Two ethnic security dilemmas and their economic origin

Khemraj, Tarron

New College of Florida

14 April 2019

Two ethnic security dilemmas and their economic origin

Tarron Khemraj
New College of Florida

April 2019

ABSTRACT

The paper outlines two ethnic security dilemmas (ESDs) that permeate Guyanese economic and political life. At the heart of the ESDs are strategic uncertainty of voters and the joy of destruction (envy) of political leaders. Most voters vote pro-ethnically and leaders of one political party find strategies to undermine the other. The prize is the control of government and associated economic opportunities. This view is supported by a survey of Guyanese historical political and economic contests. The dilemmas occur because the interrelated political strategies of the two ethnic-based parties produce a sub-optimal economic outcome for everyone, although a superior economic outcome (equilibrium) exists but cannot be achieved because the dominant parties find it impossible to coordinate and cooperate within the confines of the present constitutional and electoral frameworks. High strategic uncertainty and low inter-group trust fuel the inherent dilemmas among voters and political leaders. Ideas or metaphors from applied game theory are used to define the ESDs more precisely and suggest possible solutions.

KEY WORDS: prisoners' dilemma, stag hunt, inequality, economic underdevelopment

INTRODUCTION

Various social dilemmas exist in international relations, group interactions within a country, and interpersonal behaviour[1]. These dilemmas can be studied using the structured tools of classical game theory or behavioural and evolutionary game theories (Fang et al. 2002). There is yet another dilemma from the field of international relations: the security dilemma, which helps us to understand the strategic interaction among countries. The security dilemma was later applied to the study of intra-country ethnic conflict (Dev 1991, Ramharack 1992, Posen 1993). When the idea is applied to study intra-country conflict, the name becomes the ethnic security dilemma or societal security dilemma (Collins 1998, Olesker 2011). This paper explores the ethnic security dilemma using the tools of applied game theory, particularly the prisoners' dilemma and the stag

---

[1] For detail see the following research on various social dilemmas: Sen (1967), Kollock (1998), Skyrms (2004) and Bowles and Gintis (2011).

hunt[2]. Applied game theory helps us to define clearly the societal security dilemmas and the potential measures for minimizing their harmful effects[3]. Two ethnic security dilemmas (ESDs) are proposed: an African-Guyanese security dilemma and an Indian-Guyanese security dilemma. They are dilemmas because they result in a sub-optimal economic outcome (a deficient equilibrium) in which everyone finds it impossible to coordinate and cooperate within the confines of the present constitutional and electoral frameworks. Hence, the societal dilemmas produce an economic underdevelopment trap (Khemraj 2016). Strategic uncertainty and limited inter-group trust – which both engender pro-ethnic voting on the day of secret ballot – are at the core of the two ESDs among the masses. Political leaders of the two dominant parties contribute to the ESDs and their behaviour is also conditioned by strategic uncertainty and limited trust. Both ESDs are jointly determined by economic insecurity, as the historical survey will later indicate. Hence, there is no culpable group since the political actions of both are endogenous to the economic structure and history of Guyana.

Only a handful of researchers studying ethnic conflict in Guyana have anchored their analysis with the theory of the ESDs. For example, Ramharack (1992) was clear in pointing out why the constitutional arrangements which result in 'winner takes all' cannot work in a bi-communal society such as Guyana. He notes 'competitive elections…can catalyse ethnic fears since national democratic elections place the entire system "up for grabs"…this problem translates into an ethnic security dilemma, whereby the dominant group attempts to maintain hegemonic control over the rest of society…' (Ramharack 1992, 83-84). Dev proffers two dilemmas – an Indian and an African Guyanese dilemma which are rooted in the Indian numerical advantage and the African domination of the coercive forces, as well as the state bureaucracy (Dev 1991, 12). Norton highlights that the 'ethnic security dilemma increases because political power has been treated as a zero-sum nature' (Norton 2007, 171). Moreover, Norton argues that the control of the government is crucial for the distribution of economic rights. Picking up from Dev and Norton,

---

[2] Note, the stag hunt has another variant known as the assurance game. The name assurance indicates uncertainty regarding the action of players in the game.

[3] It appears that the ethnic security dilemma has not been studied in the context of applied games. This paper makes a contribution by showing how the intra-country societal dilemma could be defined and clarified using applied game theory. However, Jervis (1978) explored the logical foundations of the security dilemma using the stag hunt, prisoners' dilemma and chicken (Jervis 1978).

Khemraj (2016) observes that the two ethnic dilemmas produce pro-ethnic voting and economic underdevelopment – a connection that was made using the prisoners' dilemma.

This paper goes two steps further by outlining the voters' behaviour in the context of a stag-hunt game and the political leaders' contest as a repeated prisoners' dilemma. In addition, the moves by both leaders and voters are combined in an extensive-form game to make some tentative statements about inequality and underdevelopment. These tools of game theory should be seen as metaphors, which help us to clearly define and study the consequences of the two ESDs. The payoffs in the prisoners' dilemma game express envy as defined by behavioural economists. Essentially, envy payoffs come from the satisfaction one political leader gets when his competitor fails. On the other hand, the payoff for the voters indicate perceived or expected incomes when their party wins or loses the election[4]. Moreover, framing the concepts in such a structured manner helps us to identify possible policies that could at least minimize the harmful consequences of the two ESDs.

Others have also noted that the political conflict in Guyana is underpinned by the desire to control economic resources. Without the help of a game-theoretic approach, the political scientist Ralph Premdas argues that ethnic conflict in Guyana can be explained not only by cultural pluralism, but also the competition over economic concerns such as 'public jobs and resources' (Premdas 2004, 262). This point was also echoed earlier by anthropologist and sociologist, Leo Despres (Despres 1975, 1969). The competition over the control of government ultimately results in two regimes of state corruption in Guyana (Edwards 2017). Norton (2007) also notes that the political conflict expresses the desire to control resource allocation through the capture of the government. He proposes power sharing at the executive level to deal with this problem[5].

This study comes at a moment when Guyana is on the cusp of becoming an oil-producing country in 2020 following a series of massive off-shore discoveries by ExxonMobil. Guyana now has the highest per capita proven oil reserves – recently exceeding that of United Arab Emirates

---

[4] Expectation in the game-theory context and in other fields of economics is the mathematical expectation involving a probability distribution measuring the uncertainty of various outcomes of a random variable. This paper illustrates the two ESDs in an applied context since the technical side of the games has been thoroughly explored [see Powers and Shen (2008), Bowles and Gintis (2011), and Dixit et al. (2015)].

[5] Various writers have proposed some form of power sharing for Guyana. One of the earliest coherent arguments for power sharing came from the Working Peoples Alliance (WPA) and one of its substantial leaders: Eusi Kwayana (Hinds 2010a). Power sharing was also a prominent feature of the writings of Dev (1991) and Ramharack (1992). In the conclusion, I argue that power sharing is a necessary condition, but must be supplemented by several sufficient measures.

and Brunei – in the world given the quick discoveries of at least 6 billion barrels. There is much discussion of policies necessary for the country to escape the natural resource curse. The policy discussions, however, have largely failed to account for the historical internecine ethno-political struggle. It is hoped that this paper not only clarifies the two ESDs, but also provides insights into potential political solutions necessary to prevent yet another fulfilment of the natural resource curse. Before presenting the two ESDs, the paper outlines the political contestation and then the economic context. Finally, necessary and sufficient policies are proposed.

POLITICAL CONTEST

Since independence from Britain in 1966, Guyana was ruled by two dominant political parties: Peoples progressive Party Civic (PPP/C) and Peoples National Congress Reform (PNCR). Before 1992, the PPP/C was called PPP and the PNCR was named PNC[6]. They both use these new letter adjuncts to signal some form of inclusiveness given that both parties derive most of their votes from a main ethnic group. Historically, the PPP/C draws most of its votes from Indian Guyanese (IG) while the PNCR gets most of the African Guyanese (AG) votes. This pattern is documented in the literature for as early as the 1961 general election (Premdas 1995). Premdas finds a strong correlation between the census data on the ethnic composition of a village and the votes received by both PNC and PPP in said election. More recently this pro-ethnic voting was observed in survey data from the Latin American Public Opinion Project (LAPOP) for the years 2014, 2008 and 2006 (Khemraj 2016). The LAPOP dataset indicates that the third party, Alliance for Change (AFC), tends to draw its support from people of mixed ethnicities, Amerindians and independent IG and AG voters. Just a tiny percentage of IG vote for PNCR and AG vote for PPP/C.

