

A NEW INQUIRY INTO THE NATURE AND CAUSES OF THE WEALTH OF NATIONS:
ANALYZING THE IMPACT OF ENTREPRENEURIAL INSTITUTIONS ON ECONOMIC
DEVELOPMENT

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Abstract

Determining what causes economic development has been a largely contested debate since the time of Adam Smith. Most theories of development advocate for foreign aid to help the poor, but after 60 years poverty is still widespread around the globe. Utilizing a theoretical framework of inclusive institutions, this paper aims to determine the role of institutional quality on development outcomes. I find that countries with institutional arrangements that support and encourage entrepreneurship are more economically prosperous than those with a poor institutional framework. Having strong institutions allows for innovation, saving, and investment that leads to economic growth. The results of my analysis demonstrate that in order to end poverty there must be a shift from funneling aid funds into less-developed countries and instead aiding with institution building to cause economic development.

Keywords: Economic development, institutional economics, entrepreneurship

“The consequences for human welfare involved in questions like these are simply staggering: Once one starts to think about growth, it is hard to think about anything else” – Robert E. Lucas¹

Economists have been seeking to solve the development puzzle since Adam Smith originally poised his *Inquiry into the Wealth of Nations*. Despite the copious amount of time dedicated to evaluating development, the economists widely disagree about the most effective way to cause growth. From boosting aggregate demand to encouraging entrepreneurship, economists have created numerous theories for what causes economic development. The large amount of disagreement, both over theory and application, makes it difficult for development practice to be consistent and effective. Determining which of the theories and application of development causes and sustains growth is crucial for countries to achieve economic prosperity. Careful evaluation of development theory shows that institutions are the central pillar to causing development. By encouraging the entrepreneurial aspect of human action, inclusive institutions are what generates prosperity. To be effective at causing and sustaining economic growth, development theory and practice must emphasize the causal link between well-built institutions and entrepreneurship.

This paper seeks to bridge the gap between economic theory and development practice. Economic literature commonly focuses on either theory or practice but fails to recognize the causal link between sound theory and effective application. This paper seeks to fill this gap in three ways. I first critically evaluate the four main schools of development thought – Keynesian (Harrod-Domar), the Solow Growth Model, Population, and Entrepreneurial Institutions – and the development practice that follows. Utilizing this framework, I conduct a case study in Latin America by comparing Chile and Argentina to demonstrate how different institutions produce different economic outcomes. Finally, I create an Institutional Quality Index (IQI) to evaluate how strong institutions impact economic growth in practice.

¹ Lucas 1988

Positive Theory of Development

Economic growth cannot be possible without saving and investment. Societies that have low time preference are more likely to save and undertake longer, more productive production processes. Countries that have achieved economic development have a greater supply and variety of consumer goods at their disposal because of their savings rate and long production processes. The only way to spur long-run development is by investing in production processes. Investing in production encourages innovation and specialization which allows for even more goods to be supplied. Saving is the sine qua non for economic development. The chief obstacle in economic development is the comparative scarcity of capital goods due to low savings. Countries that were once poor became prosperous because they increased their savings, allowing for additional capital goods, and lengthened production structures.

All policies aimed at economic development must encourage saving and investment. By encouraging capital accumulation, productivity can be spurred thus encouraging higher standards of living (Manish, Powell 2015). Coupled with a strong institutional framework, countries that embrace saving and investment can see prosperity. Most countries were once poor. It was a result of saving, investment, and institutions that have allowed some countries to escape poverty and enter prosperity.

Contemporary Development Theories and Applications

Most people see the plights of the poor and desire to help. One in ten people in developing regions still live under \$1.90 a day and millions more live slightly above this amount. Ten percent of the world's population lives at extreme poverty and cannot fulfill their most basic needs of food, water, and hygiene. Women and children are much more likely to live at risk of poverty and according to the United Nations, if the current trajectory does not change 167 million children will live in poverty by 2030 (United Nations 2020). These statistics are harrowing, and it is clear

something must change. Not all solutions to poverty, however, are equal. A critical evaluation of modern development theory is crucial to determine which development theory and application leads to real economic development.

Keynes and the Harrod-Domar Model

RF Harrod and Evsey Domar independently developed identical growth models as a logical extension of Keynesian macroeconomic models. While Keynes had focused on aggregate demand stimulus to promote full employment, Harrod and Domar argued that investment changed both supply side and demand side economies. Full employment, in Harrod and Domar's view, could be maintained if investment and other sources of aggregate demand grew in pace with increased output from investment. On the supply side, the Harrod-Domar model made growth predictions easy to calculate - all central planners had to do was insert an assumed savings rate and the capital-output ratio. On the demand side, Harrod and Domar found instability in the dynamic economy – anything that pushed the economy out of equilibrium would cause a continuous spiral away from equilibrium. This instability suggests that there is a need for active interventionism to keep aggregate demand in line with the capacity of the economy. The Harrod-Domar model provided a convenient framework for planners to find ways to align supply and demand sides. It easily justified foreign aid and government taxation if private domestic savings was insufficient to meet macroeconomic needs (Van den Berg 2013).

Although many argue that Harrod-Domar does not have an application, remnants of the model persist in development economics. Economists apply the Harrod-Domar model to calculate short-run investment targets and a target growth rate. If investment is below the rate required to reach the ideal, there is a “financing gap” between the model and the real world. Using this gap as evidence, development economists call for increased aid (the “Big Push”) to attain the target growth rate. The model was used in the Soviet reconstruction period to encourage developed countries to

give to those economies in transition. Virtually all the aid advocates during this period used the Financing Gap model, making the Western Industrial grant program to the USSR one of the largest policy experiments based on a single model.

Determining aid amounts based on a financial gap is not an effective means of allocating foreign aid. Easterly 1997 finds that the relationship between changes in growth and investment is in fact negative when trying to fill the financing gap. The goal of filling the gap is increasing investment on a one to one ratio with aid. Out of 138 countries studied by Easterly, however, only one country produced the result desired by planners and development economists. Instead, this type of development policy hinders development (Easterly 1997). The modern use of the Harrod-Domar model to fill the financing gap hampers growth and does not encourage the saving and investment necessary to encourage economic growth.

