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Long-term Public Debt in the Leading Economies: An Econometric Analysis and Forecasting

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ABSTRACT

Negative effects and risks associated with the excessive level of government debt have been characterised in numerous works [e.g. Borensztein 1989; Wigger 2005; Ramos-Herrera, Sosvilla-Rivero, 2017]. The most frequently mentioned negative aspects of excessive government deficits and debt include, in particular, a decline in consumption and a slowdown in economic growth [World Economic Outlook, 2008; Panizza, Presbitero, 2014; Ramos-Herrera, Sosvilla-Rivero, 2017]. The negative impact of these two factors on private investment and industrial production is also often highlighted [Gong, Greiner, Semmler, 2001; Wheeler, 1999]. The literature also contains opposing views on these phenomena. For instance Mohd Daud and Podivinsky [2011] used structural equation model and spatial autoregressive model with fixed effects in order to show no negative impact of external public debt on economic growth for East Asia-Pacific, Latin America, the Caribbean and Africa.

Despite of the efforts directed to limit the negative effects of the global economic crisis in 2007, the public debt exceeds significantly its acceptable level in many countries [Ayala, Blazsek, 2014].

Kovtun, Dolinovskaya and Ignatyuk [2014] point out that the financing of public expenditure by means of public debt is now an integral part of the financial system and an element of the macroeconomic regulation mechanism and a tool for the implementation of the country's development strategy. They also stress that it is important not only to identify the factors determining the increase in public debt and the strength of their impact on a country's macroeconomic situation, but also to calculate a public debt threshold based on the existing tendencies.

The main objective of the paper is to determine long-term levels of public debt of selected high developed countries. The obtained results will allow to verify the hypothesis that, if the current debt creation tendencies maintain, the level of public debt will exceed the assumed norms. The analyses will also take into account the robustness of obtained results to changes in the global economic situation.

The procedure presented in the work of Branson [1989] and Batóg [2008] will be used to calculate long-term debt levels. Starting from the model describing the dynamics of economic growth in terms of real gross domestic product (GDP) and the model allowing to determine the average share of the budget deficit in GDP in the examined period, the forecasts of the level of public debt and the long-term share of public debt in GDP will be computed. The alternative procedure based on a probability distribution of the government debt-to-GDP ratio with the assumption of a zero budget deficit and the random nature of the interest rate and the growth rate of GDP was proposed by Tamegawa [2012]. Other solutions to the problem in question can be found e.g. in the works of Heinemann [1993] and Cafiso [2012].

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Human Capital Development and Economic Growth in Nigeria

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ABSTRACT

This study empirically investigated the direction of causality between Growth Domestic Product and human capital using education, health, and foreign direct investment expenditures in Nigeria, with annual times series data from 1980 to 2018. Co integration and Error Correction Techniques were employed to explore the relationship among these variables. The Study examined stochastic characteristics of each time series by testing their stationarity using Augmented Dickey Fuller Test. he study showed that a long-term relationship exists between GDP and expenditures on health, education and foreign direct investment during the period under review. It revealed that investment in human capital impact positively on economic growth. Based on these findings, the study recommended amongst others that government should expand institutional capacity by strengthening the infrastructure of educational and health institutions to produce quality manpower. Government should provide enabling environment and ensure macroeconomic stability to encourage increased investment in human capital by the private sector.

Key Words: Human Capital , Education, Health, Foreign Direct Investment, Co integration.

Reflective Learning as a Tool of Effective Crisis Leadership

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Abstract

The paper argues how the process of reflection is of key importance in developing adequate strategies in crisis situation. The leader's reflection is grounded on the observation of the emotions, practices, actions, and responses. By adding these responses to the current knowledge foundations, new knowledge and meaning are created. The purpose of this study is to explore process of organizational learning through development of competencies for reflection in action; which is one the crucial leadership goals. By theorizing on the antecedents and consequences of the development of capacity for reflective action the paper gives insight not only on the ways in which organizations can build capacity for devising more successful strategies but also how the proper relation between two crucial cognitive activities, attention and thinking, should look like in the leader's mental model.

Keywords: reflection, learning, mental models, leadership

1. Introduction

Most of the research on adaptive organizational learning models suggests that a crisis situation comes from the outside, as a dramatic change in the environment, either in the narrow competitive landscape or in the wider scope. One example of such case is surely the 2020 corona virus (SARS-CoV-2) and disease (COVID-19) outbreak, the largest epidemic of the disease in modern history and the one with unprecedented impact on economic life in recent decades, radically changed numerous industries and demanded leadership action in organizations all over the world. However, in this paper we suggest that people themselves are often subjects that set up their environments. From that viewpoint loss of association between the organization and the environment develops a novel meaning. Loss of alignment can mean that the organization has established resources and skills as well as limitations that have not yet been raised in the environment. In that way the environment requires the capabilities which are not in the organization's strategic space any more. The source of this change lies within the organization, not outside it. We can say that the organization is changing faster than the demands it is facing. This leads us to the supposition, voiced by Weick (2001) that the "problem" is not a turbulent environment, but the turbulent organization. While the process of crisis management in the case of outside driven necessity is well known, the question of proper action in the case of discrepancy within individual and organizational mental models requires more research attention.

Answering this question is important because of the key function that leadership holds is managing change. The leadership initiative, as a process of establishing novel governing metaphor is especially important in times of crisis. Crisis disrupts status quo mental models and calls for new approaches in handling organizational complexity. By

discussing role of the process of reflection in organizational learning the paper sheds light on the ways in which organizations can build capacity for expansion of their strategic space as well as on the question of proper relation between elements in the leader's mental model. Furthermore, better understanding of the relation between individual and collective influences on development of organizational learning models can lead us to devise more value adding mods of communication. More precisely we try to find out whether the process of designed conversation (van der Heijden, 2005; Eden, Spender, 1998) leads to a shred or aligned system of meaning which allows the organization to behave in a strategically organized fashion.

To answer the question of proper role of reflection in the process of organizational learning we have adopted an overtly post-modern epistemology which proposes multiple types of knowledge, learning and memory, and argues that key leadership function is to intervene in their interplay.

2. Mental schemes as building blocks for reflection

Mental schemes are cognitive structures that we use for facing with reality at every level. Bartlett (2010) defined mental schemes as a dynamic organization of past responses or past experiences. From that perspective mental schemes represent structures that form different aspects of the reality - they are independent units that carry meaning. The mental scheme can be viewed as an instrumental relationship, the single element of experience as well as a multifaceted set of elements.

We use schemes in two ways: to provide frameworks for future understanding of the world and to organize existing knowledge. These two ways of understanding the world form our action (stereotypes) and as well as the origins or action (personality, social roles, archetypes), and the like. By the use of schemes, everyday situations do not require creative use of cognitive apparatus. In that way our mental efforts can be diminished to the level of automation – we can consolidate new items of perception in the existing mental schemes and work with them efficiently without considerable effort. Mental schemes influence our cognitive processes and behavior in the most profound way. Bartlett (2010) described memory as a creative process of reconstruction of mental schemes and same level of influence can be given to mental schemes in the processes of perception, understanding and interpretation. We can say that the organization of knowledge depends on mental schemes.

The same can be said for the origins of actions because of the crucial effect that the significance of expectations, incorporated by mental schemes, have in the search for meaning in novel experiences. In the case of reading, for example, schemes provide mental frameworks that help the reader to understand what they read (Bruner 1990).

However, nature of mental schemes can be utilized in different ways. Hodgkinson and Sparrow (2002) suggest that appropriate organization of mental schemes should include high-quality information and dense and sophisticated connections between interrelated structures. These kind of mental schemes enable leaders to have proper understanding of the events that are taking place around her, she can interpret and effectively extract correct information for the flow of experience, and can work out more suitable and more correct interpretations and hence solve problems easier and faster. From the other perspective, too much reliance on mental schemes can result in unwanted results such as uncontrolled processing of information, incorrect data filtering and stereotypical ways of thinking which are all potential dangers to leader’s decision making (Hruska, 2015).

Our mental schemes go through a constant process of accommodation (Neisser 1976). We can say that the main tension in our cognitive activities is the one between existing and novel mental schemes. Through the process of accommodation mental schemes create more complex cognitive structures – mental models. The process of accommodation of novel mental schemes in the existing mental model is the process of learning.

3. Learning as problem solving

In the course of the process of mental scheme accommodation and the re-creation of mental models, the leader becomes what she is through what she has perceived and did in the past. That process is more complicated in organizational setting due to the complexity of situations which arise from numerous elements with unpredictable mods of action.

Key role of amalgams of mental schemata - mental models, is to take information from the outside and direct action. When confronted with a problem situation, the leader must agree on what the problem is, fully understand it and find a way of articulating the problem to herself before she starts looking for a solution (Simon 1977). The process of articulation is hence the same as a process of building mental representation.

Problems are uncompleted mental models; cognitive structures that are not sufficiently sophisticated to guide action in the situation that we are confronted with. They are lack of knowledge that we do not know how to address. Conceptualization of the situation in the leader's mind is a process of construction of mental models from inputs of the problem situation. In that way problems are constructions of the mind. As Polany (1957, 90-91) puts it problem solving is more a kind of a wrestling activity than it is about getting to know the various doctrines. Simon (1977, 1987, 1997) uses notion of distinct cognitive domains, disciplines, for description of groupings of mental schemata. However, the problems are usually cutting across different disciplines making it hard for a single person to have existing mental models and correct new mental schemata to be able to properly address the issue in hand (Baracskai, Velencei and Dörfler 2005, 50-51).

When the leader is reconstructing the problem that is, searching for meaning in a problem situation, he is actually setting the boundaries of his attention in a way that allows him to see which segments of mental model are not in alignment that is in which direction the situation needs to be changed. As Schön (1991, 40) puts it: problem setting is an interactive process in which we select the elements to pay attention to and hence provide the context within which we will foster the chosen concepts. In that way previous decisions set the framework of attention that we can utilize again if the specifics of the problem solving situation demand it.

For our purpose it is also important to notice that experience in problem solving is of key importance in developing leader's capabilities because the narrow focus of once successfully solved problem is substantially unlike from the comprehensive scope of attention that the leader uses when he was first introduced to this kind of problem solving situation (Simon, 1997). Ability to connect past experience with novel inputs and subsequent accommodation of leader's mental model is a process of reflection.

4. Organizational learning through reflection

Reflection is a process of turning attention to the experience which we face as a continuous steam of mental schemata. By focusing attention to the singular element of the flow of experience we bring it in our mental model where it becomes building material for problem solving. In that way reflection represents key step in learning. The fundamental supposition of reflection as a process of learning is that strategies acquired by experience (mental routines) are the once that drive the process of gathering and interpreting data on which the reconstruction of the past events is based (Schacter 1996).

In the explication of the sense-making process Weick (1995) as well as Gioia and Chittipeddi (1991) note that actions are understandable to us only once they have been completed, which puts us always behind our actions. Furthermore, what happens now determines the meaning of what has already transpired. The meaning is altered as the existing projects and goals change.

An important notion for development of organizational learning models is the difference between "reflection-in-action" and "reflection-on-action" (Schön 1991). "Reflection-in-action" can be defined as "thinking on our feet". It comprises looking to our experiences, connecting with our emotional states, and getting in touch with our present mods of action in order to build new perspective of the problem situation which is taking place. Leaders should try to develop abilities of reflection-in-action because as Schön (1991, 40) notes, driving from the process of mental model design: the importance of reflection on past actions and events is the key function of learning.

Competence of reflection in action is based on ability to attain mental schemes and to distinguish the interconnectedness between them. The interconnectedness, or in other words the understanding of the multipart net of cause – effect relations is principally attained by reflecting on our experiences and considering what consequences single mental schemata have on the others in a particular problem solving situation and over time.

The competence of reflection is not defined only as a single set of rules, that is set of rules confined to the single discipline. By reflecting on the problem situation we also form the "meta" learning competences, a cognitive activity independent of the discipline in which it is presented.

Leaders can increase their competence for reflection in action by acquiring mental schemes of the problem domain. Baracskai, Velencei and Dörfler (2005) propose a four level scale of decision making proficiency depending on the number of acquired mental schemes (Figure 1): the novice, the mediocrity, the expert and the master level. The novice can propose various schemes to solve the problem, but neither one of them is good enough and the problem remains unsolved. The mediocre problem solver has a large number of solutions but in the specific context he does not know which one to apply and also does not solve the problem. Expert can choose between several solutions that would be suitable for solving a problem and can reach the problem in a satisfactory way although slowly. And finally, the master problem solver has only one solution, exactly the one that solves the problem in a fast and elegant way.

	Journeyman	Mediocre decision maker	Expert	Master
Number of schemes	10	100	1000	10000
Number of solutions	none	counless	many	one
Desides on...	the next step	cook-book	combination	image
Sees...	something else	details	rules	essence
Inference	common sense	arithmetics	logic	intuition
Language	does not speak	phrases	profession	metaphor

Figure 1 Levels of knowledge – from journeyman to master

Source: Baracskai, Velencei and Dörfler 2005, p. 21

In the later work on learning models by the same authors (Dörfler, Baracskai and Velencei, 2009) also distinguish a fifth level - the grandmaster. Difference between master and grandmaster problem solving level is not in the number of schemes but in the fact that grandmaster problem solver also has a meta-level view of all the mental schemes. This ability allows leader to articulate meaning through metaphors which facilitates transfer of the message at the meta levels of recipient's consciousness which allows intuitive acceptance of the transferred meaning as correct (Prietula and Simon 1989).

5. Conclusion

The ability to create, store and use the cognitive schemas, which are essential building blocks of competence, in real time is pivotal leadership trait. Numerous organizations are struggling to adapt and find a balance between the immediate crisis response and the long-term strategic thinking that can find opportunities for renewal and innovation.

The paper discusses proper approach to development of models of organizational learning based on leader's capacity of reflective action.

The process highlights the significance of learning through a synthesis of experience, sensemaking and action into a holistic sense of the organization. Through the process of reflection on past experience the leader can improve his mental model of the problem situation in hand. The reflection can take place after the action has finished but also during the action. Besides that, through process of reflection the leader also becomes more competent to deal with another problem solving situation.

By mastering the process of reflection, the leader becomes better equipped to use the collected factual knowledge in the right way which is called procedural knowledge or skills. Competencies at the expert level require superior declarative as well as procedural knowledge. The skill implies the ability to systematize information into sets, or, how Simon calls them, chunks as well as to form meaningful patterns within these groups (Simon 1987, Gobert and Simon 1996, Gobert and Simon 2000).

The conceptual model proposed in the paper contribute to the body of knowledge on organizational learning by moving the focus of the research from the perspective of model of development that is driven by the influences to the understanding of the organization as a proactive and attentive, in a word - living, system, which arguably offers more suitable approach to many organizational challenges. In that way reflection in action can be seen as the essential skill for leadership development in the times of crisis.

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Leading Through Sensegiving: Framework for Successful Change Management in Complex Organizations

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Abstract

The role of a leader in the process of change management is to encourage members of the organization to go ahead with needed activities and simultaneously to seek out new signs that will direct further action. This paper is set in the theoretical framework which views organizational life as an ongoing experience of thinking and acting, hence we propose that this crucial leader's activity can be best described by the model of sensegiving. Sensegiving proposes that the leader firstly establishes a mental representation of his initial search for meaning and, secondly, communicates it to the members of the organization who build their sense of it. Realization of leader's mental representation demands action which is based on the sense created by the activities of organizational members. The paper argues for the process of sensegiving which is in complex organizations comprised of three phases: the integration of current situational influences to the initial mental representation, the alignment of the new representation with key stakeholders and finally the dissemination of new mental model to other members of the organization through designation of activities.

Keywords: leadership, sensegiving, change management, sensemaking

1. Introduction

Business literature rife with numerous description of leadership functions, but essentially leaders have two main responsibilities - they articulate the goals of the organization and strategies for achieving these goals and motivate organizational agents to carry out strategies. Leaders who are good at setting strategies and motivating will make the organization more effective, and the ones who are less good at performing these activities will pull the organization down.

Research in leadership and organizational development is seldom focused on the problem of coping with organizational complexity. In order to tackle the complexity of organizational life we must abandon the reductionist objectivity and focus on a holistic approach to human experience especially the experience of interaction. As McCarthy (2001, 286) argues: "There is no ontological reality or pure objectivity waiting to be investigated by a neutral observer. Rather the objects of experience are a social construction based on quasi-transcendental and anthropological interest for continuing the social lifeworld." Because of that in this paper we propose application of looking at leadership through paradigm of managerial and organizational (Gioia 1986, Weick and Bourgeon 1986, Gioia and Chittipeddi 1991).

In this theoretical and thus speculative intentionaly paper we argue how the leadership process can be best described trough the alignment of interpretations and actions of organizational members. Conveying meaning is known in the literature as the process of "sensegiving" (Gioia and Chittipeddi 1991, Hill and Levenhagen 1995). From the broadest perspective, the sense giving is a metaphor that draws attention to the idea that reality must be seen as an ongoing activity, which takes shape when individuals attempt to bring order and retrospectively make sense of the situation in which they find themselves (Morgan, Frost, and Pondy 1983, Morgan 1980). Once we find the meaning we can provide it to the others. That is the process of leadership.

Coming from that perspective the paper offers three phase process of sensegiving in complex organizational settings. By discussing role of the sensegiving in the change management process the paper sheds light on the ways in which leaders can free themselves from the constrains of unproductive thinking and assumptions in this crucial process.

2. Dealing with organizations as complex social systems

The need for tackling complexity in organizational research is put forward by three reasons: the nature of organizational systems, the nature of the human mind and the reach of the existing research apparatus. First issue is adduced by the fact that social organizations are one the most complex systems. In his hierarchical framework of systems, Boulding (1956) arranged systems in a hierarchy of complexity. The hierarchical approach classifies systems into nine levels or entities. According to increasing levels of complexity, each new level brings in a different relation, as well as involving those at previous levels. The nine levels of the hierarchical approach are as follows: frameworks (static structure), clockworks (simple dynamic), thermostats (control mechanisms), cell (self-maintaining structures), plants (pre-determined patterns of growth and decay), animal (increased mobility and self-awareness), human beings (self-consciousness), social organizations (roles, perceptions, status), and transcendental systems (Boulding 1956, 200-201).

Indeed, the strategies and the structures of contemporary business organizations are largely modeled on principles of cause and effect based on linear chains of command. This mechanistic, Newtonian perspective dominates the business administration literature as well. The Newtonian research logic commands that the targets are set prior to the analysis. The accomplishment of goals is, therefore, reflected in the knowledge demanded by the divisions of labor. The division of labor, on the other hand, determines the functions that are organizational agents perform. The performance is motivated by their compensation schemes. As Spender (1998, 15-16) argues, the roles established by the division of labor are afterwards coordinated, first by the system of clear rules, and then by the position of authority which tries to match the behavior of individuals with the requirements of the role. Power is used to keep the behavior of the agents within the frame of the designer's expectations. The power of the chief bureaucrat is legitimized by the authority that is accepted when an individual becomes a member of the organization. The structure of organizational power is explicit in terms of its rules, as well as its rewards and sanctions. Communication problems can appear, mostly due to the inadequate information of employees about their roles. In this regard, the organization has no problem with knowledge. Problems in these kinds of organizations, as Fiske and Taylor (1991) note, are decomposed, ignoring the influence of interaction in the process. They are also in motion in reverse schedule – from wanted results to needed preconditions. Leaders recognize patterns in decision making situations and use simplified rules that they consider appropriate for a particular situation. They simplify complex phenomena by reducing them to the level of numbers (like profit or market share) which they afterwards treat as the equivalent of more complex reality. Finally, they take the current experience in a way that allows them to retain their existing beliefs and their interpretation.

The promise of application of complexity theory in organizational studies in that it would consequently lead to better understanding of how organizations cope with surroundings and the conditions of uncertainty. The issues of correlation and unpredictability post two strong and pervasive elements that constitute the complexity of every interactive system. They are, however, commonly avoided issues in business agendas. It is up to the organizational research to change that. In this perspective, the leading of organizational complexity is less about controlling and more about developing leader's abilities to influence organizational behavior in ways that enhance the likelihood of industrious scenarios.

3. Change as a process of sensemaking

Managing processes of change is the key of good leadership. The word "change" has several contradictory meanings. Sometimes it refers to the external changes, especially in the technology but also in the competitive dynamics, consumer demands, political environment, and the like. Also, the term change may relate to the elements within the organizational system. Regardless of the vector from which they origin, fundamental goal of change management is to align internal and external dynamics.

According to Weick (1979) organizations are in the process of organizing therefore they undergo through the constant change. In the organizational dynamics change occurs because of the process of reacting to novel situations.

The phenomenon of search for meaning is ubiquitous. Sensemaking, as Weick (1995, 109-111) explains, begins with three elements: the frame, the element taken out of the flow of experience and the bond between them. The meaning is formed from the cue within the concrete frame in which member of the organization locate, perceive and identify events. Cues are noticed and made meaningful within the frames. Frames are, usually, previous moments of socialization, and the cues are, usually, present elements of experience. The search for meaning is based on finding the cue, a metaphor that leads us to the construction of "oasis" of sense out of otherwise meaningless elements that constitute the current state of affairs. The desire to make sense of the situations steams from the need to safeguard the conception of the existence of the world that is stable, in other words characterized by pre-given qualities where all important information is readily available. That position strengthens our ability to act which is of paramount importance in problem solving.

Organizations are social constructions that significantly influence the formation of meaning. According to Giddens (1976), social structures are created in the process of establishment of meaning, and at the same time they bound it. Organizational context is also specific from the perspective of existence of multiple meanings of activities in the process of sensemaking. Gergen (1982, 62-65) highlights the role of activity in three premises of sensemaking. Firstly, identification of any action is subject to constant revision. The reason for this is that organizational life takes place in a dynamic context which also changes the meaning of earlier events. Secondly, the foundation of any identification is based on networks of interdependent and changing interpretations. Meaning of action is rarely self-evident. Since the identification is determined by the specific context and since the context is continually expanding in the future and the past it is not clear what contextual indicators in the process of searching for meaning can be taken as reliable. The opposing groups will want to emphasize the importance of the events that are more appropriate for their goals. Thirdly, any activity is subject to the multiple identifications, whose comparative advantage is questionable. To call something a "problem" is no better or more sustainable than to call the same event an "opportunity". What is interesting is that one and the other proposal may initiate a series of activities that will validate the selected stand.

4. Leading as the process of sensegiving

Organizations are based on multiple interpretations of interactions which consequently creates the enactment of the social systems. Such perspective demands answer to the fundamental question of organizing - how to coordinate actions in a world of multiple realities? A possible answer to this question is the observation of the organization as a social form that generates a unique understanding which can be replicated by the people who were not involved in the original construction. Managing the transition from the individual relationship to a more general comparison is to manage the tensions that arise when people try to reconcile innovation, inherent in a personal relationship with a control derived from the generic subjectivity. Reconciliation of these two poles of organizational interaction is achieved by intertwined routines and usual patterns of behavior, both of which have their origin in individual interactions. Forms of social organization, in principle, consist of activities based on a formula that is developed and maintained through continuous communication activity (Weick 1995). Unsurprisingly, the goal of communication is to develop a common understanding of the situation.

Sensegiving can be defined as the process by which the leader is trying to influence the sensemaking of the organization members in order to uphold preferred redefinition of organizational reality (Hodgkinson and Sparrow 2002, 25-26). The sensegiving model as a sequential process was first introduced by Gioia and Chittipeddi (1991). According to the model, the leader firstly establishes a mental representation of his initial search for meaning and, secondly, communicates it to the members of the organization who build their sense of it. Realization of leader's mental representation demands action which is based on the sense created by the activities of organizational members. The action can be viewed as a feedback on the results of the leader's sensemaking process. In return, through the interaction with other interpretations, the leader's initial representation changes again. That circular process of sensemaking and "sensewitnessing" is one of the key organizational activities in coping with change. Since cognitive competencies are resulting with behavioral competencies, the sensemaking and sensegiving processes are crucial for the successful implementation of the leadership process.

The leader provides meaning to the members of the organization through different set of skills. Hodkingson and Sparrow (2002) emphasize that major decisions are basically procedures of simplification that are used for the purpose of highlighting the appropriate balance in terms of the level of complexity. The notion is relevant for leaders because in this kind of situation they must use clear, simple and action-oriented messages in order to connect the desired future state with current preoccupations. Only in this way, the leader can maintain "zones of relative control" which would allow stability, crucially needed for launching of new ideas.

In the interest of avoiding the divergence of the interpretations of the situation between the organizational agents, in other to be able to make effective decisions, the leader must find a way of focusing the process of interpretation. Otherwise, members of the organization will be overwhelmed and preoccupied with differing interpretations of their past activities. Weick (2001) argues that a powerful mechanism for routing of interpretations can be a process of behavioral commitment. Binding behavior focuses process of searching for meaning on three things: activity, socially acceptable justifications and additional activities to confirm the justification. In that way the sensegiving process is conducted indirectly, through commitment to action.

5. Sensegiving process as a tool for leading strategic change

Driving organizational change is based on the interpretation of novel perspective to the other members of the organization whose way of thinking about the situation in hand will consequently be altered. For that we propose the three stage process. Firstly, the leader must integrate current situational influences, both external and internal, to the initial mental representation. This is done through initial presentation and negotiation of the new mental model with several people of leader's confidence, usually, the top management team. In the first phase, the initial metal representation changes through the process of harmonization - it develops, becomes more specific, refined or reduced by the constructs of others. The second phase is based on the alignment of the new representation with key stakeholders. Dissemination of new mental model to other members of the organization through the activities is the third phase of the process. From this perspective, the role of a leader is to encourage people to go ahead with certain activities and simultaneously to seek out new signs that will direct further action.

The leader’s initial metal representation changes through the phase of harmonization - it develops, becomes more specific, refined or fragmented by the constructs of other members of the organization. Any organizational change, particularly radical one, rarely occurs suddenly. Habitually it is a matter of building consensus through socially constructed negotiation (Berger and Luckmann 1966). Through the process of consensus building, centers of power are trying to position themselves on, what they consider to be a better position in the new design. The principal activity of the “old aristocracy” is to discourage implementation of the radical changes in organizational enactment.