There was a pre-election coalition between the AFC and a group known as A Partnership for National Unity (APNU) that was formed for the 2015 general election. APNU is essentially the PNCR in alliance with a few micro political parties, including the historically important Working Peoples Alliance. APNU + AFC won the May 2015 general election by fewer than 5000 votes. If the recent local government election of January 2018 is a predictor of future election outcomes, a large number of the Indian Guyanese voters from Berbice has moved back to the PPP/C. This will certainly intensify the feeling of uncertainty among African Guyanese given their numerical disadvantage. An unfortunate outcome of Guyanese history is the voting pattern reflects

---

[6] The year 1992 is generally accepted by academics as the return to free and fair elections (Premdas 1995, 2004).

the bi-communal nature of the population. According to the last population census, Indian Guyanese make up 43.5 percent of the population, while African Guyanese account for the second largest group with 30.2 percent. People of mixed heritage account for 16.7 percent and Amerindians 9.2 percent. The other relatively smaller groups include people of European, Portuguese and Chinese origin.

The constitution of Guyana does not allow for post-election alliances. Instead, if an independent party wishes to form an alliance with one of the main parties, it must do so before election. Moreover, a party can form the government with less than 50 percent of the votes, as the PPP/C did in 2011 when it won the election with 48.6 percent of the votes. The pre-election alliance allows the dominant parties to accuse the independent party of trying to split their votes. The strategy of accusing the third party of selling out and betraying an ethnic camp has been around for many years. For example, Rise, Organize and Rebuild Guyana (ROAR) faced aggressive accusations from the PPP/C of trying to split its IG voters for the 2001 election. ROAR mobilized explicitly in the IG communities. Good and Green Guyana (GGG) also faced a similar fate, but this time from the PNCR in the 1997 election. The GGG was accused of accepting campaign finance from the Indian-dominated PPP/C in an effort to split the AG votes. The AFC faced similar pressures from the PPP/C during the run up to the 2011 election.

Ethnic mobilization has recently intensified as election approaches given the December 21, 2018, no-confidence vote against the APNU + AFC government. A government member of parliament defected and voted for the PPP-sponsored motion. The former MP, Charrandas Persaud who is of Indian origin, is seen as a hero by the PPP/C's base or a villain by the PNCR's base. The tangled nature of the pro-ethnic mobilization was in stark display when PNCR's supporters vilified the Canadian embassy in Guyana for facilitating the smooth transit of Persaud – who holds Guyanese and Canadian citizenship – to Canada for his physical safety. They accused the Canadian embassy of being in collusion with PPP/C to remove the APNU (PNCR) + AFC government. On the other hand, the PPP/C's Indian base cheered Persaud for supporting their vote in spite of his status of dual citizen. However, the Canadians would soon receive sharp criticisms from mainly Indian Guyanese after they prevented the PPP/C's presidential candidate – Irfaan Ali – from travelling to Canada. These PPP/C supporters have invoked old distrust between that party and Western countries – namely Britain and United States – which colluded to remove the elected

leftist PPP governments of the 1950s and 60s[7]. Meanwhile, African supporters of the PNCR now praise the Canadian embassy for preventing Ali from travelling to Canada to visit supporters.

The APNU government challenged the no-confidence motion on three grounds: (i) that Persaud is a dual citizen[8]; (ii) that Persaud received a bribe from the PPP/C to defect; and (iii) that 33 is not a majority (but 34 is) in a parliament of 65 members. The police has found no evidence to date of a bribe, but this has not stopped government officials and supporters from referencing it as a tool of ethnic mobilization. On January 31, 2019, the Chief Justice upheld the no-confidence vote and ruled that the government must immediately resign, suspend parliament and prepare for general election in ninety days. However, a few days later, President Granger at a political rally announced he will not resign. He also did not commit to dissolving parliament, which he says 'has work to do.'[9] The President is aware that the Guyanese military is made up of mainly African-Guyanese supporters. It is highly unlikely the Indian-dominated PPP/C could have refused to dissolve the National Assembly if the opposite scenario had occurred. However, on March 22, 2019, the Court of Appeal by majority 2-1 overturned the previous decision by the Chief Justice and ruled that the no-confidence vote was improperly passed since 34 is the absolute majority. The constitution is ambiguous enough to accommodate various interpretations.

The central hypothesis of this paper is the ESDs are underpinned by economic considerations. This point was most striking when a minister of government from the PNCR component of APNU declared to party members that she only employs PNC supporters. This is how the daily newspaper, *Stabroek News*, puts it: 'during a presentation at the Region Four District Conference, held at Congress Place on November 25th, a recording of which has been made public, Lawrence can be heard telling attendees that they should not be afraid to give jobs or contracts to party comrades, while indicating that she does the same.'[10] In the same news report, Lawrence also urged supporters not to assume that all Indians are supporters of PPP/C, implying that they

---

[7] See Premdas (1995) for a comprehensive discussion of the removal of the early Jagan PPP governments.

[8] There are several dual citizens in parliament from both the government and opposition in spite of its disallowance in the constitution.

[9] 'No plan to resign, will exhaust appeals – Granger; Harmon deems UN official's position against gov't "premature",' *Demerara Waves*, February 3, 2019.

[10] 'The only friends I got is PNC, so the only people I could give work to is PNC – Lawrence tells PNCR conference,' *Stabroek News*, November 30, 2018.

need to join the PNCR to benefit from government patronage. This brings back memory of the period under Forbes Burnham and Desmond Hoyte – particularly from 1978 to 1992 – when a PNC party card was necessary for obtaining work in the civil service and security forces. As a result, IG were largely underrepresented in these areas.

The Lawrence speech also raises the issue of tokenism, which David Hinds underscored when he rebutted the PPP/C's plan to present a high-profile African Guyanese as the running make for Irfaan Ali (Hinds 2019). Hinds, a major leader in African Guyanese community, reminded the PPP/C of its 'ethnic domination' of Africans during the period 1992 to 2015. He furthermore notes that if the PPP/C wants to deal with the 'ethnic imbalances in the economy' it must disclose its stance on executive power sharing. For its part, the PPP/C has never outlined its position on power sharing, partly because the party knows that the numerical advantage of its Indian support base will enable it to win free and fair elections. There is the view that the PPP/C was trying to disrupt the established order in which IG keep economic power and AG political power (James 2006, 141).

The perspective that the PPP/C was enabling the consolidation of both political and economic power in the hands of the Indian community would result in several challenges to its legitimacy while in government from 1992 to 2015. The consideration of government legitimacy is important because the ESDs are not only applicable to situations of complete anarchy (Kaufman 1996). Kaufman underscores that we can apply the intra-country security dilemma to situations when anarchy is approximated by challenges to the legitimacy of government. The recent no-confidence vote and its counter challenge can be seen in this context. In an earlier period, there were protests and court actions challenging the legitimacy of the PPP/C government from the 1997 election to around the mid-2000s. There are two generally accepted periods of outright conflict in Guyana. The first being the civil war of the early 1960s (Premdas 1995). The second period of explicit conflict occurred immediately after the 1997 election to around 2006-08 (Kissoon 2007, 2019; Hinds 2010b; Myers and Calder 2011). Both events of outright conflict involve the legitimacy of government.

The first major post-1992 ethnic flashpoint occurred in 1995 over land rights (750 acres of land) in the Boerasierie region when the opposition leader, Desmond Hoyte, urged AG farmers to use 'deadly force' if necessary in the face of alleged aggression from IG farmers (Hinds 2010b). The independent daily newspaper, *Stabroek News*, deemed Hoyte's statements to be excessive and

7

inflammatory. Hoyte responded to *Stabroek News* with a letter itemizing cases of PPP/C's victimization of AG in the civil service (Ibid.). After the PNCR lost the election in 1997, Hoyte called for his supporters to 'make the country ungovernable' and for the African-dominated security forces not to go after their kith and kin who were protesting in Georgetown. There were also several gunmen who launched attacks, including killings and kidnappings, from camps on the East Coast of Demerara. The de facto IG leadership in the PPP/C simply could not rely on the army and police to maintain stability and therefore it is alleged the PPP/C relied on narco-connected mercenaries and extra-judicial killings to prevent its removal from government.

Furthermore, these events and those surrounding the no-confidence vote indicate that there is no consolidation of democracy after 1992. Hence, further emphasizing Kaufman's point relating to the challenge to legitimacy. The failure of democratic consolidation in the presence of free and fair election was lucidly pointed out by Hinds (2005). Hinds argues that for democracy to work effectively in Guyana it must be accompanied by some form of power sharing, which the PPP rejected in the lead up to Carter Centre-backed general election in 1992. The PPP/C also rejected executive power sharing after the 1997 and 2001 elections, preferring 'power sharing in parliament' via committees (Hinds 2010a). In both periods, the PPP reasoned it would win a free and fair election given the numerical advantage of its ethnic base. Making a similar point, Jeffrey (2019) argues that the democratic project was not completed following the death of the PPP/C's charismatic leader, Cheddi Jagan, in March 1997. Jeffrey notes that the PPP/C was seen as promoting ethnic dominance by half the population. However, what Jeffrey did not account for was the logic of tit-for-tat resource competition, which implies that the PPP/C was responding to the PNC's 28 years of political, economic and ethnic domination. Jeffrey, nevertheless, uses the argument of forbearance with respect to the PPP/C-sponsored vote of no confidence. His essential argument was one should not always be keen to test the limits of democratic institutions in an ethnically divided country.

