential factors in influencing societal changes, due to its ability to help formulate good decision making in every sphere of modern society, in businesses, education, politics and science. Higher education over the years has significantly increased, thus given rise to many opportunities for those who pursue it. The Caribbean students, like the rest of the world seek to benefit from higher education, not only for enhanced academic knowledge, but also for socio-economic development.

Due to its sluggish development, brittle economy and lack of natural resources the Caribbean region faces many economic challenges in making quality higher education accessible to all of its occupants.

The purpose of this study is to investigate and compare the challenges of low output of higher education and availability of higher education institutions in the 21st century in the Eastern Caribbean. The study analyzed database of 37 tertiary institutions in the OECS, while using comparative approach to analyze availability and cost for higher education. Results show that factors that are affecting higher education in the region are accessibility, location, quality of education, institutional costs and unemployment of graduates. We found that increased access in higher education has risen tremendously due to accessibility of technology and factors like globalization, integration-networking and traveling cost. This paper suggests that collaborative approach be taken by governments of the region to increase access and funding for higher education through scholarships and grants.

Keywords: Eastern Caribbean, Higher education, Challenges, Cost and access

1. Introduction

1.1 Background

The Organization of Eastern Caribbean States (OECS) came into existence on 18th June, 1981 when seven Caribbean countries Antigua and Barbuda, Montserrat, St. Christopher-Nevis, Dominica, St. Lucia, Grenada and St. Vincent and the Grenadines signed the Treaty of Basseterre. Later in 1995 Anguilla became a member then subsequently the British Virgin Islands then Martinique acceded on 4th February, 2015, bringing the total number to 10 countries. The Governments of these islands declared that they were “inspired by a common desire to strengthen the links between themselves by uniting their efforts and resources and establishing and strengthening common institutions which could serve to increase their bargaining power as regards third countries or groups of third countries.”

The small islands of the Caribbean have been victims of globalization for an extended period of time, causing momentous economic challenges which in turn places a significant strain in the reform and development of higher education (Bacchus, 2008). The geographic location of these islands play a pivotal role in the countries and the region's economy, but over the years has been seeing a tremendous increase from different professionals within the job market. Since the 1980's the region has been facing a spurious character of economic territorialization which adversely affect developmental changes Ocampo, (2004) in higher education. While the Caribbean region struggle to contribute 0.13% Morrison, (2014) of it gross domestic product to research and innovation, other developed economies have been dedicating at least 2%, with Japan leading the field on 3.2%. Within the Eastern Caribbean there are only two universities that are involved with research and innovation. The University of the West Indies (UWI) which have three different locations around the region and is funded by 17 countries within the Caribbean and St. George's university, which is privately owned by international investors but is also financed by the contribution

of the private sector. Although these two universities are located within the Caribbean region, it is only St. George's University that is actually located within the Eastern Caribbean which is the focus of this research. However, UWI has open campuses in nine of the OECS. All of these academic institutions are internationally accredited and are linked across international boundaries by a common historical tradition and culture.

These institutions are connected by international knowledge network that communicates research worldwide through books, journals and increasingly, databases (Altbach, 1987). The trends which are influencing higher education financing outlined by Marcucci & Johnstone, (2007), are still very relevant in the Caribbean: (a) rising unit costs of instruction; (b) increasing enrolments; (c) faltering government revenues coupled with escalating fiscal burdens associated with, for example, the public sector wage bill, and debt obligations; and (d) decentralization, devolution and deregulation which encourage the privatization of public higher education institutions. Therefore, implementation of the strict rules and policies are one of the measurements in trying to secure persons living in the region, mainly because public financing is the exclusive method for providing post-secondary education. The average investment as a percentage of GDP in post-secondary education is 0.8% of which only one eighth is from private funds (Bloom & Hobbs, 2008). Therefore, to create a cost effective and sustainable framework to produce strong partnerships and receipt of quality education for the national colleges there must be collaboration between UWI and the private sector.

It is known broadly that the expansion of educational opportunities does not benefit the population equally due to size and the constant challenges within the OECS (Pelletier, 2009). Therefore, in order to make education beneficial to all, it is necessary to keep the education sector fully staffed and equipped. The educational future of these islands are unpredictable due to factors like free movement and constant travelling, which in turn fuels migration (in search of better job opportunities), then those who remain would be forced to work twice as much which in turn leads to the long known phenomenon of brain drain which would adversely affect these small islands.

1.2 Statement of the Problem

The constant changing of the global economy where everything is technologically driven, new jobs are created requiring highly skilled individuals with multi-talents; the OECS faces the problems in finding qualified individuals to fill these big gaps when hundreds of students graduate yearly. This paradox affects the younger generation (Blom & Hobbs, 2008). The Eastern Caribbean governments requested from the World Bank an analysis and concrete policy suggestions tailored to the OECS, to improve the employability and competitiveness of their work force. The Bank has committed to provide analytical and advisory services in a phased manner, linked as appropriate to financial support for pilot programs.