Solow Growth Model

Robert Solow in his paper “A Contribution to the Theory of Economic Growth” set to extend the Harrod-Domar model into the long-run. The neoclassical model analyzes changes in output due to population changes. The model demonstrates that capital investment can only increase the growth rate temporarily because eventually the capital to labor ratio will go up, moving the economy to long-term growth path where real GDP grows at the same rate as the workforce. To increase productivity, the exogenous productivity shift factor must be encouraged through technological innovation. The model predicts that in the long-run, economies will reach a steady state equilibrium and all economies will eventually converge.

The model makes assumptions in both the short and long run. In the long-run, growth can only be driven through increasing total factor productivity exogenously. As a result, long-run growth is not dependent on the demand side. Capital accumulation occurs because of technology; capital has no influence over innovation. In the short-run, *ceteris paribus*, poor countries will grow faster than

rich countries because their convergence rate is faster. The Solow Growth Model demonstrates that policies cannot impact growth rates, it is only a result of technological innovation spurring the convergence that countries develop (Solow 1956).

The Solow Growth Model demonstrated to development economists that the only reason there would not be convergence between poor and rich countries is because of differences in capital. Like the Harrod-Domar model, this assumption has encouraged aid to jumpstart convergence. Because of the poverty trap, poor people are saving below the optimal rate which leads to stagnating capital stock, preventing convergence. By increasing the inflow of aid, technological innovation can be encouraged, leading to economic growth. The International Monetary Fund utilizes these calculations to justify their aid activities and argues that the calibrations from the Solow Growth Model show the necessity of aid (Dalgaard, Erickson 2006).

Utilizing the Solow Growth Model to defend aid relies on the assumption that social planners have perfect information. In this model, the benevolent social planner knows and can accurately predict the different outcomes of the amount of aid given. However, in the real, not-mathematical world, there is no way for planners to have perfect information. As F.A. Hayek puts it “The knowledge of the circumstances of which we must make use never exists in concentrated or integrated form, but solely as the dispersed bits of incomplete and frequently contradictory knowledge which all the separate individuals possess” (Hayek 1945). Without institutions like prices and profit and loss aiding societal organization, planning through aid efforts will always fail.

Concerns for Population

It is not disputable that there has been exponential population growth for centuries. From Thomas Malthus to Paul Ehrlich, population catastrophists have lamented that humanity is on the brink of extinction because population growth is outpacing the rate of food growth. Malthus argued that “the power of the population is indefinitely greater than the power in the earth to produce

subsistence for man” (Malthus 1798, 4). Because of the arithmetical nature of food growth and the geometrical nature of population growth, there will always be a deficit between the two (34) resulting in mass starvation (65). It is easy to see why people are ringing the population alarm. During the time of Paul Ehrlich’s population bomb the low-income countries saw a population growth that would lead to the doubling of their population every 31 years putting an extreme strain on resource (Ehrlich 1978, 7-10).

The population bomb is dependent on the fertility rate. The higher the fertility rate, the higher the population growth. For many developing countries, families must have children to survive but because of high infant mortality rates they choose to have many children to ensure they are able to function as a family. As Jeffrey Sachs points out the demographic trap – when impoverished families choose to have lots of children contributing to the population bomb – puts enormous stress on farm resources, environmental resources, and restrain the ability of families in developing countries to thrive. Sachs argues that high population growth exacerbates poverty, and that poverty leads to higher fertility rates, causing a toxic cycle (Sachs 2005, 65-66). These fertility rates fall as economic development occurs and children are more likely to survive. Sachs argues that most of the world has achieved this balance, which is why there has been a slowdown of the “bomb.” This phenomenon has not reached developing countries because the conditions slow population growth have not been developed. Child survival, education for girls, employment for women, family planning services, and more are not available to those in developing countries. Foreign aid, therefore, should fill the gap and spur investments in these “population bomb ending” conditions to produce a rapid decline in fertility and rise in economic growth (324-326).

Population does put a strain on resources in Africa but solving through aid will not effectively end the population problem. Sachs alludes to the idea of demographic transition theory, which asserts that as societies experience development, and they will move from a place of high

morality and high fertility to low mortality and low fertility. Sachs and other proponents of this theory do not engage with the different means to improve welfare and enhance prosperity leading to the final stage of the demographic transition outside of aid. Eventually, the new equilibrium between mortality and fertility will be reached if there is economic development. Aid will not spur the demographic transition and in fact, hinders the transition.

Why Foreign Aid is Not the Answer

As demonstrated through the literature review, most development economists call for a form of foreign aid to end poverty. Advocates of aid are deeply compassionate and seek to solve a genuine tragedy of the modern world, however, the use of aid to spur economic development has not brought about prosperity for needy people. Foreign aid is not required for economic development and instead positively hampers developing countries from achieving any form of real growth. 60 years of reform schemes, dozens of plans to spur development, and \$2.3 trillion spent the aid industry has not ended poverty. The evidence is clear, aid heroes will always fail to reach their utopian goal (Easterly 2006, 11).

One of the largest problems of aid is that it acts as a political reward. No matter how “bad” the recipient governments are, allied nations will continue to funnel funds. The most undemocratic and most corrupt countries still received massive amounts of aid even after an attempt to shift aid to only countries with sound institutions (Burnside and Dollar, 2000) . In Rwanda, for example, the World Bank saw the atrocities being committed against the Tutsis in 1994 and continued to send aid.

“The development aid system knew of the disintegration of Rwandese society; saw the many Tutsis working for aid agencies or partner NGOs being harassed, threatened, or killed; discussed these matters and surely regretted them; but seemingly felt it was outside its mandate or capacity to intervene, that all it could do was continue business as usual. Thus aid continued to muddle through trying to make its usual projects work with a faltering government, until the day the genocide began” (Uvin 1998, 65).

When aid agencies turn a blind eye to bad governance and continue to provide aid, they only encourage horrific behavior. Donor countries believe that they can transform governments in these

countries and bring about massive institutional change through aid, but planning institutional shifts is virtually impossible. Donors and planners cannot figure out how to make “good” governments because it is incredibly difficult to do so. Although some countries have developed their institutions and improved governance, systematic evidence points to aid decreasing democracy and making governments worse (Easterly 2006, 133-136).