The numerical advantage of the PPP/C's support base, although smaller today compared with 1992, fuels the strategic uncertainty associated with the PNCR's behaviour as the senior partner of APNU. The imperfect information results because the de facto AG leadership in the PNCR does not know for certain whether enough IG will defect from voting for their party, the PPP/C. It also explains the PNC's behaviour prior to 1992 as much as it does with respect to the PNCR's response to the no-confidence vote. The risk of being dominated by the Indian-based

PPP/C brings out an important dimension of the AG strategic response (self-help strategy). The notion of self-help response is also crucial for the application of the intra-country security dilemma (Posen 1993)[11]. With loyal support from most in the security forces, it is generally accepted that the elections of 1968, 1973, 1980 and 1985 were rigged to maintain the PNC dictatorship (Premdas 1995). As it relates to the no-confidence vote, it is unlikely the PNCR will make concessions as it did with the Carter Centre for the return of democratic elections in 1992.

The paper focuses on group-level conflict. In many situations players in the game are not individuals but groups. For example, labour unions, ethnic groups, social movements, political parties and so on. Groups face internal coordination problems when they are pursuing collective rent-seeking (Abbink el al. 2010). Therefore, members of one group invest in punishment of fellow members as they seek to compete with another group for control of government (ibid.). Hence, we have the concretization of inter-group conflict via intra-group punishment for members who deviate from the group's interests. There are two recent examples of intra-group punishment in the Guyanese media. First, a founding member of a new political party, A New United Guyana (ANUG), was forced to resign because supporters of PNCR called for boycotting his businesses. Second, the mother of a vocal Indian Guyanese member of APNU was harassed in her village by an IG supporter of PPP/C.

ECONOMIC CONTEXT

To a large extent the expressed conflict in Guyana reflects a deeper discontent over the distribution of land and other resources such as employment in civil service and private sector, the composition of the army and police, government scholarships and contracts, among others. The conflict over the control of economic resources has deep historical roots going back to the immediate period after emancipation in 1838. To a large extent the conflict results because of the failure of structural production transformation of the economy. Limited structural change implies the country is also susceptible to world commodity price swings because the goods produced are non-complex and have low income elasticity of demand in the world markets (Constantine 2017a). The implication is a low long-term rate of growth of the economy relative to similar small open economies (Khemraj 2015, 2016). Moreover, according to Constantine, the failure of structural change determines income inequality in future periods.

---

[11] Self-help can be seen as the strategic response of one group given the strategy of the other player or group.

The survival of the sugar plantations required surplus labour because of the low elasticity of technical substitution of physical capital (machines) for labour (Moohr 1972). The low elasticity of technical substitution was imposed by the geography and ecology of the polder system, which requires a unique drainage and irrigation system to keep out the Atlantic waters from the front and the hinterland waters from the back of each plantation. Drainage is vital because the coastal lands are low-lying with an 'average elevation from two meters below to two and a half meters above mean sea level' (Potter 1998). Agriculture has to be done under the protection of an elaborate system of dams and dykes on a narrow strip of coastal land reclaimed from the mangrove swamps by the Dutch settlers in the 1700s. This strip of land is between 10 to 40 miles width and starts from the northwest at the Guyana-Venezuela border and ends at the Guyana-Suriname border in the southeast. The area runs along the Atlantic Ocean to the north and accounts for approximately 3, 524 square miles of the total 83,000 square miles of Guyana. At least 88 percent of the population lives there.

The tropical empoldered system imposed high fixed and variable cost of production of agriculture at the time that involved growing cotton, coffee and sugar plantations[12]. It also complicates public health management and the management of communicable diseases from colonial period to present (Gampat 2015). The polder system developed in the colonial period, imposes a colonial underdevelopment trap which involves sustaining a production structure dependent on primary products (Khemraj 2015). The idea that geography imposes a divergence in Guyana's long-term performance relative to Barbados was also proffered by DaCosta (2007). However, DaCosta's mechanism explaining the differential outcome is very different from that of Khemraj (2015). The former author argues that geography has more of an Acemoglou-type channel, which emphasizes the malformation of market-based institutions in areas that did not become permanent settler colonies by Europeans (see Acemoglu et al. 2002). On the other hand, Khemraj (2015) and Constantine and Khemraj (2019) argue that geography and ecology restrict the production structure – hence, retard institutions of production of the type suggested by (Reinert 2008, 2006). Moreover, it is the production structure that determined initial inequality and therefore future political contestation (Constantine 2017a, Constantine and Khemraj 2019). This

---

[12] Polders also exist in Holland and parts of Germany. However, in the case of Guyana this manmade feature is in a tropical environment. This means that vegetation grows all year and the coastal silt requires constant maintenance.

contestation becomes even more intractable when there is bi-communal ethnic distrust and conflict as in Guyana.

The high fixed and variable costs imposed by geography was horridly offset by enslaving African labour before 1833 and a system of indenture after full emancipation from 1838. The motivation for indentureship was to create a surplus-labour environment since immediately after emancipation there was the redistribution from planter-profit income to African wages (Moohr 1972). This shift from profit to wages caused a collapse of many coffee, cotton and sugar plantations. Exports from the colony would decline precipitously, but domestic production from mainly peasant African farmers rose significantly from 1838 to around 1855 (Ibid.). A second factor that accounted for the export collapse was the price competition from other British colonies as Britain promoted free trade within the Empire starting around the 1820s. As early as 1825 sugar from British Guiana faced severe competition from Mauritian sugar, and thereafter sugar from South Africa and Australia (Bulmer-Thomas 2012). Sir Eric Williams, who would become the first Prime Minister of Trinidad and Tobago, argued early that the uncompetitive nature of Guyanese sugar has to do with the manmade polder system and the fact that British Guiana fell out of favour with finance capital from London (Williams 1945).

The plantation system of production in British Guiana survived through surplus labour and low wages. As noted earlier, attempts at mechanization, particularly in the fields, proved unsuccessful given the low rate of technical substitution imposed by the ecological system. However, immediately after emancipation many people of African origin from the Caribbean and Africa, as well as Chinese and Portuguese immigrants also came to boost the labour force. But it would be the Indians who would soon form the largest group of labourers, such that by 1880 Indians accounted for 33 percent and Africans 59 percent; and by 1910 Indians accounted for 44 percent and Africans 40 percent of the population – hence establishing the bi-communal population that exists to this day (Mandle 1973, 51-54).

Technical innovation at the factory level did occur, however. Perhaps the most important technical innovation was the introduction of the vacuum pan in the Demerara province in 1833 (Adamson 1972, 171-173). The technique produced superior sugar known as Demerara crystals and higher yield from a given amount of juice. In spite of the superiority of the technology, only 16 percent of the sugar produced by 1852 utilized this technology (Adamson 1972). This had to do with the high cost of financing the vacuum-pan method. Nevertheless, the low wages paid to

bounded Indians and other indentured immigrants played a decisive role in reducing the average wage cost. In 1841 the average wage cost of 14 pound sterling fell to 8 pound sterling by 1851 (Moohr 1972, 604).

The foreign price competition created the condition for sale of surplus land to freed Africans after 1838. Cheaper cotton from southern United States caused many cotton plantations to go bankrupt by 1830, thus making available for sale many abandoned plantations. At first the planters were reluctant to sell land to the freed Africans in the view that it would result in a labour force independent of the sugar plantations. However, the failing estates and the demand from Africans for land made it possible. The planters still did not sell lands in functioning estates, but instead the failed and abandoned ones (Farley 1954). The surplus abandoned lands required significant financial capital to recreate (Moohr 1972, Adamson 1972). The lands sold in the early years after emancipation were overpriced (Adamson 1972). In addition, a large proportion of the sales was in areas far away from major urban markets. The overpriced land and distance to market meant that there was little remaining for physical upgrades and for drainage. An acute drainage problem of the time was the natural occurrence of the great mud banks formed along the seacoast (Adamson 1972, 59). The mud banks prevented the gravity drainage from working properly when the sluice gates were opened. This meant the flood waters running from the backlands and the deeper hinterland cannot run off into the Atlantic. It required steam-driven pumps which only the wealthier estates could afford. Adamson and Moohr noted that in later years Africans were able to purchase land at significant discounts. However, these were in far off places away from the urban centres of Georgetown and New Amsterdam, thus supporting only subsistence farming (Khemraj 2015).

