

# **Embracing the Opportunities of Globalization and Technology for Sustainable Development: An Alternative Approach for the Organization of Eastern Caribbean States (OECS)**

**Graham Thomas**

Texas Southern University, Houston, Texas USA, [thomasg@tsu.edu](mailto:thomasg@tsu.edu)

**David Olowokere**

Texas Southern University, Houston, Texas, USA, [olowokered@tsu.edu](mailto:olowokered@tsu.edu)

**Esther R. Thomas**

Texas Southern University, Houston, Texas, USA, [thomaser@tsu.edu](mailto:thomaser@tsu.edu)

## **ABSTRACT**

The exploration and utilization of innovation and intellectual ability of the human resource has been a primary benefit of globalization. To a great extent the common traditional barriers to sustainable development experienced by many countries have been reduced. As a result, many countries have benefited greatly by embracing opportunities to demonstrate their potential and enhance their capabilities beyond their national boundaries. Small, independent island states, such as the seven islands forming the Organization of Eastern Caribbean States (OECS), have not been able to embrace such opportunities. The presence of seemingly insurmountable barriers has made it difficult for these small island states to make significant advancement into the global economy. The emergence of technology has leveled the playing field for these nations; success through sustainable development is now possible. In this paper we focus on the OECS countries as a group of seven states with primary focus for discussion on four of the seven states; Dominica, St. Lucia, Grenada, and St. Vincent. Our aim is to present an alternative approach to globalization for the OECS. We show how these states could possibly overcome these seemingly insurmountable barriers and challenges and carve out a niche for themselves in the global market.

**Keywords:** globalization, sustainable development, OECS, technology, barriers

## INTRODUCTION

The advent of globalization in the 21<sup>st</sup> century has, to a great extent, reduced common traditional barriers to sustainable development for many countries. This wave of globalization or the 3<sup>rd</sup> wave, a term coined by Thomas Friedman (Friedman, 2005), is governed primarily by communications, movement of people and knowledge (Morell, Johnson & Marcek, 2006). Globalization has enabled the exploration and utilization of innovation and intellectual ability of the human resource. Many countries have embraced the opportunities provided and demonstrated their potential to use these opportunities in enhancing their capabilities beyond national boundaries. Many countries have been able to increase and improve developmental relations within and across national boundaries. As links strengthen across the globe, distance seems to fade into the background; local happenings are affected and shaped by events occurring many miles away as they play a similar role in affecting and shaping the events occurring many miles away (Nyugen & Pudlowski, 2005).

Small, independent island states, such as the seven islands forming the Organization of Eastern Caribbean States (OECS) have not been able to benefit wholly from globalization. For these small island states, major barriers to successfully adopting the suggestions for sustainable development include physical size, population, financial resources, technical expertise and lack of traditional mineral resources, such as petroleum oil, natural gas, and coal deposits. As a result it has been difficult for these countries to take the steps needed to make significant advancement into the global economy. The emergence of technology as a vehicle for development has leveled the playing field for these nations such that success through sustainable development is a possibility for these countries.

In this paper we focus on the OECS as a group of seven states; Montserrat, Antigua & Barbuda, St. Kitts & Nevis, Dominica, St. Lucia, Grenada, and St. Vincent . Our primary focus for discussion is limited to data available for four of the seven states; Dominica, St. Lucia, Grenada, and St. Vincent. We present an alternative approach for the OECS in embracing globalization. Our aim is to show how these states could overcome barriers to successful globalization through skillful use of already established institutions. We will also show how engineering projects based on sustainability, environmental friendliness, cultural sensitivity and economic benefit could be developed and the potential benefits of this alternative approach to globalization for the OECS.

## AN ALTERNATIVE APPROACH TO GLOBALIZATION FOR THE OECS

Restricting factors for the OECS include physical size, population, financial resources, technical expertise and lack of traditional mineral resources, such as petroleum oil, natural gas, and coal deposits. Physical size of the OECS presents a barrier to economic development for many reasons. Many engineering projects require the use of large plants which must be built to carry out activities related to the projects. This presents a problem for these countries which have limited physical space and in many cases are unable to undertake large projects with specifications for building huge plants and design centers. Population is another problem for OECS. With relatively small populations these countries find it difficult to attract multinational corporations, such as Intel, GE, IBM, and Halliburton. These companies tend to associate population size with numbers related to man power, skill and expertise and wages. As a result these multinational corporations are less willing to explore opportunities for business and economic development with smaller countries; for these corporations the perception is that small populations mean small labor force, less skill and expertise and higher wages.