Beyond the political problems, aid is not necessary for countries to develop. Most of the recent economic success stories have been countries that did not receive a lot of aid and did not spend a lot of time in International Monetary Fund (IMF) programs. Most of the countries that have been economic disasters have been the opposite – copious amounts of foreign aid and large amounts of time spent in IMF programs (345-346). Although the mechanics of economic success stories vary, there is one common denominator - the West was not involved. The bulk of development success in the Rest comes from homegrown efforts to develop, with Western institutional influence where it suits that country’s needs (363).

Aid flows are more than enough to eliminate global dollar-a-day poverty, but clearly poverty has not ended (Deaton 2013, 272). Why? Because aid positively hampers development. Sub-Saharan Africa houses most of the world poorest countries² and has received copious amounts of aid. Evaluating GDP and aid numbers from the 1960s to the 2010s demonstrates that growth decreased steadily in Africa while aid increased steadily. No matter how hard aid researchers attempt to detangle the effects of aid on growth, *ceteris paribus* the correlation between aid and growth remains negative. Even when *ceteris* is not *paribus* the same relationship holds (281-89).

This critique is not to say that there is no form of foreign aid that can be beneficial. Certain medical care or provision of water can greatly impact the lives of those in developing countries (See

² Afghanistan, Bangladesh, Cambodia, Haiti, Nepal, and Timor-Leste are the only non-African countries among the poorest forty countries

vaccination campaigns in Africa or Latin America). However, the idea of saving the Rest through a Big Push has shifted resources from effective aid to funnel funds and central planning. This type of aid frequently comes hand in hand with white saviorism; the idea that the only person who can save the Rest is the West. This ideology is not only profoundly patronizing, but why aid is only focused on equality not opportunity. The world's poor does not need to wait around for the West to come and save them. Through policies that promote sound institutions and entrepreneurship the Rest can save themselves (Easterly 2006, 27). It would be much more beneficial if development policies focused on how they can aid countries in institutional building and promoting entrepreneurship.

Entrepreneurial Institutions

Douglass North defines institutions as “the rules of the game in a society or, more formally, are the humanly devised constraints that shape human interaction” (North 1990). Institutions are created to organize and reduce uncertainty in exchange. They provide the incentive structure for an economy which as the institutional structure evolves, can shape the direction of economic change to growth, stagnation, or regression. There is both formal and informal institutions. Formal institutions are rule of law, constitutions, or contracts while informal institutions are norms, standards, and morals. While both are important for development, formal institutions will be the emphasis of this analysis because they are more quantifiable empirically.

All development policy should be aimed at assisting in building the incentive and institutional structure. Institutions play a key role in changing the incentives for people, either positively or negatively. To generate prosperity, the entire economic system must be built upon a strong framework of institutions that change the incentive structure towards entrepreneurship and homegrown development. Without this framework, it will be very difficult for development policy to cause long-run growth.

Institutions Necessary for Growth

Policies that shape economic performance come from defining and enforcing the economic rules of the game. There is always a large amount of uncertainty in economic decision making that generates transaction costs, but institutions provide structure for decision making that reduces information asymmetry and the costs of information. The heart of development policy must be the creation of policies that will help shape the rules of the game (North 1992). Good institutions help shape countries in a way that can end the cycle of bad policies and poor growth. Without a strong institutional framework, the external factors hindering development cannot be constrained (Easterly 2002, 279). Creating an institutional framework with a robust division of labor, well defined and strongly enforced property rights, as well as vibrant exchange reduces the transaction costs of economic decision making.

The division of labor allows for specialization and partition of complex production into smaller tasks which allows for an increase in output. Adam Smith in the *Inquiry into the Wealth of Nations* uses the example of pin factory to demonstrate how the division of labor allows for more efficiency. Each worker in the pin factory works based on their comparative advantage which increases efficiency and output (Smith 1776, 6). There will be constant pressure for producers to expand their operations and the market to lower costs and increase output which will increase the wealth of nations (15). There are no permanent losers in the division of labor, only gainers. As producers expand the market, there will be more room for specialization that allows for generalized gains in economic value (Buchanan, Yoon 2002). By allowing for growth in total output, and lengthening of the production structure, the division of labor greatly contributes to growth.

Prosperity and private property are inextricably linked. By giving individuals the exclusive right to their property, the owner has total decision rights. This authority allows users to account for all costs and benefits to create efficient outcomes that can translate to higher standards of living.

Entrepreneurs bear the costs of decision making so they are encouraged to conserve resources and maintain capital for future production (Powell 2002). In countries where property rights are protected, on average GDP per capita is twice as high. Where countries with a poor enforcement of property rights are incredibly poor, with a GDP of only one-fifth of those with the strongest protections (Driscoll, Hoskins 2003). The relationship between wealth creation and property right demonstrates the importance of having well-defined and strongly enforced property rights to generate savings and investment that leads to economic growth.

Voluntary exchange allows us to engage in the global division of labor and broadens the market, which generates the wealth of nations. The expansion of the division of labor allows everyone to maximize their comparative advantage, benefiting all of society (Bastiat 1964, 222). Gains from trade are the payoff from the division of labor and specialization. Without voluntary exchange, everyone would live in autarky limiting what can be produced. Trade opens the door for goods that could not be efficiently produced by everyone, allowing for more means to satisfy our ends (Easterly 2013, 248). Openness to trade has immense development power. Trade increases access to higher quality and lower priced goods, encourages efficiency and innovation, drives competitiveness, and promotes fairness. Workers and resources can be dedicated to their most productive end – increasing efficiency and allowing markets to thrive (Boudreaux, Ghei 2018). Trade allows countries to capture the gains from division of labor, leading to massive opportunities for growth.

The Influence of Institutions on Development

The reason countries have such large differences in economic outcomes is because of their institutions. The rules of the game influence how people interact, how the economy functions, and the incentives people face. Without strong institutions, countries are unlikely to see development. Broad empirical evidence demonstrates that institutional differences across countries influences their

development and poor countries are hindered because of dysfunctional institutions. Acemoglu and Robinson 2010 find that the main determinant of cross-country differences in income per capita is the difference in economic institutions. When countries reform their institutions, they can move from economic stagnation to rapid growth (Acemoglu, Robinson 2010).

