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# Geography, Economic Structures and Institutions: A Synthesis

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## Abstract

This paper develops a conceptual framework and presents three case studies that show how differences in economic structures are the fundamental cause of differences in economic development. This insight is derived from a synthesis of competing hypotheses. More complex products have higher barriers to entry, higher income elasticity of demand in export markets, are more conducive for technical change, support higher wages and profits etc. Moreover, a given economic structure gives rise to a particular distribution of income—an important source of de facto political power. The paper argues that a productive structure based on a wide mix of complex products engenders lower income inequality. This is consistent with the Kuznets-Lewis wave—changing income distribution as a consequence of structural changes. We use historical evidence to show that geography played a pivotal role in shaping economic structures and demonstrate that geography is still important in explaining the Guyana-Barbados divergence. Finally, the article argues that the mechanics of economic change or dynamic under-development are determined by the intensity of competition between de facto and de jure political powers and the resolution to this contestation.

**Keywords:** geography, economic structures, institutions, inequality, growth

**JEL Classification:** O13, O14, O15, O43, P48

*What I am suggesting here is that we can draw on the insights of the different paradigms... up to their margin of advantage. As such we should seek to make our discourse... less confrontational and less ideological. The development of a more synthetic outlook based on new as well as past insights is what is called for. New perspectives are best served when they have the confidence to dialogue with the old... It is for the new tendencies to reformulate the old insights that remain valid in such a manner that they can be absorbed into the new outlook.*

— Mark Figueroa 1996, *The Plantation School and Lewis: Contradictions, Continuities and Continued Caribbean Relevance.*

# 1 Introduction

How rich countries got rich and why poor countries stay poor get to the heart of concerns regarding economic change and persistent under-development. There is no shortage of theories that seek to explain comparative economic development. In this paper, we zoom in on three basic narratives—geography<sup>1</sup>, economic structures<sup>2</sup> and institutions<sup>3</sup>. This article synthesises the useful insights into a coherent framework that in our view can better explain how rich countries got rich, why poor countries stay poor and the mechanics of emerging economies.

As explained in the epigraph above, the goal of this synthesis is to build on the insights of various traditions in economic development to advance the discourse in less ideological terms. As such, we hope to provide a new narrative to guide the subject on the political economy of economic development. It goes as follows. Economic change or persistence is the outcome of distributional conflict. The *haves*—those with economic assets and power<sup>4</sup>—have vested interests in the status quo—the present economic structure and its corresponding

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<sup>1</sup>By geography we mean those natural factors (climate and temperature, soil fertility etc.,) that affect economic outcomes (Sachs (2001) and Khemraj (2015)).

<sup>2</sup>An economic structure refers to the aggregate representation of a country’s technological capabilities (Constantine (2017b)). This can be measured by summary indices such as economic complexity (Hidalgo et al. (2009)) of a country’s export basket. Thus, there are low, mid and high technology economic structures.

<sup>3</sup>North (1991) defines institutions as the humanly devised constraints that structure political, economic, and social interaction. They consist of both informal constraints (customs and traditions), and formal rules (constitutions, laws, property rights).

<sup>4</sup>In our set up, there are de jure (e.g. political institutions) and de facto (e.g. economic resources) sources of power. Power is thus defined as the de jure or de facto ability to direct or influence the behaviour of others or the course of events.

distribution of resources. The *have nots* contest this allocation and the structural origins of their dispossession—the economic structure and politico-institutional forms. *Inclusive* economic change—economic growth with lower inequality—is the outcome of an elite bargain that has two pillars: 1. An agenda for economic transformation towards a more complex and technology intensive economic structure and 2. The reduction of distributional tensions in time  $t$ . Imagine the latter as a minimal welfare state—some short term capital-labour compromise and the former as a longer term compromise that propagate Kuznets-Lewis dynamics—changing income distribution as a consequence of structural changes.

A productive structure—we use this interchangeably with economic structure—based on a wide mix of complex products has a wider range of occupational choices, flatter hierarchy of occupational structure, wider diffusion of skills and knowledge and deepening class consciousness—lower income inequality. Further, as structuralists have long argued, complex economic structures at the macro level or the technological content of commodities at the micro level are growth enhancing; if only because they have higher income elasticity of demand in export markets, are more conducive for technical change and support higher wages and profits. These insights reveal the following. First, productive structures jointly determine economic growth and income distribution. Second, economic change or persistence is determined by how social contestation change or reinforce the economic structure respectively. Our synthesis shows that historically, geography determined the technological content of economic structures (economic growth) and by extension, the distribution of income and its corresponding intensity of distributional conflict.

Through the use of case studies: Guyana, Barbados and Mauritius, we show that institutions of production—industrial policies ([Reinert \(2007a\)](#))—as opposed to simply institutions of exchange—protection of private property—engender growth enhancing structural transformation. The Mauritian miracle best demonstrates this and the Guyana and Barbados cases highlight the relevance of geography in shaping economic structures and income distribution. Specifically, Barbados’ natural endowment of beaches led to tourism services and a superior growth process as compared to Guyana—still dependent on low technology commodities like sugar and gold. Tourism services have a high *luxury* content with higher income elasticity of demand in export markets. However, Barbados like Mauritius in more recent years, has developed an offshore financial centre since the 1970s that produces an extractive growth process—economic growth with increasing inequality. The distributional implications of financial services are rising top incomes ([Zucman \(2014\)](#) and [Kaplan and Rauh \(2010\)](#))—this

has been the Mauritian story since the mid 2000s—a striking contrast to its miracle years (1970s to mid 2000s) of falling top incomes and industrialization.

The case studies reveal that top incomes in the respective countries have deep colonial origins and the inclusive Mauritian miracle is the outcome of an elite bargain, largely facilitated by the good fortune of sugar rents. In contrast, high income inequality still plagues Barbados and Guyana since their economic elites have been mostly unchallenged. Consequently, top income earners use their de facto power to influence economic policy that entrenches their income position. We argue that this is a fundamental explanation for why both Barbados and Guyana still rely on a production structure of low technology content.

Our new narrative and case studies reveal distributional contestation and productive structure as deep determinants of relative development, as compared to the new institutional economics tradition that emphasise distribution and political institutions. Our analytical framework and case studies demonstrate that the choice and performance of political and economic institutions depend on which interest group wins the distributional conflict and the technology intensity of the economic structure. Though the traditions of geography, economic structures and institutions are competing hypotheses; they share sufficiently common features to provide a synthesis. Our starting point is economic structure as the basis of economic growth. In pre-modern times, geography was the sole determinant of production possibilities—economic structure. Further, economic institutions form the incentive structure to reinforce or change the productive structure and as the case studies show, institutions of production rather than of exchange promote growth enhancing structural transformation.

The remainder of the paper is organized as follows. [Section 2](#) provides a brief overview of the three fundamental causes of relative development and [section 3](#) presents our theoretical framework. [Section 4](#) outlines the case studies and [section 5](#) concludes.

## 2 Three Fundamental Causes

In this section, we sketch the three basic hypotheses of comparative economic development.

### 2.1 Geography

[Machiavelli \(1531\)](#) is among the earlier proponents of the geography hypothesis and in recent times a substantial empirical literature has emerged. In its simplest form, [Sachs \(2001\)](#)

documents a positive relationship between climate and temperate on the one hand and economic development on the other. More complex variants highlight the disease environment (Sachs and Malaney (2002)), natural resource endowments (Sachs and Warner (2001)) and transport conditions (Rappaport and Sachs (2003)).

Given these competing mechanisms, the debate centers on the causal channels. Sachs and his co-authors contend that the central mechanisms are through geography's impact on agricultural productivity and the disease environment. Warm climates are prone to tropical diseases and extremes of heavy rainfall or drought, which adversely affect health conditions and agricultural growth respectively. In more recent work, Khemraj (2015) uses Guyana as a case study to demonstrate the salience of the geography thesis. He notes that Dutch colonial settlement on the coast locked Guyana into polder agriculture, which incurs high drainage and irrigation costs. Khemraj argues that this geographically imposed constraint laid the foundation for wage suppression and extractive growth.