After a longer or shorter time of negotiation with the key stakeholders, the next phase of change implementation can start. From this perspective, the role of a leader is to encourage the people to perform designated activities and look for new signs that will direct further action. The sensemaking process initiated by the radical decision maker has the iterative character. It is based on the understanding of the situation in which the decision maker is as well as on trying to gain a little bit better comprehension of where she wants to be. Plans that arise from the strategic direction of the organization provide the purpose and a vision of what the organization wants to achieve.

The incremental nature of the change process is reflected in the second and third step of the process of radical decision implementation – the sensegiving phases. Key process for successful implementation of change is the creation of derived interpretations of the situation. Transposition of the new meaning of the situation, compressed in the governing metaphor, cannot be conveyed to the entire organization at once (Hruska, 2015). Each interpretation is formed separately, and some people need more time and incentives that the others. As people are crystallizing their understanding of the situation, through the resulting action they make the initial representation more concrete and more tuned. In the process described above a lot of resources are consumed in “preparing the ground” - in activities such as building of coalitions and establishment of sensemaking reference points through planning, etc.

6. Conclusion

Leadership in complex organizations recognizes that the future cannot be controlled (in a deterministic sense) because complex systems are unpredictable, and the future conditions are determined by the internal dynamics. Leaders have to think systemically and to stay aware of the interactive dynamics since they are one element of an interactive network we call organization. Role of the leader is not to control the networks because it cannot be done but to help enable useful behaviors, including the expansion and complexification of the networks. Therefore, the complexity theory suggests that leadership should not concentrate on organizational control but rather on supporting the capacity of the organization.

The paper argues for the process of sensegiving which comprises of three phases: the integration of current situational influences to the initial mental representation; the alignment of the new representation with key stakeholders; the dissemination of new mental model to other members of the organization through designation of activities. From this

perspective, the role of a leader is to encourage people to go ahead with certain activities and simultaneously to seek out new signs that will direct further action.

Principal notion of the proposed framework is that changing minds through the process of sensegiving is an incremental kind of process – some buy-in to the new viewpoint at the beginning and some never. Also, the rhetoric process of implementation of change, as pointed out in previous segments of the chapter, is based either on the process driven by beliefs or action. In respect to the described process of rhetoric for implementation of change in complex organization, belief-driven rhetoric is main approach of the second phase while action driven rhetoric is principal mode of the third phase of the implementation model.

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Sensitivity Of Model Uncertainty And Its Impact In Derivative Pricing

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Abstract

Recently, various case studies have indicated the importance of model risk in the derivative industry and many other researches have emphasized the consequences of neglecting model uncertainty. Therefore, financial institutions have been proposed and developing new approaches to tackle and quantify them systematically and to use them as a decision aid for risk managers and regulators. Greek letters are used to represent how sensitive financial derivative prices are to changes in parameters of the chosen model used for pricing. In this paper we propose to study the sensitivity of model uncertainty, in order to understand better how changes in parameters affect it. We know that financial derivatives can be volatile and sensitive to factors such as changes in the pricing of the underlying asset and so on. These attributes are components of risk that a trader needs to control if he/she is to manage the risk of a portfolio when switch the model. On the other hand, since greeks allow an investor to determine how much risk their portfolio is facing, we have used this information to propose a new measure of model uncertainty considering some information of model risk as a penalty function. This approach will enhance some knowledge in context to the hedging strategies and enable the investors to protect their investments from adverse changes within the market and models. Some applications in standard short dated fx derivatives are illustrated. Keywords: Sensitivity of model uncertainty, model risk, greek letters, hedging strategies

A case study of the economic and social development challenges facing Guyana in its transformation of becoming a geopolitical interest in South America and the Caribbean

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Abstract

This case study aims to examine the critical factors affecting the economic and social development of Guyana – which is largely described as a small developing economy in South America, despite being endowed with an abundance of natural resources which include over eight billion barrels of recoverable crude discovered since 2015 onwards. The research methodology employed combines a qualitative model of research and analysis technique, specifically a thematic synthesis was performed in which relevant secondary data were collected. An economic and financial analysis of quantitative datasets on various macroeconomic variables spanning a period of 25 years (1994-2019) was also conducted, inter alia, interpretation of the datasets. Guyana is the only English-speaking country in South America with a small population of less than one million people, per capita income of US$5,000 (2019), and GDP in nominal terms of US$4 billion. The author seeks to present a compelling case of whether Guyana can become transformative within the region, viz-à-viz an enhanced framework that would foster deeper regional economic integration of South America and the Caribbean with the rest of the world. This notion is premised against the backdrop of its arguably geopolitically potent location, its emerging petroleum industry, coupled with the increasing global interests in Guyana especially from the United States, United Kingdom, European Union (EU), Canada and many other countries across the world. The main findings of the study with respect to the social and economic development challenges – show that there are fundamentally four dynamic elements responsible for the under-development nature of Guyana. These are: (1) there is a huge human capital deficit in terms of education and skills of the population, (2) physical infrastructure deficit, (3) high cost of energy which is one of the highest in the western hemisphere, and (4) the most crucial determinant is the inherent features of the political economy which is underpinned by ethnic division and politically motivated crime and violence, historically and to some degree in the current political environment. The paper analyzed the causation and drivers of these determinants and concludes that with good political leadership and governance, Guyana can move from being an under-developed country to a 'developed' economy and thus become a strategic geopolitically important country because at the margin western hemisphere oil supply is crucial, and because a Brazilian corridor to the sea is important. In these respects, it is contended that Guyana can play a pivotal role that fosters greater regional and continental integration of the Caribbean and South America, respectively – within the global economy.

Keywords: critical factors, development, transformative, geopolitical**.**

Preface

Guyana is the only English-speaking country located on the Northern coast of South America and classified as a lower-middle-income country, with US$5,000 income per capita (2019), an economy valued at US$4 billion and a population of approximately 750,000. The structure of Guyana's economy is relatively diverse. It comprises several productive economic sectors namely: the extractive industry which includes gold, diamond, and bauxite mining–while the other productive industries constitute the agriculture, fishing and livestock, forestry, rice, sugar, gold, manufacturing and the services sector, engineering, and construction. With recent oil discoveries offshore Guyana, the gross recoverable resources now estimated more than 8.0 billion oil-equivalent barrels, making it one of the most significant global finds in recent years. These deposits occur in the Guyana Basin which covers the entire coastal region and extends 150 km

out into the Atlantic Ocean. As such, with the development of Guyana's embryonic energy sector, a plethora of opportunities are anticipated to emerge in 2020 and beyond – some of which have already manifested for Guyanese businesses to capitalize upon–including through the formation of synergies with other international and regional organizations in the area of providing support services to the offshore drilling companies, and other oil and gas-related ventures.

Guyana is poised to experience an economic 'boom' in the medium to long term outlook. Oil production has recently commenced offshore by ExxonMobil in December 2019. Though there may not be any significant amount of direct employment for Guyanese by the multinational oil companies such as ExxonMobil, there will be a surge in demand for support goods and services, and thus the creation of indirect employment. Many companies are forging ahead to form strategic partnerships–a mixture of both local and foreign companies. As such, both the government and the local private sector ought to work closely together to ensure that we exploit all possible means to build institutional capacity, the building of skills and requisite competence in all possible respects to capitalize on the sea of opportunities that the new sector will induce.

Methodology

The research methodology employed combines a qualitative model of research and analysis technique, specifically a thematic synthesis was performed in which relevant secondary data were collected. An economic and financial analysis of quantitative datasets on various macroeconomic variables spanning a period of 30 years was also conducted, inter alia, interpretation of the datasets. Further to note, the compilation of this paper constitutes largely, a series of articles published by the author in a weekly column carried in the local press titled "The Economy & Finance".

1 Guyana economy

The structure of Guyana's economy is relatively diverse. It comprises several productive economic sectors namely: the extractive industry which includes gold, diamond and bauxite mining - while the other productive industries constitute the agriculture, fishing and livestock, forestry, rice, sugar, gold, manufacturing and the services sector, engineering and construction. Given this, Guyana is known throughout the region as one of the richest countries in respect of its natural resources. Yet, the country remains highly underdeveloped. It is therefore important to note that the manner in which these resources are managed, *inter alia* the policies pursued in these regards are what will determine the '*desired'* economic progress of the country and its people. This achievement inevitably calls for strong and visionary leadership at the national level, a competent government and an educated population, having the ability, patriotism and the will power to conceptualize a carefully crafted national development plan for the long-term economic growth and prosperity of Guyana's economy. These are only few of the key prerequisites for the accomplishment of these goals. In fact, they are considered to be the underlying pillars for the attainment of economic prosperity of a nation.

1.1 Historic economic context

Since achieving independence from Great Britain in 1966, Guyana's economic performance have been inconsistent. Following a short period of economic growth between 1970 and 1975, Guyana's accumulated GDP growth between 1976 and 1990 was -32.8% according to UN's Economic Commission for Latin America and the Caribbean. This economic inconsistency persisted into recent years as shown in Figure 1 below, which presents average GDP growth for Guyana compared with averages for the Latin America region.

Source: (Corral et.al, 2009)

As in the case of the Latin America and Caribbean more generally, Guyana has experienced considerable ebbs and flows in economic growth. Since 1990, Guyana has experienced five years of negative economic growth, 1990, 1998, 2000, 2003 and 2005 while the average for Latin America has fallen into negative territory only once, in 2002. Following Guyana's negative growth rate in 2005, the country saw a significant improvement in economic performance the following year (2006) with 5% GDP growth during that year as well as 2007. In 2008 however, economic growth declined to just 3%. Guyana is regarded as one of the Western Hemisphere's poorest countries with a per capita income of about one-fifth of the average in South America, wherein, Guyana faces formidable economic challenges (Corral, et.al, 2009)

1.2 Macroeconomic analyses

The economy recorded growth in real Gross Domestic Product (GDP) of 4.7 percent at the end of 2019. This growth rate was driven by increased production in gold, rice, other crops and enhanced construction and services activities. Conversely, there were lower production output of sugar, fishing, livestock, forestry and bauxite. The inflation rate increased to 2.1 percent at the end of 2019 on account of higher food prices from less than 2 percent in the previous year, while the exchange rate remained relatively stable at GY$208.5 / US$1.

1.3 The External Sector

At the end of 2019 the overall balance of payments registered a deficit of US$49 million which improved from the corresponding period position of US$132.2 million in 2018 and the US$106.1 million projected for 2019. This outturn was attained as a result of a higher-than projected capital account surplus that was sufficient to offset a higher current account deficit.

The balance of payment deficit was financed by debt relief of US$50.7 million and debt forgiveness of US$45.7

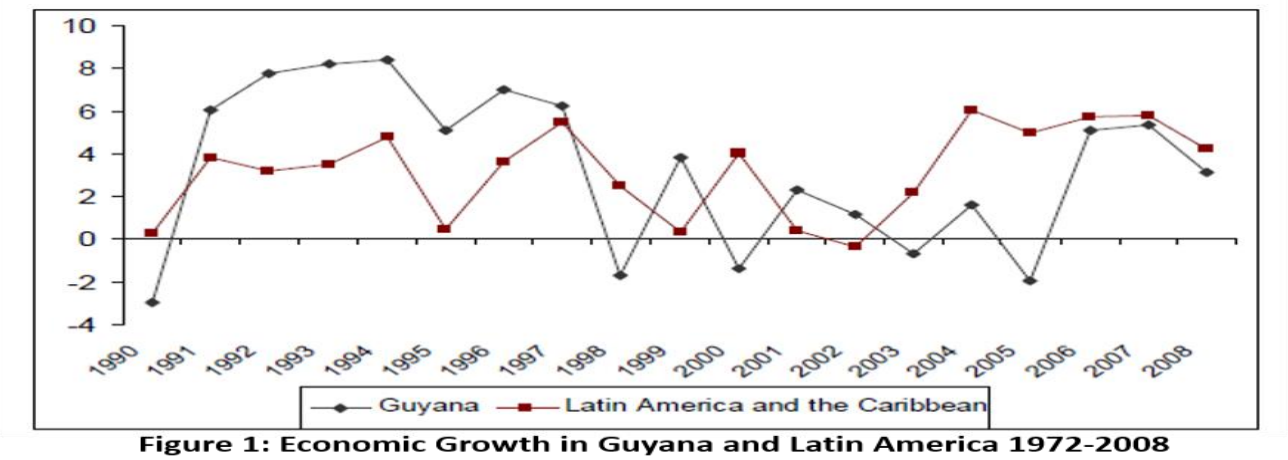


Figure 1: Economic Growth in Guyana and Latin America 1972-2008

million, while the net foreign assets of the Bank of Guyana increased by US$47.5 million.

The current account recorded a deficit of US$1.8 billion at the end of 2019 which represented 25.3 percent higher than the deficit in 2018 and 30.7 percent higher than the deficit forecasted for 2019 at the half-year. The variance resulted from a larger than projected deficit on the merchandise trade account – despite the larger than projected unrequited transfers.

The merchandise trade deficit amounted to US$1.45 billion in 2019, larger than the deficit of US$1.03 billion in 2018 although export earnings increased by 13.8 percent or US$189.9 million in 2019. The widening merchandise deficit is attributed to larger than projected import payments of intermediate and capital goods for the oil and gas sector which offset the higher forecasted export earnings. Export earnings of US$1.57 billion surpassed the mid-year projection by US$141.9 million. This was driven by better performance for sugar, rice and paddy, gold and other exports by US$2.8 million, US$20.7 million, US$99.7 million, and US$29.4 million respectively.

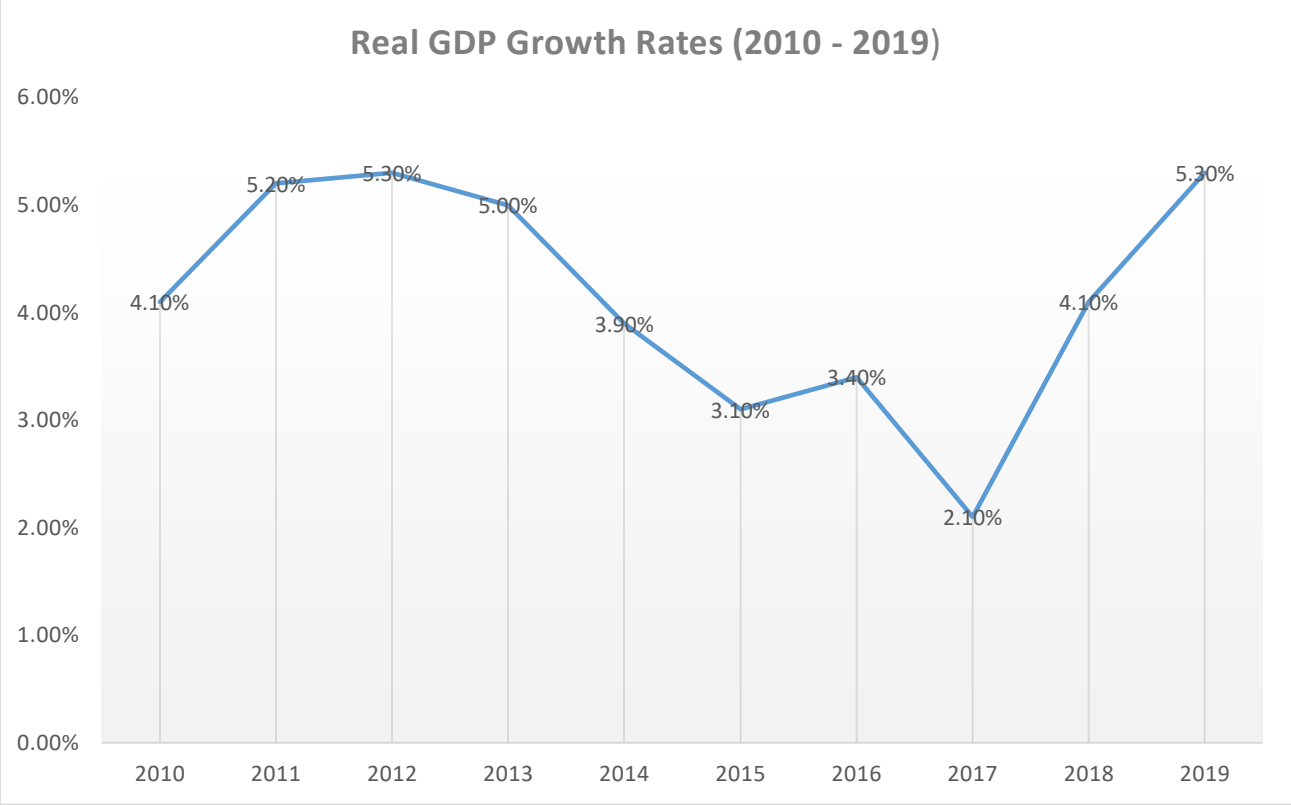


Figure 2: Real GDP Growth Rates (2010-2019)

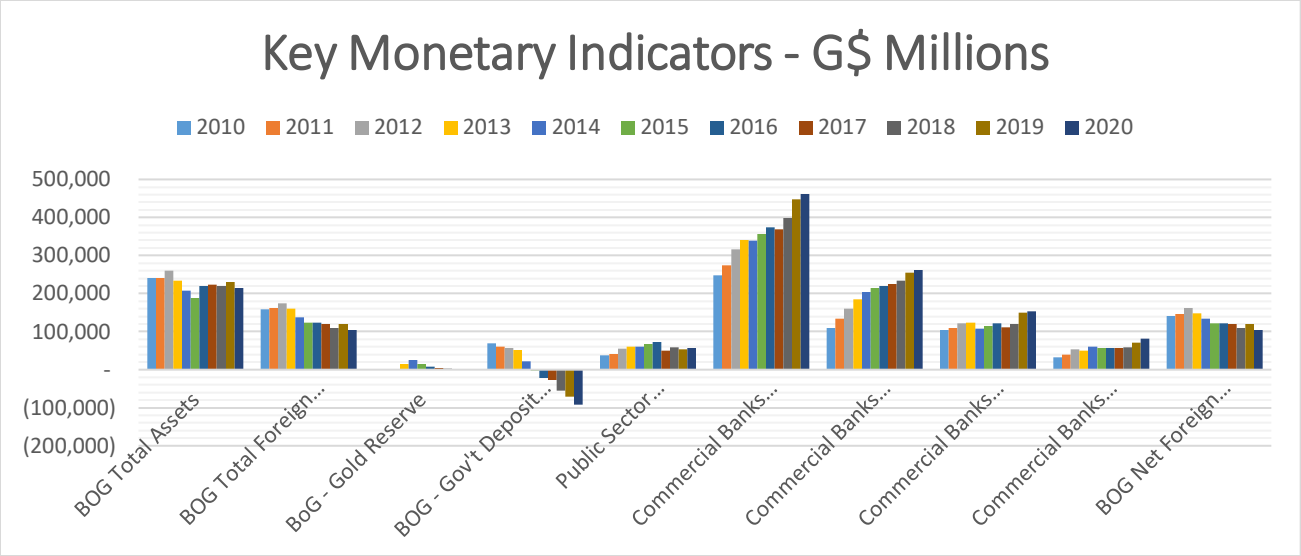
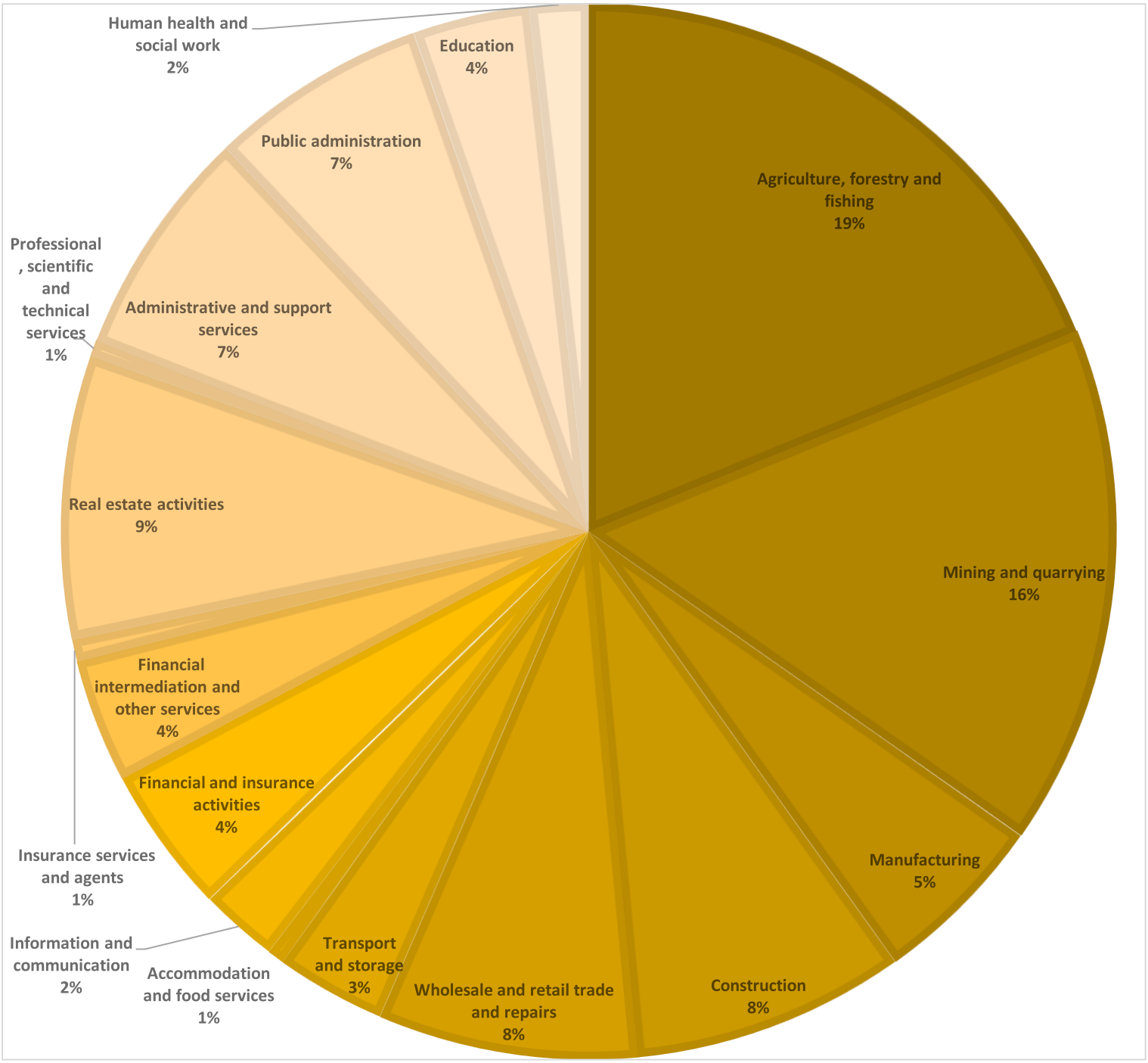


Figure 3: Key Monetary Indicators – G$ Millions

Source: Bank of Guyana Reports

FIGURE 4: SECTORIAL CONTRIBUTION OF GDP (2019)

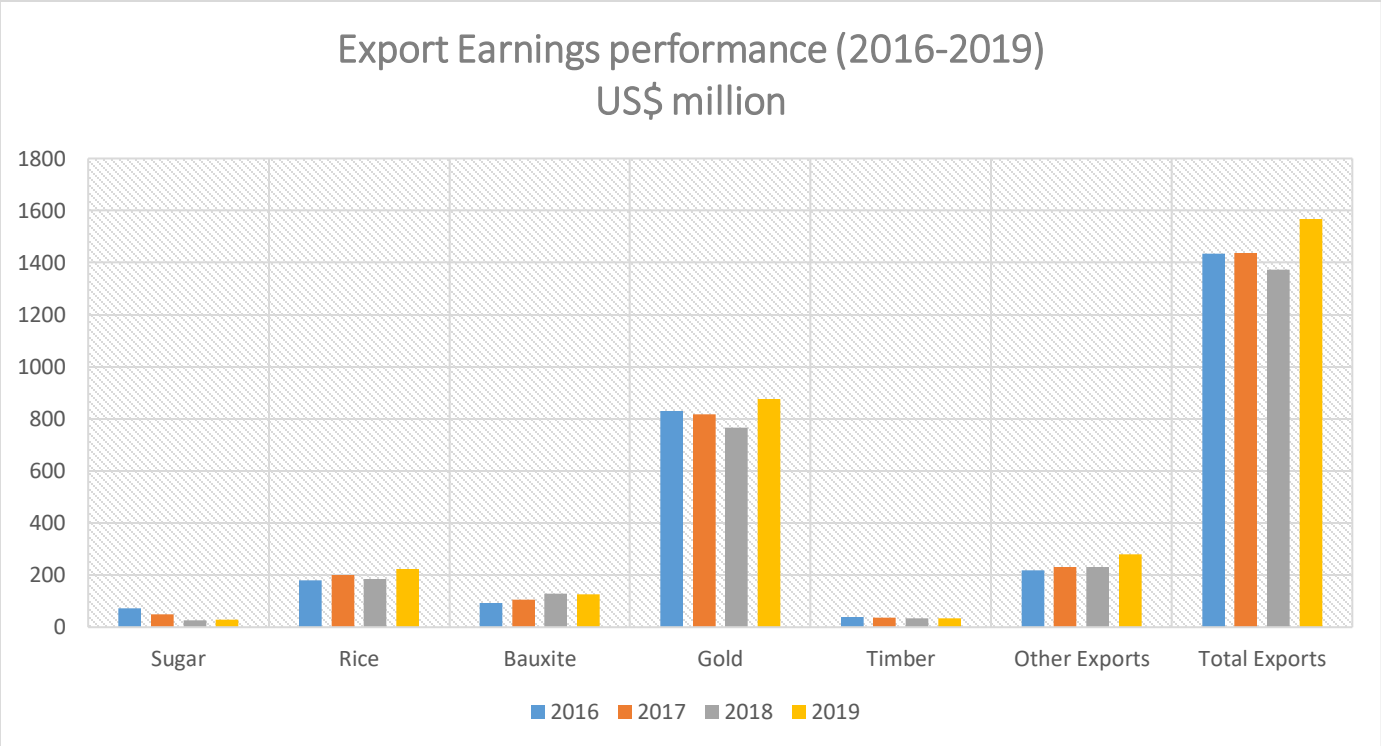


Source: Bureau of Statistics, Guyana.