However, few researches have been conducted and much is not known about the eastern Caribbean higher education, (Leathwood & O'connell, 2003). Thacker & Perrelli, (2012) noted, that some studies have tried to investigate the growth performance of Caribbean countries, but not much data was found, thus making building upon previous research difficult. The similarity of these problems within the member countries of OECS shows how the region is affected in the area of higher education development. Thus, projecting the economy is difficult, because of the type of economy render it unstable and factors affecting the annual tourism season, which is the main source of income for these islands. The key constraint to growth is the absence of adequate economic development and employment of the right types of skills. Education has an important role to play in addressing these challenges in the OECS. This shortfall in turn, has contributed to insufficient improvement in socio-economic development at both national and regional levels. OECS Countries are making significant financial contributions towards education yet limited attention is focused on Higher education. It can be speculated that the lack of attention can be drawn from the issue of globalization, which revealed that the focus on research has shifted politically in the US and UK and observed differences in research (St Clair & Belzer, 2007). Also, because students leaving secondary school do not possess the critical thinking skills required for today's labor market and not possessing the base for the projected higher levels of knowledge and skills for future economies. Beyond certificates, employers require inter alia: creative, critical thinkers; competences in interpreting data; the capacity to generate and communicate knowledge; ICT skills; ability to work in teams on complex tasks; and demonstration of appropriate work ethics.

The analytical first phase brought about a focus which a report was completed on the relevancy of education and training system in the OECS, found that educating the society is building human capital, investment and productivity in developing the skill sets in the individuals of the country (Becker & Tomes, 1994). As the development of the world progresses rapidly, as it relates to technology, upgrading of speeds and faster processing capabilities, the Caribbean region remains a few steps behind in acquiring these new technology and equipment. This is largely due to financial constraints, consequently causing retardation in these areas which is closely linked to education.

Subsequently causing low performance of students, reduce quality of workers and inadvertently limited knowledge based institutions that are accessible in the region for higher education. Higher education enrolment in the region is 12%, according to Trow's revised treatise; the region is nowhere close in accomplishing the threshold for the first stage of the three stages (Trow, 2005).

The purpose of this study is to investigate and compare the challenges of the low output of higher education students and availability of higher education institutions in the 21st century in the eastern Caribbean.

1.3 Objectives

1. To trace the development of higher education in Eastern Caribbean States.
2. Identify the different challenges that the Eastern Caribbean facing for the past 20 years in the evolution of higher education development.
3. To establish a correction measure for the different challenges
4. Create solutions for the challenges in higher education.

Research questions

- a) How has the higher education developed over the years?
- b) What are the different challenges facing the Caribbean higher education?
- c) What corrective measures have been taken by the Eastern Caribbean States to mitigate the different challenges?

2. Methodology

The research design consisted of historical and comparative data that were utilized in the construction of the results that were obtained. The areas that were investigated were based on challenges of cost sharing, tuitions fees, country's economy, types of university, and the access of higher education institution in the Caribbean. The instruments that were used in this research were policy and document analysis and also secondary data. In addition to the 10 different country's population, the economies were also analyzed during the process to gather financial insight. The instruments were suitable and reliable in providing the measurements required for this study. The data that was used was collected from UNESCO and World Bank database (reports, charts, reviews and other documents).

The sample size was comprised of the 10 countries that make-up the Organization of Eastern Caribbean States (OECS) and a total of 37 higher education institutions. Amongst the 37 higher education institutions, is the largest university in the Caribbean, the University of the West Indies (UWI). These universities were chosen based on their geographical location, their population size and size of the neighboring countries for which they provide educational development.

The researcher utilized Microsoft excel 2010 and XE currency converter to undergo the data analysis. We used the application XE the currency converter to convert back tuition fees from USD and EURO to Eastern Caribbean Dollar XCD, which is the official currency of the Eastern Caribbean with the arranging of the different currencies analyzed. The data analyses of the different challenges were observed from colleges and other international participants that were selected on the basic of being a member of the organization of eastern Caribbean states and from universities which are located in the Eastern Caribbean. Also, universities with faculties that are located in the Caribbean whose principal university is located in developed countries were analyzed from the university's websites.

Analysis was conducted on ten (10) public colleges, one (1) regional university (the University of the West Indies which is responsible for providing higher education for (17) countries), St. Georges University in Grenada and 25 international privately owned medicine faculties that are located in the Eastern Caribbean.

The data observations reported and discussed in this article provides concrete evidence to the motivation behind the practices of marketing and privatization of higher education in the Eastern Caribbean region. The analysis contributes to an in-depth understanding of policy making and policy implementation of the privatization in higher education. This study also draws from national and regional statistics and policy document analysis when discussing the different factors, taken into consideration the challenges of the higher education in the Eastern Caribbean states that has taken place over the past 20 years. An extensive search of literature was done to analyze the problems and the challenges that islands face.

3. Literature Review

The major problem which affects higher education in the Caribbean is due to insufficient revenue generated from the economy. According to Dresch, (1987), the cost of higher education in developed countries are usually subsidized by the state, for citizens of that country and even though foreign students are charged higher fees they are to some extent subsidized by the state; however, in the Caribbean only a small fraction of subsidies are offered by the government. Motivation is one of the main factors which are closely related to economics, the macro-economics of the average student life is very complex, due to culture and life style. Garth Williams and Lewis Solomon carried out evaluations in the adversity of the different elements which should be taken into account for the issue of foreign study, they both agreed that the area of costs and benefits are still in the planning phase (Solomon & Young, 1987).