Diamond (1999) goes back even further and posits that *prehistoric* geography and biological conditions are the underlying causes. Diamond notes that around 10,000 BC inhabitants of Eurasia benefitted from environmental advantages that positioned them for a technological leap. These advantages included the larger size of Eurasia, more diverse animals and plants and its East-West orientation that promoted the diffusion of technology. Given these endowments, descendants of Eurasia had a technological lead (guns and steel) and their immunity to Old-World germs allowed them to conquer new regions.

## 2.2 Institutions

Acemoglu et al. (2003) claim that geography, in particular its disease channel, has an indirect effect on economic development through institutions. They argue that malaria and yellow fever were decisive factors in determining European settlement in newly colonized areas. Naturally, European settlement was limited in areas with high mortality rates and the converse was true. In the latter case, Europeans were more likely to establish protection for private property and some degree of adult suffrage, both of which encourage social and economic development.

If geography is indeed destiny and its key features are mostly time invariant, then the countries that were rich in say, the 1500s, due to advantageous geography, should also be rich today. This is not the case. Colonies with relatively higher urbanization rates and

population density—proxies for economic prosperity in the 1500s—are poorer today. The reversal reflects changes in the institutions resulting from European colonialism (Acemoglu et al. (2005a)). The new consensus is that economic institutions are the fundamental cause of long run growth, that is, the protection of private property (Acemoglu et al. (2005a)). Since this is dependent on the political rules and system—political institutions are deep determinants of economic performance (North (1990)). Economic development is thus the outcome of institutions—democracy and the protection of property for a broad cross section of society (Rodrik et al. (2004)).

## 2.3 Economic Structures

Did differential European settlement engender divergent rules and means of organizing society or divergent settlement of differently endowed labour? By the latter we mean different know-how, production capabilities or human capital. These endowments are central to the structuralist thesis, that the complexity or technology content of products determine economic performance. From this perspective, the reversal of fortune is unsurprising—plantation based commodities like sugar engender declining terms of trade (Singer (1950)), low wages and weak inter-sectoral linkages (Prebisch (1950)). Fundamentally, the world distribution of income is determined by differences in production structures.

Thirlwall (1979) presents a theoretical model that demonstrates how a country’s rate of economic growth is determined by the growth of foreign demand (or growth of its trading partners) and the ratio of income elasticities of demand for exports and imports. Countries with more limited production technologies have higher elasticities of demand for imports and this lead to the following: 1. Balance of payment crises in the short run and 2. Economic divergence in the long run as balance of payments adjust. This thesis of balance of payment constrained growth—growth constrained by economic structures—has been verified by numerous empirical studies. See Bertola et al. (2002) for focus on LAC, McCombie (1997) for UK, USA and Japan, and Hussain (1999) for African and East Asian countries.

The earlier proponents of this tradition dates back to Giovanni Botero—what Reinert (2016) calls the Renaissance Canon or economics. Botero’s *Greatness of Cities*, originally published in 1588, explained why cities were the repositories of wealth—they had extensive divisions of labour, technical change and high value added as a ratio to imported raw materials. Empirical evidence in support of the Renaissance Canon is documented with the

recent rise of East Asia and the history of economic growth of the now developed countries (Chang (2002) among others).

## 3 A Synthesis

### 3.1 Economic Structure

*Factor endowments influence the evolution of economic structures.*

— Stanley Engerman & Kenneth Sokoloff, 2002, pp.59., *Factor Endowments, Inequality and Paths of Development among New World Economies.*

In the context of history, it is self-evident that geography was the early determinant of *what* and *how* goods are produced—see (Diamond, 1999, ch.2,5) for a plethora of examples of how geography shaped the evolution of societies. Historically, land locked countries had qualitatively different production possibilities as compared to islands or geographies with easier access to coast lines. In the West Indies, climate and soil fertility were crucial in forming their sugar economies, while natural gifts like gold and silver laid the foundation for mining economies in Spanish America (Engerman et al. (2002)). Geography was also an important divider for mainland North America—climate and soil fertility provided a comparative advantage for growing rice and tobacco in the South as compared to the North (Engerman et al. (2002)). But with modern technologies, the geographical origins of production possibilities (*what* and *how*) become less important. Still, the historical value of geography and its demise present a crucial insight—that the *what* and *how* are central to the process of change. We argue that some goods and services (the *what*) have higher growth payoffs and the same holds for certain production technologies (the *how*). Thus, differences in production structures can explain differences in economic performance across space and time.

Acemoglu et al. (2005b) explain the rise of Western Europe between 1500 and 1850 on account of two factors: 1. Access to the Atlantic (geography) and 2. Political transformations due to the growth of Atlantic ports (institutions). This period of Atlantic trade gave birth to colonial empires, in other words, it was a period of substantial change in production possibilities in Western Europe. In plain terms, colonialism was an industrial policy to advance structural change in Europe. In 1729, English economist Joshua Gee summarized



colonialism as follows:

That all Negroes shall be prohibited from weaving either Linnen or Woollen, or spinning or combing of Wooll, or working at any Manufacture of Iron, further than making it into Pig or Bar iron: That they be also prohibited from manufacturing of Hats, Stockings, or Leather of any Kind [...] Indeed, if they set up Manufactures, and the Government afterwards shall be under a Necessity of stopping their Progress, we must not expect that it will be done with the same Ease that now it may. [As cited in [Reinert \(2007b\)](#)].

As demonstrated in the above quote, the growth promoting economic activities of manufactures were the exclusive privilege of Western Europe. But the idea that there are special powers in certain economic activities go back to much earlier times. Between 1500-500 BC during the Phoenician dominance of Mediterranean trade it was received wisdom that combing labour and raw materials through the production of manufactured goods produce a superior standard of living relative to extracting and selling raw produce ([Reinert and Daastol \(2004\)](#)). But why the rise of Western Europe and not other geographically gifted spaces? [Reinert and Daastol \(1997\)](#) note that on the eve of Atlantic trade (early 15th Century), England under Henry VII emulated the Republic of Venice's mercantilist policies—import tariffs and prohibiting the export of machinery etc.,—with the sole objective of expanding production possibilities. [Serra \(1613\)](#) contends that mercantilist policies are responsible for the wealth of the Republic of Venice (a resource poor country) as compared to the resource rich Kingdom of Naples. Similar policies were enacted in France under Louis XI around 1462. Ergo, geography is not destiny. Our geographical synthesis is simply to present a framework that is consistent with historical time and implies the following.

geography  $\implies$  economic structure<sub>t</sub>.

We have omitted a time subscript from geography to demonstrate that it is not time varying but this is not necessarily the case in the context of climate change. The latter is bound to alter production possibilities of what and how to produce and therefore, economic performance. Notwithstanding the historical significance of geography, it cannot explain the converge we observe with the rise of successful East Asian countries. However, it does suggest that the Asian convergence is related to a fundamental change in production possibilities. Either, the Asian Tigers have developed new production technologies and/or managed to produce goods/services with higher growth payoffs. The principal question is how they were able to do so? More on this below.

## 3.2 Economic Performance & Distribution

### 3.2.1 Growth

*Let us compare Poland with England: both nations at one time were at the same stage of culture; and now what a difference. Manufactories and manufactures are the mothers and children of municipal liberty, of intelligence, of the arts and sciences, of internal and external commerce, of navigation and improvements in transport, of civilisation and of political power. They are the chief way of liberating agriculture from its chains...The popular school [that is, Adam Smith and J.B. Say] has attributed this civilising effect to foreign trade, but in that it has confounded the mere exchanger with the originator.*

— Friedrich List, 1909, pp.142. *The National System of Political Economy.*

Why do economic structures matter for growth? (Beckford, 1999, pp.216) notes the following economic obstacles consistent with low value added production structures: high inequality and correspondingly low demand, declining terms of trade, poor forward and backward linkages, limited technical change and a predisposition to foreign capital. These ideas are summarized in Hidalgo et al. (2007)'s notion of the *Product Space*—a network representation of the relatedness or proximity between products traded in the global market. When a country produces a commodity that is located near the centre of the product space it can also produce many other related products with existing technology—herein lies the seed of economic diversification. But this does not hold at the periphery of the product space—goods located there are unrelated and require highly specialized technology. It follows that growth reducing and enhancing structural changes are the outcome of transformations from the centre to the periphery and the reverse respectively.