These countries would need the financial resources to support large-scale engineering projects. This creates a problem for the OECS since their economies are heavily dependent on agricultural exports which are greatly impacted by fluctuations in world market prices and competition from countries which can produce the same agricultural products at a lower cost. To obtain the benefits from large-scale engineering projects technical expertise is crucial. For the OECS technical expertise is exported since many trained experts migrate to more developed countries and utilize their expertise in projects and jobs where these are required. As a result, these countries are left with few trained technical experts and have difficulty filling this need for technical experts as demanded by large-scale engineering projects. Most businesses are looking for opportunities to trade based on traditional mineral resources. The OECS are not endowed with traditional mineral resources, such as petroleum

oil, natural gas, and coal deposits. This creates a barrier for attracting business that would be interested in exploiting these resources.

To overcome these barriers, the OECS must use an approach that allows them to capitalize on their strengths. Strengths inherent in each of these nations include already established institutions, such as the public sector (government institutions), private sector, individual entrepreneurs and educational institutions.

The public sector can provide the following:

- Readily available information – this should include explanation of laws and regulations on business planning, implementation and social responsibility.
- Reduced bureaucracy – streamlining would decrease levels of bureaucracy and provide a more efficient process.
- Implementation of policies to support technological advancement and entrepreneurship – adoption of policies which create an environment conducive to encouraging the use of and development of technology and opportunities for entrepreneurs.
- Impact studies – detailed studies should be conducted on the impact of each project on the social and cultural behavior of each country. This should be conducted prior to accepting any projects and the information on each study should be presented to all stakeholders involved.
- Common patent legislation across the OECS – with a common market, common legislation will encourage innovation and act as a safeguard for intellectual property. This will further motivate individuals to take risks and use their creative abilities in improving business practices and ideas.
- Regulations for meeting international standards – globalization involves the penetration of markets outside national boundaries. The public sector is responsible for legislation which ensures that the activities of businesses follow international standards.

Responsibilities of the private sector revolve around the following:

- Bold initiatives – willingness to take the first step in engaging in global trade.
- Joint ventures – expand base towards developing business relationships with a variety of business entities, such as governmental agencies, individual investors, and local and foreign companies
- Capital – provide and raise capital for funding projects; venture capitalists, fund- raising activities.
- Investments – increase investment in the development of technology to include, technological ideas and projects.
- Creative and novel ideas – willingness to provide support needed for entrepreneurs and others for development and implementation of business ideas. Provide incentives for highly qualified, experienced and talented individuals to return to their countries to use their expertise to further develop their countries.
- Respect for patent legislation and rules – demonstrate and encourage respect for intellectual property of others.
- Quality of products and services – ensure that total quality is the key; customers must be provided with products and services of excellent value.

Individual entrepreneurs are valuable in the following ways:

- Innovation and creativity – develop ideas in an efficient way that reduces waste in resources.
- Research – willingness to conduct exploratory studies on ideas, ventures and business approaches.
- Technical skill – use scarce technical skills to further development of ideas, practices and products.

Educational institutions are important for:

- Quality products – prepare and produce entrepreneurs equipped with technical skills.
- Education and curriculum – redesign old or develop new courses in technology, entrepreneurship and research and development.
- Educational partnerships – work closely with foreign colleges and universities in research and technological development.
- Business working relationships – maintain close, successful relationship with public and private sectors. The emphasis is on formulation of strategy for economic development that focuses on technology education.