TABLE 2: BALANCE OF PAYMENT ACCOUNT (2019) US$ MILLION

Items	2018	2019	Variance	Variance (%)
Current Account	**(1,439)**	**(1,803)**	**(364)**	**25.3**
Merchandise trade	(1,033)	(1,452)	(419)	40.5
Services (Net)	(897.4)	(932.2)	(35)	3.88
Transfers	491.7	581.5	90	18.26
Capital Account	**1,299**	**1,767**	468	36
Capital transfers	23.5	28.5	5	21
Non-financial public Sector (Net)	82.5	147.9	65	79.27
Private Capital	1,197	1,653	456	38.10
Other	-	-		
Short term capital	(4.8)	(62.3)	(58)	1198
Errors & Omission	**8.0**	**(12.8)**	(21)	-260
Overall Balance	**(132.2)**	**(48.9)**	**83**	**63**

Source: Bank of Guyana Annual Report, 2019



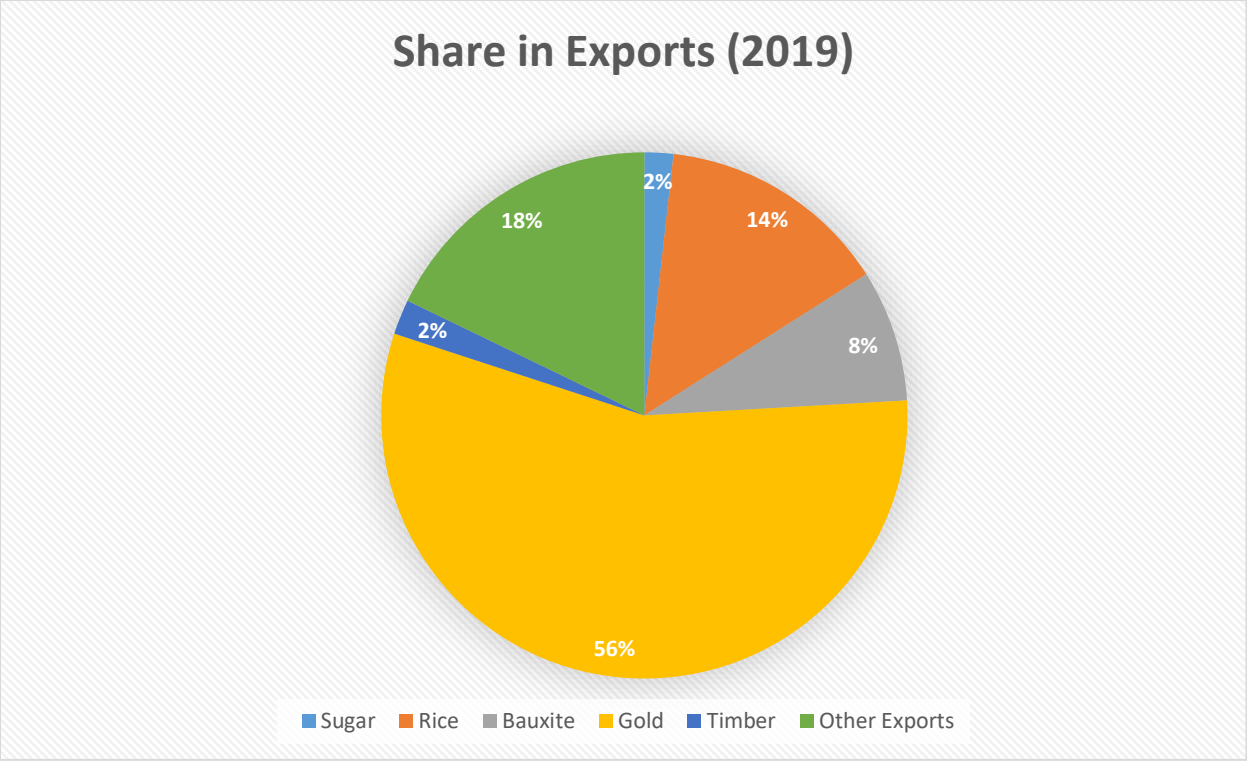


Figure: 5: Export Earnings performance (2016-2019)

Figure 6: Share in Exports (2019)

Source: Bank of Guyana Annual Report, 2019

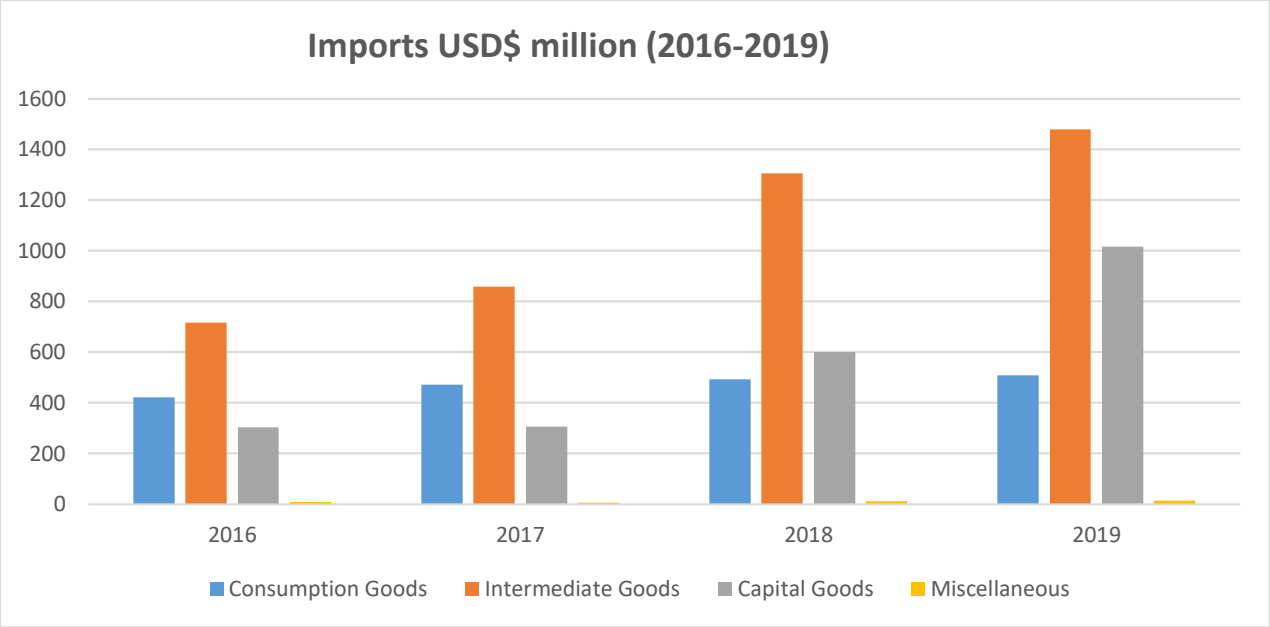


Figure 7: Imports USD$ million (2016-2019)

Source: Bank of Guyana Annual Report, 2019

1.4 Exports of major commodities

Total export increased by 13.8 percent or US$189.9 million to US$1.56 billion from US$1.38 billion in 2018. Sugar export earnings amounted to US$27.8 million, 25 percent more than 2018 earnings. This was attributed to a 0.4 percent increase in volume of sugar exported which amounted to 78,071 metric tonnes or 275 metric tonnes more than the level exported in 2018. Average export price for sugar increased by 2.1 percent or US$355.8 metric tonnes in 2018.

Rice export earnings amounted to US$222.7 million, 19.7 percent above the 2018 level, which resulted from higher export volume and higher average export price. The volume of rice exported amounted to 526,617, 12 percent or 56,305 metric tonnes more than the 470,312 metric tonnes exported in 2018. The EU's share of rice exports increased to 34.1 percent from 28 percent in 2018. Conversely, CARICOM's share fell to 15.8 percent from 21.9 percent in 2018, and Latin America's share was 48.7 percent compared with 34.6 percent due to the Venezuela market. The U.S market accounted for 1.4 percent of total rice export. The average export price for rice increased by 7 percent or US$27.3 to US$423 per metric tonne compared with US$396 per metric tonne the previous year.

Export earnings for bauxite amounted to US$127 million, 0.9 percent less than 2018 performance of US$128.2 million due to a decline in export volume by 1.9 percent or 36,482 metric tonnes from 1,943,367 metric tonnes in 2018 to 1,906,886 metric tonnes in 2019. The average export price increased by 1 percent from US$65.95 to US$69.62 per metric tonne in 2019.

Gold exports amounted to US$876.6 million which increased by US$109.8 million or 14.3 from 2018 position of US$766.8 million. This outturn was attributed to higher volume of exports and higher price. Export volume increased by 4.1 percent or 25,175 ounces to 636,410 ounces in 2019. The average price per ounce of gold was higher by 9.8 percent to reach US$1,377.5 per ounce in 2019 from US$1,254.5 per ounce in 2018.

Timber exports amounted to US$33.7 million in 2019 which represents an increase of 1.1 percent from 2018 level on account of higher export price. Receipts from plywood exports decreased by 26.2 percent to US$1.2 million from US$1.6 million in 2018, while other timber exports increased by 2.5 percent to US$32.2 million from US$31.7 million in 2018.

Export earnings from other exports including re-exports amounted to US$279.2 million, 18.4 percent above the 2018 level. This outturn was on account of higher receipts for re-exports which increased by US$54.4 million to US$68.2 million, largely reflecting the re-exportation of machinery and equipment that were temporarily imported for use in the oil and gas sector. Conversely, exports from fish and shrimps, rum and other spirits declined by US$21 million and US$11.7 million respectively.

TABLE 3: EXORTS OF MAJOR COMMODITIES (US$ millions)

Items	2018	2019	% Change
Sugar	27.1	27.8	2.5
Rice	186	223	19.8
Bauxite	128	127	-0.78
Gold	767	877	14.3
Timber	33.3	33.7	1.2
Total	**1,141.4**	**1,415.5**	**24**

TABLE 4: OTHER EXPORTS (US$ millions)

Items	2018	2019	% Change
Fish & Shrimp	97.2	76.3	-21.5
Fruits & Vegetables	8.0	6.2	-22.5
Pharmaceuticals	3.0	4.6	53.3
Garments & Clothing	0.3	0.6	50
Wood Products	3.7	2.9	-21
Prepared foods	29.9	27.5	-8.0
Rum & Other spirits	46.6	34.9	-25
Beverages	3.0	10.4	246
Diamond	12.3	11.7	-4.87
Molasses	0.4	0.0	-100

Re-exports	13.8	68.2	394
Others	17.5	35.8	104
Total	**235.7**	**279.2**	**18.45**

TABLE 5: IMPORTS (US$ millions)

Items	2018	2019	% Change
Consumption goods	493	510	3.44
Intermediate goods	1306	1479	13.2
Capital goods	600	1015	69
Miscellaneous	10.8	13.7	26.8
Total	**2410**	**3019**	**25.27**

Source: Bank of Guyana Annual Report,2019

1.5 Inflation

According to the Bank of Guyana, the inflation rate measured by the Urban Consumer Price Index (CPI) was 2.1 percent at the end of December, 2019. The monthly change in the consumer price level ranged between -0.1 in January to a high of 2.4 percent in October, 2019. The outturn was primarily due to higher food prices which increased by 6.2 percent. The cost of food was largely influenced by seasonality, supply shortages and higher prices of imported food items. Prices spiked for vegetables by 22.5 percent as well as meat, fish and eggs by 10.8 percent. Price increases were also recorded in categories of miscellaneous goods and services, education, recreational and cultural services and medical care and health services by 0.5 percent, 0.4 percent, and 0.2 percent respectively. Conversely, there were declines in prices for pulse and pulse products with prices of fruits, milk and milk products declining by 3.9 percent, 1.3 percent and 1.0 percent respectively. The lower price of fuel contributed to the declines experienced in the categories of housing and transportation and communication by 0.8 percent and 0.6 percent, respectively.

TABLE 6: CONSUMER PRICE INDEX

Commodity	2018	2019
All items	117.1	119.5
Food	138.5	147
Clothing	94	89
Housing	100	99
Footwear & repairs	82.4	81.5
Furniture	90.6	89.9

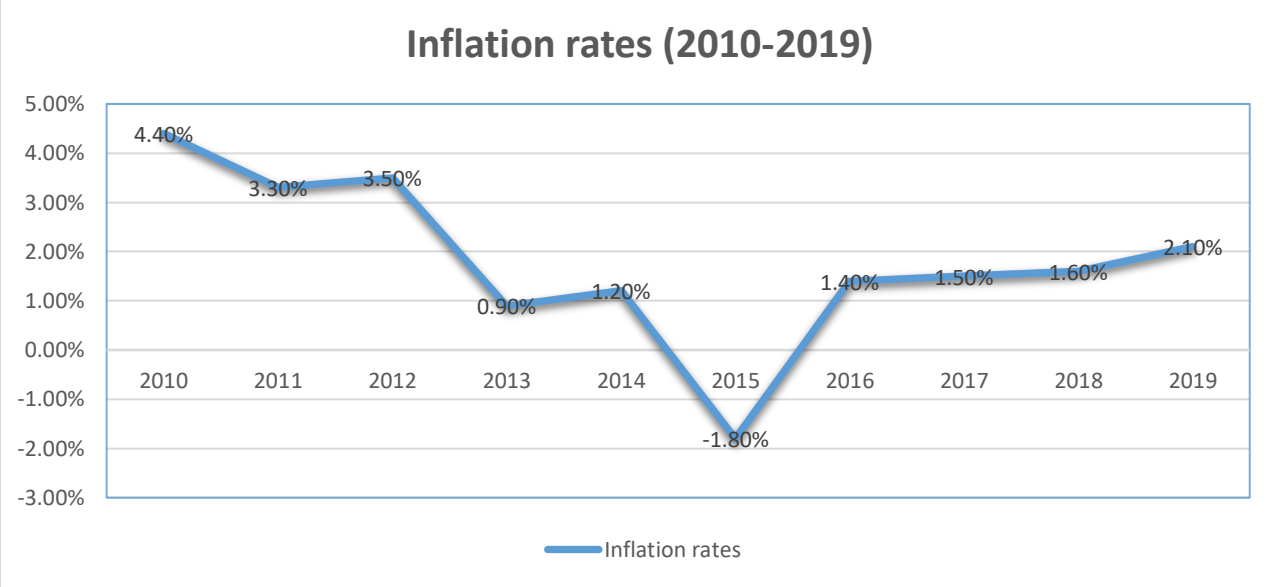
Transport & communication	120.3	119.5
Medical care & health	129.6	129.9
Education, recreation & cultural services	96	96.4
Miscellaneous goods and services	120.3	120.9

Figure 8: Inflation Rates (2010-19) Source: Bank of Guyana Annual report, 2019

1.6 Interest Rates and spreads

According to the Bank of Guyana, commercial banks interest rates trended downwards for 2019. The weighted average time deposit for the banks declined by 13 basis points to 0.98 percent while the weighted average lending rate fell by 84 basis points to 9.18 percent respectively. The small savings rate was also lower by 7 basis points to 0.97 percent. The prime lending rate was lower as well by 2.71 percentage points to 10.29 percent. The interbank market interest rate ranged between 4 percent and 4.5 percent during the review period.

Table 7: Commercial Banks Selected Interest Rates



	2018	2019	Change

Small savings rate	1.04	0.97	-0.07
Weighted average time deposit rate	1.10	0.98	-0.12
Weighted average lending rate	10.02	9.18	-0.84
Prime lending rate	13	10.29	-2.71
91-day T-Bill discount rate	1.54	1.54	-

Source: Bank of Guyana Annual Report, 2019

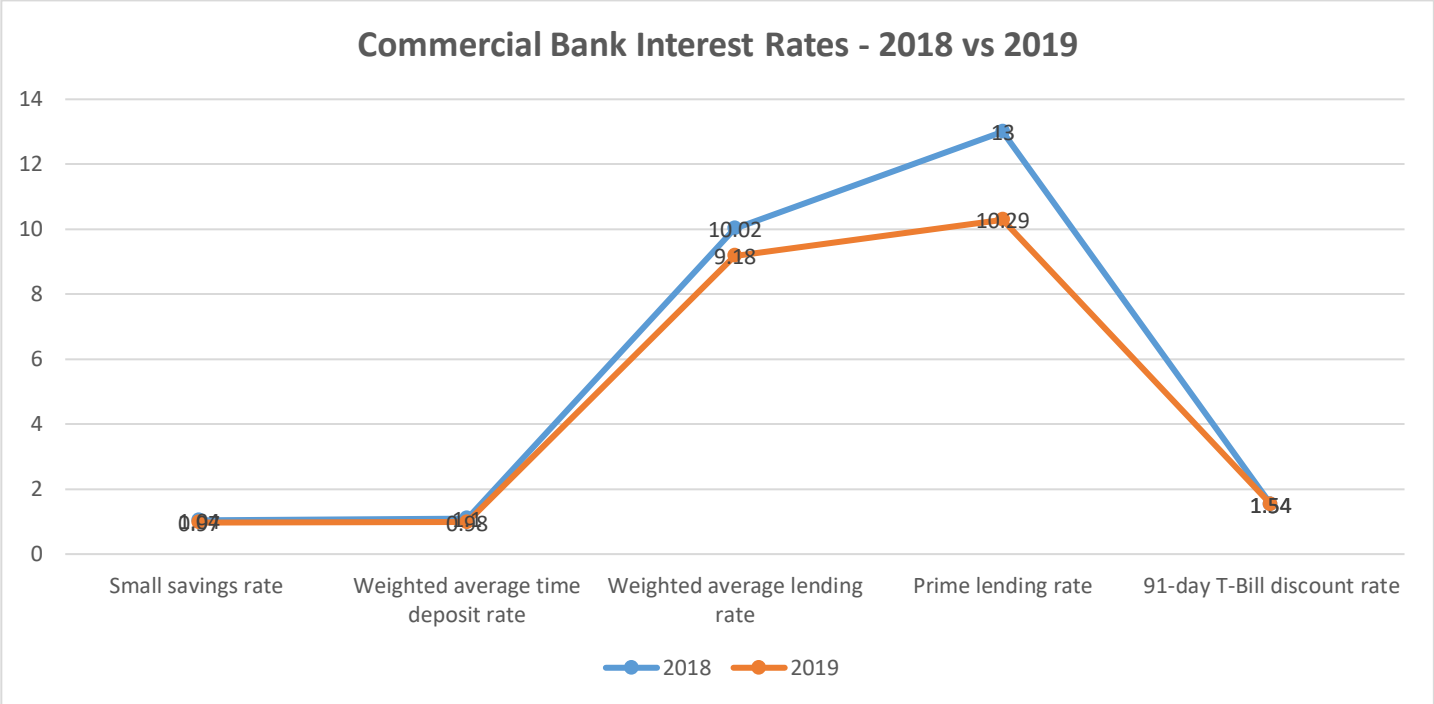
Figure 9: Commercial Bank Interest Rates – 2018 vs 2019

Source: Bank of Guyana Annual Report, 2019

1.7 Exchange Rate

The weighted mid-rate based on the three largest commercial banks turnover, remained at G$208.5 at the end of 2019. The un-weighted mid-rate using the same method depreciated by 1.01 percent to G$214.86 compared with G$212.72 in 2018. The average buying and selling rates at cambios fluctuated during the review period. The commercial bank cambios' average buying and selling rates were G$213.66 and G$215.24 from G$213.31 and G$215.06 respectively in 2018. The non-bank cambios' average buying and selling rates were G$213.74 and G$216.44 from G$210.67 and G$213.28 respectively.

1.8 Public Debt



Total public debt stood at $354 billion by the end of 2018 representing an increase of $24 billion from 2014, while the balance on the CF as of 2017 (the most recent publicly available data) stood at $137 billion deficit from a position of $77 billion in 2014 representing an increase of its deficit/overdrawn position by $60 billion. It is important to note

that – these huge deficit balances drawn on the central bank are in effect the creation of debt which ought to be repaid. These Central Bank balances should not be used as perpetual financing for Government's spending.

At the end of 2019, total public debt stood at US$1.689 billion or 32.7 percent of nominal GDP, while total debt service payment amounted to US$316.5 million or 27.7 percent of central government revenue. The total stock of public debt is 5.3 percent lower than Budget 2019 projection of US$1.782 billion. This is attributed to a US$50.7 million debt reduction from Kuwait in March 2019, and principal repayments on fiscal T-bills. At the end of 2019, debt-to-GDP ratio was approximately 12 percentage points below the Budget 2019 projection of 44.8 percent.

Table 8: Total public Debt (US$ million)

Items	2018	2019	%Change
Total Public Debt Stock	1,708	1,689	-1.1
External public debt	1,322	1,305	-1.28
Domestic public debt	386	383	-0.7
Share of external public debt	**77%**	**77.29%**	**0.29**
Share of domestic public debt	22.6%	22.71%	0.11
Debt-to-GDP ratios			
Total public debt	**44.2%**	32.65%	11.55
External public debt	34.2%	25.23%	8.97
Domestic public debt	10%	7.41%	**-2.59**

Source: Ministry of Finance

1.9 Government Revenue and Expenditure

In 2015 the Government's total deposit in the Central Bank stood at a surplus of $15 billion, total public sector deposits in the commercial banks stood at $68.2 billion giving rise to total Government deposit $84 billion surplus in the banking system. The Bank of Guyana International Reserves stood at US$595 million which represented almost five months' worth of import cover in reserves; at the end of 2014 total public debt stood at $330 billion which includes external debt; and the overdraft on the Consolidated Fund (CF) at the end of 2014 stood at $77 billion.

As at April 2020 the Government's deposit accounts at the Central Bank stood at a whopping $92.4 billion as a negative/deficit balance from a surplus of $15 billion in 2015. While bearing in mind that these deposit accounts over the last two decades had always recorded surplus balances as high as $70 billion surplus in 2010. The public sector total deposits in the commercial banks stood at $55.4 billion which would give rise – when taken together with the balance at the central bank to a deficit of $37 billion or US$177 million, compared to a surplus position in 2015 of $84 billion or US$403 million. The international reserves as at the end of February 2020 stood at US$548 million which is equivalent to less than 2.5 months' worth of import cover – thus an indicator of a weaker position from almost 5 months equivalent in 2015.

Government revenue grew by $133 billion or 125% over the last ten years (2010-2019) from a position of $108 billion in 2010 to reach over $240 billion by end of 2019. Government total expenditure grew by $149 billion or 119 % from a position of $125 billion in 2010 to reach $274 billion by end of 2019. However, capital expenditure contracted over the last five years when compared to the previous five years (2010-2015), wherein, capital expenditure only increased by 42% or $19.6 billion over the last ten years while current expenditure increased exponentially to reach $207.6 billion from $78 billion in 2010 or by $129.2 billion, representing an increase of 165%. In 2o10, capital expenditure accounted for approximately 40% of total Government expenditure and by the end of 2019, capital expenditure accounted for less than 25% of total Government expenditure.

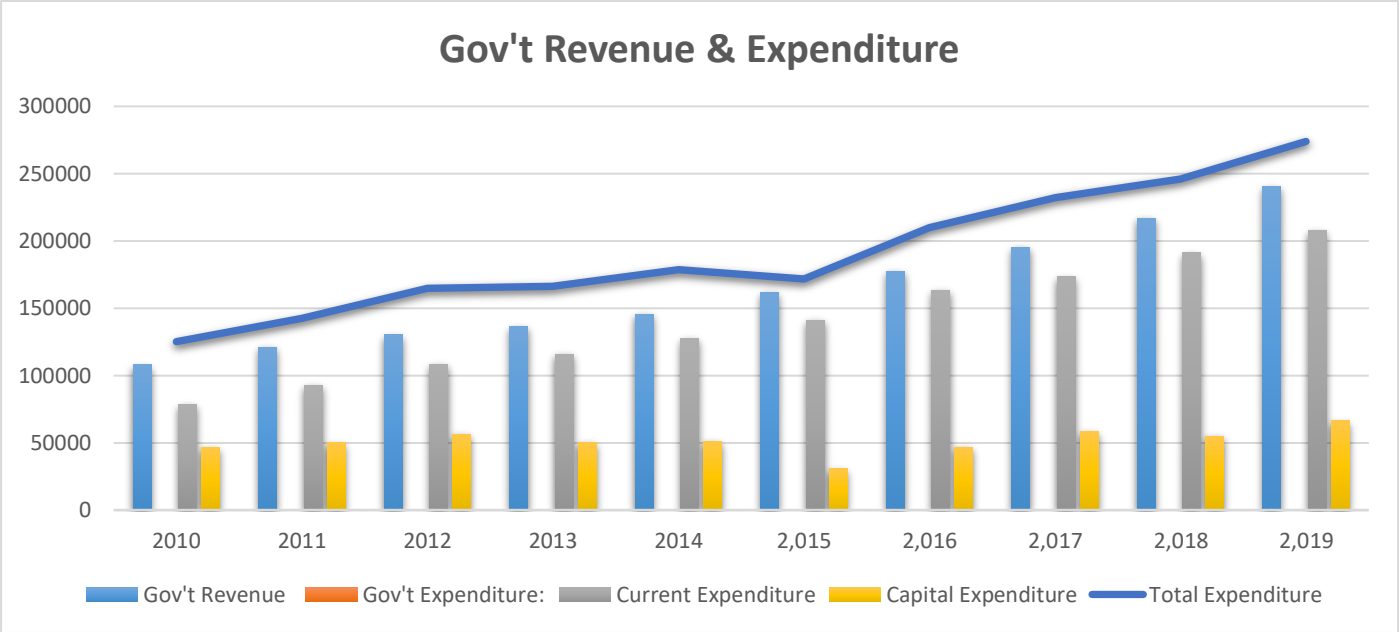


Figure 10: Gov't Revenue & Expenditure
Source: Bank of Guyana Reports

Government's Revenue & Expenditure for the period 2011 2018

In this section, a more comprehensive analysis of government revenue and expenditure over the last eight years period, aggregated and compared as two periods of four years each – for simplicity in the presentation.