In concrete terms, economic structures matter for the following reasons. First, higher value added economic activities are produced in imperfectly competitive markets that keep wages and profits elevated for longer periods. This sustains aggregate demand and internal growth. Second, Dasgupta and Stiglitz (1980) explain that imperfectly competitive market structures are more conducive for innovation and technical progress—this is recently supported by Andreoni (2014). Third, Constantine (2017b) notes that production structures based on increasing returns economic activities are more likely to fertilize the seeds of democratic transition and consolidation; and following Aghion et al. (2008), democratic property

rights are crucial for the diffusion of technology. We now have dual routes through which economic structures determine the rate of technical change and economic growth: the economic route, which we have already explained, and now the political route—from economic structures to political transitions to technical change. Fourth, economic activities with increasing returns enjoy higher income elasticity of demand in export markets and this make them ideal growth propellers for highly open economies (Thirlwall (1979)). Fifth, Constantine notes that job ladders are longer for technology intensive economic activities and serve as an important mechanism for upward labour mobility, which improves the distribution of income. Sixth, Constantine (2016b) and (Hartmann, 2014, pp.60-61) contend that a country’s economic structure is an important determinant of the allocation of human capital between entrepreneurship and rent seeking (broadly defined); and therefore, indirectly affects the growth process through the labour market. It follows that technology intensive production structures are growth enhancing because they stimulate demand for wealth creating activities like entrepreneurship.

Fundamentally, a country’s production structure is the basic source of its economic performance.

### 3.2.2 Distribution of Income

*Is a country’s ability to both generate and distribute income determined by its productive structure? Economic development pioneers, like Paul Rosenstein-Rodan, Hans Singer, and Albert Hirschman, would have said yes, since they argued in favor of a connection between a country’s productive structure, and its ability to generate and distribute income.*

— Hartmann et al, 2017, pp.75. *Linking Economic Complexity, Institutions, and Income Inequality.*

In the previous section we have hinted to the distributional implications of productive structures to demonstrate the joint determination of growth and distribution as shown below. Economic structures in the current period  $t$  determine the aggregate growth of the economy and the (pre-tax) distribution of income in  $t + 1$  (the future period). But what are the mechanisms?

$$\text{economic structure}_t \implies \left. \begin{array}{l} \text{economic performance}_t \\ \text{income distribution}_{t+1} \end{array} \right\}$$

A productive structure based on a wide mix of complex products is more likely to have a wide range of occupational choices, relatively flat hierarchy of occupational structure, wide diffusion of skills and knowledge and deepening class consciousness (unionization) (Hartmann, 2014, pp.70). It follows that relatively complex economies have structural limits to the growth in top incomes, high wage shares and a strong middle class—less inequality.

Let us consider an agrarian production structure, composed of a limited range of low value added products. First, there are pockets of high return economic activities but the great share of employment and productive activities are low skill and low return—this is the first basis of disparities in income. Second, given the simple production technologies, skills and productive knowledge are embedded in small groups—it follows that higher economic rewards are appropriated by small groups. Third, occupational choice or lack thereof, in the case of slavery, is confined to unskilled labour. Finally, a tall hierarchy of occupational structure emerges to regulate the mass of unskilled labour<sup>5</sup>. High inequality emerges on all fronts—growth in top incomes, low wage shares and a minuscule middle class. But the reverse holds with a structural change to the centre of the product space.

We have just outlined the basic *economic* mechanisms of how production structures determine pre-tax income distribution. These capture in general terms what we call the Kuznets-Lewis curve. (Lewis, 1954, pp. 158, 159, 172) first outlined how the dynamics of capitalist development (read economic change towards centre of product space) increase inequality until labour becomes scarce and in turn, reduce income inequality. Lewis notes that in the open economy setting, where immigration and the export of capital are possible, the growth-inequality relationship is ambiguous. Nonetheless, Kuznets (1955)'s inverted-U is present in Lewis' closed economy model. Lindert (1986), Williamson (1985) and Aghion and Bolton (1997) propose the following explanations for the Kuznets-Lewis curve respectively: 1. Inverted-U exists because of the declining importance of income generated by land as the economy grows, 2. As the economy develops, the increases in wages exceed the growth in the return on capital and 3. As capital formation expands, the rate of interest falls and ergo, the poor can invest and catch up. These explanations fall within our basic framework—we expect land rents to fall, wages to exceed the return on capital and lower interest rates as occupational choices expand and as skills and knowledge become widely diffused with a

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<sup>5</sup>Ortiz (1947) explained how different distributional outcomes are possible in agrarian structures with different technological commodities. He argues that low skill intensive sugar production led to slave and master relations in Cuba—extreme inequality; in contrast to skill intensive tobacco production that produced a free bourgeoisie class.

transformation towards the centre of the product space.

[Acemoglu and Robinson \(2002\)](#) argue that it was political mobilization of the masses and the extension of the franchise in Western Europe during the 19th Century that generated the Kuznets-Lewis curve. They explain that the Industrial Revolution in the 18th Century gave rise to growing inequality and social unrest—the seeds of political mobilization. To explain the absence of the Kuznets-Lewis curve in East Asia, Acemoglu and Robinson posit that countries in this region initially had low inequality due to land reform in the 40s–60s. It follows that their economic transformation was largely inclusive and thus, delayed political reform. These scholars blame disorganized civil society for the absence of the Kuznets-Lewis curve in autocratic and natural resource based countries (e.g. Sub-Saharan Africa). We agree with the general spirit of Acemoglu and Robinson’s thesis, that there is a political economy dimension to the Kuznets-Lewis curve—we expand on this [below](#), but here we note the following points.

First, it is unsurprising that resource rich countries do not engender a Kuznets-Lewis curve—an economic transformation to a more complex economic structure is a necessary condition. In [section 3.2.1](#) we have noted the structural origins of a democratic transition and consolidation. Natural resource rich countries provide an easily identified tax base—the natural resource—it follows that democracy is highly redistributive and elites enforce repression to delay the Kuznets-Lewis dynamic. As it relates to their “disorganized” civil society argument—[Constantine \(2016a\)](#) contends that low technology production countries have missing and failing markets and this in term give rise to informal means of organizing production, distribution and exchange. These are largely undertaken among informal networks and herein lies a fundamental division in civil society—there are included and excluded members in the more important informal networks. It follows that a “disorganized” civil society is also a function of production structure—structural change towards the centre of the product space promotes social cohesion through the economic mechanisms outlined earlier. Second, the growth process in East Asia has not been inclusive—see [Milanovic \(2016\)](#), [Jain-Chandra et al. \(2016\)](#) and [Piketty et al. \(2017\)](#) for recent evidence on rising income inequality in East Asia, Asia and China respectively. This experience begs the question as to why Acemoglu and Robinson’s political mobilization does not emerge and produce a Kuznets-Lewis curve. Finally, the extension of the franchise in Europe and the Industrial Revolution are not coincidences—with a change towards a more complex productive structure, the tax base is harder to identify as compared to natural resource rich countries. Therefore, the extension

of the franchise is relatively less redistributive, so elites compromise.

In more recent work, [Scheve and Stasavage \(2017\)](#) demonstrate that democracy does not necessarily engender lower inequality—at best this relationship is ambiguous. Let us assume that political mobilization does occur and the masses are able to bargain for greater redistribution. [Constantine \(2017c\)](#) presents a model that demonstrates how redistribution in a small and open low technology economy can engender balance of payment crises. In this case, inegalitarian economic policies are consistent with macroeconomic fundamentals. It follows that there are structural-economic limits to greater redistribution or the Kuznets-Lewis dynamic.