To embrace the opportunities provided through globalization, the OECS must engage in business and trade practices characterized as sustainable, environmentally friendly, culturally sensitive and of long-term economic benefit. The benefit of any project to the OECS lies in the extent to which the idea or business is able to maintain itself. Sustainability is important because if the idea or business is unable to maintain itself the impact of the associated losses from the failed project will be felt in each sphere of the countries' economy. This will create an economic burden for the constituents. A project that is sustainable provides wealth for any developing country and is the basis for further development. When sustainability is a characteristic of a project there is room for expansion. Expansion can involve service or product quality and quantity, generation of additional employment opportunities, and development of highly sophisticated and unique tools and approaches to completing work. The result thus rolls over into the economy; increasing the standard of living and the quality of life and allows for a focus on maintaining the sustainability rather than on numerous non-sustainable projects that may never come to fruition and have numerous costs, especially the cost associated with time spent on analyzing projects..

For the OECS, endowed with natural beauty, projects must be selected which are compatible with the surrounding landscape and environment. These selected projects must be preceded by environment feasibility studies to ensure that the vibrant natural habitat and scenery are not destroyed; they must be eco-friendly. There is another option for the OECS to merge into a business partnership; cooperative partnerships. This approach is based on the idea of combining resources to support the implementation of engineering and education projects that are viable and cost effective. Some projects could include alternative sources of energy. In the case of Dominica, for example, with its wide variety of plant life, research on pharmaceuticals and natural medicines could be pursued. Additionally, there is opportunity through cooperative partnerships, for outsourcing and exchange of technical personnel through use of expatriate assignments. Partnerships of this kind would also encourage open innovation and willingness to develop, penetrate and share niche markets.

Culture is an important facet of any group or organization. For any nation, culture is the foundation of its life; culture drives all other activities and all other activities are based on in some aspect or other on cultural norms and patterns of behavior. Business activities therefore, are cared for in a manner consistent with the culture of a nation's people and each nation prides itself on its culture; disregard for or insensitivity to cultural practices usually results in destruction of business relationships regardless of what stage the relationship may be at. For OECS culture is important as well and sensitivity to cultural behavior must be demonstrated. Steps must be taken to ensure that projects do not encroach on or demonstrate disdain or disrespect for the culture in any way. At times, there may be a call for compromises. The manner in which these hurdles are crossed will greatly impact the positive results of the relationship and the project itself.

Long-term economic benefit provides the basis for continued development of any group of people. It ensures that benefits from the idea or business perpetuate and flow cyclically throughout all areas of the population. Thus it ensures that benefits are shared and enable outflows to all constituents. For example, if a thousand people make \$100,000 a year rather than \$10,000 a year, the increase in disposable income supports a lifestyle which allows them to spend more on dining out, purchasing durable goods, and securing investments and assets. The result is the generation of employment for others as businesses reap the benefits of their purchasing activities. This cycle continues and the benefits of their increased salary and subsequent change in lifestyle is felt and enjoyed by other constituents. As business options increase the government's tax pool expands providing revenue for improving and developing the country's infrastructure and services for its populace. The inflow of cash through acceptance of selected projects is a source of foreign exchange. The country's revenue increases and this lowers the country's deficit which results in a higher Gross Domestic Product (GDP) which results in a healthier and more diversified economy with a higher standard of living.

A practical approach to the selection of projects would enable the OECS to capitalize on their strengths and embrace the opportunities for globalization and technology for sustainable development. We present this approach and discuss the benefits associated with utilizing this approach in the following section.

## PROJECT SELECTION FOR THE OECS: A PRACTICAL APPROACH

A variety of projects is available for countries with the desire and need to obtain maximum benefit from globalization. The OECS can select from large-scale, medium-scale, and small-scale projects. Options for large-scale projects include the need for resources to match a large labor force (greater than 1000 workers), physical and information resources, land and capital. For Medium-scale projects, vast amounts of resources are not required. Smaller amounts, for example a labor force between 500-1000 people, are needed. On small scale projects, less than 500 persons would be needed to complete the labor force and the other factors of production would match the demands of the labor force required. The challenge for the OECS lies in the many barriers which they must overcome when engaging in business activity. To successfully overcome these barriers an approach to selecting projects must be taken which minimizes the extent of the effect of the barriers these countries face. To do this the OECS must evaluate the options based on their capabilities as (1) individual states and (2) as a group of states. A practical approach is to match individual capabilities with small-scale projects and to match group capabilities with medium-scale projects. In this way, individual states benefit by accepting responsibility for their individual development and reap benefits as individual states as they conduct their business on a global scale. At the same time, selection of projects based on group capabilities would ensure cooperation and support among the group members for economic development for all states and sustainability of wealth for the region.