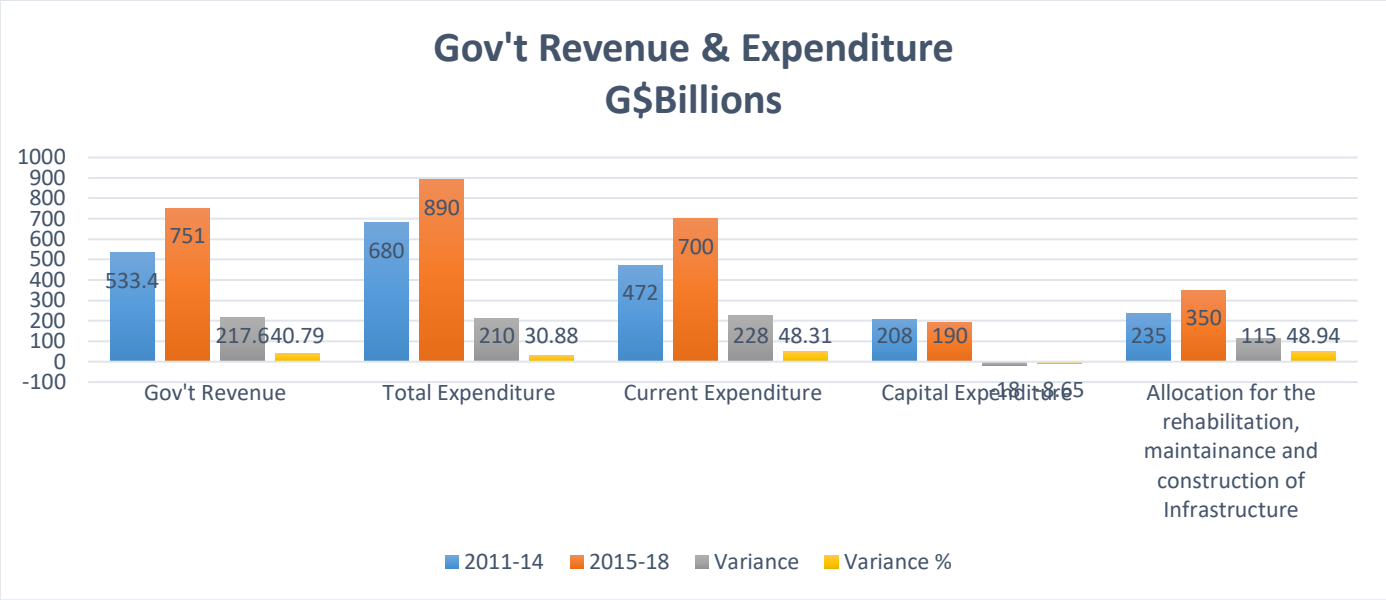


Figure 11: ***Gov't Revenue & Expenditure Billions***

Table 9: ***Gov't Revenue & Expenditure Billions***

	2011-14 G$B	2015-18 G$B	Variance $GB	Variance %
Gov't Revenue	**533.4**	**751**	**217.6**	**40.79**
Total Expenditure	**680**	**890**	**210**	**30.88**
Current Expenditure	472	700	228	48.31
Capital Expenditure	208	190	-18	-8.65
Allocation for the rehabilitation, maintenance and construction of Infrastructure	**235**	**350**	**115**	**48.94**

Source: Extrapolated from Bank of Guyana Annual Reports, Budget Speeches & End Year Outcome Reports by Ministry of Finance.

For the period 2015 –18, Government total revenue amounted to $751 billion which increased by $217.6 billion or 41 percent from $533.4 billion in the corresponding period of 2011-14. This increase can be explained by increases in the level of taxation rather than increases in a more broad-based tax system. Total expenditure increased by $210 billion over the period 2015-2018 from $680 billion in the corresponding period of 2011-14, representing an increase of 31 percent, while current expenditure increased by $228 billion for the period 2015-18 or 48.3 percent from $472 billion in the period 2011-14.

On the other hand, allocation of expenditure for infrastructure and construction projects which include the rehabilitation, maintenance and construction of roads, bridges, stellings, education infrastructure, health and security infrastructure, Information and Communications (ICT) infrastructure, and hinterland roads and other infrastructure, increased by 49 percent or $115 billion to $350 billion for the period 2015-18, relative to the corresponding period 2011-14. Interestingly however, while Government current or consumption expenditure for the period 2015-2018 increased by a whopping 48 percent when compared to the previous four years period, capital expenditure for the period 2015-18 actually fell by 8.65 percent or $18 billion relative to the period 2011-14.

Government expenditure is often divided into three main types: (1) current expenditure or government final consumption expenditure. This category of expenditure include goods and services for current use to directly satisfy

individual or collective needs of the members of the community; (2) capital expenditure of fixed capital expenditure (or government investment) include government spending on goods and services intended to create future benefits, such as infrastructure investment in transport (roads, rail, airports), health (water collection and distribution, sewage systems, information communications technology, and research spending; and (3) transfer payments – spending that does not involve transactions of goods and services, but instead represent transfers of money such as social security payments, pensions and unemployment benefits. Government's current or consumption expenditure for the period 2015-2018 increased by a whopping 48 percent when compared to the previous four years period, capital expenditure for the period 2015-18 actually fell by 8.65 percent or $18 billion relative to the period 2011-14. To that end, the essence of this analysis validates the contentions that while, over the last four years Government expenditure has undergone massive increases compared to the period under the previous administration at that time. Such expenditure are largely concentrated in unproductive areas that could be deemed wasteful spending owing to weak institutional frameworks to ensure value for money projects. In fact, as can be seen from the numbers, government expenditure on real capital projects have actually declined by 8.65 percent or $18 billion compared to the last four years in the period under review.

It is perhaps not enough to emphasize that this is a undersiable trend especially in a developing economy context – wherein for the period 2011-14, 30.5 percent of government total expenditure was allocated towards capital projects, while for the period 2015-18, 21 percent of government's total expenditure were diverted towards capital projects, a decline of 10 percent relative to the previous period. Consequently, though government's revenue has grown exponentially in the last four years by some 41 percent, much of it has gone into the financing of consumption goods and services, thereby bloating the size of the public sector and a much larger government, rather than diverting more resources towards funding new capital projects that will enable sustainable future economic development.

Table 10: Analysis of Aggregate Expenditure

	2011-14 GY$B	2015-18 GY$B	Variance GY$B	Variance (%)
Gov't Revenue	**533.4**	**751**	**217.6**	**40.79**
GDP (avg.)	4.75	3.13	-1.63	-34.21
Inflation (avg.)	1.62	0.68	(0.94)	(58.27)
Private Investment	325.10	731.30	406.20	124.95
Private Consumption	2,100.60	1,918.20	(182.40)	(8.68)
Total Private Expenditure	**2,425.70**	**2,649.50**	**223.80**	**9.23**
Public Investment	244.00	209.00	(35.00)	(14.34)
Public Consumption	255.90	505.10	249.20	97.38
Total Public Expenditure	**499.90**	**714.10**	**214.20**	**42.85**

Source: Bank of Guyana Annual reports

Moreover, the above data has revealed that average GDP growth rates for the period 2011-14 was stronger compared to the period 2015-18 which weakened by -1.63% in 2015-18 relative to 2011-14.

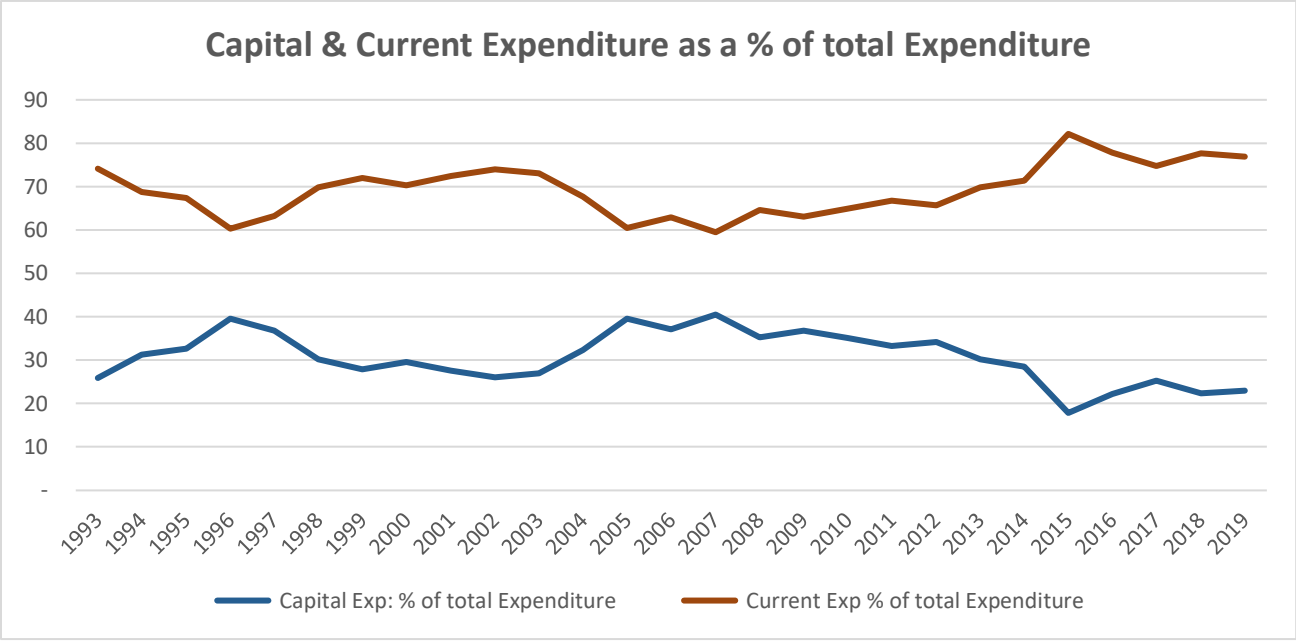
Total private expenditure increased by $223.8 billion or 9.23 percent in the period 2015-18 from $2.4 trillion for the four years period 2011-2014. This was driven largely by increases in private investment by $406.2 billion or 125 percent in the period 2015-18 – which can be safely deduced that this outturn was largely due to oil & gas related activities in the economy where ExxonMobil in particular has injected billions of dollars into the economy to its sub-contractors for services utilized in its operations. Conversely, private consumption has fallen by 8.68 percent or $182.4 billion. Total Public expenditure on the other hand increased by $214.2 billion or 43 percent relative to the corresponding period while total private expenditure increased by a meagre 9.23 percent. The alarming revelation of total public when disaggregated has shown that public investment fell by $35 billion or 14.34 percent in the period 2015-18 compared to the period 2011-14 while public consumption has increased dramatically by almost 100 percent or $250 billion from $256 billion for the period 2011-14 to $505 billion. This level of massive increases is equivalent to the entire national budget for 2017 which was $250 billion and can thus be interpreted to say such that: for the period 2015-18, Government has expended an entire year's budget on consumption expenditure alone. This is extremely worrying as it points to weak fiscal discipline on the part of central government, while noting that public investment has declined by some $35 billion coupled with a huge decline in private consumption. The private

investments are all largely driven by oil and gas related activities in the economy – thus, this is nothing to be excited about other than it being an indicator that Guyana has already been permeated by the so-called "Dutch disease syndrome".

1.2.1 Comparative analysis of spending under two different regimes: 1993-2019

The central focus in this section highlights the trend and levels of government spending for the period 1993 – 2019 (26 years), the rate of growth and allocation towards current and capital expenditure over this period.

The period under examination covers a total of 26 years of which 21 years were governed by the previous current



administration (emerging from the 2020 general and regional elections) and the latter five years was governed by the now Parliamentary Opposition. In 26 years, total Government expenditure amounted to $3.080 trillion which is almost 4 times nominal GDP in 2018. From 1993 – 2014 total Government expenditure amounted to $1.912 Trillion which gave rise to an average of $476 billion spent over a five years period, while in 2015 – 2019, total Government expenditure amounted $1.160 trillion which almost 2 and ½ times the average expenditure for a five years period under the previous administration. In other words, the level of government spending under the current administration is 2 ½ times greater than that of its predecessor.

Total government expenditure is divided into two main categories – that is, capital expenditure and Current Expenditure. Current expenditure or government final consumption expenditure include goods and services for current use to directly satisfy individual or collective needs of the members of the community; (2) capital expenditure of fixed capital expenditure (or government investment) include government spending on goods and services intended to create future benefits, such as infrastructure investment in transport (roads, rail, airports), health (water collection and distribution, sewage systems, information communications technology, and research spending.

To these ends, allocation towards current expenditure for the period 1993-2014 averaged at 70 percent of total expenditure and the remaining 30 percent being allocated towards capital expenditure. Further, during this period, current expenditure reached a high of 74 percent on two occasions: 1993 and 2002, while its lowest was 59 percent in 2007 and remained within the region of 60 – 74 percent of total government expenditure. This means, more than 30 percent and close to 40 percent in some instances of total government expenditure were allocated towards capital projects which are investments that creates future benefit, and which help to stimulate economic development.

On the other hand, during the period 2015 – 2019, average allocation towards current expenditure amounted to 78 percent of total expenditure with the lowest being 75 percent in 2017 and the highest of 82 percent in 2015, thus leaving a meagre 22 percent of the total budget, on average for capital projects.

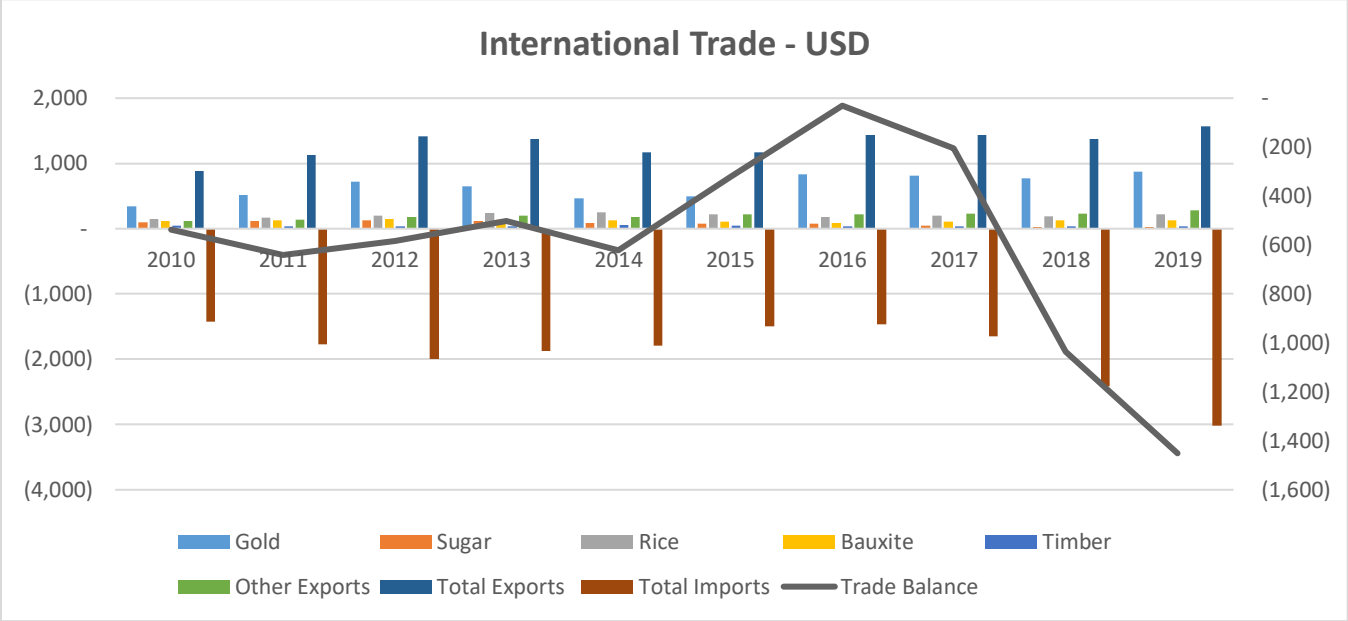
Figure 13: Capital & Current Expenditure as a % of total Expenditure

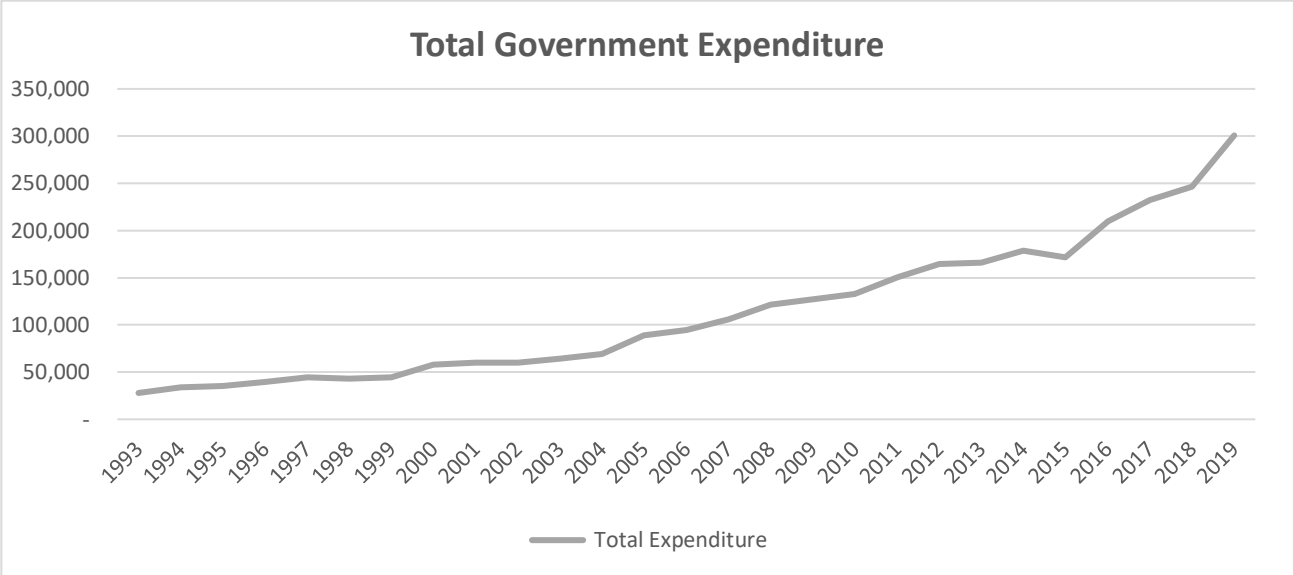
Figure 14: Total Gov't Expenditure

Source: Bank of Guyana Annual Reports, Budget Speeches & Estimates, Various

1.2.2 International Trade

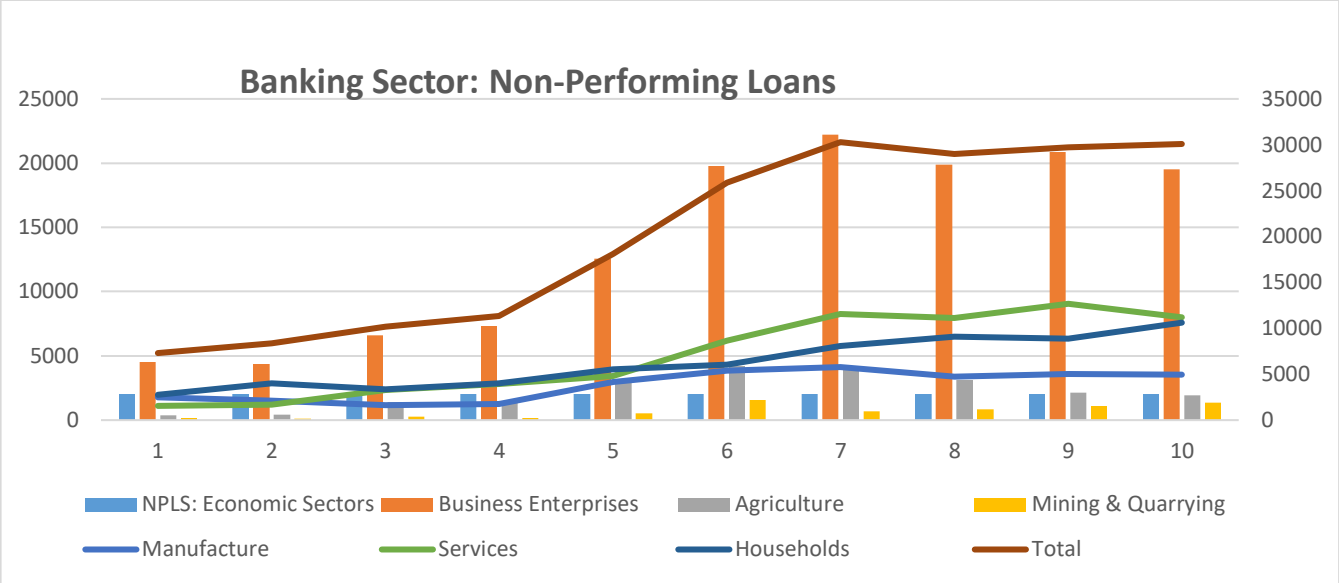
Over the last ten years, international trade balance expanded from a deficit position of US$536 million to US$1.4 billion by the end of 2019, representing an increase of US$900 million or 171% from 2010 to 2019. This level of increase is attributed to Gold exports which grew by US$531 million or 153 %; rice accounted for an increase of





US$72 million or 48%; bauxite accounted for US$13 million or 11%; and other exports accounted for US$156 million or 127%. Conversely, export earnings from sugar declined by US$73 million or 72% over the last ten years; and timber declined by US$14 million or 29%.

Figure 15: Int'l Trade - USD



Source: Bank of Guyana Reports, various.

The large growth in the trade deficit balance over the last ten years, however, was driven by exponential increases in imports, particularly for capital items, from a position of US$1.4 billion in 2010 to over US$3 billion by the end of 2019, representing an increase of US$1.6 billion or 113%, while total exports increased by US$685 million or 78%. Notably, this huge balloon in the country's total import bill is driven by capital goods for the oil and gas related activities in the economy.

1.2.3 Non-performing loans in the banking sector

An examination of the total non-performing loans (NPLs) in the banking sector over the last ten years (2010 – 2019) revealed that NPLs have grown from a position of $7.3 billion in 2010 to reach over $30 billion at the end of 2019 or by 312%.

Figure 16: Banking Sector: Non-performing Loans
Source: Bank of Guyana Reports

By examining the trend over the years, from 2010 – 2013, NPLs increased by just over $1 billion each year until 2014 through 2019, NPLs grew at an alarming rate of over $8 billion on two occasions when compared to previous year's performance during this period, thus bringing the total increase for the period under review by over $22 billion. The business enterprise sector accounted for $15 billion of this increase of which the service sector accounted for the highest of $9.6 billion compared to the other business sectors such as mining and quarrying, manufacturing and agriculture which accounted for $5.2 billion. Notably, the household sector was also badly affected, accounting for $7.8 billion increase or 282% from a position of $2.7 billion in 2010 to $10.6 billion at the end of 2019.

1.2.4 The micro-economic impact

It is important to contextualize the impact of the macroeconomic environment – the outcome of the current state of the macro-environment – that is, on a micro-level. In other words, how does it translate to the livelihoods of the working class and most vulnerable people in society, and what are the effects on householders, individuals, and firms. Though the economy has indeed recorded consecutive and increased growth rates in real GDP over the last five years, it does not necessarily translate widely to improved standard of living for the vulnerable and the working-class people. GDP does not measure progress and human development and is certainly not a good measure of standard of living. Essentially, GDP measures spending in four different aspects namely: Government spending, investment (foreign and local), consumption / household expenditure and net-exports, which, in the case of Guyana has always been a deficit position. In other words, Guyana imports more goods from the rest of the world than it produces and exports to the rest of the world. A desired position in this regard is one where there is a trade balance surplus (where exports is

greater than imports). A country's ability to generate adequate supplies of foreign reserves depends largely on its national competitiveness to produce goods at internationally competitive prices to boost export earnings.
The major inhibitor here is the high cost of energy in Guyana is among the highest in the western hemisphere. This inhibits the private sector from making investments to produce more value-added goods and services, which, in turn will enable greater levels of job creation. It is important to note as well, that it is not "how much" money is spent and / or invested in the economy but how and where these spending and investments are allocated. In the case of Government spending, there are largely two categories: consumption and capital or public investments. Consumption spending are those related to the procurement of goods and services for Government agencies and payment of salaries and wages for public servants. These goods and services are procured from both local and international firms. The extent to which consumption goods and services are procured from local firms would naturally help to fuel the growth and sustainable development of local businesses. However, such procurement, if done in an inequitable manner or where only a miniscule amount of local businesses and contractors benefit from providing the public sector with goods and services then the impact on the micro-level would not be far reaching or broad-based.

High levels of public debt coupled with a decline in government revenue attributed largely to the adverse economic effects of COVID-19 and the political uncertainties, would thereby constrain Government's ability to honor its debt obligation, and if so materialized, this leads to a bankrupt State. With this in mind, when government's revenue has to be redirected to service high levels of debt, this has implications for vulnerable groups, working-class, middle-income families and the business sector. The level of the non-performing loans in the banking sector, for example, is an indicator of the vulnerabilities and economic hardships, some sense of the gravity thereto, upon which vulnerable groups of people, the working-class and some sections of the business sector have been facing over the last five years. To this end, as highlighted previously, the level of NPLs increased by over $22 billion in the last ten years, where the business sector alone accounted for 66 percent or close to $20 billion and the household sector accounted for 30 percent or $4.5 billion, representing an increase of 75 percent from 2010 position.

To interpret this differently, non-performing loans effectively means that individuals and businesses are virtually bankrupt such that, they are unable to service their debt obligations owing to a number of factors including loss of income. To put these numbers into perspective, Guyana has an average of 250,000 households, a population of 750,000 people and a per capita income of less than $100,000 per month. Assuming that an average of three persons live within a household with a combined average household income of $250,000, while noting that the majority of the population are in the low-income bracket. In these respects, it can be safely extrapolated that the $4.5 billion portion of household NPLs in the banking sector literally means that there are just approximately 42,500 that are bankrupt or are now thrown into the poverty line. This represents 17 percent of the average total households in Guyana and 25% of the population. In 2010, using this same metric, the figures have shown that just about 4 percent of total householders were in this position. This means, that despite growth in GDP, the level of poverty of grown steadily over the years and this will only worsen with the impact of COVID-19 especially in the absence of adequate fiscal support packages on the part of the Government.