[Piketty \(2014\)](#), [Milanovic \(2016\)](#) and numerous empirical studies fail to consistently verify the Kuznets-Lewis curve. The emerging consensus is that overtime we are more likely to observe a Kuznets-Lewis *wave*. The conventional explanations for the upswing in income inequality in the US and Europe are deunionization, the growth of finance, decline in top marginal tax rate, technological change and globalization ([Stiglitz \(2015\)](#) and [Stockhammer \(2013\)](#)). This recent upsurge in income inequality is consistent with our structural theory. The post-industrial economic structures of the US and Europe have increased income inequality primarily because it failed to generate economic activities consistent with a relatively flat hierarchy of occupational structure.

The growth of the so-called new economy is based on financial services, where computer algorithms estimate sophisticated models to minimize portfolio risk. Further, financial rents emerge when economic returns are not based on investment fundamentals ([Tomaskovic-Devey and Lin \(2011\)](#))—firm investment plans and R&D—but financial bubbles and investor “noise”—scandals, leaks and the like. The so-called FIRE (Finance, Insurance and Real Estate) economy becomes an important pocket of high incomes but these returns far exceed skill and demand and supply for financial talent ([Lin and Tomaskovic-Devey \(2013\)](#)). Given that talent and skill are less important to financial rents, the FIRE economy does not engender a wide diffusion of skill and knowledge ([Cecchetti and Kharroubi \(2015\)](#)). Also, the enormous financial rents serve as powerful attractors to the FIRE economy and by extension, reduce the *effective* range of occupational choice ([Kneer \(2013\)](#)). Non-financial services have also increased in the new economy and given rise to a multitude of part time and low wage employment ([Autor and Dorn \(2013\)](#)). Manufacturing has decreased tremendously and through technical change has generated its own dualism—pockets of high and low wages. In short, the post-industrial economic structure has increased the hierarchy of occupational

structure and all dimensions of income inequality (Kwon and Roberts (2015)).

The empirical literature on productive structures and income inequality is thin but we briefly discuss three new contributions. Hartmann et al. (2017) undertake a multivariate regression analysis of over 150 countries between 1963-2008 and find that productive structure as proxied by the Economic Complexity Index (ECI) is inversely related to the Gini after controlling for institutions, aggregate income, human capital and export concentration. The ECI is an important predictor of future income inequality. Further, these scholars calculate what they call a Product Gini Index (PGI)—a weighted average of the Gini coefficients of the countries that export a product. It follows that each commodity is consistent with a level of aggregate income inequality. Products like cocoa beans, flour and animal hair are consistent with Gini coefficients that exceed 0.5, while textile machinery and paper machine parts produce much lower Gini coefficients. Hartmann et al. (2016) undertake a similar analysis for the Latin American region and find that member countries export products that are consistent with high inequality and low complexity. Constantine (2017a) presents new evidence of top income shares for selected CARICOM member states and find remarkable stability, with exceptions relating to exogenous shocks like hurricanes and structural adjustment programs that adversely affect capital assets. Constantine explains the absence of a Kuznets-Lewis *wave* due to the absence of meaningful structural changes.

### 3.3 Power

*As in all societies, the distribution of real political power is identical to the pattern of distribution of economic and social power.*

— George L. Beckford, 1999[1972], pp.79. *Persistent Poverty: Underdevelopment in Plantation Economies of the Third World.*

At the most basic level, the distribution of income is a fundamental determinant of de facto political power—that power not allocated by formal political institutions like a constitution or government agency. When income inequality is extremely high, say 19th Century Europe or present day US and Europe—the rich have disproportional influence on formal political institutions (Piketty (2014) and Stiglitz (2013)). For example, in 2010 the Supreme Court in the US in its ruling on *Citizens United vs. Federal Elections Commission* equated *Corporations* to *individuals* and this effectively allows wealthy individuals to become major donors to political parties. With growing top income share, ordinary citizens cannot



compete—the democratic principle changes from one person one vote to one dollar one vote (Stiglitz (2013)). Alternatively, consider the case of slavery, where slave owner or planter class controlled every institution important for societal function (Beckford, 1999, pp.61,74,78). Even in the post emancipation period, money played a crucial role in politics—(Engerman et al., 2002, pp.72,73) present evidence that show how wealth was a voting requirement for many Latin American countries between 1840-1940. Strikingly, (Engerman et al., 2002, pp.75) show that the wealth based requirement was only removed in the mid 20th Century in Barbados. The recent ruling on Citizens United re-establishes this old tradition.

$$\left. \begin{array}{l} \text{income distribution}_t \\ \text{political institutions}_t \end{array} \right\} \implies \left. \begin{array}{l} \text{de facto political power}_t \\ \text{de jure political power}_t \end{array} \right\}$$

De jure political power is derived from political institutions, say a constitution that outlines the powers of a President or the principle of separation of powers. But we have just discussed how de facto political power is leveraged to influence formal political institutions—like a wealth based requirement for voting. We argue that there is a complex interaction between de facto and de jure political powers and the strength of this interaction depends on the extent of income inequality. When extreme inequalities of income are present, de jure political power is hijacked by the de facto influence of the rich and powerful. Conversely, when the growth in top incomes is constrained, there is meaningful separation between de facto and de jure political powers. The central insight that emerges is that there is no unambiguous relationship between democracy and redistribution on the one hand and democracy and growth on the other. These depend on initial inequality and economic structure. The second insight is that the rich use their wealth and status to influence policy and this is where our structural analysis takes an institutional turn.

Acemoglu et al. (2008) asked: is it economic or political inequality that matters for long-run development? These scholars explain that political inequality leading to economic inequality is at least as important as the reverse mechanism, if not more important in explaining development outcomes. The idea that the degree of political equality is fundamental is a thesis about whether liberal democracies (political equality) cause growth. In recent work, Pozuelo et al. (2016) employed a worldwide survey of 165 country-specific democracy experts to separate democratic transitions into those occurring for reasons related to economic turmoil and reasons more exogenous to economic growth. Using this novel identification strategy, they conclude that political equality does not cause growth. The principal point is



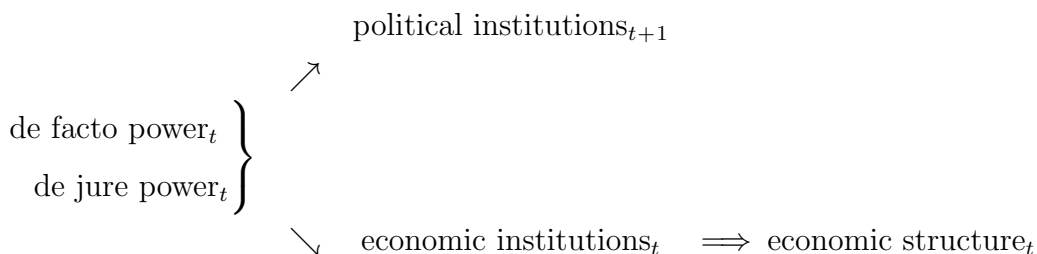
that how de jure political power is exercised—even if it is equally distributed—depends on how closely it interacts with de facto political power.

### 3.4 Institutions

*[...] very different institutional structures have often been found to be reasonable substitutes for each other, both in dissimilar as well as similar contexts. The historical record therefore, does not seem to support the notion that any particular institution, narrowly defined, is indispensable for growth.*

— Stanley Engerman & Kenneth Sokoloff, 2005, pp.643. *Institutional and Non-Institutional Explanations of Economic Differences.*

In the previous section, we have outlined how de facto power can influence policy and formal political institutions. We illustrate this below where de facto power shapes political institutions in time  $t + 1$ . Elites infinitely prefer to exercise control and influence overtime and one way of committing current and future politicians to their cause is by legislating elite-friendly rules/laws. This is why lobbying in the US is legal and thus, legitimate. While political institutions are largely enforced in developed countries, enforcement is the exception rather than the rule in poor and developing countries. Public and academic interest in reducing corruption demonstrate the problem of enforcing anti-corruption legislation in these countries. In cases where political institutions are inadequately enforced, elites find other means of influencing current and future policy. One effective way is to protect the basis of their economic position—the present economic structure. It follows that elites influence de jure political power to form economic institutions that reinforce the economic structure—this is shown below.