Substantial resentments evolved over the years because of the viewpoint that Indians were sold lands on more favourable terms and that this enabled their relative success in rice cultivation. Land sales to Indians had the singular motivation of keeping them close to the sugar plantation economy, which survives on low wages and surplus labour (Mandle 1973). At the end of re-indenture in the early 1870s Indians were free to move off the sugar plantations. Only 14 percent lived in incorporated villages (Adamson 1972, 94). This meant that most of them were landless and were scattered throughout the coastal plain. One aspect of the indenture contract was a return passage to India. However, the planters and the sugar oligarchy of the time realized that they would lose labour. Therefore, plans were made to sell small pieces of land for peasant farming close to

sugar plantations in exchange for giving up the return passage. Initially Indians did not purchase lands at the levels the planters hoped. However, the sugar price depression – partly explained by dumping of subsidized beet sugar from Europe starting in 1884 – caused sugar production to collapse once again. Wages in British Guiana declined further. It was at this point Indians started purchasing lands in larger numbers from the 1890s when they calculated that small-scale cultivation paid as well as plantation labour (Adamson 1972). The collapse in world sugar price opened the way for the emergence of rice cultivation as an alternative industry to sugar. Sugar plantation owners started renting lands for rice cultivation and the colonial administration encouraged rice cultivation out of necessity. Even American capital flowed into British Guiana from 1909 to 1915 as in the case of a large-scale farm in the Abary savannah area (Potter 1998).

Meanwhile, the Indians who started rice cultivation went into aquatic rice instead of the land variety grown by Africans prior to emancipation. Africans were reluctant to grow the higher yielding aquatic variety mainly because of a perception that the flood water causes elephantiasis or 'big foot' (Greenidge 2001). On the other hand, the African peasantry was skilled at producing crops such as plantains, yams, cassava and several livestock. This knowhow goes back to before emancipation when small-scale farming was allowed on the plantations as a means of subsidizing the planters' operational cost (Farley 1954). Until now, external price pressures have proven to have devastating effects on the former slaves and indentured immigrants alike. However, World War I, the interwar period and World War II created the external demand and favourable price for expansion of rice production (Potter 1998, Greenidge 2001). This point underscores the crucial importance of demand – in this case external demand – in determining long-term economic growth, a factor which is fundamental to several schools in economics. On the other hand, the crops which Africans grew were restricted by internal demand since there was not a global market for ground provisions. The necessities of war also meant the colonial government invested in better varieties and centralized marketing, conditions which would be to the advantage of large Indian rice farmers. By 1940 a few Indians would own rice mills and large-scale farms (Potter 1998). The poorer peasants rented land from rich Indian mill owners and in some cases they toiled under conditions described as semi-slavery (Ibid., 147). They also rented and leased crown lands which were failed sugar estates. However, the majority of small-scale Indian and African peasants still face the same problems, which Greenidge – who was former Minister of Finance in a pre-1992

13

PNC government and is presently Minister of Foreign Affairs in the APNU+AFC government – recognizes.

With the majority still landless, many Indians started to move into African villages. Other groups from the Caribbean and Africa who came to Guyana after emancipation also moved into many AG villages (Josiah 1997). However, the Indians would be seen as squatters who eventually bought land from Africans who were moving to the civil service and other high professions in the urban areas. This movement away from the rural villages by Africans started in large numbers around the 1890s. This movement was necessary given the difficulties associated with small-scale farming. In addition to the geographical constraint, the system of bequeathing land to children was restricted by the Roman-Dutch legal code of the time (Despres 1967). The Roman-Dutch code, which was not modified until the 1950s, favoured the planter class since it promoted absolute ownership by allowing groups of individuals to own undivided shares of land (Ibid., 37). Despres argues that this resulted in fragmentation of ownership rights of African lands that reduced the investment value of the property and complicated land management. Moreover, Africans believed in a more egalitarian system of bequeathing wealth. However, this system resulted in the children's property dilemma, which exists even today among all Guyanese communities. The first sibling waits for the other to make the first move to develop the property. However, the other sibling is also waiting for the first to spend the first dollar, and so on. If the Roman-Dutch code complicated land management, it was the opening of education opportunity in 1876 – the Compulsory Education Ordinance – which facilitated the movement away from the peasantry. The 1876 law was not enforced for Indians (who were dominantly Hindus or Muslims) since most were reluctant to attend Christian-only schools at the time (Despres 1967). Enforcing the law by creating Hindu or Muslim schools would also imply independence from the sugar plantations.

Nevertheless, the squatting issue is often raised as an illustration of Indian greed and hunger for land (Greenidge 2001). Disagreements over land distribution continue to this day. Cedric Grant, who wrote the forward to Greenidge's book – and who was a former Ambassador to United States under the pre-1992 PNC government – expresses the view this way: 'the undermining of the village movement, coupled with the establishment of land settlement schemes for Indians under the aegis of the colonial administration continued to tip the scales against Africans…Greenidge recognized that Africans also contributed to the decline of their bargaining power and their fortunes in relation to those of indentured labourers…' Moreover, in recent years there have been various

calls for reclaiming African ancestral lands. Well known trade unionist, Lincoln Lewis, presented titles to two villages in the province of Berbice (S.N. 2017). Lewis testified in front of the Commission of Inquiry for African ancestral land that the village was purchased by his great-great grandfather in 1840 and was titled in 1850. He is asking that the unoccupied parts to be returned to the family estate.

The land issue was likely a central motivator of the political unrest and violence after the PNCR lost the 1997 general election. The view in the PNCR was that the PPP/C was setting out to dominate all aspects of political and economic life, including packing the Land Selection Committee with only PPP/C supporters. Cedric Grant also notes that 'PPP supporters have embarked on the practice of trespassing on the land of non-PPP supporters, tying up landowners in the courts with injunctions and proceeding to cultivate the lands.' The group which controls the Land Selection Committee can indeed make legal challenges difficult. Cedric Grant further notes that 'to this day squatting, which has extended to the urban areas, is a sensitive issue for governments of whatever racial or ideological complexion and one that has to be handled with the greatest delicacy.'

Public data on the ethnic distribution of land does not exist in Guyana. This is particularly problematic given various historical claims to land. As a matter of fact, data on ethnic distribution of income and wealth is non-existent in Guyana. However, we do know that Guyana is a high income inequality country given recent estimates of income shares by deciles (Constantine 2017b). The top 10 percent has experienced rising income share since the mid-1980s while the bottom 40 percent a falling share. As it relates to land ownership of Guyana's total land area of 83, 000 square miles, government owns 84 percent, Amerindian communal lands account for 14 percent, and only two percent is private freehold (Bulkan 2014, Panaritis and Kostopoulos 2010).

There is a connection between the competition for land and the competition for civil service employment (Despres 1975). Large-scale African movement away from the rural to urban centres started around the 1880s. They eventually occupied the major role in the colonial civil service, although it took several decades to predominate at the senior level 1900 (Ibid.). On the other hand, by 1930 IG gradually started to move into the urban areas. In 1925, Africans accounted for 85 percent of the colonial bureaucracy, while a mere 4 percent were Indians (Brown 1999). By the dawn of independence in 1965, Indians accounted for 33 percent while AG 53 percent of the civil service (Despres 1975). It should be noted that Despres' data came from the Commission of

Inquiry into the racial problems in the public service. The International Commission of Jurists (ICJ) presented their findings in 1965, one year before Guyana's independence. In terms of the security forces, IG accounted for 20 percent and AG 74 percent (Ibid.). Other data presented by Despres indicate that Indians were closing the gap just before independence. However, one category in the government services at the time in which IG formed the majority was that of land development. They accounted for 85 percent and AG 13 percent.

This partial closing of the employment gap in the civil service by 1965 must be seen in the context of the long-term dispute over land distribution. This problem was the central concern of African Society for Cultural Relations with Independent Africa (ASCRIA). ASCRIA ostensibly focused on cultural events, but at a deeper level it was an economic and political movement. Many of ASCRIA's members were prominently placed in the PNC government of the 1970s. They were placed in several of the state-owned development banks and in 1970-71 ASCRIA's coordinating elder, Eusi Kwayana, chaired the National Land Settlement Committee and the Executive Board of the National Marketing Corporation. One commentator, cited by Despres, outlined the connection between ASCRIA and the ruling PNC at the time under President Burnham: 'Burnham is ASCRIA as much as Eusi Kwayana is ASCRIA. ASCRIA is the cultural and economic arm of the government: the PNC is its political arm' (Despres 1975, 104). ASCRIA's core belief was that all Guyanese were exploited by British colonialism and American imperialism, but African Guyanese were further exploited and discriminated against by IG and Portuguese Guyanese. Therefore, according to Despres, Africans have to be re-established on the land, regardless of whether the land is currently occupied by the sugar industry, interests in the hinterland or by East Indians.