Table 11: Average Household Income (GYD)

Average House hold Income	**$ 250,000**
Household Expenses:	
Grocery / Food Items	$ 50,000
Utilities (electricity & Water)	$ 15,000
Internet / phone	$ 10,000
Transportation	$ 30,000
Rent	$ 30,000

Loans	$ 30,000
Entertainment	$ 20,000
Total Household Exp	**$ 185,000**
Surplus /Deficit	**$ 65,000**

Source: Author

Further, to corroborate this argument, the above table shows the average household income and expenditure, wherein, these expenses are deliberately conservative and as shown in the table, there is virtually no room for savings for the low-income earners coupled with rising cost of living. Hence, with massive job losses and with no monetary support, thousands of Guyanese and householders will be pushed into poverty. The same applies for the business sector as well, particularly, hundreds of small and medium sized enterprises would face high risks of bankruptcy or simply put, will be forced to shut down.

2 The Political Economy

The political economy in Guyana since over the past 60 years is characterised as one which is marred in racial tensions and ethnic and / or identity politics. The two major political parties in Guyana are split along racial lines with more Indo-Guyanese supporting the Peoples Progressive Party (PPP), while the majority of Afro-Guyanese supporting the Peoples National Congress Reform (PNC). These divisions concerning race and party identification are still present in Guyana though not to the great extent as it were for the past four or five decades (Corral et.al, 2009).

The figure below illustrates Guyana's Freedom House score on Democracy since 1972 as compared with Latin American averages. The "freer" a society is in terms of both civil and political rights, the lower the score. As can be seen from the figure, for much of the 1990s following the election that placed the PPP as the majority party, Guyana

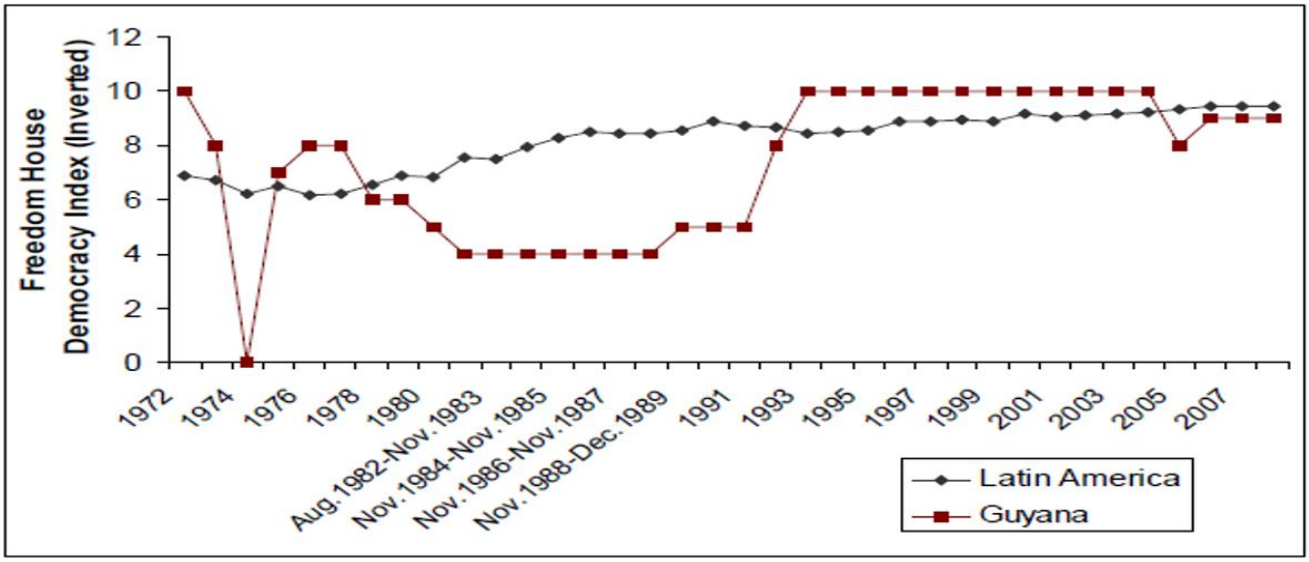


Figure 16: Freedom House Scores in Guyana and Latin America, 1972-2008

was classified as a free society, routinely scoring above the Latin American average. It should be noted that in 1992 the PNC lost control of the government for the first time since its election in 1964. During this time, the PNC led Guyana amid credible and persistent allegations of electoral irregularities, including vote rigging and list padding (Corral et.al, 2009).

Source: (Corral et.al, 2009)

Between the years 1993 and 2004, Guyana's combined Freedom House score of political and civil liberties exceeded the average of the Latin American region. However, as can be seen from the figure above, Guyana's ranking declined somewhat in 2005, dropping from score 10 to 8 on the Freedom House inverted index, and also reducing its classification from "free" to "partly free". According to the Freedom House annual report for that year, this outcome was attributed to …" the government's failure to fully investigate the emergence of anticrime death squads and the growing influence of the illegal narcotics trade on the country's political system." The following year, Guyana's ranking increased by one point on the combined scale, enough to elevate it back to being considered a "free" society, however, since 2005, Guyana's Freedom House score has again fallen to below that of the regional average.

2.1 Politically motivated crime and violence in Guyana – historic context and socio-economic outcome

The impact of crime and violence on economic sector diversity

Literature has focused attention on identifying whether violence impact growth via changes in economic factor accumulation – that is – reducing labour supply or increasing capital costs. Yet, much little is known as to how crime and violence may affect how economic factors are allocated. Rios (2016) found evidence in his research paper which shows that increases in criminal presence and violent crime reduces economic diversification, increased sector concentration, and diminished economic complexity. Rios (2016) argued that the results presented strong, consistent, significant, and hold over a variety of specifications and robustness tests. Overall, according to Rios (2016) preferred specification, an increase of 9.8 percent in the number of criminal organizations is enough to eliminate one economic sector. Similar effects can be felt if homicides rates increase by more than 22.5 percent, or if gang-related violence increases by 5.4 percent.

The socioeconomic costs of violence in the Caribbean (IOM, 2007)

"There are a wide variety of approaches that have been used to catalog and measure the costs of crime and violence. Analyses for the Caribbean have found that fear of crime causes individuals in Jamaica, the Dominican Republic, and Haiti to avoid activities and locations that are perceived as exposing them to risk of being victimized by crime. People whose families have suffered from crime report substantially lower levels of life satisfaction, and this effect is much greater in the Dominican Republic than in non-Caribbean countries. Crime also reduces tourist arrivals in the region, discourages business investment, and stifles economic growth. Cross-country panel data suggests that Haiti and Jamaica could boost economic growth per capita by 5.4 percent per year if they were to bring their homicide rates down to the levels of Costa Rica. Guyana and the Dominican Republic would also benefit substantially, with potential growth rate increases of 1.7 percent and 1.8 percent respectively." (Caribbean, C&V chapter 4).

There are multiple typologies in the crime and violence literature for the possible sorts of costs that could be contemplated. The World Health Organization (2004) draws a distinction between direct costs (medical, legal, policing, prisons, foster care and private security) and indirect costs (lost earnings and time, lower human capital, lower productivity, lower investment, psychological costs, and other non-monetary costs). Buvinic and Morrison (1999) used a more complex typology and distinguish between the following:

- Direct costs: the value of all goods and services used to prevent violence or offer treatment to its victims or perpetrators. This has been the most commonly estimated category of costs and includes health costs, police, justice, and prison costs, as well as resources spent on private security measures. While the most frequently measured, this category may not be the most important.

- Non-monetary costs: higher mortality and morbidity rates that results in pain, suffering and death, but not necessarily result in either expenditure on health care or in easily quantifiable economic losses.

- Economic multiplier effects: impact on human capital, labour force participation, lower wages and incomes, savings and macroeconomic growth.

- Social multiplier effects: erosion of social capital, inter-generational transmission of violence and lower quality of life.

Key trends in crime/violence cited from (IOM, 2007); a joint report by the United Nations Office on Drugs and Crime and the Latin America and the Caribbean Regions of the World Bank.

- ✓ Homicide rates rising over 1900s/early 2000s in most countries
- ✓ Recent declines in a few countries (e.g., Jamaica, Guyana)
- ✓ Homicide rates quite volatile in small countries
- ✓ Registry data on assaults, rape, and property crime of uncertain quality; usefulness hinges on reporting rates
- ✓ Share of U.S bound cocaine transiting the Caribbean has fallen from 30 % (1998) to 12 % (2005)
- ✓ Kidnapping an emerging and serious problem in several countries

Vulnerabilities and socioeconomic costs, IOM (2007):

- ✓ Drug trafficking promotes crime and violence in a number of ways.
- ✓ Youth are disproportionately represented among victims and perpetrators of violence.
- ✓ The use of firearms in criminal acts has increased in several countries in the region.
- ✓ Countries with higher growth rates have lower murder and robbery rates.
- ✓ Countries with lower level of inequality have lower murder and robbery rates.
- ✓ Violent crime is more likely to affect poorer households; property crime is more likely to affect wealthier households.

Socioeconomic costs of violence, IOM (2007):

- ✓ Costs to Tourism
- ✓ Non-monetary effects are: area stigma; reduction in social capital; fear impacts activities
- ✓ Costs of gender-based violence (Haiti)
- ✓ Effects on business
- ✓ Growth dividend: Cross-country panel data show reducing the murder rate by 1/3 from its current level in the Caribbean could more than double the region's rate per capita economic growth.

Prevention activities are generally more cost-effective than control actions, IOM (2007):

- ✓ More cost effectiveness studies in developing countries are needed.
- ✓ The World Bank study in Brazil is neither comprehensive (it estimates the cost effectiveness of only nine interventions) nor definitive (impact parameters have been borrowed substantially from similar programs in other countries because of the lack of impact evaluation data in Brazil). However, it represents the first attempt to estimate the cost effectiveness of violence prevention initiatives in developing economies.
- ✓ The preliminary estimates for Brazil suggest that in terms of crimes averted per *real* spent, prevention – particularly secondary prevention – is more cost effective than control or repression; this result is consistent with evidence from other countries. Nonetheless, the criminal justice approach, focusing on police, prosecutors and the judicial system for control and repression, continues to be the dominant approach to crime and violence prevention.

The Crime and Safety Situation in Guyana

Criminal activities, like many other countries in Latin America and the Caribbean, is a major issue in Guyana – particularly crimes against people and property. Most violent crimes against foreigners have occurred in the capital and there are also been incidents of violent crimes in other parts of the country (U.S. Crime & Safety report, 2016).

Local media reports, in 2015, indicated increased levels of criminal activity throughout Guyana. However, an independent review of documented criminal activity from 2013-2015 indicated that while press reporting showed a dramatic increase in crime, the increase in most categories was in single digits for 2014-2015. In addition, 2015 statistics were overall well below levels of 2013. Serious crimes namely murder and armed robbery are common. According to information from the United Nations Office on Drugs and Crime lists Guyana's 2012 homicide rate was 17 per 100,000 people – the fourth highest murder rate in South America, behind Venezuela, Colombia and Brazil.

Guyana's murder rate is almost four times higher than that of the U.S. (U.S. Crime & Safety report, 2016). Criminals are often organized, travel in groups of two or more, and conduct surveillance on their victims. In the business and shopping districts especially, armed robberies occur regularly. The local media reported a total of 140-armed robbery incidents in 2015, but it is likely that many incidents go unreported. Despite a rigorous licensing requirement for the average persons to own firearms, criminals regularly use weapons. Handguns, knives, machetes, or "cutlasses", tends to be the weapon of choice.

Criminals have acted brazenly, and police officers have been both victims and perpetrators of assaults and shootings. Historically, two types of criminal gangs existed in Guyana: political and criminal gangs. The primary motivation of a political gang is to compel others to support or endorse a political party or policy through intimidation. While political gangs do not routinely commit illegal acts, their express goal is to fortify support for a political platform, which often results in violence. Episodes of political gang violence generally occurred during the run-up to national elections. Conversely, criminal gangs explicitly engage in criminal activities, which range from petty drug dealing, as is the case with local street gangs, to large-scale narcotics and arms trafficking, as is the case with larger criminal organizations (Small Arms Survey, 2012).

An overview of Criminal Networks in Guyana

In comparison to Guyana's Latin American and Caribbean neighbors, Guyana exhibits limited gang and organized criminal violence. Strong street gangs such as Jamaica's *possess*, or Mexico's *cartels* are generally absent. Nevertheless, there is real cause for concern as Guyana's local gang and organized crime issues have the potential to develop into much larger problem. This assertion is supported by three observations, according to the Small arms survey done in Guyana in 2012. First, there is a sentiment in Guyana that the arrest of Shaheed Khan, the country's most notorious drug trafficker, means that gang and violence problems are largely things of the past. However, many of Khan's associates still remain at large and continue to maintain the network that he helped established (Al-Jazeera, 2009).

Second, the underlying ethnic tensions between the Indo-Guyanese and Afro-Guyanese also remained largely unaddressed, further deepening mutual mistrust. Thirdly, with US narcotics efforts focusing on shutting down the Pacific corridor (Colombia, Central America, and Mexico), there is a possibility that the Caribbean could re-emerge as a key trafficking zone. With its poorly monitored ports, porous borders, intricate river network, and weak security sector capacity, Guyana is an ideal alternate for drug traffickers. There are other long-term implications for Guyana with the presence of organized crime syndicates, for the country's economic and social development. In this regard, citing the Arms Survey report on Guyana (2012: p45-46):

"*In interviews conducted for this study, many respondents said that drug trafficking and organized crime were not necessarily a problem in Guyana as the country does not produce narcotics on a large scale and there is no widespread drug abuse problem. Guyanese, in general, argue that the country is merely a transit point for drugs and that there is not much they can do about it. In essence, there is a general sense of apathy about the issue. While the costs of drug trafficking may not be felt immediately, they have negative consequences that slowly erode the institutions of government and people's trust in them. Corruption, a vital factor in drug trafficking and money laundering, is the most obvious example. Corruption creates widespread mistrust of the government and security sector, raises the costs of doing business, increases low-level criminality, hinders democratic politics, and contributes to high emigration. Drug trafficking has a host of social costs, many of which are already evident in Guyana. Should the country maintain its general sense of apathy towards gangs and organized crime, Guyana's security situation will only continue to deteriorate."*

The main outcome of crimes in Guyana

One of the main outcomes or cost to Guyana as it relates to a high degree of crime is that, Guyana suffers from a history of sustained high emigration primarily to the U.S, Canada, the U.K and other Caribbean countries. Approximately 5,000-6,000 Guyanese emigrate legally to the U.S. each year. Estimates for the number of people in the U.S of Guyanese descent are as high as 1.4 million people (Guyana Crime & Safety Report, 2016).

Discussion and analysis

Monetary costs of crime and violence: over the last five years, as illustrated in the table below, the Government of Guyana has expended US$604.67 million (equivalent to G$124.86 billion), representing direct costs in the security sector. This figure is thus safely reflective of the level of seriousness and cause of concern of the crime and violence

situation in Guyana. Noting too, that this is however, not reflective of private security costs by both individuals and firms in Guyana which – if one were to carry out a survey – would amount to substantial sums in dollar values, annually.

Table 12: Direct costs of crime & violence in Guyana – national security

Years	National Budget Figures measured in USD
2018	$148.67M
2017	$140.9M
2016	$119.1M
2015	$101.6M
2014	$94.4M
Total	**$604.67M**

Source: Ministry of Finance, Budget Estimates/Speeches

Main hypothesis: the major consequence for Guyana resulting from the crime and violence situation on socioeconomic outcomes, is that this has been the primary causation, both historically and presently, perhaps to a lesser extent, of a high level of emigration and by extension – leading to a great degree of *'brain drain'* in Guyana. In other words, a large number of Guyanese educated population have migrated to other foreign countries and this phenomenon has indisputably been a key contributor towards Guyana remaining largely underdeveloped particularly the socio-economic strata; especially against the backdrop of the history of political crimes Guyana's context – as described.

Notwithstanding the limitations surrounding the development of this paper – that is – some amount of time constrains together with a lack of resources to conduct a primary survey to corroborate most of the assertions put forward herein; this is nonetheless, a strong and practicable hypothesis of which such reasonable inference could be arrived at from the discussions and analyses that follow.

Economic and social multiplier effects: as outlined earlier, economic multiplier effects relate to the impact on human capital, labour force participation, lower wages and incomes, savings and macroeconomic growth, while social multiplier effects relate to erosion of social capital, inter-generational transmission of violence and lower quality of life. In these regards, according to global migration flows data published by the UN Migration Agency (IOM), inward migration to Guyana up to 2015 was 15,384. In 2015, the immigrant population of Guyana was 2.01 percent of the total resident population. On the other hand, outward migration from Guyana up to the same period was a whopping 451,139. In 2015, 37.03 percent of all citizens lived outside their country of origin.

During the past two decades or so, an unprecedented massive emigration of people out of Guyana to North America had occurred. An average of 6,080 people per year emigrated between 1969 and 1976, increasing to an average of 14,400 between 1976 and 1981. Figures for 1976 showed 43 percent of emigrants went to the United States, 31 percent to Canada, 10 percent to Britain, and 9 percent to the Caribbean. As a consequence of deteriorating economic and political conditions in the 1980s, led to even sharper increases in the emigration rate. Unofficial estimates put the

number leaving the country in the late 1980s at 10,000 to 30,000 annually. Many of these emigrants were middle class professionals, who opposed government policies. Thus, a significant and permanent loss of vitally skilled individuals (http://www.guyanausa.org/emigration.htm).

An overview of the macroeconomic performance of the Guyanese economy 2016-17

The Guyanese economy recorded real economic growth of 3.3 percent for 2016 while projected growth for 2017 is set at 3.5 percent according to IMF country report on Guyana which was recently concluded. A point of interest to note is that the projected growth set by the IMF cited that macroeconomic outlook for 2017 is positive and the medium term. In essence, this validates the arguments wherein it is contended that it is the short-sighted policies pursued by the "then" administration that will inevitably cost the economy long term economic development deprivation. While the IMF set a decent projection of 3.5 growth for 2017, the Economic Policy Analysis Unit arm of the Ministry of Finance sets an ambitious target growth of 3.8 percent which is expected to be driven by growth in the mining, quarrying and services sectors.

The economy constitutes several productive sectors namely Agriculture (Rice & Sugar); forestry; Mining and Quarrying (Bauxite & Gold); Manufacturing and the Services Sector which includes the financial sector. As at the first quarter of 2017 the economy registered uneven growth in sectorial output relative to the corresponding period last year (BOG quarterly report, 2017). The Agriculture sector recorded 51.5 percent increased production in rice while sugar contracted by 33.8 percent on account of operational constraints, closure of Wales estate and lower market prices. Making sense of the economy's overall performance, while the economy grew on average by some 3 percent, by the end of the third quarter of 2017 projected growth have had to be revised downwards, especially with the closure of several sugar estates which in turn resulted in the largest retrenchment in Guyana's economic history of some 9,000 plus persons, thereby adversely affecting both directly and indirectly about 40,000 dependents.

Additionally, many Guyanese households and by extension the Guyanese economy, are largely dependent and/or beneficiaries of remittances to supplement their livelihoods. In support of this, citing data published by the World Bank, remittances in Guyana in 1982 represented 0.47 % of GDP which then increased to 10.7 percent of GDP by 2014. This is an evidentiary element of the migration phenomenon in Guyana and also somewhat validates the view that Guyana is largely regarded as a low-income country – correlating to the notion of Guyana being an underdeveloped country despite having an abundance of rich natural resources. And, again, the reason for this outcome could be explained by the lack of skills, knowledge, human capital and other human capacity to develop this nation, inter alia, its rich natural resources such has gold, diamond, bauxite, timber, enormous and diverse agriculture potential, rice, sugar and soon to be an oil producing country in 2020 – just to mention a few examples in this regard.

Citing Ibok & Ibanga (2014), "*human capital development is an indispensable component of the socio-economic development process. It is a development strategy aimed at fulfilling the potentials of people by enlarging their capabilities which necessarily implies the empowerment of the people, and enabling them to participate actively in their own development. It also serves as the means through which the skills, knowledge, productivity and inventiveness of people are enhanced."*

Put differently within this thematic context, it is through the acquisition of knowledge and skills by the people of a country – which in turn – benefits both the individuals and the economy as a whole. Individuals' benefits in the form of higher earnings and enhanced employment, thereby conferring upon them an improved quality of life, which then benefits the broader economy in the form of higher productivity and which ultimately translates into enhanced socio-economic development. As an example in this respect – of a country that gained independence around the same time as did Guyana, and one that does not have the vast amount of rich natural resources like Guyana, and that was almost at the same stage of development at the time of independence; Singapore is a country that employed a model that was driven by the philosophy of developing an educated population which would in turn become the key driver to propel its economic growth and development.

This proved to be highly effective and successful in achieving this outcome and has actually placed that country in an enviable position in terms of sustainable economic growth. In this regard, an examination of the history of economic development of Singapore revealed that about fifty years ago, this country was an undeveloped country of a GDP per capita of less than US $320. This country is now one of the world's fastest growing economies with a GDP per capita at an incredible US $60,000, making it the sixth highest in the world according to Central Intelligence Agency figures. For a country with no territory and natural resources, the economic ascension of this country can only be characterized

as remarkable. By embracing free market capitalism, globalization, education, and strict pragmatic policies the country was able to become a global leader in commerce by overcoming their geographic disadvantages.

Conclusion

Taken together, the notion of the high level of emigration rate that Guyana suffered from over the last few decades which still persist – albeit to a lesser degree as compared to the mass emigration rate recorded about two decades ago – strongly correlates to the underdeveloped status of Guyana's socio-economic strata. More importantly to note, however, such conclusive inference, is stemmed mainly from the crime and violence situation in Guyana especially within its historic context wherein Guyana had experienced a unique kind of crime and violence situation described as political crimes which usually occurred during periods of general elections. This was usually in the form of riots and extreme violence fueled by racist political prerogatives by the country's politicians which resulted in an ethnically divided nation. Some level of this historic Guyanese phenomenon still pervades the economy but to a lesser extent.

3 Guyana's emerging oil & gas sector: a contextual economic outlook

The New emerging Oil & Gas Sector – The Short- and Medium-term implications on the Guyanese Economy: Guyana is indeed a blessed country with rich natural resources. How these resources are managed, exploited and the policies implemented in these regards are what will determine the economic progress of a country. Strong leadership, a competent government and an educated population with carefully crafted and the conceptualization of a bright vision at the national level for long term economic growth and prosperity, are the prerequisites for the accomplishment of such goals.

3.1 Analysis of the Oil and Gas Production Sharing Agreement between the Government of Guyana and Exxon Mobil

According to Article 11 (Cost Recovery and Production Sharing) of the Petroleum Agreement between the Government of Guyana and Esso Exploration and Production Guyana Limited and Cnooc Nexen Petroleum Guyana Limited and Hess Guyana Exploration Limited, the profit-sharing model is designed as hereunder stated.

Of the total production of crude oil per calendar month, 75 % of the aggregate value of sale will be dedicated to recovery costs by the Oil Companies (hereinafter referred to as the contractor), while the remaining 25 % will be shared 50/50 between the GoG and the Contractor. So effectively, the 50 % profit sharing model is actually 12.5 % of the aggregate value of production being sold (half of 25%). However, there are a number of inherent weaknesses of this model – weaknesses in respect to the Government of Guyana being very much disadvantaged or short-changed, when measured against what they (GoG) will actually receive, that is, the final revenue for example:

(1) Article 11.9 of the contract states that, "the Contractor shall have the right to use in any of the Petroleum Operations as much of the production as may reasonably be required by it therefor and the quantities so used or lost shall be excluded from any calculations of Cost Oil / Cost Gas (Recoverable Costs) and Profit Oil/ Profit Gas (12.5 % profit sharing) entitlement. So, this means, if 3 million barrels of oil were produced for a particular month but the Contractor retains 1 million barrels of oil for the Petroleum Operations, then the profit sharing will be of the remaining 2 million barrels after deducting 75 % recoverable costs. Bearing in mind that the Contractor could manipulate or I should say overstate the amount of production needed for its operations.

(2) Under Article 13 which speaks to Valuation of Crude Oil or Natural Gas, it states that the value of a Barrel of Oil or an Mcf of Natural Gas shall be the average fair market price in United States Dollars for the said production month. This means, in December for example, the production for that month will not necessarily be sold in December but in January. However, the price would be locked in whatever it was in December, even though the actual sale will more likely take place in January. The disadvantage of this model is that if the Price is high for that particular month, the contractor may not be able to capitalize on that opportunity. Albeit, I don't think this may be too much of a big deal, but the following point is more of a big deal.

(3) Article 15 which speaks to taxation and royalty, as was already disclosed, we are aware that in addition to the 50 percent share of profit which is 12.5% of revenue, the GoG will be paid 2 % royalty. It is further agreed that in respect to Value Added Tax, Excise Tax, duty, fee or another impost shall not be levied on the Contractor. And it is agreed that in respect to Corporate Tax which the Contractor should have been subjected to under the laws of Guyana, the GoG shall remit to the GRA on their behalf (Contractor), the equivalent of their Corporate Tax. This means, from the 12.5 % we earlier established which the government will receive will be further diminished by virtue of this clause wherein they have to pay the corporation tax for the Contractor. It further means, explicitly that the Contractor is permanently exempted from paying corporate tax (refer to article 15.4 to 15.5)

- **Therefore, in light of the foregoing we can assume the following in a computational format:** If Production of Crude Oil amounts to 3 million barrels per month, and let's assume 500,000 was retained for Petroleum Operations, then 2.5 million of the production is actual amount that will be sold. Again we assume price average per barrel in a given month is US$50 (using the IMF projection of US$50 per barrel) total revenue will amount to US$125M; 75 % Recovery Cost will therefore be US$93.75M, with US$31.25M remaining for Profit Sharing – the GoG will then be paid US$15.625M per month from one production and from this amount.