Forest & Altbach, (2006) stated, that the third world nations seem to have a less articulate policy concerning foreign students, the demands by the educated segmented of the population and the lack of access to local academic institutions have significantly increase the demands for opportunities for overseas study.

Johnstone (1999 and 2004), cost sharing have significantly increase higher education enrolments and contributed to the development of the American economy. He also stated, that in Europe cost sharing of living expenses by students, are borne by the taxpayers and in Germany it is covered by the parents, this demonstrate different ways of how cost can be shared. Marcucci et al. (2007), suggested that some country has organizations in place to handle tuition fees and that this type of system makes the process easier to manage, while in other countries the government is responsible for the creation of different types of opportunities for students, accommodate and eligibility for funding; they are also legislations established to give institution power to set tuition levels.

The majority of the world's foreign students who study in advanced industrialized nations are from third world countries (Altbach & Knight, 2007). The developed countries worldwide continue to attract international students to pursue higher education, thus, there is a need for policies to address brain drain, human development index and migration among others, within the Caribbean region. It is known broadly that the expansion of educational opportunities does not benefit equally the population and due to the small population size of the Caribbean results will be the extremely opposite to the larger developed countries, a negative effect.

Through the advent of advancement of technology, greater funding is required for the development of educational facilities. Bransford et al., (2006), argues that higher education has new forms and they make up a sector of the post industrial society. Science and technology are thought to be the principal characteristics of knowledge and are therefore progress towards a wide spread in higher education. In addition, the economics of higher education is linked closely to marketing which has increased significantly with the current transformation of higher education. These results were caused by the dramatic increase from marketing and knowledge (Shahjahan & Kezar, 2013). However, studies by Arocena & Sutz, (2001); Brunner & Uribe, (2007) observed, that limited amount of resources has generated a wide gap in the different sectors of the society. This crisis of the old public universities produced a higher level of individual department, because of the sourcing of student loans are been funded by the individual or the family members. This therefore causes an imbalance and strain on the society and students who went through this process. As described by Altbach, Reisberg, & Rumbley, (2009) the idea of quality would help to link education with skills in different ways, as a consequence improving final product of the graduate acquired within the duration of study in each subject, giving rise to an education space that is rational and multicultural.

In a similar view, the development of quality measurement of higher-education has been explained as a rationalization imperative in the presence of a situation that is increasingly complex and heterogeneous (Verger & Robertson, 2012). As the higher education develops around the world, the availability of options is still limited within the region of the Eastern Caribbean, consequently forcing students to travel internationally for higher education.

Over the years, results have shown that the Caribbean has been relying on new innovation of research; this has shown a poor outlook on research and a low level of creativity for the region. According to Kupchik et al., (2009), the Caribbean need to pay more attention to their quality and standard of research in order to be recognized in the research society and be innovators in order to enhance higher education and obtain better results.

Another major problem which is common in the region is the high level of underperformance of students, which commonly leads to grade-repetition and reduced interest in pursuing further education. Additionally, the region bears a tremendous burden annually in the form of early dropout rate for post-secondary education, this increase level of dropout adversely affects the society with the quality of workers that are produced (L'Évesque, 2008).

Outstanding advantage in the area of research in Caribbean's higher education institutions can be attained, thus producing great results, if scholars in the region unify their efforts, skills and expertise to a cause. Usually the Caribbean seeks solutions internationally to correct occurring situation which happens nationally; this practice came about from colonial laws. The different routines have been cemented through networking among the region with various funding bodies (such as the World Bank) which dictates, international experts is a must if support is to be rendered to the Caribbean; the outcome of such agreements have been chronicled because of past occurrences. This agreement tends to disenfranchised regional scholars and experts by reducing their ability to help in the educational development of the region.

The high levels of attrition rates have been increasing in the region which is challenging the overall quality and standards of education. The implication of globalization makes it necessary to reform our education systems; for it requires us to adapt our own education content to meet not only our local demands, but also our international concerns. Due to the level of preparedness which is emphasized in teaching, this has affected the quality which is offered to the students. It also affects the output of the student, resulting in the students not being fully competent to maneuver the tasks of the work world and adulthood. The increase number of dropout has created a high incidence of illiteracy and numeracy has caused a diverse impact on the future generation (Organization of American States).

In relation to gender in the Caribbean the ratio is 2:1 academically, in favor of women, female has outperformed their male counterpart throughout the educational journey from primary to higher education. The participation of the poorest quartile in higher-education in 2009 fluctuated between 27% and 2% among the countries in the region. There is a dire need for reformation of the pedagogical format and system, due to its employment of archaic methods and failure to adopt new procedures for the enhancement of teaching skills and techniques. Strategic planning is not taken into consideration when making curriculum changes for the development and effective running of institutions. The establishment of one standard education system for all the 10 different islands is required.

The overall development of higher education still poses a great level of difficulty to all the Caribbean countries, this lengthy case is linked to higher priorities other than research for innovation, culture and research. Universities need to take measures in aligning itself with different organizations and forming partnerships to sensitize the populous on the importance of research to the region's development; partnership has proven to improve the research policy in the developing countries. (Jones, McCarney, & Skolnik, 2005).