By the 1970s, under a system known as party paramountcy, the PNC would completely dominate the civil service, army, police, and nationalize key foreign-owned enterprises in the bauxite, sugar, retail and other sectors. I will not repeat the nature of party paramountcy here as this system is well documented in the literature (see Danns 1982, Mars 1990, Premdas 1995). For an economic analysis of this period see Khemraj (2016) and Gafar (1996). Under this system there was a noticeable decline in IG employment in the civil service, police and other governmental agencies. The ICJ report alluded to earlier also notes the numbers for the colonial police. As at 1965, 21 percent and 72 percent of the police force was made up of IG and AG, respectively (Danns 1982, 115). However, during the 1970 to 1977 period, Danns calculates the recruitment

16

rate of IG to be 8 percent and AG to be 92 percent (Ibid., 121). Data on the ethnic composition of the civil service is non-existent. One study by Bissessar (2002) reports numbers for senior public-service positions for the period 1973 to 1979. For example, there were 5 IG and 50 AG chairmen of boards and commissions; 6 IG and 487 AG members on boards and commissions; and 6 IG and 34 directors in state-owned financial institutions. The cause of the reversal is often debated. Is it outright discrimination or a case of IG not willing to work for low wages? Danns raised both questions and also noted than even though Indians entered the police force at a much lower percentage during party paramountcy, they were often promoted at a faster rate than AG once inside. However, the data provided by Bissessar are for employment at the upper echelon of the public service. From 1992 to 2015, the PPP/C forced out many senior civil servants and replaced them with their supporters. Many were wrongfully dismissed, according to Brown (1999). Unfortunately, we do not have a systematic data set to determine the precise ethnic composition of the civil service, police force, army and private sector. Nevertheless, a cursory observation would indicate that the historical employment specialization by ethnicity still exists – IG predominate in the private sector while AG in the public sector. The mining sector, however, tends to display greater balance in terms of ownership of production and mining rights.

THE TWO DILEMMAS

Broadly speaking, the Indian and African-Guyanese ESDs result from the fear of economic marginalization, whether real or perceived. They are dilemmas because the pursuit of one group's political and economic interests causes a worse overall outcome for most in the society. In other words, the term dilemma is used to emphasize that pro-ethnic political mobilization results in a worse outcome (Pareto-deficient equilibrium) compared with the superior result if the groups cooperate. Cooperation is not possible because of limited trust (strategic uncertainty) regarding how other individuals will act or respond to a chosen strategy (Jansson and Eriksson 2015, Singh 2009). For the rest of the paper trust means the propensity to behave cooperatively (Fang et al. 2002). This definition of trust is consistent with the convention in both behavioural and evolutionary game theories. In low-trust environments, individuals pursue self-interested strategies over what is good for the entire group.

The perception of economic marginalization motivates self-help responses which are crucial for applying the security dilemmas to study ethnic conflict (Posen 1993; Collins 1998). In our case study, the self-help responses have political expressions or strategies. Self-help responses

involve taking matters into one's own hands (Posen 1993). In the group context, they encompass one group's self-action to preserve or protect its interest when there is no credible system of guarantee. The non-establishment of a guarantor is central to applying the thesis of the security dilemma to intra-country conflict. Without the guarantor one group develops its own self-help strategy in response to the self-help strategy of the other side. Therefore, the notion of self-help has parallels with strategy in game theory. Self-help does not only involve complete anarchy as in the case of a civil war (Kaufman 1996). For the purpose of this paper, self-help takes the form of voting to keep the other side out of power or finding ways to undermine the winner of an election.

Low trust motivates self-help strategies and reactions at the group level and history helps to decipher the strategies of each group. Guyanese history tells us that the self-help strategies occur at two levels – among the masses in the way they express their voting and at the level of political leadership in the manner the loser seeks to undermine the winner. (i) Voters have two strategies: (a) vote for ethnic party (pro-ethnic voting) or (b) vote across ethnic lines (split votes). (ii) Leaders have two strategies: (a) respect democratic elections or (b) use extra-institutional measures (or throw out forbearance) to undermine winners. The security dilemma also involves uncertainty, which motivates one group to assume worst-case outcomes in its response to the action of the other (Roe 1999). The uncertainty inherent in the societal dilemma has a natural parallel in game theory in the form of strategic uncertainty or imperfect information[13]. The uncertainty comes about because one group does not know exactly how the other side with respond to its chosen strategy. For example, the voters from one group know that the other side can also vote for their own ethnic party. Therefore, they are likely to assume the worst case in a situation (given limited trust) when group-connected economic patronage is at stake. Similarly, the leader of one group knows that the other side might not concede the election outcome and choose extra-institutional methods to undermine their political party.

Therefore, we have enough information from history to specify the first metaphor known as the stag hunt to explain the dilemma facing most voters. Given the bi-communal nature of the population between two main groups, we can divide the voters into two camps: (i) PPP/C voters and others, and (ii) PNCR voters and others. I use the latter name given that the PNCR is the dominant party in APNU. It also emphasizes that the historic conflict between the PPP and PNC.

---

[13] However, such strategic uncertainty is not the same as asymmetric (or incomplete) information, whereby one person does not know the strategy set of another (Dixit et al. 2015).

Table 1 shows the basic set up of the stag hunt. All Guyanese voters choose between two strategies: (a) vote for their historic or ethnic-based party (defect) and (b) vote across the ethnic divide (cooperate or split their votes). The payoffs are hypothetical numbers which we can interpret as average income levels perceived or expected by voters if a certain political party wins the election. The first payoff value is gained by the row voters (IG voters and others) and the second payoff value is received by column voters (AG voters and others). For example, the values (4, 4) indicate 4 for IG voters and others and 4 for AG voters and others, and so on.

Table 1   The ESDs from the voters' perspective in a stag hunt

		AG and other voters	
IG and other voters		Vote other (cooperate: split votes)	Vote PNCR (defect)
	Vote other (cooperate: split votes)	4, 4	1, 3
	Vote PPP/C (defect)	3, 1	2, 2

To understand why the game presents an inherent dilemma we have to consider the strategic uncertainty facing each side. The AG voters are not assured whether IG voters will split their votes and therefore cooperate. If they cooperate (split their votes) and IG do not reciprocate they earn income = 1 and IG earn income = 3. Similarly, IG voters are not assured whether AG voters will split their votes (cooperate) on the day of secret ballot. If they split their votes and AG do not reciprocate, then they IG receive an income level = 1 and the other side an income level = 3. These payoff outcomes are not farfetched given the ethnic political patronage and patron-client networks that are prevalent in Guyana and similar countries (Danns 1982; Hintzen 1989; Khemraj 2016; Edwards 2017). To cooperate or split one's vote is to choose a risky strategy since history suggests the other side might not do same. Most people in an environment of low trust will likely play it safe and defect – hence the term pro-ethnic voting. The perceived stakes are high and getting higher given the significant off-shore oil discoveries. The party that controls government essentially determines the expenditures from oil revenues. Everyone will cooperate only if

everyone else does. But there is no focal point or institutional framework to facilitate everyone to cooperate[14].

The stag hunt has two equilibria (4, 4) and (2, 2). The higher equilibrium (4, 4) is payoff dominant but the latter, (2, 2), is risk dominant. If voters can coordinate on voting across the ethnic divide, everyone gets a higher income or the superior equilibrium (4, 4). However, this is not possible because the voters are uncertain how the other side will vote on the day of secret ballot. Hence, both sides will defect and therefore engender a Pareto-inferior equilibrium or level of economic development (2, 2). The inferior outcome or risk-dominant equilibrium implies low trust in the society (Singh 2009). Risk dominance, moreover, is fundamental to explaining different forms of coordination failures (Straub 1995). If the side which wins the election does not matter for economic distribution – for example there is some form of power-sharing constitution – then the voters can split their votes without the fear of economic loss. The uncertainty is embedded in our subjective probabilities which we determine from experience and history. Furthermore, the high probability of pro-ethnic voting implies low trust. The superior equilibrium (4, 4) can only be achieved if we trust others to cooperate, which is not achievable in the present constitutional and electoral frameworks. It should be clear that the two ESDs involve low trust (high probability of defection) which results in a sub-optimal outcome for all.

The next step is to explain the leadership dilemma as part of the ethnic security dilemma. Table 2 shows the metaphor of the prisoners' dilemma (PD). Like the stag hunt, the mathematical feature of the PD has been studied extensively and the two are closely related (Bergstrom 2002; Powers and Shen 2008). Therefore, my focus is to outline how the game illuminates the dilemma facing Guyanese leaders on both side of the ethnic divide. To fully appreciate the set up and payoff structure, let us think about the numbers indicating a subjective satisfaction relating to seeing or making the other side fail. The payoffs indicate envy pleasure from seeing the other side fails in governance. Envy has been studied using the joy-of-destruction game in an experimental setting. The antisocial behaviour involves one player destroying the payoff of another due to pure spite and nastiness (Abbink and Sadrieh 2009; Casal et al. 2012). When the contest is hidden the joy of destruction between individuals is more pronounced, according to Abbink and Sadrieh. Therefore,

---

[14] The idea of a focal point to solve coordination problems goes back to the seminal contributions of economist Thomas Schelling (Schelling 1960). How do we know that others know that we are willing to cooperate? Guyanese history shows that the focal point does not exist and it might have to be established via constitutional methods that make it necessary for both sides to be winners after a free and fair election.

one can easily extend the logic of hidden spitefulness in group-level interaction compared with a face-to-face meeting between two individuals who might prefer to be cordial. In another experimental setting, one player is willing to pay for having the wealth of another reduced or destroyed in order to address perceived inequality of income (Zizzo and Oswald 2001). Within the context of standard tools of microeconomics, one can think of joy of destruction as malevolent preferences of leaders (Singh 2007). With malevolent preferences (or utility) one leader experiences greater satisfaction when he preserves his income but witnesses his competitor's income decline.