The strategy of promoting structural rigidity is the same as advancing elite-friendly legislation—both are slow changing and consequently, serve as effective methods of exercising power and influence overtime. One noteworthy example is the absence of land reform in Latin America, (Engerman et al., 2002, pp.64) note that this was so on the account of deliberate intervention by economic elites. It follows that structural change is as consequential as political change for both economic and political elites. This explains why growth enhancing structural change is the exception and why we observe institutional persistence, entrenched inequality and what (Beckford, 1999, pp.215) calls an under-development equilibrium. But the equilibrium among economic structures, political power and institutions is not limited to under-developed countries (in the sense that Beckford uses this term). In fact, this is the kernel of all forms of structural rigidity—whether it is the FIRE economy or complex and technology intensive economic structures.

We are now in a better position to present our political economy perspective on the Kuznets-Lewis wave as noted earlier. Structural change ignites a Kuznets-Lewis process and by definition, this changes the distribution of de facto political power in society and consequently, the interaction between de jure and de facto powers. Therefore, institutional changes (political and economic) are expected. In the case of the US de-industrialization, income share of the middle class declined and financial rents (top incomes) dramatically increased—with this change in the distribution of de facto power, the US experienced the following institutional changes—tax cuts, financial de-regulation and de-unionization. The principal objective of these institutional changes is to protect the structural-economic basis of financial rents—this can be stated differently—these institutional changes strengthen elites’ property rights.

It is imperative to note that in our view economic institutions are not simply *institutions of exchange* (property rights), the following quote illustrates the limitation with this conventional perspective.

[...] “inclusive” institutions are a web of democratic political institutions, strong rule of law and the protection of private property for a broad cross section of society. [...] both “inclusive” and “extractive” institutions focus primarily on institutions of exchange. The preoccupation with the latter is the outcome of the implied assumption that production capabilities already exist. But poor countries, which by definition lack production technologies, cannot ignite robust growth by “downloading” institutions of exchange from developed countries. [...] imperfect exchange becomes less of a problem

when one realizes that poor countries have little to exchange. [(Constantine, 2017b, pp.2-3)].

Constantine draws the distinction between institutions of production—industrial policies: tariffs, subsidies, cheap and directed credit etc., and institutions of exchange—property rights, rule of law, etc. He notes that only institutions of production promote growth enhancing structural change. In fact, institutions of exchange engender structural and institutional inertia—while these may be growth enhancing by exploiting existing opportunities or creating new opportunities for trade—this is done within the *existing* productive structure. The tax cuts, financial de-regulation and de-unionization that followed the US de-industrialization were undertaken to improve the gains from trade *within* the post-industrial economic structure.

Institutions of production are the means by which economies can transcend structural inertia and its corresponding equilibrium with power and institutions. In [section 3.1](#) we asked what explains the rise of the Asian Tigers. Our model is now able to provide an answer—various institutions of production were *adequately enforced* to produce increasingly complex and technology intensive products. Crucially, our model is able to explain why this is exceptionally difficult—successful structural transformation rests on the complex mix of de facto and de jure political powers. In other words, when agents of these competing powers are able to solve the expected distributional conflict associated with structural changes and the market failures<sup>6</sup> associated with learning new technologies; a growth enhancing transformation begins. Most countries fail on both fronts but even if the expected distributional conflict is solved by consensus or force, many firms may fail to learn how to competitively produce complex goods; perhaps because of the well-known market failures or their overwhelming de facto power that can demand indefinite subsidies or other forms of protection.

It follows that [Evans \(1995\)](#)'s *embedded autonomy*—the state's ability to maintain its autonomy from private interest while simultaneously engaging the private sector—as observed in East Asia—was largely a historical coincidence that at times required the threat of violence to tame de facto power. It is unlikely that this historical accident can be replicated elsewhere. This has been the principal Caribbean Marxists' critique of industrial policies—that the effectiveness and social implication of these largely depend on whose interest the state represents ([Bernal et al., 1984](#), pp.73-76). The following quotes demonstrate this point.

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<sup>6</sup>Market failures include information, coordination, human capital and technological externalities etc., see [Hausmann and Rodrik \(2003\)](#) for elaboration.

Nationalization [...] a critical important aspect of the socialization of the means of production in the transition; but while nationalization is a necessary condition, it is not a sufficient one [...] The objective and impact of nationalization depends on the *class character of the state* [...] (Bernal et al., 1984, pp.74), Emphasis added.

The transition to socialism requires intervention of the state [...] The sufficient condition is that the class character of the state must be the dominance of working classes. (Bernal et al., 1984, pp.73).

Our model presents a guide for policy on this front. A transparent analysis of the distributional payoffs from various industrial policies and a strategy to compensate losers can potentially tame the anticipated distributional conflict. Still, this assumes that all interested parties find consensus on the necessity of structural change—a wholly unlikely scenario—it follows that power struggle over control of the state rather than embedded autonomy is the norm.

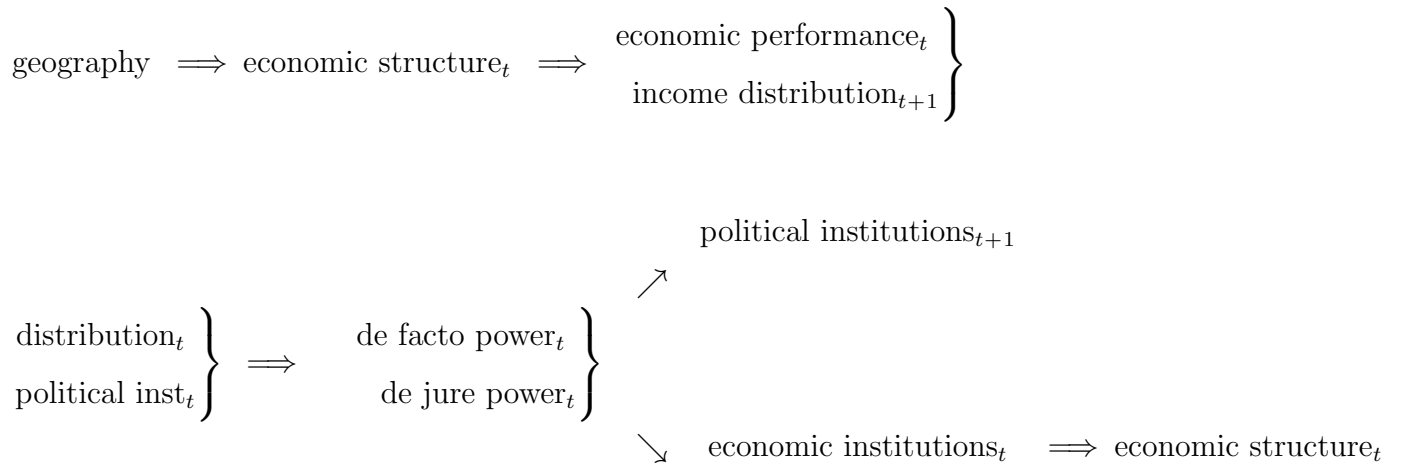
### 3.5 General Framework

Pulling all the pieces together leads to the following schematic of our framework. Economic structure and income distribution are our two state variables<sup>7</sup>, knowledge of these in time  $t$  is sufficient to determine all other variables in the system. A country's economic structure in time  $t$  determines its current economic performance and income distribution in  $t + 1$ . Historically, geography played a central role in the formation of economic structures, this is less so today but not unimportant. Income distribution in time  $t$  determines the complex relationship between de facto and de jure political powers in time  $t$  and influences the evolution of political institutions over time and the type of economic institutions enforced in the current period. This in turn determines the economic structure in time  $t$ . In our schematic, political institutions and power are given in time  $t$  but are endogenous over time.

The fundamental source of persistence is the economic structure and it has two dimensions. First, it is slow changing and second, it generates an income distribution and corresponding distribution of de facto power that influences current de jure political power to maintain the economic structure in time  $t$ . This tendency towards persistence is depicted in our schematic below.