Variations in capabilities for the four states, Dominica, St. Lucia, Grenada, and St. Vincent, include differences in available expertise, land, labor, capital, physical and information resources. The individual uniqueness in strengths provides each state with the capability to accept and sustain small-scale projects. Dominica's capabilities lie in the abundance of unique natural resources, available expertise, physical and information resources, and labor. St. Lucia's strength is in the availability of capital, large areas of flat, accessible land, physical and information resources, and labor. For Grenada and St. Vincent, their strength lies in the availability of labor and physical resources. Thus a focus on the strengths of each of the Island states is the key to embracing and benefiting from the opportunities provided through globalization. Dominica would benefit from small-scale projects with a strong emphasis on the utilization of engineering and technical expertise. With a ready pool of educated and highly skilled engineers Dominica would be able to accept and maintain small-scale projects. Land is an issue for this state since most of the available land is mountainous and not readily accessible. To make this land available for use large investments in improvements to infrastructure would be required; at this point Dominica is unable to meet such demands on its own. However, facilities are readily available for use; many areas already have unused and underutilized buildings which would suit small-scale projects requiring small or medium-sized facilities. Where small-scale projects require an accessible and ready water supply, Dominica, because of its unique natural beauty and vast amounts of clean water would be able to meet the demands of such a project. Any demand for labor can be met by the state. Dominica has an unemployment rate 23% at a population of 68,910 (CIA, 2007). St. Lucia, on the other hand, is best served by concentrating on small-scale projects which primarily require huge amounts of capital investment and the development of facilities requiring large areas of flat, accessible land. Much of the available land is uniquely flat, unlike the other three states. In addition, the infrastructure is well developed to match the demands of projects requiring specific infrastructure accommodations. St. Lucia, at a 20 percent unemployment rate with a population of 168,458 (CIA, 2007) would benefit economically from utilizing its workers; St. Lucia can provide a large pool of workers for these projects. Both Grenada and St Vincent would be able to attract and accept small-scale projects requiring a labor force and physical resources. With a population of 89,703 Grenada's unemployment rate is 12.5% while St. Vincent experiences an unemployment rate of 15% with a population at 117, 848 (CIA, 2007). Both states would be able to supply the labor required including the physical resources to meet the demands of projects for long-term profitability.

Medium-scale projects place heavier demands on countries than small-scale projects. These demands are likely to increase the effects of the challenges faced by the individual states. As a result, medium-scale projects may not be a best-choice for these states. An alternative approach is to optimize their individual strengths by working cooperatively as a group on medium-scale projects. This approach would require all states to cooperate rather than compete destructively with each other. The purpose would be to develop friendly, professional business alliances among themselves with the major focus on assisting each other towards a common goal; economic development and wealth for the region. This approach would allow for splits in any medium-scale projects so that states with

core competencies would be assigned to work on the parts requiring specific expertise or skill. For example, since one of Dominica's competencies is in educated and skilled engineers, with a state college offering associate degrees in specific technology fields, specific work on a medium-scale project could be assigned to Dominica in the area of research and development. St. Lucia could be assigned to care for manufacturing requirements. With well developed infrastructure and easily accessible, flat land it would be more appropriate and advantageous for St. Lucia to accept that responsibility as part of the OECS project work team. Capital investment would be handled by St. Lucia; St. Lucia's business record in securing capital is the best in the region and as such is a core competency for St. Lucia, and by extension this becomes a core competency for the region. Grenada and St. Vincent would be assigned parts of the project specifying labor demands and would assist with meeting both the demand for labor and physical resources as required. Additionally, both Dominica and St. Lucia would also be given the opportunity to provide labor. This would be important since it would help these countries improve the current state of unemployment.