Therefore, if the PNCR leaders accept the election outcome, the PPP/C's best response is to find extra-institutional and legal measures to make the PNCR government not succeed. In this case, the PPP/C's leaders get pleasure = 4 and PNCR leaders only achieve pleasure = 1. For example, the December 2018 no-confidence vote illustrates a constitutional measure, but one without forbearance. Examples of the other extra-constitutional measures used to undermine the winner can be found in the section discussing the political contest. The December no-confidence vote was likely meant to be payback for the 2014 no-confidence motion – supported by both AFC and PNCR – against the then PPP/C government. The PPP/C, which formed the government with less than 50 percent of the votes, forestalled the vote by proroguing parliament. On the other hand, if the PPP/C leaders accept the election result, the PNCR's best response is to find extra-institutional means to destabilize the PPP/C government. In this case, the leaders of PNCR obtain pleasure payoff of 4 and those of PPP/C get 1. For example, the conflict after the 1997 election indicates one extra-institutional measure that was used in the not so distant past.

Table 2   The ESDs from the leaders' perspective in a one-period prisoners' dilemma

		PNCR leaders	
PPP/C leaders		Accept election outcome (cooperate)	Extra-institutional means (defect)
	Accept election outcome (cooperate)	3, 3	1, 4
	Extra-institutional means (defect)	4, 1	2, 2

Therefore, it is clear that both sides have a dominant strategy of defect or undermine the winner given the mutual distrust and the desire to control the executive. In this case we have a

single Nash equilibrium of (2, 2). The outcome (2, 2) can be seen as the equilibrium of no democratic consolidation. The outcome is reinforced by envy or to use the more colloquial Guyanese term: bad-mindedness. The equilibrium is clearly deficient or sub-optimal compared with the Pareto-superior outcome (3, 3). Moreover, the inferior outcome is consistent with the definition of a dilemma – that is, both sides are worse off by pursuing their group's interests. The superior equilibrium can only be achieved in the one-period game if both sides accept the election outcome. In other words, both parties have to be winners after the election. However, the uncertainty associated with the game does not allow for this possibility. Such cooperation could occur in the repeated prisoners' dilemma, but it depends on having the institutional framework to promote trust (reduce the rate of discount or increase forbearance) and eliminate the gain from defection. At the moment, the one-period and repeated gains from defecting (pleasure of envy) is too high. As much as it is important to reduce the benefit of defecting, it is also important to increase the per-period perpetual loss from defecting (Dixit et al. 2015). Guyana presently has no institutional mechanism that can do all three: (i) decrease uncertainty or impatience; (ii) reduce the benefit of defecting in the one-period and repeated scenarios; and (iii) increase the loss associated with defecting in the one-period and repeated games[15]. These three conditions can only be achieved by some form of executive power sharing that prevents a side from losing after the election. This might require a completely new constitution to change the incentive structure away from mutual undermining to cooperating.

Until this point the equilibrium outcome for both leaders and voting masses are inferior, but equitable. Inequality among the citizens is not obvious the stag hunt and prisoners' dilemma. It is possible to demonstrate the persistence of inequality using our historical understanding of Guyanese society. Like before assume strategic uncertainty but the first move in the sequential game is made by voters, who two strategies: (i) split votes (cooperate) and (ii) vote for ethnic party (defect). Making the second move, the leaders of the winning party have to decide between two strategies: (i) overwhelmingly reward political base (defect) and (ii) enable fair distribution (cooperate). Making the third move, the leaders of the losing party have two strategies: (i) accept democracy (cooperate) and (ii) find ways to undermine the winner (defect). Undermining the winner could involve bending the existing legal and constitutional systems, secretly destabilizing

---

[15] This implies the probability the game is repeated or will continue indefinitely = 1. If the game is not repeated, then it is rational to defect now and set up a dictatorship.

the winner by using subtle sabotage as we studied in a previous section, and other extra-constitutional measures.

Voters anticipate that their economic interests will be served better by intra-group social networks that optimize gains when their political party wins the election. Therefore, let us assume that most voters anticipate (or expect) that their economic payoff will be higher if their ethnic party wins the election. In other words, the most voters are looking forward to the actions of their respective political party and reasoning backward to decide how to vote on the day of secret ballot. An earlier section of the paper outlines the historical economic contest which motivates the backward induction method of solution of this sequential game. The first stage of Figure 1 nests the stag-hunt game outlined earlier. As noted previously, the voters' dilemma is the outcome of mutual distrust regarding how the other side will vote on the day of secret ballot. The uncertainly propels most people to vote pro-ethnically, which is supported by the LAPOP sample data and historical evidence mentioned earlier.

Figure 1   Inequality and non-democratic consolidation
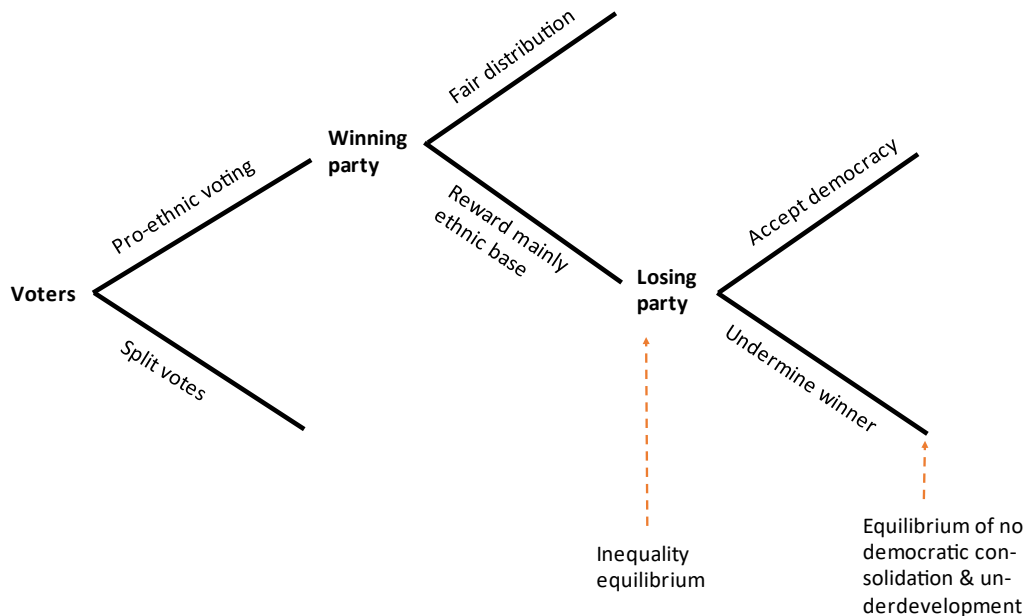
The party that wins the election has to decide how to distribute economic rights. If it does a fair distribution, then many from its base might stay at home the next time election comes along. In order to maximize its expected economic outcome the party has to reward its base disproportionately. Moreover, whatever patronage goes to the other side has to be visible – for

example, contracts to a small number of elites from the other ethnic group. Therefore, the winning party has to make a credible commitment by overwhelmingly rewarding its ethnic support base. Hence, we have the equilibrium of inequality persistence. At this equilibrium the leaders of the party that loses the election has to decide whether to accept democratic outcome or find ways to undermine the winner. This final part of the sequential game nests the leadership conflict in the prisoners' dilemma outlined earlier. The losers have to signal strength to its base by making a credible commitment to undermine the winner. Otherwise, it can be locked out from the executive for a long time. Hence, we now have the equilibrium of limited democratic consolidation and underdevelopment.

SUMMARY AND PROPOSALS

The two ESDs were outlined for political leaders and the masses of the two main ethnic groups. At both levels, the dilemmas are reinforced by low inter-group trust and intense uncertainty. The voters of one group are not certain how the other side will vote on the day of secret ballot. Will they split their votes (cooperate) or vote for their ethnic leaders (defect)? In the case of most voters, it involves risk of losing perceived income. Hence, the economic origin of the voters' dilemma. The leaders are motivated by the utility to see the other side not succeed in governing the country. Since the prize is the control of the executive, one group of leaders is incentivized to undermine the other group of leaders. If the other group should succeed, then the losing group gains lower utility – hence the joy of destruction or pleasure from envy. Therefore, leaders pursue a mutual strategy of sabotage and undermine, which certainly reinforces the underdevelopment equilibrium resulting from the voters' dilemma. There is a superior payoff which exists if both sides can be winners from free and fair elections. However, the higher payoff is only possible if both sides are winners from free and fair elections.