To spur development, institutions must be inclusive. They must secure private property, provide an unbiased legal system, allow for exchange and contract, as well as entrepreneurship. These institutions foster economic activity, productivity growth, and economic prosperity. Inclusive institutions create inclusive markets that capitalize on the division of labor and specialization and allow entrepreneurs to run with their comparative advantage. Those who are the most productive and satisfy consumer wants will be able to work and thrive, allowing for the entire economy to grow. Inclusive institutions give way for technology and education that allow land, labor, and capital to be more productive. Innovation is made possible through institutional factors like private property, exchange, and entrepreneurship. Education increases when there is significant economic progress. Having a set of inclusive institutions allow for education and innovation to be prioritized which continues the long-run trend for growth (Acemoglu, Robinson 2012, 74-79).

Economic institutions are incredible. The ability of economic institutions to harness the economic potential of markets, encourage technological innovation to improve productivity, encourage human capital investment through entrepreneurship, and bring about specialization of talents is unique to the inclusive institution framework. When countries focus on building this structure, they can see growth. Economies that fail to meet these objectives are economies experiencing stagnation or regression.

Institutions, Entrepreneurship, and Growth

The entrepreneur is continually discovering profit opportunities that have not previously been discovered and acts as an equilibrating force between what is produced and what consumers

desire. The entrepreneur gains profit because they have fulfilled the desires of the consumer. Because the entrepreneur is alert of the undiscovered opportunities, they can discover and exploit situations where they can arbitrage – buy low and sell high (Kirzner 1973, 30-74). This benefits the consumer by putting their desires back in equilibrium with what is supplied. The entrepreneur clearly serves a function that benefits society overall.

Institutions that promote freedom, like inclusive institutions, allow entrepreneurship to flourish which contributes to societal wellbeing. Economic freedom allows all participants in the market to act to achieve the end they desire, instead of an end imposed by some external agent. In an inclusive institutional environment, people can use their skills and in pursuit of their economic ends. Institutions that allow for entrepreneurial choice allows for entrepreneurs to be entrepreneurial (Harper 2003, 57-64). Entrepreneurial innovations allow for opportunities that propel more opportunities and economic growth. These innovations expand the division of labor, making the entrepreneur one of the key contributors to economic development (Young 1928). None of this could be possible without the institutional framework to generate incentives for entrepreneurs.

The institutional structure of a country provides the rules for the entrepreneurial game. Quality entrepreneurship relies on strong institutions that allow for exploitation of opportunity and resources. Institutions like rule of law and private property (inclusive institutions) allow for vibrant and productive entrepreneurship. Further, this institutional structure allows for entrepreneurial discovery via profit and loss mechanisms (Sautet 2005).

Entrepreneurship, however, cannot be the fundamental cause of growth. Mises asserts:

“Economics, in speaking of entrepreneurs, has in view not men, but a definite function. This function is not the particular feature of a particular special group or class of men; it is inherent in every action and burdens every actor...The term entrepreneur as used in catallactic theory means: acting man exclusively seen from the aspect of the uncertainty inherent in every action” (Mises 1949, 252-253).

Entrepreneurship is an omnipresent aspect of human action and cannot “cause” development in and of itself. Entrepreneurship’s impact on development is entirely reliant on the institutional regime.

There are countries with large amounts of human capital that still suffer economically because of their poor institutions. Some manifestations of entrepreneurship are conducive to development, while others are not. The rules of the game are what determines the efficacy of entrepreneurship and what brings about development. Spurring entrepreneurship without institutional change will not cause development but providing entrepreneurs with the right set of institutions and incentives will encourage the entrepreneurial aspect of human action to heighten development (Boettke, Coyne 2010).

The Effect of Different Institutions – A Case Study in Argentina and Chile

Chile and Argentina are historically similar countries but with drastically different outcomes. With Chile ranking 14th on the Fraser Index of Economic Freedom and Argentina ranking 144th (Berggren et al 2020) the gap between economic outcomes in the two countries is stark. The divergence between these two countries demonstrates the importance of having a strong institutional framework in the promotion of economic development.

A: Political, Economic, and Cultural History and Similarities

At the end of the nineteenth century, Argentina and Chile were both poised to become economic powers. Both countries were capitalizing on exports and gaining unprecedented amounts of foreign investment. Economists worldwide watched Latin America closely as the two potential economic powerhouses saw incredible growth and development. At the turn of the twentieth century, however, Argentina and Chile both fell from economic grace. Chile has been able to recover, returning to its spot as an economic great. Argentina, on the other hand, has stagnated and remained unfree and unprosperous.

Both countries share a common Spanish colonial legacy. After gaining independence two centuries ago, the countries have had relatively similar political histories. Both countries are democracies without a dominant party. Their political history has been marked by unrest including

large violent public protests. With history of brutal military rule, the political climates of Argentina and Chile have been tumultuous (Silverthorne 2016).

Argentina and Chile both sought to alleviate political, economic, and social unrest through dismantling previous economic systems and replacing it with market reforms. Both countries saw market reforms as a restructuring ethos. They believed that by adopting market reforms, the countries could begin a path towards a depoliticized and market-driven society. During the period of unrest, order had been completely lost and Argentina and Chile hoped the institution of market reform would restore equilibrium (Undarrago 2015).

Move towards Markets

In the 1960s and 1970s, the brutal military regimes in Argentina and Chile unexpectedly combined their repression and violence with radical market reforms. This combination of policies is not obvious and seems counterintuitive. As Milton Friedman puts it:

“The military is distinguished from the ordinary economy by the fact that it’s a top-down organization. The general tells the colonel, the colonel tells the captain, and so on down, whereas a market is a bottom-up organization. The customer goes into the store and tells the retailer what he wants; the retailer sends it back up the line to the manufacturer and so on. So the basic organizational principles in the military are almost the opposite of the basic organizational principles of a free market and a free society” (Friedman 2000).