Nkrumah - Young, Huisman, & Powell, (2008) describe, University of the West Indies to be the leading university in the Caribbean, it was founded in 1962 and to date is it is known to be the core institution of research. There is however, another university which offers higher education in the region, it is called St. George's University and is located in the island of Grenada, bringing the total amount of research and innovation institution to two. It is no wonder, Caribbean students are forced to enroll in international universities where tuition costs are relatively higher.

Third world countries have been at a disadvantaged in terms of higher education development, due to educational foundation which has been laid many years ago involving research and development, Lewis & Simmons, (2010) observed, that the funding for scientific and technological areas that is required to accomplish research is lacking, and also future dependence on international technology, aids in growth retardation of local and regional development. The manner in which research is been conducted in the Caribbean is linked to Caribbean history; opposed to in the developed countries (Young, 2005). As summarized by Bland & Ruffin, (1992), research culture is affected by many different factors; Firstly: resources, Secondly: research emphasis, Thirdly: age size and diversity, Fourthly: group climate, and Fifth: rewards are some of the main factors which shows the low results in the Caribbean.

4. Theoretical Framework

The concept cost sharing theory was constructed by Johnston (1986, 2002, 2003a) and was constructed to combat against tuition fees which had increased dramatically. It explores the cost of higher education which is undertaken by four different bodies: (1) the government or tax payers; this method is implored via direct or indirect taxation where the tax collected funds the country's education. (2) by the parents or family members; through wages or salary accumulated by savings and through loans or lending agencies. (3) students; through contributions or savings and income and (4) philanthropist; which is financed through endowments or current and active contributions (D Bruce Johnstone, 2004). Benefit in acquiring higher education by which cost sharing is applied is demonstrated throughout the Caribbean, the economies which sustain the Caribbean with high level of un-sustainability, cost sharing practices help to benefit the region.

The policy of cost sharing where it is responsible for covering additional cost such as housing, food and other expenses which is covered by the government, assists in the increase for higher education in the Caribbean (D Bruce

Johnstone, 2004). “Cost-sharing thus takes on many different forms, but in whatever form or forms, it takes on, it is generally increasing throughout the world, including the advanced industrialized world, at the start of the 21st century” (Johnstone2004:4). In order for cost sharing to increase the results of higher education graduates in the Caribbean, the government must invest more into higher education, this way the burden is taken away from the families who would encounter difficulties in maintaining student on yearly basics.

Cost sharing is linked to the tuition for each student; the cost of higher education is divided among different stake holders in the society, in this way the tuition fees are raised where necessary (Donald Bruce Johnstone, 2006). Higher education in different countries also produces growth in the country, “most countries continue to experience dramatic increases in the public and private demand for higher education, as higher education comes to be recognized as the engine both of economic growth and of individual opportunity and prosperity” (Johnstone, 2010:10)

Tuition fees can be categorized to define the amount that is required to be borne under the responsibility of the student, this can further state whether paid by the government, by a company, by the student relatives or by friends. The tuition is independent from other fees which are used to cover institutionally provided non-instructional services which are provided by a Higher education institution. The other fees can be sub-divided into food, transportation, books, health, housing, and clothing along with basic necessities for living. Tuition fees can be viewed as a contribution factor to any country economics development(Gu & Hua, 2010)

They can be classed into three different groups: (A) tuition fees for all, whether upfront or deferred: upfront or deferred fee can be defines as the parent or institution or government has the responsibility to cover a fraction of the higher education cost (B) no tuition fees: no tuition fees means that the country accepts all the instructional cost for the eligible students, this would come from the revenue collected through the different mediums in the country, and (C) dual track tuition fees: dual track tuition fees is given to a certain number of students based on their outstanding academic performance and other students who qualifies, but performs on a lower level, these students are placed on a tuition fee agreement making higher education available to everyone. Each group is closely linked to a country’s conception of parental, institution or person absorbing the financial responsibility for their children’s or employees higher education.(Dearden, Fitzsimons, & Wyness, 2011) .

Due to the rapid advancement of technology the demand for higher education has increased. The commercialization of higher education has caused it to rise in different arenas Renehan, (2015),thus in the Caribbean students also seek higher education advancement. The weak economy which supports the region makes it difficult for parents to pay tuition and living expenses as far back as the 1980’s causing them to take students loans to finance higher education (Renehan, 2015). The challenge continues, as it remains very difficult for parents to support their family while paying tuition fee for their child/children in universities; not having parents that are financial stable to assist, the only alternative to obtaining higher education is to apply for student loans or scholarship that is offered by the government or other private organization.

There has been a shift in different economies which has affected the price which is to be paid for tuition, thus resulting to higher cost of living which is passed unto the students which is likely to be higher than the tuition(Benson, Esteva, & Levy, 2013). Some countries have more private than government universities, “privatization of higher education changed the internal workings of institutions, resulting in rapid rises in operating costs” (Renehan Stewart, 2015, P.6).