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<sup>7</sup>A state variable is one of the set of variables that describe the behavior of a dynamical system, particularly its future behavior in the absence of shocks to the system.



Notwithstanding the tendency towards persistence, our model emphasizes the potential for change. Shocks to de facto political power—say, through warfare, revolutions or epidemics that significantly alter the distribution of income—can lead to fundamental changes in both political and economic institutions and consequently, the economic structure. When institutions of production are adequately enforced, we observe growth enhancing structural change—alternatively, when emphasis is placed on institutions of exchange, growth reducing structural change is evident. Shocks to the economic structure, say through technological innovations or donor policy intervention, alter the growth calculus, the distribution of income and the evolution of the system. In the case of donor policy intervention, consider the IMF’s structural adjustment programs that led to de-industrialization in many Latin American and Caribbean countries. This demonstrates that our framework is able to explain income disparities from an international political economy perspective. Foreign intervention—well intended or otherwise—that perpetuates a low technology economic structure does not promote economic development and convergence. The same holds if foreign direct investments are located at the periphery of the product space.

How does our framework relate to the model presented by [Acemoglu et al. \(2005a\)](#). Both frameworks agree that the distribution of resources and its evolution are central determinants of economic persistence and change. However, unlike our model, these scholars posit that political institutions are the second state variable. We place less emphasis on political institutions and their de jure power because their effectiveness largely depend on the distribution of resources (say income or wealth) and the corresponding distribution of de facto power. Moreover, our framework demonstrates that the distribution of resources are

not independent of an economy's productive structure. Thus, our framework recommends industrial policies rather than governance reforms as a means to economic change.

Our framework is a useful simplification that produces analytical insights to explain why some countries are rich and others are poor. The synthesis stands on the shoulders of giants who advanced competing explanations for development and poverty across space and time. It is well positioned to answer basic questions like: 1. What are good economic institutions? 2. Why does democracy function differently across geographies and time? 3. What is the role of geography in the process of political and economic change? 4. Why do industrial policies fail so often? 5. What is the role of income and wealth inequality in the dynamics of economic development? We provide answers to these questions and others in the empirical cases below.

## 4 Case Studies

In the case studies that follow, we do not provide a detailed account of the political and economic history of the respective countries. Rather, by way of analytical narratives we illustrate the workings of our model.

### 4.1 Guyana

Guyana—like many of its sister colonies in the Caribbean, was used primarily for sugar cultivation. Its hinterland—not well suited to drainage and irrigation (Khemraj (2015))—made inland farming too expensive and its distance from the coast made transport and trade prohibitive (Taeuber (1952)). Khemraj notes that the Dutch colonizers opted for the coastland for settlement and agriculture. But the coastland is below sea level and thus, prone to flooding, which made agriculture a costly economic activity (Williams (1945)). Sustained profits required wage suppression, high sugar prices and political lobbying by the planter class for preferential prices (Adamson, 1972, pp.33). It follows that geography played a central role in determining location of settlement and costs of production. Moreover, soil fertility placed a premium on agricultural produce—sugar—a low technology commodity with diminishing returns.

In section 3.2.2 we have demonstrated how low technology commodities like sugar, produce high inequality—when this is paired with political inequality (slavery)—Guyana be-

comes an oligarchic society. Therefore, to understand the dynamics of change or lack thereof in the Guyana case, its low technology economic structure and high income inequality must be central to the analysis. The two state variables in our framework.

The abolition of slavery in 1834 gave way to the village movement (Rodney (1981))—the acquisition of land by ex-slaves for purposes of housing and non-sugar farming (Josiah (1997)). This was facilitated by exceptionally high saving propensities and Bourne (1975) estimates these to be between 0.21-0.41 based on annual wages and land outlays. It is important to emphasize here that the village movement and its consequent development of an independent peasantry were the outcome of Guyana's land size (geography) relative to its labour supply (Farley (1964)). It follows that geography played a key role in enhancing the bargaining power of ex-slaves *vis-a-vis* the planter class—(Rodney, 1981, pp.648) notes that they bargained for higher wages and better working conditions. This is a clash of interests that threatens the distribution of political and economic power and the economic viability of high-cost sugar cultivation.

This formidable threat led to a new economic institution—indentureship—that sought to do two things: 1. Reduce the labour cost of sugar production and by extension, reinforce the production structure and 2. Reduce aggregate wage share and therefore, maintain high income inequality. But indentureship does not address the geographical origins of the emerging independent peasantry. This led to another key economic institution—land policy (Farley (1954)), which prevented ex-slaves from acquiring more lands. Moreover, Bourne (1975) explains that prohibitive taxes were imposed on the commodities consumed by ex-slaves and Danns (1997) contends that they were deliberately denied access to credit. These economic policies were the sources of persistent inequality and limited structural change—the land policy prevented the growth of non-sugar economic activities. This historical account demonstrates our equilibrium of political power, institutions and economic structure.

The policy of indentureship led to the immigration of Chinese, Indians and Portuguese and Guyana's ethnic cleavages or distrust served as the basis of political mobilization—even today. It follows that distributional conflict assumes a multi-ethnic dimension and complicates the evolution of political institutions and the dynamics of structural change and persistence. For example: growth enhancing structural change produces winners and losers and the ethnic distribution of the payoff structure is central in determining whether or not (or how) structural change is promoted. In terms of the *how*—structural change in the direction of inequality promoting economic activities serve existing interests and we call this

*primitive diversification*. With the inflow of indentured labourers, colonial administrators encouraged Portuguese to undertake non-tradable economic activities like commerce and retail trading (Moore (1975)). Just as the FIRE economy, these non-tradables increased income inequality and elevated the economic status of the Portuguese and overtime even rivaled the plantocracy (Wager (1975)).

Constantine (2017d) presents new evidence to show that the richest 10 percent in Guyana owns 41 percent of household income as of 2013, the same level of income concentration in 1960. Further, he posits that this elite group has its colonial origins in the rise of the Portuguese. Why is this consequential to economic change? At the most basic level, economic elites seek to protect the economic basis of their top incomes or only advocate primitive diversification. Here lies an important source of Guyana's failure to ignite the process of growth enhancing structural transformation. Chandisingh (1983), Thomas (1988) and Ishmael (1993) argue that the de facto power of elites were largely unchallenged under both dictatorship and democracy in Guyana. For this reason, only primitive diversification took place under both political systems. In present day Guyana, economic elites are not exclusively of Portuguese origin, they are now a complex web that includes both Afro and Indo-Guyanese but this hardly alters the story—these economic elites have entrenched interests in promoting only primitive diversification.

The evolution of Guyana's productive base has been along the periphery of the product space. It has moved away from mono-crop sugar production to non-tradable economic services and to a tradable basket of primarily rice, sugar, bauxite, gold, diamonds and non-traditional agriculture. Like sugar in its colonial history, bauxite served as the principal export in the 70s and gold now plays a similar role. Given this primitive diversification, it is no surprise that Constantine (2017d) finds little evidence of a Kuznets-Lewis wave as it relates to top incomes in Guyana.

Recently, Guyana has discovered oil and invited Exxon Mobil to undertake further exploration and production. Like other low technology commodities, oil is located on the periphery of the product space but has the potential to transform the economy. However, initial conditions of high income inequality does not augur well for an oil boom; the latter is likely to exacerbate distributional tensions. Guyana's own history also suggests that the oil economy is likely to do more harm than good. As noted earlier, sugar, bauxite and gold were at different times dominant exports and presented familiar possibilities as does the oil economy. But colonial initial conditions as do present day, were aligned in the interest of special



groups that ensured that the growth process was extractive and economic diversification was primitive.

Inevitably, we have omitted numerous details about the history of Guyana, in particular, its well-known ethnic preferences and voting pattern (Khemraj (2016)). But for the purpose of illustrating the workings of our model this is less important. Guyana’s ethnic conflict divides the working class and exacerbates the distributional conflict, which only reinforces one of our state variable—inequality—as a law of motion that explains Guyana’s economic and political development. When this law of motion is juxtaposed with a low technology productive structure, Guyana’s persistent under-development or lack of growth enhancing and inclusive structural change become a *stable* equilibrium outcome. Fundamentally, its erratic growth and highly unequal distributional outcomes are determined by the low technology content of its productive base.