Distortions in economic and political life were leading Argentina and Chile towards anarchy. Both militaries saw benefit to market reforms because of the depoliticizing and stabilizing effects markets could have on political unrest. The military could exercise vertical rule over all areas except the economy, while economists could have power and jurisdiction over the economy (Fridman 2010). Although seemingly counterintuitive, market liberalization allowed for the order necessary to suppress unrest in Argentina and Chile.

Chicago Boys

One of the greatest turns towards liberalism in Latin America comes from an academic phenomenon known as the “Chicago Boys.” The University of Chicago signed exchange agreements with many Latin American universities that allowed students to receive neoclassical and monetarist

training. The Chicago boys were then tasked with planning a liberalization of Latin America, utilizing the knowledge they had gained at the Chicago school.

In Chile, the Chicago “crusade” was incredibly effective and market ideas became the norm in Chile. The Chicago boys in Chile used shock therapy to fix the economy, liquidating more than 200 state owned enterprises in the first wave of privatization. In Chile, the Chicago Boys saw immense success – the inflation rate dropped sharply in the late 1980s, prices fell, wages rose, and unemployment was at the lowest it had been since 1973. The economy was growing steadily at a rate of six to eight percent and foreign investment was returning to Chile. The Chicago Boys had successfully turned the economy around in Chile (Sigmund 1983).

Argentina, attempting to emulate the Chilean experience, appointed a monetarist to plan their liberalization. Hoping to see the success of Chile, Argentina instead saw continued fragmentation due to persistent differences in the private sector. Argentinean industrial sectors resisted reform and began rent seeking – searching for state compensation and certain arrangements to give special privilege. The Chicago Boys scaled back their ambitious and focused on small reforms as opposed to the structural reforms seen in Chile (Undurraga).

A Note on Violent Enforcement of Markets

A valid objection to the reforms in Chile is the violent enforcement of market liberalism by Pinochet. Many argue that the only reason market reforms were effective in Chile is because of Pinochet suppressing any dissenters. Pinochet operating in a dictatorship was able to force institutional change, while places (like Argentina) could not consolidate power like Pinochet did. Despite their differences, if there was a clear link between brutal military dictatorships and economic prosperity both Argentina and Chile would have seen economic growth (Keech 2004).

Market reforms in Chile have continued following the dictatorship and without violent means of enforcement. Virtually all governments since 1990 have maintained the market-oriented

economic and social models perpetuated by the Pinochet regime (Packenham, Ratliff 2007). There is no justification for the horrific abuses done by Pinochet, but recognizing the atrocities committed by the Pinochet regime does not undermine the Chilean economic miracle.

Institutional Change in Chile and Argentina

“The curious task of economics is to demonstrate to men how little they really know about what they imagine they can design” – F.A. Hayek³

Imposing markets from the top-down is not simple. Without making long term changes in consumer choices, institutions, and innovations the markets that create growth will not materialize. The free-market is dependent on a bottom-up emergence of social institutions that support the market instead of hindering it (Easterly 2006, 41). The difference in economic outcomes between Chile and Argentina can largely be explained by the difference in accompanying institutions.

Chile

Chile has supplemented their economic policy changes with large alternations in their institutional structure. Chile has had massive economic success following first-generation reforms (e.g. trade liberalization, inflation controls, fiscal stabilization measures) but because of the institutional change they have been able to continue that success in second generation reforms (e.g. regulatory framework of banks, market competition, private sector infrastructure development). By building an effective institutional framework that allows for second-generation reforms to take place, Chile has been able to see high rates of economic growth. Beyond economic institutions, Chile has placed additional emphasis on political institutions like rule of law, corruption control, and stability. While political institutions are much more rigid, Chile has coupled their economic reforms with political reforms that allows for a strong institutional net for markets.

³ Hayek 1988, 76

The institutional effectiveness of Chile's reforms is clearly demonstrated through shifts in Total Factor Productivity (TFP). After controlling for other factors, empirical analysis demonstrates that a country's institutions reinforce economic reforms which is demonstrated through increases in TFP. When evaluating the institutional quality of countries around the globe, Latin American countries tend to have poor institutions. But Chile stands alone, appearing far above the trendline.

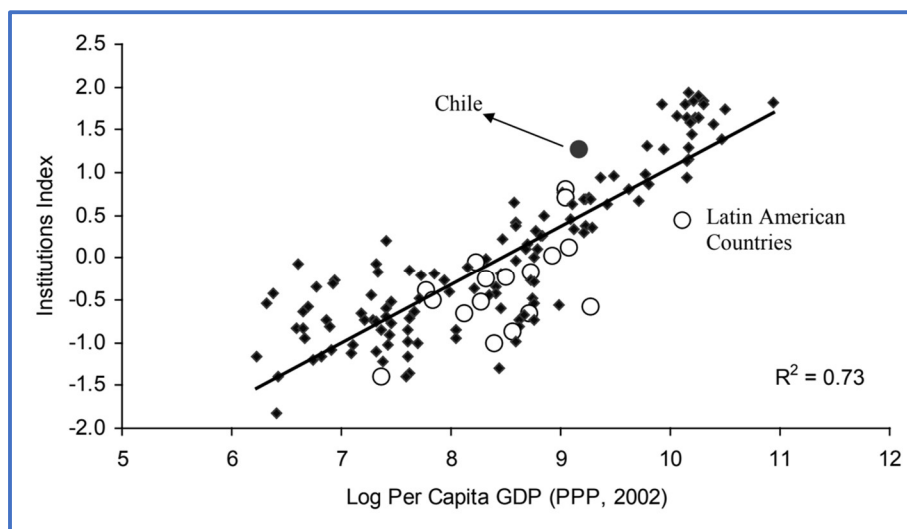


Figure One: Relationship between Institutions and GDP per Capita (Hernandez and Parro 2008)

The striking difference between Chile and other Latin American countries is explained by differences in institutional quality. Since Chile's original liberalization, it has continued to create institutional arrangements that promote prosperity from the independence of their Central Bank to free trade agreements. Chile's institutional change has been continual which has supported the market liberalization and allowed it to continue.