5. Analysis

The cost of different tuition fees were analyzed using Microsoft excel 2010, observing the cost ranges from the lowest to the highest range of higher education in the low economy countries, also the different courses offered and the duration of the different courses. Also taken into consideration was the population size and size of the islands and the most influencing factor the islands’ economy or the main industry.

Analyzing the medical universities, which are located across the Eastern Caribbean, it is noted that the greater percentages of students are international students. This can be attributed to cheaper living conditions, high educational standards and less crowded classroom.

The table demonstrates the different factor which influences higher education development.

Table 1. Demographics and costs of the higher education in the OECS

Country	Populat ion	Land size	Populatio n density	Main Industry	GDP PPP CAPITA	PER	Types of University	Tuition range XCD	Currency	College Universities	
										Public	Private
Anguilla	14614	35.14	162	Tourism, Boat Building	18800		Community, Medicine	11,000- 41,000	Eastern Caribbean Dollar	1	3
Antigua & Barbuda	91818	170.8	505.2	Tourism, Construction	20,977		Technology Institute Medicine	3750-51 2,000	Eastern Caribbean Dollar	3	3
Dominica	71293	289.9	246	Tourism, Soap ,Coconut Oil	13,102		Community, Medicine	1935-45 8,419	Eastern Caribbean Dollar	1	5
Grenada	107327	133	804	Export Nutmeg, Bananas	11,498		Community Medicine Veterinary	2600-36 4,189	Eastern Caribbean Dollar	1	3
Montserrat	6409	39	131	Tourism	8,500		community Open campus UWI	3500-54 00	Eastern Caribbean Dollar	1	_
Martinique	413264	436	452.9	Tourism, Construction	27,688		Technology Institute	27,000- 70,200	Euro	1	_
St.Kitt's& Nevis	55572	104	484	Tourism, Cotton, Cement	20,929		Graduate Medicine Veterinary	1750-12 7,000	Eastern Caribbean Dollar	1	3
St Lucia	184999	238	796	Tourism, Agriculture	10,560		Medicine Veterinary	1375-48 6,000	Eastern Caribbean Dollar	1	5
St Vincent & the Grenadines	109462	150.3	652	Tourism, Food Processing	42,300		Community, Medicine	5250-18 0900	Eastern Caribbean Dollar	1	2
British Virgin Islands	31148	151	399	Tourism	43,200		Technology Institute Medicine	10,000- 26,730	Us Dollars	1	

*Data was collected from World Bank, UNESCO population estimates for 2007, 2009, 2011

*Tuition costs are shown in the range

*Type Indicates what can be studied in different countries universities

The findings of this study demonstrate the diversity and complexity of the challenges in higher education which the Eastern Caribbean is facing in the 21st century. This diversity is manifested as a result of the changes of the ongoing reforms which have been transpiring over the years, including new technology and innovation in the new ways of creating energy to reduce cost of fossil fuels. The construction and merging of new campuses, along with mixed cultural differences in creating universities patterning prestigious institution. The influence of the Eastern Caribbean culture and ideas are adopted from the United States of America. Through intense data analysis of the empirical data and also being raised and having extensive knowledge of the education system in the region, it has been observed that the complex organizational forms of our society can be observed in different ways (Bolman & Deal, 2003). In a similar view it can be understood through ample metaphorical details (Entwistle & Peterson, 2004). Higher education has its own path and peculiarity of its own organizational forms Berger, (2001), it should be taken into consideration that higher education and the education system in the region has been model from the British system.

This article provides the accessibility for the international audiences to understand the complexity and the challenges which the region faces, as higher education continues to be a greater demand. It also shows the availability of

government and privately owned higher education institutions in the region and that urgent attention is needed in the development of education. Of all the universities in the Caribbean region only two are research institutions which offer a wide range of career choices, science, law, business and engineering; only one of which is located within the Eastern Caribbean.