## 4.2 Barbados

The colonial economic structure of Barbados—mono-crop sugar production— is not appreciably different from colonial Guyana. Yet, a substantial divergence between these countries is observed (DaCosta (2007) and Grenade and Lewis-Bynoe (2011)). The Guyana case allows us to demonstrate the dynamic equilibrium of under-development with the use of our framework, while the Barbados case is well positioned to illustrate the workings of relative development. Unlike Guyana, Barbados has a unique geographical endowment. This is best described as follows.

Governor Atkins reported in 1676 that the whole island looked like a beautifully cultivated green garden, and his successor Sir Richard Dutton echoed him in 1681: it is on great City adorned with gardens, and a most delightful place. [As cited in (Dunn, 1969, pp.5)].

(Greene, 1988, pp.155) notes that Barbados was well suited for permanent residency and developed a relatively large white settlement (Beckles, 2007, pp.53) and (Dawson, 2011, pp.136)). Even in present day, Barbados is widely known for its luxury tourism—a key earner of foreign exchange and means of employment.

A short digression on European settlement and the development of “inclusive” institutions is useful here. While Barbados had a relatively large European settlement, the historical evidence shows that Barbados had an especially extractive governance framework; contrary

to the prediction of new institutional economics—see [section 2.2](#). Barbados was the only Caribbean island to not abolish its system of elite representation in favour of Crown Rule ([DaCosta \(2007\)](#) and [Barrow \(1983\)](#)). More strikingly, ([Howard, 1989](#), pp.2) notes that the elite group was a national autocracy that at times challenged the colonial authority. On the eve of World War II, [Nicholls \(1969\)](#) argues that Barbados was the same as it had been three hundred years earlier; instead of slaves and planters, it was made up of planters and a free but landless population. It follows that Barbados’ relative development cannot be explained by “inclusive” institutions through the settlement of Europeans—the causal explanation must lie elsewhere. Finally, the legacy of extractive institutions plagues modern Barbados. One example is its Defamation Act—originally conceived in colonial Barbados to silence dissenters—but presently engenders a norm of self-censorship ([Tennyson and Barrow-Giles \(2008\)](#)) and threatens potential corporate whistleblowers ([Alleyne et al. \(2017\)](#)). Collectively, these lead to what [Tennyson and Barrow-Giles \(2008\)](#) call a culture of fear.

[Dunn \(1969\)](#) notes that the great majority of landholders were small farmers in colonial Barbados and [DaCosta \(2007\)](#) attributes this to the small size of the island, which led to high land prices and modest landholdings. Dunn estimates that 71 percent of landholders were small planters—landholders with fewer than twenty slaves in 1679. Also, Barbados’ small land size facilitated intense sugar cultivation of the entire island ([Beckles \(2007\)](#)) and [Cumper \(1962\)](#) notes that the oligarchic ownership of arable land remained until the 1950s. Just to fix ideas, [Downes \(1987\)](#) provides evidence to show that in 1970, the top 10 percent of landowners owned 77 percent of the land in Barbados. This historical account and recent evidence ([Constantine \(2017a\)](#)) firmly establish Barbados as an island with high income concentration.

A critical juncture of the divergence between Guyana and Barbados is the immediate post-emancipation period. While Guyana experienced rising labour cost ([Bulmer-Thomas, 2012](#), pp.74) and growth in the de facto power of ex-slaves; Barbados maintained its plantation system and increased output immediately after abolition ([Engerman, 2007](#), pp.51) and ([Bulmer-Thomas, 2012](#), pp.60). Unlike Guyana, the land to labour supply ratio is small and this kept ex-slaves in a constant state of tenantry. In other words, after abolition, ex-slaves continued to work for the plantation enterprise ([Nicholls \(1969\)](#) and [Barrow \(1983\)](#)) and this kept wages low and profits and output high as compared to Guyana. This demonstrates one mechanism of how the geographical differences between Guyana and Barbados were historically consequential.

Economic inequality paired with the geographical endowments that valorize luxury tourism engender a significant change in the productive structure of the Barbados economy. Here lies the fundamental source of the Barbados-Guyana divergence. Why does luxury tourism produce more stable growth than low technology commodities? First, it has higher income and price elasticity of demand in world markets ([Onafowora and Owoye \(2012\)](#)) and this ties Barbados' growth cycle to those in developed countries. So long as robust growth is observed in world markets; demand for luxury tourism is stable, unlike many low technology commodities. Second, the full exploitation of luxury tourism leads to institutional spillovers that are growth intensive. [Constantine \(2016a\)](#) explains that luxury commodities have certain institutional requirements that are similar in nature to the institutions required to fully exploit technology intensive economic activities. In the case of beach tourism—the Barbados case—institutional and organizational inputs range from low crime to adequate public services. In the absence of these, travel advisories from foreign governments are unlikely to be encouraging and tourists are unlikely to enjoy their stay or return if these are lacking. In short, the institutional inputs for luxury tourism create an attractive business climate<sup>8</sup>.

Was the shift to luxury tourism primitive diversification or inclusive structural change? To provide an answer we need to understand the shift to tourism<sup>9</sup> services as a change to a wider range of services, including financial services ([Premdas \(2013\)](#) and [Barrow \(1983\)](#)). Both tourism services and the FIRE economy were developed around the 1970s ([Bulmer-Thomas, 2012](#), pp.617) and we have already demonstrated in [section 3.2.2](#) how FIRE economies increase inequality. While the FIRE economy and luxury tourism generated better economic performance relative to Guyana, they also engendered an extractive growth process in Barbados. See [Premdas \(2013\)](#) and [Barrow \(1983\)](#) for a discussion on how the old commercial elites transformed themselves into conglomerates that dominate the distributive trade and the FIRE economy. Like the sugar economy in colonial Barbados, the FIRE economy serves as the economic foundation of the oligarchy.

Consistent with our framework, we have demonstrated how Barbados' geographical endowments shape its economic structure and consequently, its growth mechanics and income

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<sup>8</sup>See [Ortiz \(1947\)](#) and [Hillman and D'Agostino \(1992\)](#) for a similar argument of causation running from production structure to institutional performance. These scholars show that sugar as compared to tobacco production led to more extractive institutions and inequality. This even holds across geographies under different colonial rule. As [Reinert \(1996\)](#) notes: “no matter what your past, producing the same thing will make you alike”.

<sup>9</sup>Barbados had experienced a short stint of manufacturing but its government industrial plan of 1978-1982 noted that the smallness of the island is a natural constraint, see [Potter \(1981\)](#) for details.

distribution. Further, we have illustrated the structural origins of Barbados’ “inclusive” institutions. But when we take a closer look beyond the hidden abode of production and repeal the veil of “inclusive” institutions, we observe a deeply extractive growth process. While de jure political power is in the hands of the voting masses, de facto political power is concentrated in a group with close ties to Barbados’ colonial legacy ([Beckles \(1989\)](#) and [Barrow \(1983\)](#)).

The Guyana-Barbados comparison demonstrates the salience of geography in forming production possibilities—low technology and high luxury economic activities in Guyana and Barbados respectively. Notwithstanding this qualitative difference in economic structures, their colonial history laid the foundation of extreme economic and political inequality that affect the evolution of political and economic institutions today. Initial conditions of high economic inequality firmly establish de facto political power in a select group, usually with close colonial ties. It is this economic group that guides economic transformation in the direction that fortifies their income position—primitive diversification. Still, this outcome is not inevitable; only the consequence of unchallenged vested interests. It is unlikely that vested interests will facilitate an inclusive economic transformation but there is no guarantee that confrontation with economic elites will lead to the adequate enforcement of institutions of production. Inclusive economic development is the reward for those countries that manage to do the latter.