A cross-sectional econometric analysis conducted by the Stanford King Center for International Development further affirms the how the institutional change in Chile influenced their economic outcome. Based on a model estimated from 1960-2000, the model demonstrates that Chile's better economic performance can be explained by the country's comparatively better institutions. This data demonstrates that if countries seek to attain higher growth rates, liberalizing

reform processes should continue but more emphasis should be placed on building and strengthening institutions (Hernandez, Parro).

Argentina

Argentina is an unfortunate example of what happens when countries do not build up their institutions. Had Argentina developed their institutional net, Argentina could have thrived economically instead of regressing. Argentina dramatically shifted from a flourishing economy to an underdeveloped country because of their lack of institutional structure. Argentina is a prime example of how the absence of broad de jure and de facto institutional change closes countries out from long-run economic growth. The gradual breakdowns of institutions in Argentina has largely contributed to their economic downturn, even in the wake of positive economic changes.

Argentina throughout history saw growth without institutional change. Starting in the 1930s, Argentina saw a loss of political institutions like rule of law and private property that create a strong foundation for policy changes. Since then, Argentina has only weakened their institutions, leading to the eventual degradation of institutions. This trajectory away from institutional change has crippled any attempts Argentina has made towards development. Had these breakdowns not occurred and Argentina followed the trends in other countries of establishing de jure and de facto institutions there would have been a dramatic increase in output. Estimates demonstrate that if Argentina had not seen an institutional breakdown, the Argentine economy would be robust and per-capita income would approach 62 percent of the US level – equivalent to New Zealand.

“Unstable de jure and de facto institutional framework failed to promulgate growth-enhancing economic policies. Instead, it molded government-backed favoritism of dominant interest groups and encouraged pervasive rent-seeking instead of productive economic activity. On the balance, such institutional framework condemned Argentina to decades of stagnant productivity and poor economic growth” (Spruk, 2019).

The sad reality is that Argentina perpetuated institutional instability that undermined property rights, abandoned rule of law, and increased transaction costs. This institutional degradation retarded economic growth in Argentina and prevented them from being the economic powerhouse they had

the potential to be (Spruk). With a rise in populism both economically and politically, this poor institutional framework only worsened Argentina's fate

The Impact of Differing Institutions on Entrepreneurship

The differences in institutions materialize in the different climates for entrepreneurship in the two countries. According to the Global Entrepreneurship Monitor (GEM), Chile is considered an entrepreneurial "hive" meaning early-stage entrepreneurship is highly prevalent. One-fourth of the population is starting or running a new business. A large percentage of these ventures are projected to have high-growth prospects, expecting to add six or more jobs in the next five years. Not only are these businesses adding to the Chilean economy, but these ventures are also increasing standards of living. Nearly half of early-stage entrepreneurs in Chile are introducing products new to the region. The high level of entrepreneurial acumen in Chile can be explained by the opportunity and capability perception. Most adults in Chile believe they can start a business and recognize that there is an opportunity for them to do so (Bosma, Kelley 2019). These statistics place Chile third place globally. The Academic Director of GEM Chile, Maribel Guerra, argues that Chile stands out because of the quality of the enterprises. Chilean entrepreneurs are driven not just by necessity but by a clear sense of the opportunity and a desire to innovate (Tirado 2019). Chile is a dynamic entrepreneurial economy and that the institutional environment is spurring the entrepreneurial aspect of human action

Argentina's entrepreneurial acumen has been largely stagnant. Largely ranking towards the bottom in entrepreneurial activity, Argentina's entrepreneurial sector has been largely stunted by the economic conditions of the country and financial and economic regulations are inconsistent, making it difficult to start or structure a business (Global Entrepreneurship Monitor 2020). Argentina ranks 33rd out of 49 in perceived entrepreneurial opportunity, meaning that Argentines do not believe they can start a business and do not think there is opportunities for them to do so (Bosma, Kelley). This

is largely generated by the lack of institutional framework that would encourage this type of activity.

Without inclusive institutions, there is no incentive for Argentines to innovate.

The differences in institutional framework changes how humans act. Chile and Argentina have different entrepreneurial outcomes because of the different incentive structure for entrepreneurs. In Chile, entrepreneurs feel that they can and should innovate while in Argentina, that drive does not exist. The GEM statistics demonstrate how institutions are the key to encouraging entrepreneurship.

Institutional Quality Index

The Institutional Quality Index presented measures the degree to which institutions of countries are supportive of development efforts. 24 data points are used to construct an index to demonstrate how different institutional frameworks result in different development outcomes. The cornerstones of institutions are division of labor, private property, and exchange. This index seeks to show how countries that build upon the cornerstones have a strong framework for development, while those who do not have the cornerstones cannot build their economy.

*Methodology*⁴

The Institutional Quality Index (IQI) presented in this paper is a supplement to the Fraser Index of Economic Freedom. The Fraser Index evaluates five components and 26 subcomponents made up of 44 distinct variables to achieve an economic freedom score. Their index is rated on a scale from 0 to 10, reflecting a certain degree of economic freedom; with 0, being totally unfree, and 10 being totally free. Each subcomponent score is then averaged to derive ratings for the five components, which are then averaged together get an overall score of economic freedom (Fraser Institute 2020). When determining the variables for the IQI, I consulted Acemoglu and Johnson 2005, Acemoglu and Robinson 2010 and 2012, Boettke, Coyne, and Leeson 2008, Easterly 2008 and

⁴ For complete Methodology see Appendix 1

2013, North 1991 and 1992, and Richter 1988 to determine which institutions are considered necessary for economic growth. I then selected the aligned variables from the Fraser Index⁵ complete data set to create my index.

The IQI is divided into five components. [1] Government controlled resources, [2] Property Rights and Rule of Law, [3] Monetary Factors, [4] International Exchange, and [5] Ease of Business. All components and their subcomponents are averaged to create an institutional quality score. I conducted this analysis every decade from 1970 to 2018 – the last year the Fraser Index was updated. The same analysis was conducted for Hong Kong (1st on Fraser Index) and Singapore (2nd) to provide an institutional baseline for economic freedom, as well as Zimbabwe (155th) and Venezuela (162nd) to provide an institutional baseline for economic regression (Fraser Institute)⁵.