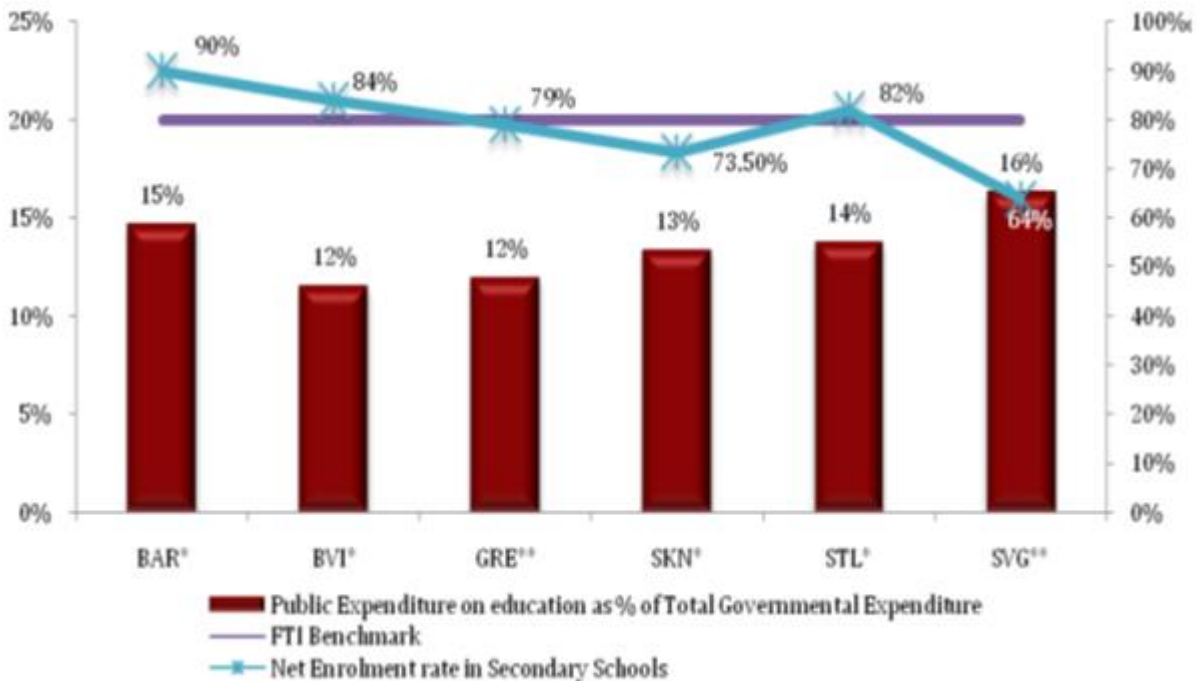
Moreover, this study identifies a number of unanswered question and challenges about higher education research with profound asymmetries of knowledge. Given the strategic location of the Caribbean, the level of higher education and development has not reached the threshold for the demand in the Caribbean. The level of research and study has reviewed into different areas; some countries which have very minimal finance into the funding as the main factor that affect this aspect. A typical example, while the specific of U.S.A higher education are widely accessible, critical elements of developing an emergent higher education system remain largely unknown (Teichler,2005). The data that was extensively reviewed shows that higher education system is adversely affected due to insufficient funding and minimal resources. The four main factors that affect higher education in Caribbean are: (a) increasing unit of instruction (b) increasing enrolments (c) low level of government revenues joint with regular financial obligations of the country and (d) increased privatization in higher education Johnstone and Marcucci (2007). Tuition cost which is set for the academic school year is relatively too high for the locals of the country in which the university is located; it ranges from 20,000 USD to 180,000 USD for the entire program, depending of the career and level which is been perused by the student. Thus, the percentage of locals which attend is less than 10% per each Caribbean county. Another challenge is that the countries have to import foreign professors and auxiliary to work in the country, to meet the basic requirements for these institutions and also the private universities are furnished form abroad. Persons from the countries are employed, but on a very small scale, which means reduces spending power for the local worker. Another serious challenge which affects these islands is its geographic location. These islands are prone to hurricanes on a yearly basis from June to November which affects both the financial and the physical functioning.

The finding from this paper contributes to the existing imbalances of information that characterize the current research in higher education. This contribution is particularly significant given the ongoing expansion of higher education throughout the world.

Research question 1: How has higher education developed over the years? The Caribbean region has developed tremendously over the past 20 years. This development was aided by the shift in the technological era worldwide. As mentioned in this article, the results of cost sharing have increased the amount of persons receiving higher education. Private higher education (PHE) has grown rapidly in recent years particularly in health care. PHE at present represents approximately 30% of global provision (Bjarnason et al., 2009, p. 8). The governments of the Caribbean have injected more funding into education development due to its demand and increased enrolment of developed and developing countries. Colleges in the region were restructured in administration, size and more subjects and careers choices that are offered to students. The development has shown improvements “encouraging active citizenship and producing skilled human capital, neither of which is mutually exclusive.” This moves higher education from a largely social phenomenon into the realms of economic policy. (UNESCO. 2009, P.20)

Research question 2: What are the corrective measures taken by the eastern Caribbean states to mitigate the different challenges? Cost sharing has proven to have multiple benefits in combating challenges, by increasing the revenue, boosting the countries higher education system and causing total burden to be removed from the taxpayers. Johnstone,(2007), cost sharing may add significant revenue to colleges and universities, and/or add capacity to a country’s higher educational system, and/or bring some relief to the taxpayer, and/or allow some shift of public revenue to competing public priorities. Student loans and scholarships for students have been implemented empowering students with the accessibility to the international universities, where they can integrate with students from around the world improving both educational skills and networking for future developments. New subjects and syllabus was created due to the reforms. Distance learning has improved the accessibility for persons desirous of obtaining higher education that cannot be in a physical classroom. Governments and big companies offer full paid and partial scholarships and reduce tuition and different incentives in helping to reduce financial burden on families. United States of America and other developed countries around the world have assisted by constructing, 35 private faculties of international universities in medicine and other engineering fields in the Caribbean as seen in table 1. This avenue has boosted the economic development of the region, giving many students the opportunity to access higher education. The fast track initiative which was created by the World Bank constructed financial regulations for the low in-come countries, 20% of revenue collected should be spent on education development but islands a still below the threshold as seen in table 2(Bermingham D,2006).

Table 2. Public Expenditure on Education



Source: Data source estimates of specific countries, FY 2009 UNESCO data base.