Then the Government is required to pay on behalf of the contractor, whatever is the Corporate Tax for that period, from its (GoG) share of the profit, that is, the US$15.625M. The contract further stipulates that the government's share shall represent the full income earned by the Contractor (oil companies). This means that in effect, the oil companies, by virtue of the petroleum contract, will effectively understate their true income by 75 percent plus, whatever value in US dollars they will retain for operational activities.

- **IMF/Exxon projected oil price per barrel of US$50:** While it is noted that the IMF/Exxon have made an ambitious projection of the oil price to be US$50, nonetheless, I strongly disagree with their projection. My assessment of the oil price is that it is very likely to be much lower than US$50 come 2020 and beyond. This conclusion is based on the hereunder analysis.

- **Oil Economics: changing global trends:** In Alaska, a Spanish oil company named Repsol made a similar oil find to that which we are all excited about in Guyana. This discovery was only announced recently in May of this year where they have found a massive oil field that could hold some 1.2 billion barrels of oil. Bearing in mind exploration is ongoing there and in many other parts of the world. The irony of this new oil find is that it parallels the developments in Guyana and production is also set to commence in 2020 the same timeline with Guyana. These findings will obviously have a bearing on the oil price come 2020 onwards, an element of the oil debates not being considered.

The global oil market has been at the centre of economic news over much of the past years. When one examines the degree of vast developments and richness with which oil rich countries in the Middle East such as Dubai among others have attained; this has certainly validated the notion of the magnitude of economic prosperity, wealth and development this resource can bring to a country and its people.

Notwithstanding, the global oil market has undergone significant changes over the last 10 or 15 years. Underscoring this evolution – two changes in particular have had profound impact on the economics of the oil market. The most significant stemming from the United States (U.S) Shale oil revolution: the rapid growth of onshore oil production in the US, typically using hydraulic fracturing techniques to extract oil from shale and other types of so-called tight rocks. The second major change has to do with increasing global concerns about carbon emissions and climate change. The momentum for increased actions is growing – with specific reference to the Paris accord or the recently concluded meeting with major global leaders which saw the US withdrawing their support for the Paris deal. Ironically, as the US withdrew their support, without much delay, many other countries including China strengthen their support in this regard. If this sense of urgency translates into policies, this could have significant implications for the long run demand for fossil-fuels.

It is worthwhile to mention that while perusing and synthesizing the current body of literature that sought to address the future outlook and projections of oil prices, it was found that those analysis that were conducted by oil companies themselves, projected that global oil price will increase at a rate of 1.25 percent annually in line with a shift in demand from west to east – India and China and will largely be driven by the global transportation sector. On the other hand,

the inherent flaw with those analyses is that they ignored the impacts climate change policies will have on oil consumption and also technology is another key factor that will be major threats to sustainable oil prices in the future.

Already there are developments in the creation of electric cars for example, and these developments will be accelerated and have real implications in respect to the oil prices. In fact, China is investing US$360 billion in renewable energy by 2020 and is leading a global green revolution. China is the largest producer of solar power; they have installed, according to a World Economic Forum publication, more wind capacity than the U.S, India and Germany combined and has the world's largest hydroelectric power plant. The first basic principle of oil is that it is an exhaustible resource. Total stock of recoverable oil resources is assumed to be known and the main focus is on the optimal pace at which these resources should be exhausted. But empirical evidences have shown that in practice, estimates of recoverable oil are increasing all the time, as new discoveries are made and technology and understanding improves.

Moreover, they are increasing at a more rapid pace than existing reserves are consumed. Over the past 35 years, in very rough terms the world has consumed over 1 trillion barrels of oil. Over that same period, proved reserves of oil have increased by more than 1 trillion barrels. Put differently, for every barrel of oil consumed, another two have been added. With reasonable certainty, total proved barrels of oil which can be economically recovered from known reservoirs are almost two and half times greater today than in 1980. But what is of critical importance at this point in time is the growing recognition that concerns about carbon emissions and climate change which means, it is increasingly unlikely that the world's reserves of oil will ever be exhausted.

These trends and developments will have a bearing on the world market price for oil and which is likely not going to be an upward trajectory. In fact, in the last ten years, the oil price hit a record high of US$140 per barrel in 2008/2009. Since then, the price started to tumble to a record low in less than US$40 per barrel in 2016. Now, it's currently hovering around US$50 – US$45 per barrel. Oil will never reach US$100 per barrel in the future with climate change policies on the rise, nor will go well beyond US$55 – US$60 per barrel. The IMF/Exxon also ignored from its projection that according to the oil contract, there's a clause that states that Guyana's crude oil will be sold at the average market price per month. Bearing in mind that the price also depends on the quality of the crude. So, if the price fluctuates between US$45 –US$50 for one month, then we will earn only the average for the month. That means we will be paid less than the world market price in reality and also based on the quality of the oil.

However, the most important concern, which I am again emphasising, that has been grossly ignored, the fact remains the world is changing. Countries are going, especially China and India that have been two of the largest consumers of Crude oil – 2020 they both will undertake aggressive policies to reduce significantly their consumptions of fossil fuel/crude oil. Many other countries in the world are following suit – that have signed on to the Paris Accord. This means that global demand for oil will dampen beyond 2020 while supply will overshoot demand thereby, resulting in the oil price to further plummet. There could even be an imminent crash of the world market price per barrel of oil beyond 2020.

- **Other Crucial factors that were ignored from the Profit-Sharing Model viz-á-viz – the Petroleum Contract:** One of the most major and crucial factors that perhaps ought to be given paramount emphasis, attention and consideration, is the investment model from an accounting standpoint.

Exxon would have commenced drilling for oil in 2014/2015. They had declared sometime in 2016 that they have invested some US$4 billion. It must therefore be understood that drilling is ongoing until 2020, which means that by 2020, their investment cost will obviously increase from that amount, I am estimating to the tune of say US$8 billion – could be less or even more. With that in mind, (1) 75 percent of revenue will go towards recovery cost – recovery cost meaning their actual investment. The contract did not state explicitly nor implicitly how long this model is estimated to last to the extent when they should fully recover their investment capital, taking into consideration the time value for money. (2) In the Accounting treatment of any investment of this magnitude, there is something called 'sunk cost'.
Sunk costs are those prior costs which cannot be recovered. For example, the US$18M signing bonus should/could be treated as sunk cost, another example would be, all those costs incurred during 1999 when they would have first negotiated the contract, and all the prior / earlier exploratory and feasibility studies costs, should all be treated as sunk cost.

The logical question therefore, is, will those costs actually be unrecoverable cost and not form part of the actual investment capital for the project? And, another question is how much sunk cost was incurred. Thus far, these elements are not made clear to the Guyana Government and the Guyanese people – as crucially important as it is. In addition, the contract did not speak to when the investment capital is fully recovered, if the profit-sharing model will be amended, because in its current form the 50/50 sharing is actually 12.5 percent of revenue after taking into consideration the 75 percent for recovery costs. Does this mean, after full recovery Guyana will still earn 12.5 % effectively? According to the contract, legally, the answer is yes. There needs to be a clause or an amendment to address this aspect, stating that upon full recovery of the investment capital, the GoG will earn 50 % of the full Gross profit. This is a huge flaw – in all 'unfairness' to Guyana.

3.2 What does this mean for Guyana and how can Guyana benefit from its massive oil wealth offshore?

The Environmental Protection Agency (EPA), a local regulatory agency in Guyana with the responsibility to take the necessary measures to protect, conserve, manage and improve the environment, has granted approval for ExxonMobil's Liza Phase Two operations in Guyana – through its subsidiary namely: Esso Exploration and Production Guyana Limited (EEPGL). There are many public discussions and debates from commentators and analysts alike in Guyana can benefit from its oil wealth offshore – that is, how should Guyana spend the potential massive wealth it is poised to earn in less than two years' time.

The most recent such public pronouncement was made recently by the General Secretary of the Guyana Trade Union Congress (GTUC), in its Labour Day celebration in Georgetown, a national holiday event in Guyana. In his speech at that forum, he made calls for free education and nationwide healthcare. There was also another suggestion put forward by a prominent professor of economics for cash transfers to each household of US$5,000, among others. In the analysis that follows, the author examines the cash transfer debate for now within the context of Guyana's economic development and status, and how economically sensible some of these proposals might be in the long run. Proponents of this proposal are of the view that a policy of this nature would aid in poverty reduction and is perhaps the best mechanism in which every Guyanese would be guaranteed direct benefit from the oil & gas production operations in Guyana – especially since this new sector would not provide a fantastic amount of job opportunities for locals. The contrary view of other analysts and economists alike, is that such a policy would engender hyperinflation and may not be fiscally sustainable.

Guyana's population is roughly 750,000 people; so, assuming that each household in Guyana has an average number of four (4) persons, then using four as the denominator and the population size the numerator, this computation would give rise to 187,500 households. For simplicity, the total average number of households is rounded to 200,000. Therefore, an annual cash transfer of US$5,000 from the potential oil revenue will give rise to US$1.0 billion or GY$206.5 billion annually. This figure of GY$206.5 billion is equivalent to 50.8% of real GDP (2017) which was GY$406 billion, and represents 82.6 % of the size of the National Budget for 2017 which was GY$250 billion. Further, considering competing priorities and opportunity costs, the new Demerara Bridge is estimated cost some US$150 million; the Cheddi Jagan International Airport expansion project is some US$150 million; the engineer and design cost to build the road linking Guyana and Brazil is about US$10 million – assuming that road might cost about US$20 million. These figures combined give rise to a sum total of US$320M or GY$66 billion which means that a total cash transfer of GY$206.5 billion annually to each household could cover the combined cost to build a new bridge over the Demerara river, the International Airport expansion project and the road linking Guyana to Brazil – almost three times.

That being said, it is important to note that the net cash flow from oil commencing from 2020 will not reach US$1.0 billion which means, if considered and at whatever figure, such policy is unlikely to take effect at the immediate onset of oil production. The first two years into production net revenue from oil is estimated at just over US$300 million, from 2022 – 2025 at a production rate of 220,000bpd, net revenue is estimated to be about or just over US$750 million but less than US$1.0 billion until production is significantly increased to over 300,000 – 500,000 bpd, net revenues will reach and/or surpass the US$1.0 billion mark (note that these estimations are based upon ExxonMobil's production alone). But this level of increased production is likely to occur until after 2025. In the synthesis of current global evidence of the impact of cash transfers in developing countries, and of what works in different contexts, and/or for different development objectives, it was found that such have proven potential to contribute directly or indirectly to a wider range of developmental outcomes.

Essentially, cash transfers are direct, regular and predictable non-contributory cash payments that helps poor and vulnerable households to raise and smooth incomes. The term can be administered through a range of instruments such as – social pensions, child grants or public works programmes and a spectrum of design, implementation and financing options (DFID, Evidence Paper, 2011). Henceforth, perhaps if the Government of the day were to decide on the cash transfer policy, the current proposed methodology, inter alia, the direct cash transfer to each household – may indeed fuel hyperinflation – an undesirable outcome policymaker would have to guard against. As such, it would probably be better to consider other instruments or even better, a combination of different instruments to administer such programmes, for example grants geared towards promoting entrepreneurial activities – might be a better way to do so, as against direct cash transfers annually to each household; or, careful thought should be given to the eligibility criteria for cash transfers for example, the high income (the rich) class should not be eligible.

3.3 The emerging Oil & Gas Sector – how will Guyana benefit?

Continuing the discussion from last week, we saw that it is unclear what model of profit sharing will be used and the confusion between profits and revenues is worrying. Clearly if the deal stipulates, we are going to earn 50 percent profit, we have to question whether Exonn (Guyana) will ever declare a profit. Even if they do, it may take them ten to twenty years after recovering all of their investments before a profit could be realized. It is therefore imperative we seek clarity in this regard and if this is so, Guyana needs to negotiate for a share in the revenues and not profit. Given the offshore nature of the Oil and Gas operation, it would be difficult to regulate the core operations of the sector. Consideration need to be placed on the fact that most of the high profile and technical jobs will be not be granted to Guyanese. This is an acknowledged fact and hence, every effort need to be employed to ensure maximum benefits received by way of the supporting sectors – the supply of goods and support services.

While all of this is happening – a large influx of consultations in which an abundance of information is channeled to policymakers with the view of setting up the correct framework and management of the new sector, there is distraction from other important matters as regards the management and performance of the economy. Crucial productive sectors are underperforming. Weak and contracted performances were recorded in the output of sugar, rice and forestry as well as wholesale, retail trade and manufacturing industries. Quantifying these, agricultural sector's performance relative to GDP fell to 19.4 percent as at the end of 2016 when compared to the corresponding period in 2015 from 22.8 percent. Manufacturing and services sectors declined to 3.9 percent and 52.9 percent from 4 percent and 54.2 percent respectively for the fiscal year of 2016. Conversely the mining sector (particularly gold) recorded 4.5 percent increase to 15.4 percent contribution to GDP in 2016 in comparison to 10.9 percent in 2015. What this means is that almost all of the current productive sectors have underperformed and contracted to some extent with the exception of gold. This could be a terrible thing economically, because if gold collapse tomorrow the economy is in trouble – an economic crisis will be imminent and perhaps instant in such a circumstance. A situation of this nature occurred in 2013 on a micro level.

The North West Region of Guyana (Region one) is largely dependent on gold mining. Early 2013 gold price on the word market plummeted which translated into a direct and instant adverse impact for that region – instantaneous downturn stemmed as a consequence. For persons who are not familiar with gold mining regions, prior to 2013 that region was booming as there were large circulation of money. To this day, North West has still not recovered, in fact it is now in a depressed state, people are moving out in large numbers from there. Prior to this, for you to conceptualize this scenario, people from all parts of the country migrated to that particular geographic location to capitalize on the benefits in those days.

This is to illustrate that, while this was on a micro level - just one region, such a situation could occur at the macro level, thereby threatening the entire country. In fact, to put this over a bit clearer, this is the risk we are surrounded by and it is being escalated by the very fact policy makers are distracted. The economy is very volatile. Policy makers need to contain their excitement within these respects. They have got to be careful not to hype up the hopes of the Guyanese people around the oil and gas anticipated revenue. I conclude by making another critical point which I shall expound in forthcoming articles on this subject.

In Alaska, a Spanish oil company named Repsol made a similar oil find to that which we are all excited about in Guyana. This discovery was only announced recently in May of this year where they have found a massive oil field that could hold some 1.2 billion barrels of oil. Bearing in mind exploration is ongoing there and in many other parts of the world. The irony of this new oil find is that it parallels the developments in Guyana and production is also set to commence in 2020 the same timeline with Guyana. These findings will obviously have a bearing on the oil price

come 2020 onwards, an element of the debates not being considered. This column however, will be dealing with this matter by way of a series of articles premised on some robust analysis.

3.4 The nexus of Guyana's development needs and potential for economic transformation

The economic rationale of a Deep-Water Port and the Brazil Road link

The notion of a Deep-water port and a road linking Brazil and Guyana is nothing new. The conceptualization of this initiative was developed and publicly discussed a long time ago. Hypothetically, these are indeed good developmental initiatives to transform the economic development of any small developing nation like Guyana. With approximately 80 percent of the world's merchandise trade carried by ships, maritime transport remains by far the most common mode of international freight and transport. It is the backbone of facilitating international trade, offering the most economical and reliable method to move goods over long distances. Ships can carry long volumes of merchandise and use free high ways in the seas, which only require infrastructure developments at the seaports. In Guyana's case, we may have to build new seaports in addition to infrastructure developments at existing seaports. The performance of ports is an essential element of overall trade costs for all countries (African Bank Development Report, 2010).

Against this background, it is widely recognized that an efficient transport system that facilitates the economical movement of goods, resources and people – is vital for economic growth and by extension – globalization. In a historical context, during the 19th century improvements in transport and communications were major contributors in the expansion of world trade and globalization. Communications continued to be revolutionized in the 20th century with innovations such as cars, aero planes, large bulk carriers, container ships and pipe lines for oil and gas. The introduction of railways and improvements in road caused land transport costs to fall by 90 percent from 1800 to 1910; the real cost of ocean shipping fell by 80 percent between 1750 and 1990; by 1980 the real cost of air freight had fallen by approximately 75 percent from its level in the 1930s. The increased participation of developing countries in world trade "would not be possible without global shipping networks, port reforms and investments in transport infrastructure as well as trade and transport facilitation", according to UNCTAD.
Moreover, there exists "a virtuous cycle where better transport services lead to more trade, and more trade helps to encourage improved transport services". By the beginning of the 21st century the 'tyranny of distance', while perhaps not completely tames, was greatly diminished (Tull, 2006).

Economic impacts of Deep-water Ports in advanced economies

The operation of Connecticut seaports directly and indirectly accounts for 2% of the State's employment and 2.6% of the State's total output in 1997. It also contributes about 2.5% of the State's taxes. The ports significantly reduced truck traffic and thus directly improve their environment. The relative cost to Connecticut's metal working industry of steel delivery by truck versus ship: a ship carrying 26,000 tons of steel crosses the Atlantic in seven days at a daily rate of US $12,000. A truck carrying 20 tons of steel from Burns Harbor, Indiana makes the 900 miles trip to Connecticut in 1.4 (12 hour) days at $60 per hour. The 1,300 truck trips cost Connecticut's steel users US$1.3M versus US$84,000 for the same quality by ship.

Conclusion

Each year, ports and water ways carry more than 2 billion tons of cargo. Not only are ports crucial for the exportation and importation of goods for international trade but also transporting of goods domestically. Another major economic benefit that ports provide to countries is the creation and maintenance of jobs. Though space precludes a more comprehensive review of empirical studies of how seaports or deep-water ports in particular – contribute to the economic development of countries around the world, much evidence exists nonetheless, to corroborate and or validate such notion that Deep-water ports do aid in massive positive economic spinoffs to countries. It is therefore against this backdrop that the road linking Guyana and Brazil together with the deep-water port project, could significantly transform Guyana's economy in terms of job creation, reduction of poverty for its citizens, more revenue in the form of taxes for the government, better quality of life and standard of living to its people, the creation of new industries and new business and economic opportunities and the list goes on.

Hypothetically, depending on the location where the port might be developed, when one looks at the geographic position of Guyana on the South American map, literally kissing the Atlantic Ocean, could Guyana become the gateway to facilitate the transport of goods from other South American countries through Brazil and a deep-water port? If such an idea is proved to be possible and economical, then one can only imagine the sea of economic prosperity with which these developments could potentially bring to Guyana.

3.5 Considerations for a modular oil refinery

In light of recent revised estimates of recoverable oil reserves offshore Guyana by ExxonMobil, it is time to revisit the feasibility of an oil refinery. The Government of Guyana had contracted an international consultant to conduct a feasibility study of an oil refinery in Guyana. That presentation concluded that an oil refinery (a conventional refinery) would not be feasible in Guyana against the backdrop of the capital investment it would require which was estimated at some US$ 5 billion.

Indeed, Guyana cannot afford such investment even if the capital were to be mobilized through a public-private partnership – because US$5 billion is greater than Guyana's GDP which is merely close to US$ 4 billion and real GDP is about US$ 2 billion.

However, there are refineries that are far less costly to build which are known as "modular refineries". These refineries are usually capable of producing 5,000 – 30,000 barrels of crude per day. These types of refineries have also experienced a trend in growing demand – largely driven by government initiatives in countries such as Nigeria and Indonesia for example, to add local refining capacity to offset continued growth of importing finished products for growing consumer demand (UOP, 2017). The advantages of the modular refineries include: lower investment costs, sized for lower-local demand, modular fabrication offsite for higher quality, shorter schedule, and possibility for future relocation. The disadvantage in comparison to the traditional larger refineries is that these (traditional refineries) have improved economies of scale and can produce a wider variety of refined products, and can also be integrated into petrochemical operations and offer more flexibility (UOP, 2017). In order to determine the viability of a modular refinery with a production capacity of 30,000 bpd, it is prudent to first establish what is the current demand or consumption of refined crude oil products, particularly fuel. To do so, data is readily available on the Guyana Energy Agency website as illustrated in the table below:

Table 13: Demand/Consumption of Refined Crude Oil Products

PRODUCTS	BBLS	C.I.F. VALUE US$
MOGAS: Unleaded	1,174,006	143,806,446
GASOIL/DEISEL	2,139,198	260,334,967
KERO	86,930	10,819,182
AVJET	70,196	8,744,200
FUELOIL	1,257,255	116,133,335
AVGAS	9,774	2,011,612
L.P.G	201,497	19,783,956
TOTAL	**4,938,855**	**561,633,697**

Given the above data for 2014, total imports of refined crude products inclusive of C.I.F (cost, insurance and freight) values, amounted to US$561.6 million, and in terms of quantity, that is close to five million barrels. So, we can safely say Guyana's average annual consumption is about five million barrels of crude annually which works out to 13,700 barrels of crude per day. Therefore, a modular refinery with production capacity of 30,000 barrels per day would be able to satisfy Guyana's local consumption needs of refined crude products, which would also save a hefty import bill of in excess of US$500 million annually, and the excess production can easily be exported to other CARICOM countries. In fact, this is more reason why Guyana should start considering a modular refinery given that Petrotrin in Trinidad & Tobago was recently closed down which thus prompted CARICOM countries having to secure new suppliers of fuel. This, is therefore a strategic opportunity that Guyana, becoming the next oil producing country in the region, should position itself to advance these avenues and maximize profit.

3.6 Natural Gas and Economic Transformation

It was recently disclosed that Liza phase one is suffice to provide some 200 megawatts of power, which is more than the Guyana Power and Light (GPL) is providing. To this end, institutions such as the Inter-American Development Bank (IDB) noted that Guyana is well positioned, with its abundant natural resources, to create a diversified electricity generation mix.

Natural Gas explained

According to the U.S Energy Information Administration, "natural gas occurs deep beneath the earth's surface. Natural gas contains mainly of methane, a compound with one carbon atom and four hydrogen atoms. Natural gas also contains small amounts of hydrocarbon gas liquids and nonhydrocarbon gases." Natural gas is used as a fuel and to make materials and chemicals, including electricity generation as well.

Drivers of new natural gas demands

In the next decade, the power sector will provide the largest growth in gas demand which depends on two major drivers: growth in total electric generation and growth in the gas share of electric generation. Most of the growth in the power-sector demand will be met by increasing amounts of natural gas-fired generation and by renewables.

Coal-fired power plants will be retired in response to more stringent environmental regulations and more competitive low gas prices, which will lead to a change in the mix of generation fuel and an increase in natural gas market share. The second largest demand increases are felt in the U.S. industrial sector, which uses natural gas as both a fuel and feedstock to meet a variety of energy requirements. The U.S. manufacturing sector accounts for about 80% of total industrial gas demand, with the remaining 20% coming from agriculture, construction and mining.

Use of natural gas for electric energy generation

In recent years, the amount of natural gas being used as fuel to generate electricity has been gradually increasing due in part to the decreasing price and increased supply. Electric utilities have been increasingly turning to natural gas as a fuel source, especially for new electric generating plants, such as combustion turbines and combined-cycle plants.

The primary benefit to the manufacturing sector is that the increasing use of fuel will result in lower generation cost for electric power. The significance of shifting electric power sources is such that the rising demand for the use of natural gas fuel in electric power generation will contribute to electric power generation will contribute to investment in new natural gas infrastructure, such as transmission lines, gas processing plants, and compressor stations.

Forward linkages

The outputs from the natural gas-intensive sectors are used as inputs by other sectors of the economy in a variety of ways. Such uses are referred to as forwarding linkages and include:

- Intermediate inputs (e.g., goods and services sold to other sectors that are used in production processes to make other types of goods and services, with no sales to final demand occurs).
- Sales to final demand (e.g., goods and services that are not used as intermediate inputs and no further processing of the output occur).

Types of final demand include:

- Personal consumption expenditure (e.g., purchases of refined products such as gasoline at filling stations or home heating oil).
- Gross private investment
- Private inventory accumulation
- Exports or imports
- Government consumption and gross investment

The forward linkage or downstream manufacturing sectors will potentially benefit from increases in supply and/or the lower cost for natural gas. Final demand sectors, such as personal consumption, exports, and imports are also affected by changes in natural gas production and pricing, but indirectly, through industry production changes captured by intermediate inputs shifts to industrial production. For example, personal consumption impacts, such as those resulting from lower electricity prices, are captured first by feedstock inputs to the electricity industry and flow through to all industries before resulting in lower prices for the consumer. The natural gas industry is a major contributor to the GDP of many countries. The industry is inherently large-scale, generating millions of dollars in associated revenues and tax income and employing thousands. As an example, in 2008 natural gas production in the U.S added US$385 billion to GDP. Gas exporting countries as diverse such as the U.K, Netherlands, Russia, Qatar, Australia and Indonesia have benefited from the enormous economic benefits that are the combinations of the following:

- Taxation of profits and of gas production

- Wider job creation in the industry from upstream exploration and production (E&P) companies, midstream processing and pipeline transportation companies, downstream local supporting arms focusing on law, human resources, public relations and many other aspects
- A local source of natural gas can act as a catalyst to other industries such as chemicals, driving wider economic growth
- Employment transformation from old industries such as coal and steel to new high-tech natural gas extraction and innovative appliances.
- New job creation across the skills and knowledge base, from entry-level to Ph.D.

A study by the Center for Global Development (CGD), found that the greater use of natural gas for electricity could help lift some countries out of poverty by providing greater access to affordable and reliable power. Natural gas must be extracted in sufficient volumes, however, in order to be economically viable. It is within these conceptual frameworks that for Guyana, natural gas development in tandem with the oil industry, could potentially transform Guyana and alleviate poverty, under prudent management and politically visionary commitments.