Proxy Variables

In some cases, a proxy variable was necessary to replace missing data. When data was missing (denoted blue in the data set), the original component score from the Fraser Index was utilized in place of a subcomponent score. Additionally, for scores under “Ease of Business” 1995 is used in place of 1970, 1980, and 1990. 1995 is the first-year data was published for the subcomponents utilized in Ease of Business and to maintain completeness of data, 1995 must be substituted.

Data Set and Figures

Institutional Quality Score - Chile					
1970	1980	1990	2000	2010	2018
5.09	5.53	7.08	7.21	7.77	7.62
Average				6.72	

⁵ For Complete IQI results for Hong Kong, Singapore, Zimbabwe and Venezuela see Appendix 2

CHILE						
	1970	1980	1990	2000	2010	2018
1. Government Controlled Resources	5.86	6.77	8.24	8.22	8.30	8.44
A. Size of Government	5.88	5.95	7.37	7.39	8.02	8.21
B. Government consumption	7.20	7.36	7.76	7.02	6.74	6.36
C. Government investment	5.88	5.95	10.00	10.00	10.00	10.00
D. State Ownership of Assets	4.49	7.83	7.83	8.45	8.45	9.20
2. Property Rights and Rule of Law	5.09	4.74	6.11	6.35	6.62	6.45
A. Legal System & Property Rights	4.61	4.49	5.86	5.92	6.88	6.73
B. Judicial independence	4.35	2.71	5.70	6.30	6.79	6.47
C. Impartial courts	5.10	4.69	6.69	6.61	6.51	5.93
D. Protection of property rights	5.28	5.61	6.17	6.00	6.44	6.95
E. Integrity of the legal system	5.67	5.43	6.54	7.56	7.44	7.26
F. Legal enforcement of contracts	5.50	5.50	5.68	5.68	5.68	5.37
3. Monetary Factors	4.98	1.64	7.07	9.13	8.68	9.50
A. Sound Money	5.98	2.31	7.65	9.30	8.94	9.60
B. Money growth	4.53	0.00	6.52	9.58	8.37	9.41
C. Standard deviation of inflation	7.54	0.00	8.34	8.40	7.68	9.49
D. Inflation: most recent year	1.86	4.25	5.75	9.23	9.72	9.51
4. International Exchange	3.83	8.81	8.29	9.01	8.57	8.13
A. Tariffs	4.60	8.71	8.18	8.91	9.47	9.45
(i) Mean tariff rate	0.00	8.00	7.00	8.20	8.80	8.80
(ii) Standard deviation of tariff rates	4.60	10.00	10.00	10.00	9.83	9.76
B. Regulatory trade barriers	4.60	8.71	8.18	8.98	7.78	6.92
(i) Non-tariff trade barriers	4.60	8.71	8.18	8.28	8.40	7.01
(ii) Compliance cost of importing and exporting	4.60	8.71	8.18	9.67	7.16	6.83
5. Ease of Business	6.37	6.37	6.37	7.07	8.09	7.69
A. Hiring regulations and minimum wage	5.68	5.68	5.68	3.36	6.67	5.57
C. Business regulations	7.09	7.09	7.09	7.97	7.62	7.36
(i) Regulatory Burden	6.18	6.18	6.18	7.93	8.33	8.00
(ii) Starting a business	6.52	6.52	6.52	9.03	9.72	9.84

Institutional Quality Score - Argentina					
1970	1980	1990	2000	2010	2018
5.83	4.39	4.38	6.87	5.60	4.98
Average				5.34	

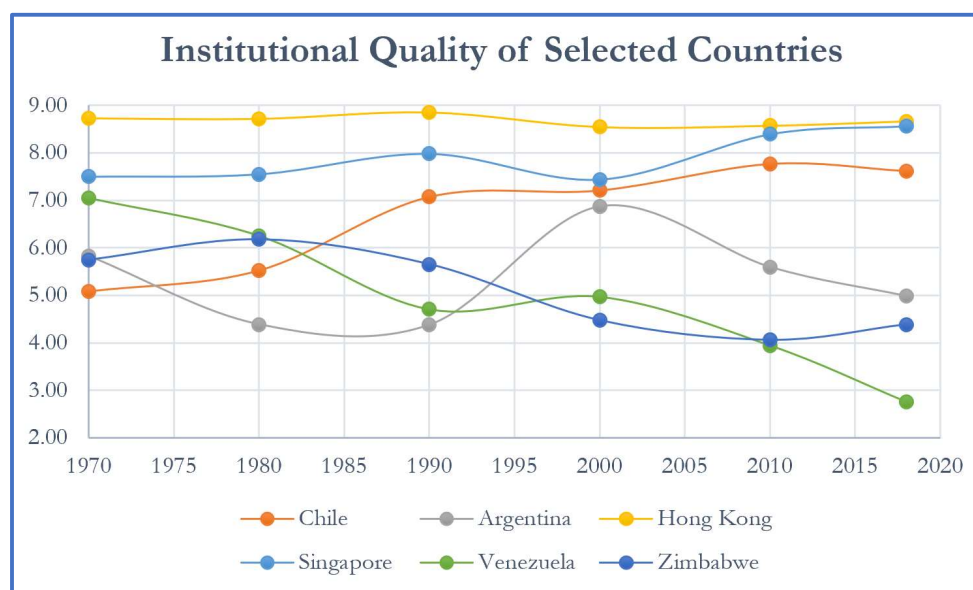
ARGENTINA						
	1970	1980	1990	2000	2010	2018
1. Government Controlled Resources	6.68	6.38	7.35	8.32	6.93	6.50
A. Size of Government	6.68	6.50	6.93	8.00	6.47	6.05
B. Government consumption	7.93	6.91	8.53	6.88	6.14	5.94
C. Government investment	6.68	6.50	6.93	10.00	8.04	7.59
D. State Ownership of Assets	5.43	5.59	7.02	8.39	7.05	6.41
2. Property Rights and Rule of Law	5.07	4.88	4.81	5.12	4.37	4.57
A. Legal System & Property Rights	4.83	4.44	4.82	4.99	4.76	4.63
B. Judicial independence	4.13	3.95	3.75	3.98	3.91	4.27
C. Impartial courts	4.61	4.58	4.36	4.68	3.65	4.26
D. Protection of property rights	6.07	5.93	5.46	5.01	4.44	5.63
E. Integrity of the legal system	5.04	4.63	5.43	7.06	4.94	4.78
F. Legal enforcement of contracts	5.75	5.75	5.01	5.01	4.51	3.82
3. Monetary Factors	7.34	0.63	0.63	9.64	6.99	5.08
A. Sound Money	7.87	2.50	2.50	9.71	6.59	5.07
B. Money growth	6.41	0.00	0.00	9.50	7.53	5.67
C. Standard deviation of inflation	6.22	0.00	0.00	9.52	9.14	6.45
D. Inflation: most recent year	8.84	0.00	0.00	9.81	4.68	3.14
4. International Exchange	4.12	4.12	3.16	6.87	5.81	6.01
A. Tariffs	4.05	4.05	3.19	7.47	5.59	6.77
(i) Mean tariff rate	4.44	4.44	5.90	7.48	7.48	7.28
(ii) Standard deviation of tariff rates	4.05	4.05	0.28	7.00	5.77	5.92
B. Regulatory trade barriers	4.05	4.05	3.19	6.43	5.33	5.36
(i) Non-tariff trade barriers	4.05	4.05	3.19	6.18	2.58	5.07
(ii) Compliance cost of importing and exporting	4.05	4.05	3.19	6.67	8.08	5.65
5. Ease of Business	6.27	6.27	6.27	6.88	5.95	6.36
A. Hiring regulations and minimum wage	5.95	5.95	5.95	4.42	3.90	2.77
B. Business regulations	6.21	6.21	6.21	6.75	5.54	6.40
(i) Regulatory Burden	6.70	6.70	6.70	7.50	5.30	6.67
(ii) Starting a business	6.22	6.22	6.22	8.83	9.04	9.58