Research questions 3. What are the different challenges facing the Caribbean higher education? Funding is one of the biggest problems for Caribbean higher education. "In the current economic climate, universities are facing extreme budget pressure precisely when they are being asked to provide new services to address the needs of even more diverse students" (Altbach, Reisberg and Rumbley, 2009, p. 39). Access to higher education in the Caribbean is also hindering the growth of human capital for the islands. Brain drain and educational mismatch is another factor that is influencing the quality of education offered and having to import professors from international market to teach in institutions. The high tuition cost of the private institutions causes a financial strain and great difficulties to the lower class in the society to attend higher education institutions. Resulting to students loans which families would sacrifice for children but there is always a big challenge in not meeting the requirements.

6. Conclusion and Recommendation

These major challenges have been the critical factors which cause retardation in the growth of higher education along with social and economic development among individuals in the region. Given the circumstances and the different problems of the region's economy, total dependence on tourism (because of the beautiful beaches and the tropical climate) is not sufficient for sustaining all areas of the economy and in the aiding financial injection and investment for each individual country's needs in the various sectors. The high tuition fees have caused families who are not financially stable to offer their children higher educational opportunities, to get student loans with high interest rates and long repayment agreements. This study provides an insight on higher education in the Eastern Caribbean region and takes into consideration the population, culture, economy, diversity of these islands and the availability of higher education institutions. In addition, other constraints are, the limited amount of available highly qualified human resource in teaching and administrative skills, this causes difficulties in ensuring economics of scale in administration management. This is a considerable challenge for the policy makers and professional who are tasked with serving the international and academic community, when interacting with them. A gradual growth in the supply from the demand of higher education has resulted in a rapid rise of students going to the developed countries for higher education and subsequent migration since the 1980s.

To this end this author recommends:

- A full sustainability assessment of the universities with tourism programs, this would be beneficial in increasing higher education through the job market which is in demand due to country main economy.
- Raising higher education standards along with the main industry of tourism to harness greater level of development together. In merging the two areas one can help to boost the different economic sectors, for

further benefits it is recommended that further investigations is carried out every year to measure the progress level of the Eastern Caribbean.

- Constructing more universities in the Eastern Caribbean offering various fields of study especially engineering and technology based.
- Offering scholarships, this will benefit the country by decreasing educational mismatch in the different organizations.

The results of this article can be a foundation for futuristic research and assessment: for areas that requires assessment in other Caribbean countries, aid in achieving a greater level of unification throughout member countries by the amalgamation education policies and the adoption of policies and strategic planning from bigger universities to develop the region.

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References

- Altbach, Philip G. (1987). *Knowledge Context, The: Comparative Perspectives on the Distribution of Knowledge*: SUNY Press. <https://doi.org/10.1177/1028315307303542>
- Altbach, Philip G, & Knight, Jane. (2007). The internationalization of higher education: Motivations and realities. *Journal of studies in international education, 11*(3-4), 290-305. <http://dx.doi.org/10.1177/1028315307303542>
- Altbach, Philip G, Reisberg, Liz, & Rumbley, Laura E. (2009). Trends in global higher education: Tracking an academic revolution: UNESCO Pub.; Sense.
- Arocena, Rodrigo, & Sutz, Judith. (2001). Changing knowledge production and Latin American universities. *Research Policy, 30*(8), 1221-1234. [https://doi.org/10.1016/S0048-7333\(00\)00143-8](https://doi.org/10.1016/S0048-7333(00)00143-8)
- Bacchus, Mohammed Kazim. (2008). The education challenges facing small nation states in the increasingly competitive global economy of the twenty - first century. *Comparative Education, 44*(2), 127-145. <https://doi.org/10.1080/03050060802040953>
- Becker, Gary S, & Tomes, Nigel. (1994). *Human capital and the rise and fall of families Human Capital: A Theoretical and Empirical Analysis with Special Reference to Education* (3rd Edition) (pp. 257-298): The University of Chicago Press.
- Benson, Alan, Esteva, Raimundo, & Levy, Frank. (2013). *The economics of BA ambivalence: The case of California higher education*. September, 13, 2013.
- Berger, Joseph B. (2001). Understanding the organizational nature of student persistence: Empirically-based recommendations for practice. *Journal of College Student Retention: Research, Theory & Practice, 3*(1), 3-21. <https://doi.org/10.2190/3K6A-2REC-GJU5-8280>
- Bland, Carole J, & Ruffin, Mack T. (1992). Characteristics of a productive research environment: literature review. *Academic medicine, 67*(6), 385-397. <https://doi.org/10.1097/00001888-199206000-00010>
- Blom, Andreas, & Hobbs, Cynthia. (2008). School and work in the Eastern Caribbean: does the education system adequately prepare youth for the global economy? : World Bank Publications.
- Bolman, Lee G, & Deal, Terrence E. (2003). *Reframing organizations: Artistry, choice, and leadership*. John Wiley & Sons.
- Bransford, John, Vye, Nancy, Stevens, Reed, Kuhl, Pat, Schwartz, Daniel, Bell, Philip, . . . Reeves, Byron. (2006). Learning theories and education: Toward a decade of synergy. *Handbook of educational psychology, 2*, 209-244.
- Brunner, JJ, & Uribe, D. (2007). *Markets University: The new scenery of higher education*. Diego Portales University, Santiago de Chile. <https://doi.org/10.5897/AJBM11.1982>
- Dearden, Lorraine, Fitzsimons, Emla, & Wyness, Gill. (2011). The impact of tuition fees and support on university participation in the UK. CEE DP, 126. <http://cee.lse.ac.uk/ceedp126.pdf>
- Dresch, Stephen P. (1987). The economics of foreign students: Institute of International Education, US Department of Education. Office of Educational Research and improvement.