These conflicts did not emerge overnight. They are the product of Guyanese colonial history, external price volatility, a non-complex production structure, and ecological and geographical conditions. This idea is outlined in Figure 2. The production structure is determined endogenously by the geographical nature of the coastal plain. Over the very long-term the failure of production transformation could shape the ecology; for example, pollution owing to mining, deforestation and erosion of land quality. As the production structure remains non-complex – implying primary resource extraction and subsistence agriculture – the conditions for conflict over economic opportunities are created. The self-help strategies emerge because there is no guarantor

such as formal institutions that promote and incentivize cooperation at the level of executive governance. In other words, to use a term from game theory, there is no focal point through which voters and leaders can coordinate their willingness to cooperate. Focal points are necessary to promote coordination which is not achieved easily because of limited trust in the stag-hunt metaphor. At the level of leadership, the focal point is necessary for training leaders to cooperate on a common-belief equilibrium. The common-belief equilibrium could be cooperation over big economic projects, such that both sides feel common ownership. This common-belief equilibrium is necessary for escaping the grim strategy of defection inherent in the repeated prisoners' dilemma.

Figure 2   The origins of pernicious political strategies
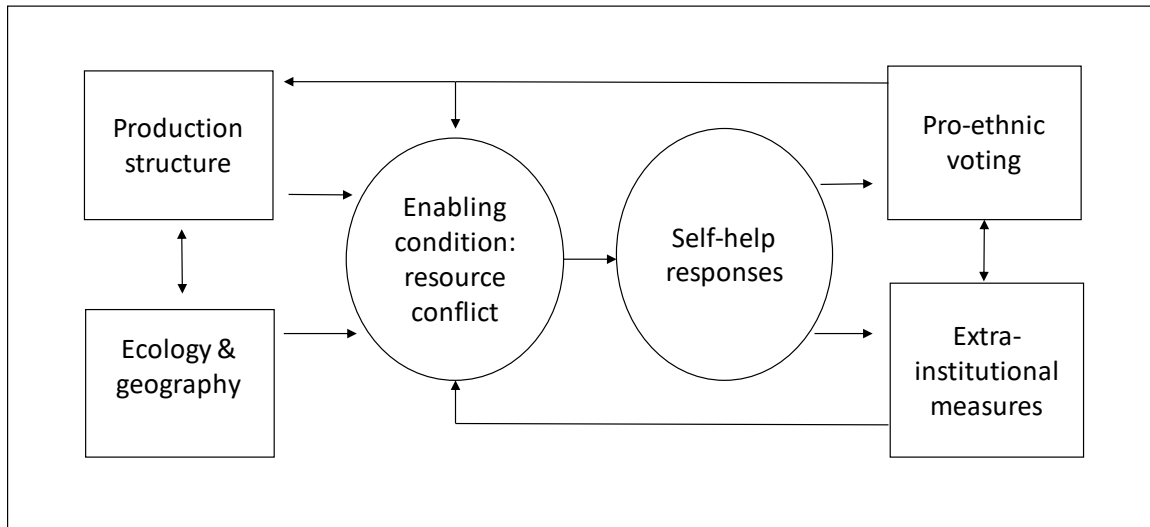
However, such cooperation is unlikely within the context of the existing constitution, which does not offer the focal point on the executive. This is because the 1980 constitution was designed to entrench a one-party system. This point was made clear by James (2006), who explains that the draftsman borrowed heavily from the Tanzanian constitution that was meant to support a one-party system of government. This implies that the constitutional reforms meant to address the political instability after the 1997 and 2001 elections were done on the foundation of a constitution meant to give the incumbent an inherent advantage over the loser – an untenable outcome in which voters largely vote along ethnic lines. It should be no surprise why the parliamentary committees and commissions proposed during the reform period of 2000 to 2003 failed to consolidate

democracy. The parliamentary committee structure was meant to promote sub-executive power sharing, but it has failed (James 2006). The party that wins the election still dominates the committees in a system where forbearance is not the norm. Just a few committees have subpoena powers. Delegating greater subpoena powers to the two main parties is unlikely to calm the burning desire to control the executive. This is signalled by the underutilization by the main parties of present subpoena power. Therefore, a necessary but not sufficient change should be a new constitution that makes executive power sharing a binding requirement.

Several other sufficient changes are needed for minimizing the general distrust inherent in the ESDs. A first sufficient condition is to complement executive power sharing with electoral reforms that allow credible challenges from independent politicians. There is also scientific merit in the idea when we look at conflict in a prisoners' dilemma set up. For example, Fader and Hauser (1988) observe that two uncooperative factions might decide to implicitly cooperate when there is competition from a third party. Therefore, any power sharing between the dominant parties has to be disciplined by third-party competition. A further electoral reform to buttress competitive executive power sharing should be the abandonment of pre-election alliances, which is often used to accuse existing independent parties of betraying an ethnic group. Post-election alliances also help to increase the degree of randomness in the election outcome, which could motivate leaders to reach out beyond their ethnic base.

Another sufficient condition for mitigating distrust and uncertainty is to require ethnic impact statements since government spending and taxation have distributional effects (Dev 2011). This has to be further complemented with laws that require publicly available data speaking to distributional concerns such as government procurement and scholarship grants, employment, land distribution, and others. Data and information could emphasize mal-distributions (or none at all) and perhaps ease worst-case assumptions that produce the harmful self-help strategies. Their availability would also greatly enhance the role of civil society as a mediator.

REFERENCES

Abbink, K., J. Brandt, B. Herrmann and H. Orzen (2010) 'Intergroup conflict and intra-group punishment,' *The American Economic Review* 100 (1), 420 – 447.

Abbink, K. and A. Sadrieh (2009) 'The pleasure of being nasty,' *Economics Letters* 105 (3), 306 – 308.

Acemoglu, D., S. Johnson and J. Robinson (2002) 'Reversal of fortune: geography and institutions in making the modern world income distribution,' *The Quarterly Journal of Economics*, 117 (4) 1231 – 1294.

Adamson, A. (1972) *Sugar without Slaves: The Political Economy of British Guiana, 1838–1904*, New Heaven and London: Yale University Press.

Bowles, S. and H. Gintis (2011) *A Cooperative Species: Human Reciprocity and its Evolution*, Princeton and Oxford: Oxford University Press.

Bissessar, A. (2002) 'Addressing ethnic imbalances in the public services of plural societies: the case of Guyana and Trinidad and Tobago,' *International Journal of Public Sector Management* 15 (1) 55 – 68.

Brown, D. (1999) 'Ethnic politics and public sector management in Trinidad and Guyana,' *Public Administration and Development* 19 (4), 367 – 379.

Bulkan, J. (2014), 'Forest grabbing through forest concession practices: the case of Guyana,' *Journal of Sustainable Forestry* 33 (4), 407 – 434.

Bulmer-Thomas, V. (2012) *The Economic History of the Caribbean since the Napoleonic War*, Cambridge: Cambridge University Press.

Casal, S., W. Guth, M. Jia and M. Ploner (2012) 'Would you mind if I get more? An experimental study of the envy game,' *Journal of Economic Behavior & Organization* 84 (3), 857 – 856.

Collins, A. (1998) 'The ethnic security dilemma: evidence from Malaysia,' *Contemporary Southeast Asia* 20 (3), 261 – 278.

Constantine, C. (2017a) 'Economic structures, institutions and economic performance,' *Journal of Economic Structures* 6 (2), 1 – 18.

Constantine, C. (2017b) 'The rise of income inequality in Guyana,' *Social and Economic Studies* 66 (3&4), 65 – 95.

Constantine, C. and T. Khemraj (2019) 'Geography, economic structures and institutions: a synthesis,' *Structural Change and Economic Dynamics* 51 (December), 371 – 379.

DaCosta, M. (2007) 'Colonial origins, institutions and economic performance in the Caribbean: Guyana and Barbados,' *IMF Working Paper WP/07/43*, International Monetary Fund.

Danns, G. K. (1982) *Domination and Power in Guyana: A Study of the Police in a Third World Context*, New Brunswick and London: Transaction Books,

Despres, L. A. (1975, reprint 2011) 'Ethnicity and resource competition in Guyanese society,' in L. A. Despres (ed.) *Ethnicity and Resource Competition in Plural Societies*, The Hague and Paris: DeGruyter.

Despres, L. A. (1969) 'Differential adaptations and micro-cultural evolution in Guyana,' *Southwestern Journal of Anthropology* 25 (1), 14 – 44.

Despres, L. A. (1967) *Cultural Pluralism and Nationalist Politics in British Guiana*, Chicago: Rand McNally and Company.