## CONCLUSION

The approach by the OECS in embracing opportunities for globalization lies in cooperation among the island states. Without a cooperative approach towards helping the region as a whole it may be impossible for the island states or by extension all seven states to experience maximum benefits which can be attained through project involvement and development. It is imperative that all states work at improving both individually and as a whole. Individually, the approach should be one which capitalizes on individual strengths and competencies through small-scale projects. Alternately, the island states should embrace opportunities to develop the region in a cooperative business model. The aim is to combine efforts through delegation of responsibilities based on strengths, uniqueness and core competencies. Medium-scale projects provide greater challenges for these countries than the small-scale projects. Therefore, the OECS project work team model helps reduce the disadvantages presented because of the many barriers faced and enables the states, collectively, to accept projects which they would otherwise have lost because of their individual problems and weaknesses. Combining strengths and core competencies creates, for these states, a stronger case when negotiating, accepting and sustaining medium-scale projects.

## References

- Bernard, J., and Rectanus, M. (2006). Globalizing the Engineering Curriculum.
- Bryce, P., Johnston, and S., Yasukawa, K. (2004). Implementing a program in sustainability fir engineers at university of Technology, Sydney: A story of intersecting agendas. *International Journal of Sustainability in Higher Education*. Vol. 5, No. 3, pp. 267-277.
- CIA - The World Factbook. (2007). <https://www.cia.gov/cia/publications/factbook/goes/st.html>, 03/08/07.
- Friedman, T. (2005). *The World is Flat: A Brief History of the 21<sup>st</sup> Century*, Farrar, Straus & Giroux.
- Hill, S. (1999). "Internationality: Building Bridges the AIT Way", 40<sup>th</sup> Anniversary Asian Institute of technology.
- Jones, R.C., Morell, L. and Scavardo do Carmo, L.C. (2004). *The Engineer of the Americas*.
- Lynn, L., and Salzman, H. (2005). "The 'New' Globalization of Engineering: How the Offshoring of Advance Engineering Affects Competitiveness and development", 21<sup>st</sup> European Group for Organizational Studies (EGOS) colloquium "Unlocking Organizations".
- Morell, L., Johnson, W.C., and Marcek, D. (2006). *Engineering for the Americas – Focusing on Engineering Education, Innovation, and Accreditation in Support of Economic Development*.
- Nguyen, D.Q., and Pudlowski, Z.J. (2005). "Environmental Engineering Education in an Era of Globalization", 8<sup>th</sup> Baltic Region Seminar on Engineering Education, Kunas, Lithuania.
- Pabon, U. (2006). *The future of work: Reflections on the next global stage*.
- Piasecki, R., Wolnicki, M. (2004). The evolution of development economics and globalization. *International Journal of Social Economics*, Vol. 31, No. 3, pp. 300-314.
- Sachs, J. (2000). *A new map of the world*. The Economist.

Sustainable development (i.e. supported development) " is a development of a society in which the human conditions are being improved and the impact on the environment remains within the economic capacity of the biosphere, so it does not break the natural foundation of human life. Within sustainable development the needs should be provided without damage to the future generations. International cooperation " active cooperation with all countries and international organizations for the purpose of rational use of ecosystems, ensure the favorable and safe future. Implementation of sustainable development purposes is ensured through: Restructuring of the national economy Environmental aspects of globalization and sustainable development. This discourse regards not the globalization per se, but rather its observed and projected impacts on the world development. It is within this discourse that humanity and global society started to be viewed as a part of a planetary ecosystem with all its resources. The pioneering works by Jay Forrester and his student Dennis Meadows are focused on global modeling and studying the interdependence of various processes in their dynamics. "Limits to growth" (1972), which became the first official report of the Club of Rome... Global Centre for Technology, Innovation and Sustainable Development in Singapore. English. Filter. The Sustainable Development Goals (SDGs), also known as the Global Goals, were adopted by the United Nations in 2015 as a universal call to action to end poverty, protect the planet, and ensure that by 2030 all people enjoy peace and prosperity. The 17 SDGs are integrated"they recognize that action in one area will affect outcomes in others, and that development must balance social, economic and environmental sustainability. Countries have committed to prioritize progress for those who're furthest behind. Multisectoral, rights-based and gender-sensitive approaches are essential to address inequalities and to build good health for all. 400. million.