- Entwistle, Noel J, & Peterson, Elizabeth R. (2004). Conceptions of learning and knowledge in higher education: Relationships with study behaviour and influences of learning environments. *International Journal of Educational Research*, 41(6), 407-428. <https://doi.org/10.1016/j.ijer.2005.08.009>
- Forest, James JF, & Altbach, Philip G. (2006). *International handbook of higher education (Vol. 1)*. Springer.
- Gu, Jinsong, & Hua, Jiang. (2010). *The Chinese higher education system and the impact of gender: the structure of Chinese education system and previous research and an empirical study*. Universit ä Oldenburg.
- Johnstone, D Bruce. (2004). The economics and politics of cost sharing in higher education: comparative perspectives. *Economics of education review*, 23(4), 403-410. <http://dx.doi.org/10.1016/j.econedurev.2003.09>
- Johnstone, Donald Bruce. (2006). *Financing higher education: Cost-sharing in international perspective*. Boston College Center for International Higher Education.
- Jones, Glen Alan, McCarney, Patricia Louise, & Skolnik, Michael L. (2005). *Creating knowledge, strengthening nations: The changing role of higher education*. University of Toronto Press. <https://doi.org/10.3138/9781442673564>
- Kupchik, Aaron, Bracy, Nicole, Apple, Michael, Hirschfield, Paul, Casella, Ronnie, Gilliom, John, . . . Matthew, Richard. (2009). *Schools under surveillance: Cultures of control in public education*. Rutgers University Press.
- Leathwood, Carole, & O'connell, Paul. (2003). 'It's a struggle': the construction of the 'new student' in higher education. *J. Education Policy*, 18(6), 597-615. <https://doi.org/10.1080/0268093032000145863>
- L évesque, St éphane. (2008). *Thinking historically: Educating students for the twenty-first century*. University of Toronto Press. <https://doi.org/10.1353/utq.2011.0114>
- Lewis, Theodore, & Simmons, Lynette. (2010). Creating research culture in Caribbean universities. *International Journal of Educational Development*, 30(4), 337-344. <https://doi.org/10.1016/j.ijedudev.2009.08.005>
- Marcucci, Pamela N, & Johnstone, D Bruce. (2007). Tuition fee policies in a comparative perspective: Theoretical and political rationales. *Journal of Higher Education Policy and Management*, 29(1), 25-40. <https://doi.org/10.1080/13600800600980015>
- Nkrumah - Young, Kofi K, Huisman, Jeroen, & Powell, Philip. (2008). The impact of funding policies on higher education in Jamaica. *Comparative Education*, 44(2), 215-227. <https://doi.org/10.1080/03050060802041209>
- Ocampo, Jos é Antonio. (2004). Latin America's growth and equity frustrations during structural reforms. *The Journal of Economic Perspectives*, 18(2), 67-88. <http://dx.doi.org/10.1257/0895330041371394>
- Pelletier, Caroline. (2009). Emancipation, equality and education: Rancière's critique of Bourdieu and the question of performativity. *Discourse: Studies in the cultural politics of education*, 30(2), 137-150. <https://doi.org/10.1080/01596300902809054>
- Renehan, Stewart. (2015). Rising Tuition in Higher Education: Should we be Concerned? *Visions for the Liberal Arts*, 1(1), 3. <http://scholar.oxy.edu/liberalarts/vol1/iss1/3>
- Shahjahan, Riyad A, & Kezar, Adrianna J. (2013). Beyond the "National Container" Addressing Methodological Nationalism in Higher Education Research. *Educational Researcher*, 42(1), 20-29. <https://doi.org/10.3102/0013189X12463050>
- Solomon, Lewis C, & Young, Betty J. (1987). The Foreign Student Factor. Impact on American Higher Education. IIE Research Series Number 12: ERIC.
- St Clair, Ralf, & Belzer, Alisa. (2007). In the market for ideas: How reforms in the political economy of educational research in the US and UK promote market managerialism. *Comparative Education*, 43(4), 471-488. <http://dx.doi.org/10.1080/3050060701611870>
- Thacker, Nita, & Perrelli, Roberto. (2012). Caribbean growth in an international perspective: The role of tourism and size. <https://doi.org/10.5089/9781475510898.001>
- Trow, Martin A. (2005). Reflections on the Transition from Elite to Mass to Universal Access: Forms and Phases of Higher Education in Modern Societies since WWII. <http://escholarship.org/uc/item/96p3s213>
- Verger, Antoni L, & Robertson, Susan. (2012). The GATS game-changer: International trade regulation and the constitution of a global education marketplace. *Public Private Partnerships in Education: New Actors and Modes of Governance in a Globalizing World*. Cheltenham: Edward Elgar, 104-127. <https://doi.org/10.4337/9780857930699.00014>