### 4.3 Mauritius

Mauritius is a model case that demonstrates both inclusive structural transformation and primitive diversification. The so-called miracle case is so prominent that various perspectives on comparative development claim to explain the success that is Mauritius. One notable example is [Robinson \(2006\)](#), who explains the Guyana-Mauritius divergence on account of stronger protection of private property and democratic politics in Mauritius. We remain unconvinced with this narrative. While property rights protection and democracy are part of the Mauritian story, we argue that these are not fundamental causes of its relative development.

Central to the Mauritian story is its colonial history. France controlled the island until 1814 and crucially, the French plantocracy (hence forth franco-Mauritian plantocracy) remained in Mauritius under British control ([Sandbrook \(2005\)](#)). Given its colonial past with

Indo and Afro-Mauritians, there was latent hostility against the franco-Mauritian plantocracy and even the British colonial state kept them at arms length. This was intensified after World War I when the plantocracy sought retrocession to France. For example, British judges often ruled in favour of Indo-Mauritians when employer and indentured labourer disputes emerged ([Reddi \(1997\)](#) and [Sandbrook \(2005\)](#)). More strikingly, Sandbrook argues that the British colonizers early on encouraged Indo-(Hindu) Mauritians to fill public bureaucracies as a means to counter the economic power of the plantocracy.

Notwithstanding this tenuous relationship between the colonial state and franco-Mauritian plantocracy, at the turn of independence in 1968; [Sandbrook \(2005\)](#) and [Meisenhelder \(1999\)](#) explain that economic power still resided in the plantocracy but with a modification that included the creole elite. ([Bowman, 1991](#), pp.119) estimates the top decile income share to be 46.7 percent in the 1970s. Further, [Auty \(2017\)](#) explains that the planters assembled a pro-growth political coalition to block a radical redistributive party and formed the first independent government. After a period of political crises in the immediate years following independence, an implicit bargain was struck between the plantocracy and the governing elites ([Meisenhelder \(1999\)](#) and [Seegobin and Collen \(1977\)](#)).

The central pillar of the bargain was a tax supported welfare state rather than asset redistribution. While the tax on sugar exports may demonstrate the sincerity of the bargain; this was largely the outcome of good fortune. [Subramaninan and Roy \(2003\)](#) note that Mauritius was able to negotiate the largest sugar quota with the EEC/EU at a guaranteed price average 90 percent greater than market price. Therefore, it is little surprise that a sugar tax was economically feasible and acceptable to the plantocracy. But overtime, with the support of the IMF, the plantocracy pressured government to abolish the sugar tax in 1994 ([Sandbrook \(2005\)](#))—surely related to the removal of preferential sugar prices.

We note the following points. First, the contestation between de jure and de facto political powers was mediated by the good fortune of sugar rents ([Greenaway and Lamusse \(1999\)](#) and [Subramaninan \(2009\)](#)). This provided government with a lucrative pool of tax revenue for purposes of diversification and the development of a welfare state. The latter was key to meeting important consumption needs so that the social peace can be maintained while wages were low ([Meisenhelder \(1999\)](#)). Second, the sugar rents and abatement of underlying distributional conflict (through the development of the welfare state) made economic elites less likely to oppose any attempt at structural change.

The Mauritian state used the sugar revenue to ignite a process of industrialization. It

established an Export Processing Zone (EPZ) in the 1970s, imposed foreign exchange controls, undertook import substitution industrialization strategies, infant industry protection and other forms of market control to enhance export competitiveness (Darga (1998) and Kothari (2013)). Just to fix ideas consider the following. Carroll and Carroll (1997) show that industrial production as a percentage of GDP increased from 23-33 percent between 1965-1993, on comparable terms to South Korea and Singapore over the same period and by 1985, manufacturing had replaced sugar as the country's largest earner of foreign exchange (Kearney (1990)). The EPZ was particularly attractive, especially to the franco-Mauritian plantocracy (Meisenhelder (1999) and Auty (2017)). Its incentive scheme exempted employers from overtime, maternity allowance, holiday work, termination of employment regulations etc. This is in striking contrast to the rest of the economy. For example, employers outside the EPZ needed to justify layoffs to a Termination Contracts and Services Board and compensate laid off workers (Sandbrook (2005)). This was Mauritius' attempt to address the distributional issues associated with structural change. Carroll and Carroll (1999) note that the governing elites widely consulted on policies and provided free health, education and pension services.

Consistent with our framework, this process of structural change was growth enhancing and inequality reducing. Based on the World Income and Wealth Database (WID), Mauritius' top 1 percent fiscal income share reached a low of 3.9 percent in 2002 as compared to 11.2 percent in 1947. A similar pattern is observed for its top decile, which reached its trough in 2005 at 14 percent as compared to 21.6 percent in 1980. This has been a period of inclusive structural change—the Mauritius miracle. However, the early to mid 2000s marked the trough of the Kuznets-Lewis wave and based on WID's data, top income shares are on an upward trend. This is corroborated by Bunwaree (2014), who uses Gini coefficients to demonstrate that inequality is on the rise since the early 2000s. We have explained the Kuznets-Lewis wave as the outcome of structural changes, ergo, the recent rise of income inequality suggests that Mauritius is undergoing some form of primitive diversification. To this we now turn.

In the late 1980s to the early 1990s, the industrialization model was running out of steam—wages increased and cheaper competitors emerged (Auty (2017)). Policy changed in the direction of promoting luxury tourism and financial services—primitive diversification. In the early 1990s, a stock market and an offshore banking centre were established with zero income tax incurred from offshore banking activities (Bunwaree (2014) and Meisenhelder

(1999)). We argue that these fundamental changes in economic activities are the driving forces behind the recent upsurge in income inequality—a striking similarity to the Barbados case.

We take the following stock of the Mauritian miracle. First, it were institutions of production that promoted a growth enhancing structural transformation. This industrialization period is hardly the consequence of simply protecting private property rights. Second, it was the good fortune of sugar rents that prevented economic elites from pushing Mauritius into the direction of primitive diversification; and loose labour laws and low wages that attracted economic elites to the EPZ. Third, it was the good sense of the Mauritian governing elite to pre-empt distributional conflict through the creation of a welfare state. In the absence of these, there would be no Mauritius miracle.

We argue that the fundamental cause of the Mauritian success was its good fortune of sugar rents that led to a compromise (between de facto and de jure political powers) of inclusive transformation. This is in contrast to the Guyana case, where sugar rents were used as settlement for nationalization of the sugar industry (Thomas (1984)). Our perspective on Mauritius warrants a short discussion on ethnic conflict, developmental state and politics in Mauritius. That Mauritius had a highly competent public service is a given—a necessary but not sufficient condition for inclusive transformation (as demonstrated by the recent rise of inequality). Moreover, its welfare state was for all Mauritians irrespective of ethnicity—an important abatement of ethnic conflict. But the welfare state was not possible without the good luck of sugar rents. Further, Mauritius is a parliamentary democracy with coalitions that extend across class and ethnic lines. This increases group representation and reduces ethnic tensions. But while this form of parliamentary democracy promotes political stability, its growth and distributional payoffs are ambiguous in the absence of sugar rents and the sugar compromise.

## 5 Conclusion

This paper develops a conceptual framework and presents three case studies that show how differences in economic structures are the fundamental cause of differences in economic development. This insight is derived from a synthesis of competing hypotheses. A given economic structure gives rise to a particular distribution of income—an important source of de facto political power. The mechanics of economic change or dynamic under-development

are in turn determined by the intensity of competition between de facto and de jure political powers and the resolution to this contestation. The protection of private property can be the underbelly of this contestation when property holders have close ties to a country's colonial past and/or when property holders are overwhelmingly of one ethnic group. Inclusive economic development occurs when a distributional bargain is struck and when economic change engenders a wider diffusion of skills and a lower hierarchy of occupational structure—lower income inequality. The Mauritius case reveals that it was the good fortune of sugar rents that gave rise to a distributional bargain and institutions of production that led to the Mauritian miracle. Our theoretical framework and the history of Guyana, Barbados and Mauritius, reveal that the distribution of income and economic structure are two laws of motion that determine societal evolution. But our framing of the underlying cause of relative development is still incomplete, if only because these insights need to be formalized and verified by more historical cases and econometric models.

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