In the case of Guyana, a pipeline infrastructure from the offshore production to the nearest shore landing is being planned for construction. The Government plans to use associated natural gas for electricity generation, some of which are being planned for a proposed 180-200 MW natural gas plant of biofuel capacity by 2025. Further, the construction of a 50 MW natural gas plant is also being considered according to GPL. Towards these ends, the following priority actions can be considered to take this project forward:

- All existing heavy fuel oils (HFOs) generating sets will either be decommissioned or converted into dual fuel operations, starting with 8.7 MW in 2019; and a further 170 MW by 2025
- Initial production is planned between 2022 and 2025
- According to GPL, conversion of existing units may not be economical due to distance from gas, age of units and direct costs associated with conversions and upgrades.
- ExxonMobil has confirmed and has disclosed to Government that 30 – 50 million cubic feet of natural gas could be piped to shore for electricity generation – representing excess gas from the Liza phase 1 alone.
- It is noted that GPL currently produces 150 megawatts of power, while the 30-50 million cubic feet of natural gas could produce about 200 megawatts of power and can be sustained for over 15 years.
- This, according to the Ministry of Public Infrastructure, is sufficient to power the entire Demerara Berbice Interconnected System (DBIS).
- The Energy Department has disclosed that gas can be brought to shore by 2023-2024.
- Secondary use of natural gas will be as a transport fuel
- The liquid component is being planned for liquified petroleum gas (LPG), although processing will largely depend on an available onsite oil refinery
- Currently, imported LPG is not being used in transport, and only by households (90%) and in commercial and industrial sectors (10%). Compressed Natural Gas (CNG) is another possibility, which if made available in domestic market, could allow conversion and retrofits of existing vehicles from gasoline to CNG.
- Government has identified a landing site, and technical assessments are being carried out to determine the feasibility of getting the gas piped from well areas located about 100 miles from shore, and the required power system structure for converting it to power.

3.7 Human Capital as a key driver in economic development in developing economies

Premised upon historic facts, the notion of the high level of emigration rate that Guyana suffered from over the last few decades which still persist – albeit to a lesser degree when compared to the mass emigration rate recorded about two decades ago – this unarguably strongly correlates to the underdeveloped status of Guyana's socio-economic strata. More importantly to note, however, such conclusive inference, is stemmed mainly from the crime and violence situation in Guyana especially within its historic context wherein Guyana had experienced a unique kind of crime and violence situation described as politically motivated crimes which usually occurred during periods of national elections.

The major consequence for Guyana resulting from the crime and violence situation on socioeconomic outcomes, is that this has been the primary causation, both historically and presently, perhaps to a lesser extent, of a high level of

emigration and by extension, leading to a great degree of *'brain drain'* in Guyana. In other words, a large number of the Guyanese educated population have migrated to other countries and this phenomenon has indisputably served as a key contributor towards Guyana remaining largely underdeveloped particularly the socio-economic strata; especially against the backdrop of the history of politically motivated crimes in Guyana's context.

In 2015 for example, the immigrant population of Guyana was 2.01 percent of the total resident population. On the other hand, outward migration from Guyana up to the same period was a whopping 451,139. In 2015, 37.03 percent of all citizens lived outside their country of origin. During the past two decades or so, an unprecedented massive emigration of people out of Guyana to North America had occurred. An average of 6,080 people per year emigrated between 1969 and 1976, increasing to an average of 14,400 between 1976 and 1981. Figures for 1976 showed 43 percent of emigrants went to the United States, 31 percent to Canada, 10 percent to Britain, and 9 percent to the Caribbean. As a consequence of deteriorating economic and political conditions in the 1980s, led to even sharper increases in the emigration rate. Unofficial estimates put the number leaving the country in the late 1980s at 10,000 to 30,000 annually. Many of these emigrants were middle class professionals, who opposed government policies. Thus, a significant and permanent loss of vitally skilled individuals.

Moreover, referencing the last labour force survey done in 2018 statistics showing the percentage share of Working-age Population by Level of Education Completed, it was shown that 10 percent of the labour force has no schooling; while about 50 percent (the highest number) of the workforce have only up to Primary Education; upper Secondary Education comprised of just of 20 percent; Post-Secondary accounts for just about 5 percent; and while Bachelor's, Masters and Doctoral Equivalents account for less than 3 percent of the labour. These interesting facts and figures therefore, further strongly corroborate the contentions presented within this article and notes the importance of the level and quality of human capital to propel economic development of any country.

Against this backdrop, human capital accumulation has long been considered an important factor in economic development. Empirical work suggests that human capital levels directly influence the rate of domestically produced technological innovation (Romer, 1990 a). Moreover, the stock of human capital affects the speed of adoption of technology from abroad as shown by Nelson & Phelps (1966). The significance of this alternative model in terms of its empirical implications is that human capital stocks in levels, rather than their growth rates, now play a role in determining the growth of per capital income.

Much of the motivation for human capital policies in developing countries is the possibility of providing economic growth that will raise the levels of incomes in these countries. The focus on alleviating poverty in developing countries relates directly to economic growth because of the realization that simply redistributing incomes and resources will not lead to long term solutions of poverty. Within this context, it is emphasized that Human Capital is an integral part of a country's development and economic growth has human capital as an important factor. Recent research has shown that tertiary education has significantly affected the growth of economies instead of secondary education. Workable policies should be put in place to bring about an overall economic growth. Expenditure on health and public education should be utilized effectively and efficiently so that the country would experience quality health care services and a quality educational system.

3.8 Guyana's oil wealth relative to Economic Development, and Human Development

Guyana is becoming more and more attractive to foreign investors, and of course there is likely to be heightened excitement by the Private Sector and the Guyanese people, in view of Guyana's new found oil wealth. Guyana is poised to earn about $100 - $200 billion annually for the first five years. Bearing in mind that other oil companies may come on board and increased production levels which means the oil revenue will only increase proportionately; the more oil finds made – production level may increase which would mean further increases in revenues. In the first decade, Guyana's *nominal* GDP could potentially expand by more than 200 percent. Now, what is GDP and economic growth? And the difference between the two? GDP – which is the acronym for Gross Domestic Product – simply means the sum total of all the goods and services produced in an economy – at market values – in a given time period – usually a calendar year. Real GDP on the other hand, is a macroeconomic measure of the size (nominal GDP) of an economy adjusted for price changes and inflation.

Real GDP is then used to measure the economic growth rate. The economic growth rate is the percentage change in the quantity of goods and services produced from one year to the next. In other words, economic growth is the increase

in the ability of an economy to produce goods and services over time – whereas – GDP is the monetary value of all goods and services. Economic growth, in turn, is used to determine economic welfare comparisons; international welfare comparisons; and business cycle forecasts. However, in the context of this article – only the economic welfare component is addressed – hereunder.

Economic welfare measures the nation's overall state of economic well-being. Real GDP is not a perfect measure of economic welfare for seven reasons: (1) quality improvements tend to be neglected in calculating real GDP so the inflation rate is overstated and the real GDP understated; (2) real GDP does not include household production, that is, productive activities done in and around the house by members of the household; (3) Real GDP, as measured, omits the underground economy, which is illegal economic activity or legal economic activity that goes unreported for tax avoidance reasons; (4) health and life expectancy are not directly included in real GDP; (5) Leisure time, a valuable component of an individual's welfare, is not included in real GDP; (6) environmental damage is not deducted from real GDP; and (7) political freedom and social justice are not included in real GDP.

"Human development is all about human freedoms: freedom to realize the full potential of human life, not just of a few, nor of most, but of all lives in every corner of the world – now and in the future", (UNDP, 2016).

Yale University (2004) published a paper on "Economic Growth and Human Development". The paper showed the linkages between economic and human development – arisen from a study – in some states. It was found that the two-way relationship suggested that nations may enter into a virtuous cycle of high growth and large gains in human development, or a vicious cycle of low growth and low rates of human development improvement. In these states, levels of economic growth and human development are mutually reinforcing, either leading towards an ***upward spiral*** of development, or a ***poverty trap***. Countries may also find themselves in a lop-sided state, at least temporarily, with relatively good growth and relatively poor human development and vice versa.

There may be various reasons for "economic growth lopsided" nations, that is, those which have high rates of GDP growth relative to improvement in human development indicators, including low social expenditure, government corruption, or inequitably distribution of incomes. The resultant effect of such cases suggests that good economic growth not accompanied by increases and/or improvements in human development may prove to be ultimately unstable.

Concluding remarks

In putting the aforementioned discussions into perspective – what all that preamble simply means – is that – with the potential huge growth in GDP on account of large sums of oil revenues – does not necessarily mean that the quality of life on a broader spectrum – will be improved and/or experienced by a wide cross section of the Guyanese people. It does not guarantee real economic growth against the background of the human development paradigm – with respect to poverty reduction in particular.

Case in point, with the largest retrenchment in Guyanese (recent) economic history of some 10,000 sugar workers – having the far-reaching implication of further adversely affecting about 40,000 dependents. This outcome, has in effect taken away approximately $10 billion in income distribution to these workers and the broader economy annually. This means that the economic and social wellbeing of these people are going to decline rather rapidly and oil revenue would not necessarily create direct employment for them. The previous Administration attempted to put programs in place aimed at re-engaging these people in productive income generating activities such as training with new skills – namely carpentry and plumbing etc. But these measures, though designed with good intent, will not compensate for the economic loss incurred, neither would it give rise to stability and progressive growth in the income distribution of these thousands of retrenched people.

Therefore, the important task for policymakers to achieve the desired outcome of improved human development and broad-based and inclusive development of the economy, depends on how well the resources earned are managed and deployed into diversification of the economy, creating new industries, investing in infrastructure, education, healthcare, and public security among other crucial development goals.

3.9 Infrastructural and Economic Development

More infrastructure does not necessarily mean more growth, because other constraints may also be binding. Poor infrastructure performance tends to affect competitiveness, slowing achievements in health and education and

disproportionately harming the poor. For the success of a modern economy to thrive, energy, water, transport, digital communications, waste disposal networks, and facilities are critical elements to begin with. Empirical evidences have shown that well-designed infrastructure investments have long-term economic benefits such as, increasing economic growth, productivity and land values, while providing significant positive spillovers. Notwithstanding, it is of critical importance to invest wisely such that, over-investment can potentially lead to projects that are inefficiently large, and therefore have low marginal returns.

The distinctions between infrastructural investment and other types of investment are its high risk, long term, capital intensive nature, reflected in the creation of long-lived assets with high sunk costs. "The resulting gulf between marginal and average costs creates a time - inconsistency problem as investors always face the problem that they will be 'held up'." (Centre for Economic Performance). As such, this requires suitable government intervention, which, in turn, exposes infrastructure investment to an additional layer of risks and decision-making biases – which is sometimes the root cause of underinvestment.

Examples of these other types of risks inherent in perhaps most developing countries if not all countries are:

- Political risks – reflecting the inability of the political system to deliver cross-party consensus around strategic plans for infrastructure and stable policy frameworks to support their implementation;
- Analytical risks – reflecting the dual relationship between the prevailing political ideology and economic mainstream;
- Unbiased project appraisal – reflecting the deficit in project evaluation grounded in sound and independent expert analysis and comprehensive assessment of policy alternatives;
- Limitations of the planning system and compensation mechanisms – reflecting a current planning system that does not properly share the asymmetric benefits of development; and
- Public accounting distortions – reflecting practices that fail to incorporate the value of the public sector debt.

Both theoretical and empirical evidences thus point to the existence of a robust positive relationship between infrastructure and economic development. In particular, it appears that:

1. Aggregate infrastructure stock and investment drive economic output;
2. The driving relationship between economic output and infrastructure varies significantly across different types of physical infrastructure; and
3. Infrastructure impacts on output both directly and indirectly, via increased private sector investment, improved productivity and rising exports.

Dubai's Gross Domestic Product (GDP), for example, is not driven by oil per se – in fact, about 95 percent of Dubai's GDP is not oil based. Dubai had discovered that it had limited oil and gas reserves ($1/20^{th}$ of the reserves of Abu Dhabi) and was thus determined to build up an economy that could survive the end of the oil boom. To this end, Dubai invested massively in infrastructure development. With the creation of ports, Dubai established itself as a hub of trade by sea and a center of tourism and business travel by air. Another good example would be to look at the history of China's economic Development. Prior to 1979, China maintained a centrally planned or command economy. To support rapid industrialization, the central government undertook large-scale investments in physical and human capital during the 1960s and 1970s. As a result, by 1978, nearly three-fourths of industrial production was produced by centrally controlled, state-owned enterprises, according to centrally planned output.

While most of its historic economic policies created distortions in the economy in these periods, the Chinese Infrastructural development from in these earlier years – historically, underpin, in a critical manner, the dominant and powerful economic success of that country today. That said, there is a notion in economics that says – if you have the facilities people will use it. If Guyana did not make the bold move to invest in facilities such as the Marriot Hotel, today there is a high influx of foreigners in the country and the presence of one of the largest multi-national companies in Guyana – ExxonMobil, Guyana would have been at a disadvantage. It is for these strategic reasons that the owner (s) of Pegasus hotel is currently investing a massive US$100 million to expand and modernize the Pegasus hotel because for at least the next 10 – 20 years, there will be a heavy inflow of foreigners and investment in these type of facilities are necessary which are directly linked to the broader economic development of Guyana. The national stadium is another example, if we didn't have the stadium it would have been unlikely for Guyana to host international

cricket games such as the entertaining 20-20 version of the game – CPL. The last CPL games in Guyana brought in some US$3.2 million in the Guyanese economy. These are just few practical examples on the need and importance of development in infrastructure that will enable long term economic development of the country.

The recently announced US$1.4 billion housing development investment by a private investor is also timely to cater for the expected influx of expatriates and remigrants over the next five – ten years. This will align perfectly with a well-crafted remigrant policy – wherein these types of facilities will be needed for people returning to live in Guyana – coming from first world countries. This is apart from the fact that this is perhaps the largest local private investment to this magnitude, representing about 25% of GDP and almost the full-size of 2019 national budget.

3.2.1 Balancing infrastructure development and savings through the Sovereign Wealth Fund

A Sovereign Wealth Fund (SWF) is a mechanism of moving a country's savings and investments from present to future. SWFs are managed in different structures ranging from Central Banks to private investment corporations. There are four basic benchmarks put forward by Ang (2010) with respect to SWFs to the extent where they should take into account the economic and political context underpinning the establishment of the SWF, and the role that the SWF will pay as one part of government overall policy. The first benchmark is legitimacy – which should ensure that the capital of the SWF is not immediately spent and instead, is gradually disbursed across the present and future generations. The second benchmark is that it should recognize the implicit liabilities of the SWF by taking into account its role in government fiscal and other macro policies. The third is setting the performance benchmark which should complement the governance structure of the SWF.

And fourthly, the long-term horizon requires a SWF to consider the long run equilibrium benchmark of the markets in which the SWF invests and the long-term externalities affecting the SWF. Conversely, instead of a SWF, there is another such like mechanism referred to as a Stabilization Fund or often times called a 'Budget Stabilization Fund'. This type of fund usually has clearly laid out rules for the deposit and withdrawal of resources to smooth the fluctuations (deficit/surplus) in the government budget. It is usually funded from excess revenues, but their purpose is to help ensure that earnings or profits are spent – through the budget process – in a way that makes it possible to share wealth with future generations (IMF, 2013 & Loppnow, 2009).

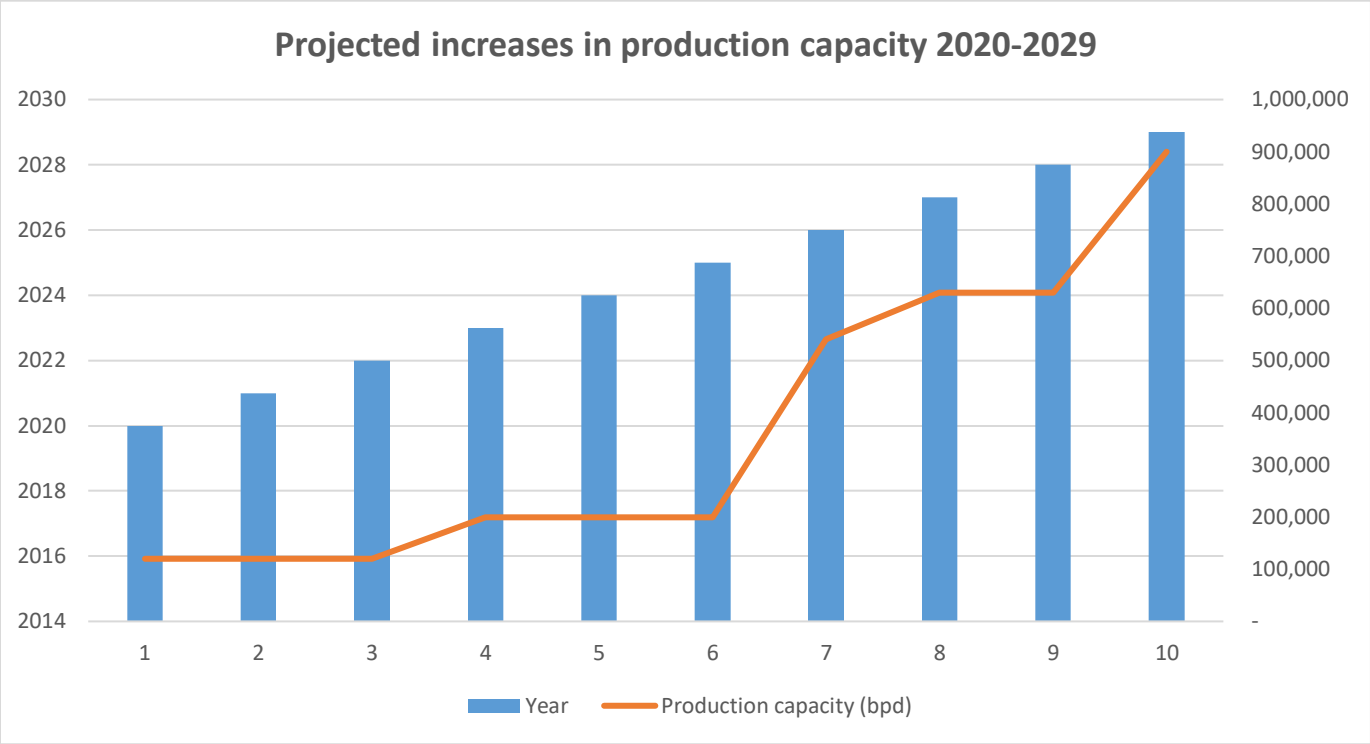
Dubai is a classic example of an oil rich country that has pursued a similar strategy. How did Dubai get so rich – was it really the oil revenues or locking away oil revenues in a SWF? To answer this question the answer lies in what Dubai actually did with their oil revenue at the onset– in that how was it spent? Dubai is the second wealthiest emirate in the United Arab Emirate (UAE) after Abu Dhabi which is the capital state. Dubai's massive transformation has taken place over the last four decades, managing to shift their economy from fishing and trading to tourism, shipping and finance. Dubai's image is synonymous with luxury, multi-billion real estate ventures; 12 million visitors in 2005; and a Vanity Fair has described it as a "city on crack".

Interestingly, Dubai's Gross Domestic Product (GDP) is not driven by oil per se – in fact, about 95 percent of Dubai's GDP is not oil based. Dubai had discovered that it had limited oil and gas reserves ($1/20^{th}$ of the reserves of Abu Dhabi) and was thus determined to build up an economy that could survive the end of the oil boom. To this end, Dubai invested massively in infrastructure development. With the creation of ports, Dubai established itself as a hub of trade by sea and a center of tourism and business travel by air. There are a plethora of examples underpinning the huge economic success of this country which is beyond the scope of a single article. Hence, at the end of this article the author has placed three links that readers can access (at their own leisure time) in this regard.

Concluding Remarks

Citing the National Development Strategy (Guyana) document, recognition has been given to the fact that Guyana is very poorly supplied with roads. The gross inadequacy of the transport system affects the country's social and economic development in many ways. For example, it increases productions costs and as such, constrains our national competitiveness particularly in the mining and forestry sectors. It also inhibits our capacity to fully utilize those natural resources that are not located on the coastland. And, by limiting communication between those who live on the coastland and those who inhabit the hinterland, effectively divides the country into two almost unbridgeable cultures. Moreover, and perhaps more importantly - it acts as a barrier between the unity of the country both in a physical and spiritual sense: because it seems difficult to think as Guyanese and act as one nation.

There is also a restriction to the coastal population's penetration of the hinterland regions and as such, forces coast



landers to live in a cramped and crowded manner on the coast, struggling and competing for land – space and other amenities, while more suitable areas are available farther south. Failure to occupy a larger part of the country tends to somewhat logically bolster some of the territorial claims by neighboring countries.

Finally, within these contexts, Guyana does not necessarily need a Sovereign Wealth Fund at the onset of oil production. Rather, a hybrid model of a Stabilization Fund and SWF might be more suitable which would effectively reduce the heavy reliance to borrow funds externally. In essence, locking away large revenues in a SWF would mean that other countries and multinational corporations would enjoy the direct and immediate benefits of such funds for it will be used for such like investments - while Guyana remains largely underdeveloped.

Table 14: Projected production capacity and oil revenues for Guyana – 2020 – 2031 (US$)

Global demand could fall by 38% in 20 years – owing to renewable energy adoption by countries. Calculation: Author.

Figure 17: Projected increase in production capacity 2020-2029 (Source: JB Consultancy)

According to the Production Sharing Agreement between the Government of Guyana (GoG) and ExxonMobil, Guyana's take is in the form of 2% Royalty and 50% Profit Share which translates to 12.5% during the period of the cost recovery where the recovery cost is capped at 75%. With this in mind and given the disclosed production capacities and the levels at which Exxon intends to increase production capacity, the table above illustrates some estimates in terms of Guyana's estimated earnings over the next 15 years from ExxonMobil alone. The analysis shows that for the first three years, Government share will be in the region of USD$260 million, less than USD$300 million in the first three years. By the end of 2025 government's take can reach USD$1 billion annually and by 2030, government's take can exceed USD$2 billion annually from ExxonMobil alone, at production capacity levels of over 1 million barrels per day.

More importantly, the spin-off effects on the wider economy will necessitate growing demand for health care services, insurance, accommodation, financial services, tourism, accounting and taxation services, the restaurant and

entertainment industry and transportation, logistics, and brokerage services. Businesses operating within these sectors will also need to position themselves to cater for these growing demands which will translate into the creation of employment by way of expansion, and training and development. To these ends, ExxonMobil reported that they have injected some GY$45.7 billion with local vendors since 2015, which represents an annual average of GY$11.4 billion into the economy, through the value chain.

3.2.2 Renewable Energy – opportunities and potential projects

Over 92% of the country's energy needs are met with **imported fuel**. **Petroleum products** constituted about a **third of total import bills** between 2008 and 2017. Until November 2016, Guyana had preferential access to oil purchases from Venezuela at concessional prices. Agreement ended unilaterally due to the cross-border territorial dispute. Guyana exchanged rice as partial payments under Petrocaribe Agreement. Guyana has since turned to Trinidad & Tobago and Suriname for its domestic oil requirements. **Average prices of gasoline are a modest US$1 per litre** higher than Trinidad (0.85) but lower than the UK (US$1.66) or Spain (US$ 1.45).

3.2.3 The Case for a Development Fund to propel Guyana's Economic Development

Guyana's financial market constitutes the Banking System, the New Building Society (NBS), Trust Companies, Finance Companies, Asset Management Companies, Pension Schemes and the Insurance Companies. The financial sector is however, dominated by the commercial banks. Therefore, an examination of the structure of the commercial banking system is presented hereunder. The commercial banking industry is characterized as an oligopolistic market structure mainly because of entry barriers that necessitate an oligopolistic banking sector. Given the nature of the financial market, which is underdeveloped and dominated by the commercial banks; commercial banks are naturally risk averse because they are deposit taking institutions and, hence - they have a responsibility to protect depositor's funds which means they have to engage in prudent lending. Compounding the situation in which access to financing is apparently difficult for small and medium sized enterprises especially; it is not necessarily the inherent nature of the commercial banks per se, but rather, a series of limitations with respect to the businesses themselves and by extension the management and owners of the said enterprises; hence it is twofold.

In the conduct of credit assessment, a borrower needs to fulfill certain qualifying criterion before the decision to approve a loan is made. One of the primary requirements in this process is collateral, and in many instances, this is one of the main limitations – lack of adequate and tangible collateral. Instantly, this may be a deterrent – much to the disadvantage of the prospective borrower. It must be noted also, that having healthy collateral is not always a decisive factor in the loan approval process. The more important decisive factors in this regard are premised upon the borrower's ability to repay - debt servicing ability, and, this other element might sound surprising; but in reality, the most crucial of them all is – the borrower's willingness to repay. Experience – over the last twenty-five years or so, has taught bankers that borrowers are not disciplined as they were for the period prior to 1992. This is undoubtedly one of the key reasons' why loans are consistently in arrears and also non-performing in some cases. This notion hinges on the fact that there has been, over this period, a paradigmatic change in the socio - cultural construct of the populace or the market within which banks operate. In respect of the technical limitations of businesses – most small and medium sized firms, lack crucial expertise in the industry within which they operate, sound financial management practices and particularly cash flow management. These, therefore, inevitably disqualify such entities from accessing financing through the commercial banks.

The problem of access to financing, is not so much an interest rate problem or cost of capital. The broader problem about access to capital is not because of commercial banks: it is because of Guyana's underdeveloped financial system. It is important to understand and acknowledge that commercial banks are inherently different structurally wherein they are not designed for microfinance. Commercial banks do in fact help and contribute to some extent but microfinancing is usually risky for the banks. With regards to microfinancing, the Institute of Private Enterprise Development (IPED) for example, was founded specifically for the purpose of microfinance and it is doing extremely well today. In this regard, it is worthwhile to examine the structure of IPED. Ironically, a few proponents are of the view that the commercial banks interest rates are "notoriously" high. However, IPED's interest rates on microfinance ranges from 20-30 % in some cases. Of course, IPED's interest rates are reflective of high-risk nature of such businesses and poor collateral. Commercial banks' interest rates are way below that ranging from 10 – 18%. Now, in terms of IPED's structure, the way this institution operates is to take a hands-on approach to help clients manage their

businesses prudently to succeed by doing extensive field work and they even have training programs for clients (small businesses). Commercial banks don't do this neither do they have the incentive to so do. Another important factor with IPED's structure is that they hold anything from household effects to cars, or any asset as security which the banks cannot do because of the regulations stipulated within the Financial Institutions Act. Therefore, in order to deal with the issue of microfinance, that's not for the commercial banks, what is needed is more microfinance institutions like IPED, and this in effect speaks to capital market development.