Dev, R. (2019) 'The same politics of domination,' *Guyana Times*, Features, January 20, retrieved from: https://guyanatimesgy.com/ .

Dev, R. (2011) 'Ethnic impact statement,' *Kaieteur News*, Features, July 17: https://www.kaieteurnewsonline.com/.

Dev, R. (1991) 'For a new political culture in Guyana,' Discussion Paper, The Jaguar Committee for Democracy.

Dixit, A., S. Skeath and D. Reiley (2015) *Games of Strategy*, 4th edition, New York and London: W. W. Norton & Company.

D.W. (2019) 'No plan to resign, will exhaust appeals – Granger; Harmon deems UN official's position against gov't "premature",' *Demerara Waves*, in Elections, National News, Politics, February 3: retrieved from: http://demerarawaves.com/.

Edwards, D. (2017) 'Corruption and state capture in Guyana: a plural approach,' *Transition* 44, 86 – 124.

Fader, P. S. and J. R. Hauser (1988) 'Implicit coalitions in a generalized prisoners' dilemma,' *Journal of Conflict Resolution* 32 (3), 553 – 582.

Fang, C., S. Orla Kimbrough, S. Pace, A. Valluri and Z. Zheng (2002) 'On adaptive emergence of trust behaviour in the game of stag hunt,' *Group Decision and Negotiation* 11 (6), 449 – 467.

Farley, R. (1954) 'The rise of the peasantry in British Guiana,' *Social and Economic Studies* 2 (4), 87 – 103.

Gafar, J. (1996) 'From cooperative socialism to economic liberalization and growth: 1976 – 1994,' *Journal of Developing Areas* 31 (1), 41 – 74.

Gampat, R. (2015) *Guyana: From Slavery to the Present, Vol. 1: Health System*, Bloomington, Indiana: Xlibris.

Greenidge, C. B. (2001) *Empowering a Peasantry in a Caribbean Context: The case of Land Settlement Schemes in Guyana, 1865 – 1985*. Barbados, Jamaica, and Trinidad and Tobago: University of West Indies Press.

Hinds, D. (2019) 'For a change, the PPP is being outmanoeuvred by the Coalition,' *Kaieteur News*, Hinds' Sight, January 27, retrieved from: https://www.kaieteurnewsonline.com/.

Hinds, D. (2010a) 'Ethnicity and the elusive quest for power sharing in Guyana,' *Ethnopolitics* 9 (3&4), 333 – 355.

Hinds, D. (2010b) *Ethno-Politics and Power Sharing in Guyana: History and Discourse*, Washington, DC: New Academia Publishing.

Hinds, D. (2005) 'Problems of democratic transition in Guyana: mistakes and miscalculations in 1992,' *Social and Economic Studies* 54 (1), 67 – 82.

Hintzen, P. (1989) *The Cost of Regime Survival: Racial Mobilization, Elite Domination and the Control of the State in Guyana and Trinidad*, Cambridge: Cambridge University Press.

James, R. (2006) 'The Constitution of Guyana,' *Transition*, Special Issue 35 – 36, University of Guyana.

Jansson, F. and K. Eriksson (2015) 'Cooperation and shared beliefs about trust in the assurance game,' *PLoS One* 10 (12), doi.org/10.1371/journal.pone.0144191.

Jeffrey, H. (2019) 'Guyanese democracy has not yet been born,' Stabroek News, Future Notes, March 6, retrieved from: https://www.stabroeknews.com/.

Jervis, R. (1978) 'Cooperation under the security dilemma,' *World Politics* 30 (2), 167 – 214.

Josiah, B. (1997) 'After emancipation: aspects of village life in Guyana, 1869 – 1911,' *Journal of Negro History* 82 (1), 105 – 121.

Kaufman, S. (1996) 'An international theory of inter-ethnic war,' *Review of International Studies* 22 (2), 149 – 171.

Khemraj, T. (2016) 'The political economy of Guyana's underdevelopment,' *Review of Black Political Economy* 43 (3 & 4), 325 – 342.

Khemraj, T. (2015) 'The colonial origins of Guyana's underdevelopment,' *Social and Economic Studies* 64 (3 & 4), 151 – 185.

Kissoon, F. (2019) 'A brief history of instabilities in Guyana, 1953-2019,' *Kaieteur News*, Features, March 7, retrieved from: https://www.kaieteurnewsonline.com/.

Kissoon, F. (2007) 'African extremism in the age of political decay: the case of Guyana,' In C. Grant and R. Mark Kirton (eds.) *Conflict Analysis and Conflict Resolutio*n, Kingston: Ian Randle Publishers.

Kollock, P. (1998) 'Social dilemmas: the anatomy of cooperation,' *Annual Review of Sociology* 24 (August), 183 – 214.

Mandle, J. (1973) *The Plantation Economy: Population and Economic Change in Guyana, 1838 – 1960*, Philadelphia: Temple University Press.

Mars, P. (1990) 'Ethnic conflict and political control: the Guyana case,' *Social and Economic Studies* 93 (3), 65 – 94.

Moohr, M. (1972) 'The economic impact of slave emancipation in British Guiana, 1832 – 1852,' *The Economic History Review* 25 (4), 588 – 607.

Myers, R. J. Calder (2011) 'Toward ethnic conflict transformation: a case study of citizen peacebuilding initiatives on the 2006 General Elections,' *Occasional Paper: Peace Building Series No. 4*, Future Generations Graduate School.

Norton, A. (2007) 'Governance in an ethnically divided society: the Guyana case,' in C. H. Grant and R. M. Kirton (eds.), *Governance, Conflict Analysis and Conflict Resolution*. Miami and Kingston, Jamaica: Ian Randle Publishers.

Olesker, R. (2011) 'Israel's societal security dilemma and the Israeli-Palestinian peace process,' *Nationalism and Ethnic Politics* 17 (2), 382 – 401.

Panaritis, E. and A. Kostopoulos (2010) 'Guyana property rights study,' *Discussion Paper No. IDB-DP-141*, Inter-American Development Bank.

Potter, L. (1998) 'Breaking away from sugar? East Indians and the rice industry of Guyana, 1905-1940,' *South Asia: Journal of South Asian Studies* 21(1), 137 – 160.

Powers, M. and Z. Shen (2008) 'Social stability and catastrophic risk: lessons from the stag hunt,' *Journal of Theoretical Politics* 20 (4), 477 – 497.

Premdas, R. (2004) 'The Guyana ethnic quagmire: problems and solutions for reconciliation,' *Nationalism and Ethnic Politics* 10 (2), 251 – 268.

Premdas, R. (1995) *Ethnic Conflict and Development: The Case of Guyana*, Avebury: Brookfield, USA, Hong Kong, Singapore and Sydney and the United Nations Research Institute for Social Development.

Posen, B. R. (1993) 'The security dilemma and ethnic conflict,' *Survival* 35 (1), 27 – 47.

Ramharack, B. (1992) 'Consociational democracy: a democratic option for Guyana,' *Caribbean Studies* 25 (1&2), 75 – 101.

Reinert, E. S. (2008) *How Rich Countries Got Rich…and Why Poor Countries Stay Poor*, New York: Carroll and Graf Publishers.

Reinert, E. S. (2006) 'Institutionalism ancient, old and new,' *Research Paper No. 2006/77*, World Institute for Development Economics Research, United Nations University.

Roe, P. (1999) 'The intrastate security dilemma: ethnic conflict as a 'tragedy',' *Journal of Peace Research* 36 (2), 183 – 202.

Schelling, T. C. (1960) *The Strategy of Conflict*, Cambridge, MA and London: Harvard University Press.

Sen, A. (1967) 'Isolation, assurance and the social rate of discount,' *The Quarterly Journal of Economics* 81 (1), 112 – 124.

Singh, T. B. (2009) 'Social norms and interpersonal trust,' Working Paper, University of Kent.

Singh, T. B. (2007) 'Poverty, economics and conflict management,' in C. H. Grant and R. M. Kirton (eds.), *Governance, Conflict Analysis and Conflict Resolution*. Miami and Kingston, Jamaica: Ian Randle Publishers.

S.N. (2018) 'The only friends I got is PNC, so the only people I could give work to is PNC – Lawrence tells PNCR conference,' *Stabroek News*, Local News, November 30.

S.N. (2017) 'Lincoln Lewis produces transport for Berbice village bought by ancestor in 1800s,' *Stabroek News*, Local News, August 30.

Straub, P. (1995) 'Risk dominance and coordination failures in static games,' *Quarterly Review of Economics and Finance* 35 (4), 339 – 363.

Williams, E. (1945) 'The historical background of British Guiana's problems,' *Journal of Negro History* 30 (4), 357 – 381.

Zizzo, D. and A. Oswald (2001) 'Are people willing to reduce others' incomes?' *Annals of Economics and Statistics* 63 (64), 39 – 65.