Moreover, IPED's financing structure - that is, the source of its financing is different from the commercial banks. It is not a deposit taking institution, its capital is actually shareholders' funds, donor funds and it reinvests its profits. Unlike the commercial banks which take savings from householders and lend to firm. So, the source of financing and the way microfinance institutions versus commercial banks are designed, is fundamentally different. Within these pragmatic circumstances, how would the establishment of a Development Fund solve these problems? Development Financing institutions are typically government-sponsored financial institutions with the primary mandate to provide long-term capital to industry. Given the inherent nature of development funds – they are largely not profit driven unlike the commercial banks. As such, the success of a development bank is not measured against the traditional set of performance indicators – but instead – their contribution to economy wide growth through the acquisition of and dissemination of financial expertise in new industrial sectors. In addition, the structure and manner in which development funds are designed to operate is different from that of the commercial banks such that, they are required to have highly skilled and well qualified experts in various appropriate fields. The reason for this is because development funds or development banks provide long term capital for repayment over longer periods, as long as 20 years for example, while commercial banks generally could only extend long term capital for up to five years maximum. Thus, it is this distinguishing factor that sets them apart. However, development funds are not to be viewed as competing institutions with commercial banks – they are more complementary financial institutions wherein – one extends long term capital in the creation of new industries and the other sustains old or established industries.

The key principles that govern Islamic finance imply that in an Islamic financial system, financing can only be extended to productive activities, trade and real estates – thus it is often considered an asset-based financial system. If fully complied with, these principles ensure appropriate leverage and help limit speculation and moral hazard. Consistent with these key principles, there are two sets of Islamic models of financing, excluding fee-based services: (a) profit –and-loss-sharing (PLS) models of financing and (b) non-PLS contracts. A strong preference is attached to the risk sharing modes of financing, as they are closest to the spirit of Islamic financing.

Having regards for the distinguishing features of Islamic financing compared to conventional development financing – the Government now has a responsibility to carefully select the appropriate productive projects – that will allow for the profit and loss sharing model for which the Islamic facility can be used for. In this regard, the new Demerara Bridge is a perfect example of a project for such. Other suggestion can be the revisiting of the hydropower project, and setting up a modular oil refinery among others of this nature, and perhaps explore this option for the Guyana Sugar Corporation Inc. (GuySuCo) restructuring programme rather than the massive $30 billion bond, which, as was established in previous writings (in my weekly column in the Guyana Times) that it is devoid of financial prudence.

Proposed Financing and Institutional Structure of the Development Fund

I have deliberately suggested the need for a Development Fund rather than a Development Bank which might require much more capital investment. There is no need for a development bank per se, in my view, as a Development Fund would suffice to serve virtually the same purpose. The Fund can be institutionalized by way of legislation, and must be composed of a technically competent Board, and a variety of professional expertise to manage and administer the Fund to execute its mandate.

With respect to the financing structure, this can come from a combination of sources such as international financial institutions like the World Bank, Inter-American Development Bank, Caribbean Development Bank, and the Islamic Development Bank. These institutions can also serve on a technical committee to support the management of the Fund to identify relevant development projects and to assist in the conduct of feasibility studies as well for these projects. Financing can also come from the Sovereign Wealth Fund, a percentage of that fund can go towards the development fund, as well as the local banking sector can invest into the fund as well. This, I am anticipating would be helpful to provide project financing to the private sector as well for large investment projects at concessionary interest rates, and to support the development of small and medium sized enterprises as well, in addition to large scale development projects.

4 Rethinking the geopolitics of Latin America and the Caribbean and the geopolitical importance of Guyana

"Geopolitics conceives the state as a geographic organism or as a phenomenon in space," Rudolf Kjellen (Sweden, 1864-1922).

Geopolitics is not a static reality like geography. It is in slow but permanent evolution. As Kattalin Gabriel-Oyhamburu states, geopolitics depends on the historical moment in which it occurs. For a long time, it has been associated with the state and the principle of national sovereignty, but it is now being reformulated the scarcity of energy, water and food resources, largely linked to access to the markets of emerging countries, has restructured the global architecture and has introduced new geopolitical priorities. Scholars have argued that the economic cycle based on commodity prices is coming to an end and that governments have stopped receiving some of the resources that, through exports, sustained high public spending (Rojaz Diaz, 2016). The model based on unlimited social spending and on patronage policies has been exhausted, which does not necessarily imply the end of populism. This does not mean the disappearance of the populists' governments in Latin America (Rojaz Diaz, 2016).

4.1 The geopolitics of resources

The projection of global powers will increasingly depend on its policy for obtaining resources. We are in the presence of a new configuration wherein the superpowers feel more powerful in controlling these resources. As such, the rivalry introduces new "places", geostrategic nodes, which are coveted by both the United States and China, which no longer seek to establish dominance in the "Heartland" or "Rimland". They seek to control using flexible strategies in the areas of high production resources (Gabriel-Oyhamburu (2020). The geographical distribution of resource centers and centers of lines of communication assigns value to each location in terms of its strategic importance. The idea of globalization supports the belief in a gradual reduction of the role of geography and geopolitics in the states, but the reality is that the exclusive control over routes and resources cannot be replaced by the "market". Thus, geography and geopolitics are as crucial today as it were in the past (Klare, 2001).

4.2 South America

South America is described as a continent in which institutions are invented every five years, are dismembered every decade and do not function effectively most times to the extent where goals are hardly achieved. When considered as a group, the economic and political phenomenon's that are carried out in the continent of South America and in the vicinity, the presence of two antagonisms in its vast and varied territory must be admitted, as the essential factors of the modalities in which the same phenomena appear. Notwithstanding, like all opposing forces, they have a certain separating effect. Thus, collectively, they can be true to the creative forces of everything that goes on in South America's political realms.

Further, these antagonisms manifest themselves into different amplitudes: one, encompassing the whole continent, in its causes as well as its effects, which is translated by the opposition of the two continental slopes, the one of the Atlantic and the one of the Pacific. Another one, directly interested in the Atlantic side, is the opposition of the two great basins located in it, the one of the Amazon and the one of the Silver, and can be easily verified with the naked eye on a geographic chart of the South America (Ibid, n.d.).

Heart Zone (Paraguay y Bolivia), Pacific Zone (Chile, Peru, Ecuador, Colombia), and Atlantic Zone (Brazil, Uruguay, Argentina).

4.3 Geography

The subcontinent South America has a huge geographical variety with influence on its geopolitics. The continent can be divided into three large areas namely:

(i) The mountain range of the Andes is the longest and highest mountain range of the world, after the Himalaya. It extends from the south of the Tierra del Fuego, following a parallel line to the Pacific coast, diversifying to the north two arms, one towards the Isthmus of Panama and another one bordering the Caribbean Coast. It passes through Argentina, Chile, Bolivia, Peru, Ecuador, Colombia and Venezuela.

(ii) The lowlands are divided into three systems: the Orinoco plains, the plain of the Amazon and the plain of the Plata, formed by the sedimentation produced by the rivers that cross them.

(iii) The continental shield (Guyanese highlands, Patagonian massif and Brasilia massif).

4.4 Regional Blocs

Regional blocs serve as the integration association of different countries or a group of countries that share common interests in economic, social, political and environmental issues, and whose structures is tried to strengthen, in its construction, based on agreements, legislation that favour intra-bloc conditions and strengthen it from external sphere. To these ends, the following blocs exist within the continent.

The Union of South American Nations (UNASUR)

The member states of the UNASUR are the Argentine Republic, the Plurinational State of Bolivia, the Federative Republic of Brazil, the Republic of Chile, the Republic of Colombia, the Republic of Ecuador, the Cooperative Republic of Guyana, the Republic of Paraguay, the Republic of Peru, the Republic of Suriname, the Oriental Republic of Uruguay, and the Bolivarian Republic of Venezuela.

Its objectives are: establish effective join action commitments; build a common space where compliance with the mentioned above would be possible; agree on common positions on the global agendas; intensify interaction in regional and sub-regional processes and delved into the South-South cooperation.

UNASUR was created in May 2008, represents the skeleton of an autonomous government structure of South America, with defense and security issues grouped under the supervision of the Council of South America Defense Council. Its main objectives are the consolidation of South America as a zone of peace, the creation of a common identity in defense matters and the strength of regional cooperation in defense matters.

According to German Prieto, UNASUR is not a process of regional integration but of cooperation. However, from a constructivist perspective, the institutionalization of a regional construction process contributes to build up of trust between the states, which favors the consolidation of a zone of peace. A shift towards regional integration would strengthen the project.

MERCOSUR

MERCOSUR is composed of Brazil, Argentina, Uruguay, Paraguay and Venezuela, and has the largest industrial park and the largest economic center in South America. It is marked by strong asymmetries among the members. It has free trade agreements with other blocs, countries, or sub-regions. Also, it states:

- Possess the largest aquifers on Earth
- Possess large oil reserves
- Represent the largest food producers of the world
- Possess the largest energy reserves

- Contain the Amazon
- Possess large gas reserves
- Possess an important network of navigable river waters

MERCOSUR is reportedly going through one of the most critical moments of its history. It is no longer just those problems that brought small countries into conflict with large ones (Uruguay, and Paraguay versus Argentina and Brazil). Now have emerged issues that are much more serious that threaten the survival of the sub-regional integration process in Latin America. Argentina's extreme protectionism, reinforced after the entry of Venezuela, threatens Mercosur's international insertion, as reflected in Mercosur's short list of free trade agreements (FTAs): Israel, Palestine and Egypt. The negotiation with the European Union is in a limbo of very difficult return and with the United States there are no news of preliminary conversations of any type.

ALBA

ALBA is made up of Antigua and Barbuda, Bolivia, Cuba, Dominica, Ecuador, Nicaragua, Saint Lucia, St. Vincent and the Grenadines, Suriname and Venezuela as its full members. Haiti, Iran, Syria, Libya and Canada are observers. Its objectives are the fight against poverty and social exclusion, based on doctrines of the left.

Venezuela's current interest seems to be focused on disputing the hegemony with the US that they hold in the Caribbean Basin. Venezuela is the primary source of resources to compensate the asymmetries, and the block itself has energy resources and minerals in large volumes, within the South American Continent.

Pacific Alliance

The Pacific Alliance is composed of Chile, Colombia, Mexico and Peru. Its objectives are: delve into the integration among these economies, define joint actions for the commercial bundling with Asia Pacific and advance progressively towards the objective of achieving the free circulation of goods, services, capital and persons. The requirements to belong to this group are: validity of the rule of law, democracy and constitutional order.

It represents as a whole, the eight economy in the world. With a population of 215 million people, it accounts for 55% of Latin American exports and for US$1.7 trillion of GDP, 35% of Latin America. It has a goal of having a free trade zone similar to the EU.

4.5 Evolution of the situation in South America

Latin America seemed to feel, for the first time in recent history, owner of its destiny, and wanted to emancipate itself from the greater brothers of the north – United States and Canada. Since the United States has decided to change its role in the region for the first time since it puts its eyes, interests and excesses on the continent in the nineteenth century, Latin America must demonstrate that it can build its future sovereign way, not in an isolated one (Carlos Mesa, 2010).

The rise of populist nationalisms, the attribution of internal ills to the conspiratorial actions of neighboring countries, the trans-national and cross-border dynamics, the anti-Americanism, and the role of the United States, since the latest initiatives related to Cuba as well as the lack of an effective definition of the armed forces of these countries and their political use are factors that have to be taken into account.

Proponents question the "modern nature" of the state as the only identity of this structure of political, economic, social and territorial organization, and of its institutional mechanism based fundamentally on the liberal principles of the West (representative democracy, economic liberalism etc.) that design world politics through the following mechanisms:

- The construction of strategic frontiers and homogenous and monoculture identities;
- Dichotomies based on ethnocentric criteria of recognition-nullification, inclusion-exclusion, and reductionist expressions about otherness: civilization-barbarism, modern-primitive, etc., and
- Hierarchies that define the role of actors in the international system according to their structural position in the capitalist world economy, and a specific "model of development", a specific democratic grammar and a specific governance system that respond to geo-historical interests determined by Western criteria (Coronado, 2010).

Emilio Rojas Diaz (2020), Rethinking the Geopolitical of Latin America. http://www.ieee.es/en/Galerias/fichero/docs_analisis/2016/DIEEEA15-2016_Geopolitica_Sudamerica_ESRD_ENGLISH.pdf

4.6 Regional integration – opportunities and challenges in the Caribbean and Latin America

The degree of economic integration of the Latin American and the Caribbean Community (CARICOM) lags behind other well integrated regions. Divergence of key macroeconomic variables across the region has fallen over time, but the fall has slowed down or even reversed in some instances, partly reflecting the different impact of external shocks on tourism driven economies in CARICOM, versus, commodities exporting member States (IMF/WP, 2019). The slow pace of regional integration reflects a combination of economic, institutional, and political economy factors, and capacity constraints. While financial integration appeared to have proceeded at a faster pace, with tightly inter-connected financial systems, capital markets remain underdeveloped and fragmented. No Caribbean-wide capital market exists, with most activity concentrated in a few countries through cross listing of securities (IMF/WP, 2019).

The contemporary global political economy is characterized by synergies and dichotomies between globalism and regionalisms. These phenomena have taken on added currency in recent years with intensification of globalization and liberalization (Grenade, 2007). As such, regional integration is both necessary and problematic – especially for the developing world. Particularly, global forces have generated renewed urgency for integration in the South (Grenade, 2007). Proponents of regionalism argue that there are other developments likely to boost regional cooperation – that is, the weakness of formal multilateral structures and the difficulties in reforming these structures will likely mean that States will look towards regional organizations to deal with new global problems. Evidently, this is already the case given the manner in which regional organizations have taken the lead in dealing with the impact of the global economic crisis of 2008 – 09. Moreover, the emergence of new regional powers such as China, India, Brazil, Russia, etc., are likely to further boost regional cooperation.

To this end, regional organizations play an important role to not only consolidate their influence, but also to allow their neighbors to gain a measure of control and ensure their interests will be factored into account by these emerging powers (Behr & Jokela, 2011). Further, in view of the fact that the COVID-19 pandemic has greatly worsened economic conditions in Latin America and the Caribbean. The regional economy is projected to contract by 7.2 percent in 2020, a much steeper decline than during the global financial crisis, reflecting the impact of the measures necessary to slow contain the spread of the pandemic, and in turn the significant deterioration of financing conditions, commodity prices and spillovers from a global recession (Ch.3: Global Economic Prospects, 2020). It is against these

backgrounds, that a renewed approach to advance regional growth, post COVID, is now deemed to be more paramount than ever before.

4.7 Impacts, policy interventions

The LAC region through mechanisms such as the EU-CARIFORUM arrangement, for example, has the potential to pull the region out of morass uncompetitiveness and sluggish growth that has impeded its development and hindered its meaningful participation in the global economy. In so doing, a thorough understanding is required of the regional competitiveness phenomenon and the factors that shape it if negotiations are to produce the outcomes required to propel the region into competing in the knowledge economy. A fundamental pre-requisite will be the re-conceptualization of development which de-emphasizes traditional neoclassical constructs of increased investments and labour to engender growth, and embraces the principles of Comprehensive Development Framework (CDF). Through the CDF framework, competitiveness and growth are the means to attain economic, social and environmental development that can benefit the society. This approach emphasizes collaboration of government, industry and firms to identify and develop skills and knowledge-intensive activities. Proponents contend that without this redefinition, enhancing competitiveness will not translate to sustainable development for the region's people (Mohammed, 2008).

Montoute (2014), in his paper on a "new paradigm, greater collaboration? The Caribbean and Latin America in a globalizing world, posited that in engaging with the RIC (Russia, India and China) countries, the objectives of CELAC must always be at the forefront. To this end, the objective is to pursue deeper integration between Latin America and the Caribbean. As such, cooperation with emerging economies is important in this regard as these emerging and powerful players could potentially foster wider South-South cooperation arrangements, which could serve, albeit; organically; bring the Caribbean and Latin America closer. Emerging economies could help build the necessary physical and social infrastructure to facilitate deeper integration. It is important, therefore, for the Caribbean and LAC to present a unified position on what to accomplish as a regional grouping in order to advance this agenda. In this respect, the group can then strategize on how to exploit the benefits of RIC engagement as a collective, and which minimizes the threat of countries seeking these benefits bi-laterally which could weaken the group to some degree. If this can be successfully achieved, the group will then become less vulnerable to external domination.

In terms of policy interventions, LAC as an emerging powerful regional grouping need to reorient its role towards becoming an implementative institution, and it needs to be granted the political and legal space to so do – as well as the machinery and quality of leadership. Second, space should be made for greater participation in regional fora. The private sector can have a more significant impact on regional integration by developing clusters of industries within LAC and with complementary interests, particularly in offensive extra – regional export industries. Third, pressuring stakeholders to develop infrastructure and policy frameworks for industries which fit the productive capabilities of different countries in the region, for example in agriculture and food security, and fourth, pushing and helping to develop – upgraded regional infrastructure, such as in communications and transport.

5 Conclusion and Proposals

5.1 Conclusion

An examination of the macroeconomic indicators over the last ten years have revealed a worrying trend of a fiscal disaster which strongly validates the contention such that the macroeconomic framework is certainly weakened relative to the period 2009 through 2014, well before Guyana became an oil producing nation, and which continues to be weakened. Moreover, it is noteworthy to mention that Guyana never produced oil before and does not need oil to transform the economy. As is evidenced in the analysis herein, the economy had a much stronger macroeconomic framework pre-2015 and without oil.

The flawed policies over the last five years led to the deterioration major productive sectors, largely the agriculture sector for example, resulting in a loss of close to US$2 billion in foreign exchange from other major sectors despite this being offset by gold and other exports. The analysis further points to economic policy blunders since 2015 by neglecting the major productive sectors, wherein policymakers seemed exceptionally and unnecessarily excited with the emerging oil and gas sector.

Hence, should certain trends of Government borrowing (from the central bank) and spending on consumption goods continue at the rate it was pre-covid-19; coupled with a significant widening of the balance of payment deficit driven

largely by imports of capital goods for the oil and gas related activities and a dwindling international reserve from the equivalent of 4 – 5 months' worth of import cover to less than two months' worth of import cover. These trends would have certainly induced a sharp depreciation in the exchange rate, depletion of the reserve, and a mountain of domestic debt that ought to be repaid from tax revenues, and, the inability to service external debt if the international reserve is depleted to record low levels.

Guyana is the only English-speaking country in South America with a small population of less than one million people, per capita income of US$5,000 (2019), and GDP in nominal terms of US$4 billion. By virtue of Guyana being on the cusp of an economic transformation wherein it just become a petroleum producing state, Guyana has an opportunity to become the driver of a transformative agenda within the region, viz-à-viz an enhanced framework that would foster deeper regional economic integration of South America and the Caribbean with the rest of the world. This notion is premised against the backdrop of its arguably geopolitically potent location, its emerging petroleum industry, coupled with the increasing global interests in Guyana especially from the United States, United Kingdom, European Union (EU), Canada and many other countries across the world.

The main findings of the study with respect to the social and economic development challenges show that there are fundamentally four dynamic elements responsible for the under-development nature of Guyana. These are: (1) there is a huge human capital deficit in terms of education and skills of the population, (2) physical infrastructure deficit, (3) high cost of energy which is one of the highest in the western hemisphere, and (4) the most crucial determinant is the inherent features of the political economy which is underpinned by ethnic division and politically motivated crime and violence, historically and to some degree in the current political environment. The paper analyzed the causation and drivers of these determinants and concludes that with good political leadership and governance, Guyana can move from being an under-developed country to a 'developed' economy and thus become a strategic geopolitically important country because at the margin western hemisphere oil supply is crucial, and because a Brazilian corridor to the sea is important. In these respects, it is contended that Guyana can play a pivotal role that fosters greater regional and continental integration of the Caribbean and South America, respectively – within the global economy.

5.2 Proposals

- The road to recovery will be one of the greatest priorities of any responsible Government. The policymakers ought to recognize, henceforth, the opportunities to rebuild the economy starting with food security. It is uncertain when the COVID-19 health pandemic will be over but, in such times of difficulty, the growing demand for food in the region presents opportunity to scale up the country's productive capacity and channel the appropriate investments in this sector.

- On the fiscal side, the opportunity for the Government to negotiate debt forgiveness and restructuring to create the much-needed fiscal space to facilitate the rebuilding of the economy – ought to be of paramount recognition and importance. Governments have an obligatory responsibility to provide public goods and services – where such goods and services serve as the enabler that creates a conducive environment in which businesses thrive through productive development – designed to foster the emergence of new industries and businesses. In so doing, Government needs to allocate resources in public infrastructure, roads, bridges, housing and industrial development sites, for example.

- These, however, should not be limited to the rehabilitation of the existing infrastructure each year as is the case in Guyana, owing to a series of factors including substandard work which translates to a lack of having proper mechanisms in place to ensure value for money projects. Rather, public investments need to be linked to a national development strategy in which new industrial zones are created that will facilitate commerce, and by extension the creation of wealth designed to achieve the sustainable development goals – mainly poverty reduction.

- The current economic situation (economic impact of COVID-19) has also necessitated the need for creative solutions to support SMEs and the impact on the labor market to avert a severe social and humanitarian crisis.

To this end, the Bankers Association through collaborative efforts with the Small Business Bureau (SBB), the central bank, Ministry of Finance and the Ministry of Business can consider the establishment of a $25 billion fund for these purposes. The banking sector has well over $150 billion liquid assets that can be used therein.

- With respect to the thrust t of this paper, it is the view of the author that Guyana can lead a regional integration agenda aimed at strengthening South-South cooperation in South America, Latin America and the Caribbean through the auspices of CARICOM and the other regional trading bloc as mentioned herein, within the framework of leveraging the country's development needs. Within these respects, for example, Guyana's geographic location in South America which places it at an advantage in terms of access routes to the rest of the world is an important factor that has to be considered in the deep water harbour project and the Brazil-Guyana road link project. These two projects alone can integrate more South-South cooperation where opportunities will open up for not only Brazil's goods to pass through Guyana thereby creating new industries and commerce, but for other countries goods in South America to pass through Guyana to the rest of the world's markets.

- As a region and a sub-continent together, the Political Leaders of South American countries need to start examining the need for a South American Development Bank to focus on large scale development projects in the member states. In the long term as well, the need to connect the continent through the construction of railways would be necessary if the leaders of South America are serious about deepened integration of the continent and to cement its role in regional integration in order to conduct business with the rest of the world. To this end, Guyana can become a regional hub for shipping and commerce, mirroring the Dubai model.

- Apart from good governance and strong political leadership and stability, which is a given to achieve these goals, Guyana needs to address its human capital deficit, infrastructure deficit and high energy cost. By addressing these issues, where the paper discussed to some extent ways in which the country can reduce the cost of energy, the types of projects thereto, and the infrastructure deficit presenting opportunities for large scale investments, these of itself can be pioneer developmental strategies wherein Guyana leads the regional integration agenda. Guyana does not only have oil as its attractiveness to foreign investors and underpinning its geopolitical importance, but it is also endowed with an abundance of natural resources including arable agricultural land and potable water. The Caribbean Community alone imports US$ 10 billion in food annually, a significantly important market where Guyana can tap into the opportunity to supply these markets.

- Towards that end, Guyana can become the food basket of the region. As a strategy to bridge the human capital deficit gap, a structured immigration policy can be put in place to attract the skills and expertise needed to advance the country's development agenda – through these regional associations as well; and lastly, there is a need for regional capital market development. The need for creative tools and innovative financial products that will align with these development goals for the region need to be examined as well from a regional and global perspective, and Guyana could be the leader to position itself in the region to drive these agendas.

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Annex

Table 1: REAL GDP AT CONSTANT (2012) PRICES (G$ MILLIONS) 2016 – 2019

	2016	2017	2017 Growth %	2018	2019	2019 Growth %
Agriculture, forestry and fishing	**217,221**	**244,734**	**12.67**	**260,963**	**259,670**	**(0.50)**
Mining and quarrying	**157,978**	**146,388**	**(7.34)**	**151,122**	**167,155**	**10.61**
Manufacturing	**48,373**	**49,105**	**1.51**	**50,208**	**57,568**	**14.66**
Construction	**65,793**	**69,007**	**4.89**	**71,021**	**73,205**	**3.07**
Wholesale and retail trade and repairs	67,410	71,754	6.45	74,509	78,234	5.00
Transport and storage	34,913	35,098	0.53	36,763	39,299	6.90
Accommodation and food services	3,245	3,410	5.06	3,684	3,886	5.48

Information and communication	20,955	21,495	2.58	22,166	22,388	1.00
Financial and insurance activities	44,216	44,823	1.37	46,702	49,114	5.17
Financial intermediation and other services	39,392	39,258	(0.34)	40,990	43,448	6.00
Insurance services and agents	4,824	5,565	15.36	5,711	5,667	(0.79)
Real estate activities	75,220	76,067	1.13	76,976	77,874	1.17
Professional, scientific and technical services	4,155	4,461	7.36	4,683	4,864	3.86
Administrative and support services	57,539	59,360	3.17	60,430	63,949	5.82
Public administration	35,147	36,101	2.71	36,985	38,985	5.41
Education	21,897	22,085	0.86	22,477	22,757	1.25
Human health and social work	10,283	10,846	5.48	11,309	11,943	5.60
Arts, entertainment and recreation	3,175	3,246	2.22	3,365	3,455	2.69
Other service activities	2,925	2,999	2.55	3,135	3,180	1.42
Less FISIM	21,545	20,700	(3.92)	20,370	21,911	7.56
GDP at basic prices						

	856,567	**888,107**	**3.68**	**924,238**	**964,114**	**4.31**
Taxes less subsidies on products	58,176	60,797	4.51	66,807	79,979	19.72
GDP at purchaser prices	**914,743**	**948,904**	3.73	**991,044**	**1,044,093**	**5.35**

Source: Bureau of Statistics, Guyana

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