Institutional Quality Score - Hong Kong ⁶					
1970	1980	1990	2000	2010	2018
8.73	8.72	8.86	8.55	8.58	8.67
Average				8.68	

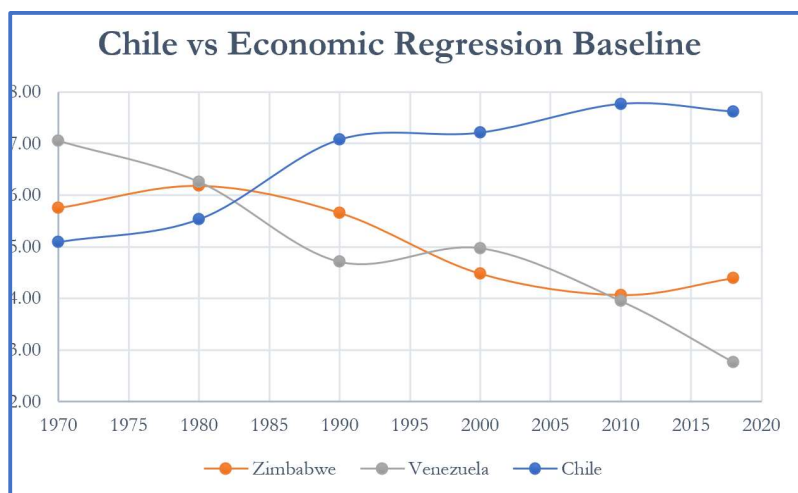
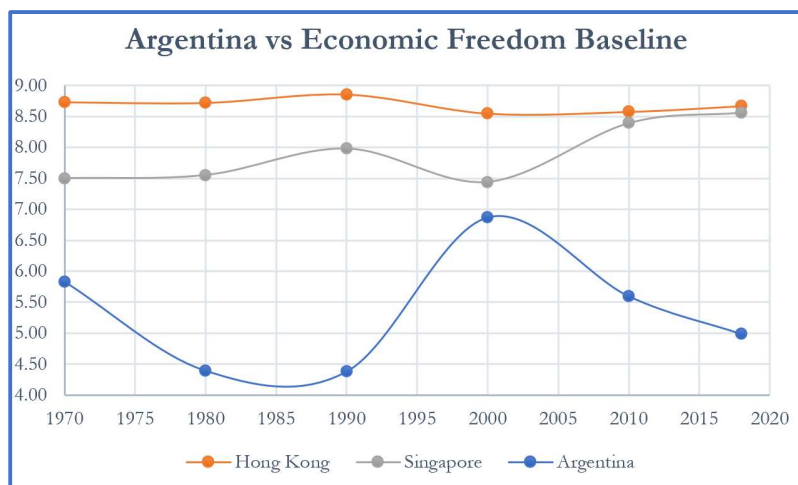
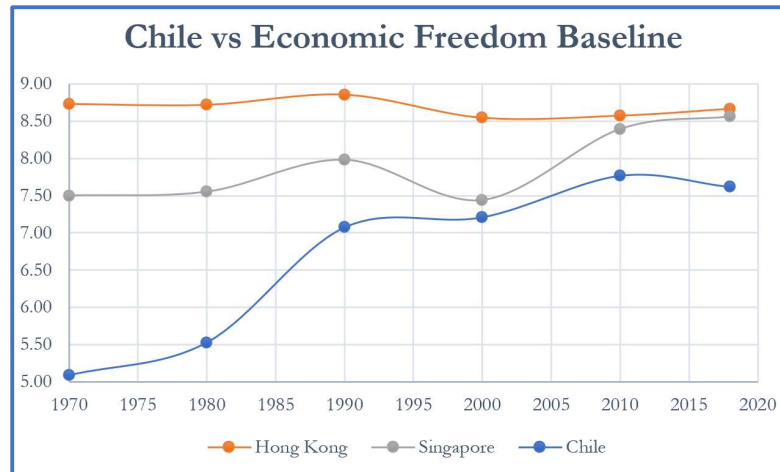
Institutional Quality Score - Singapore					
1970	1980	1990	2000	2010	2018
7.50	7.55	7.98	7.44	8.39	8.56
Average				7.91	

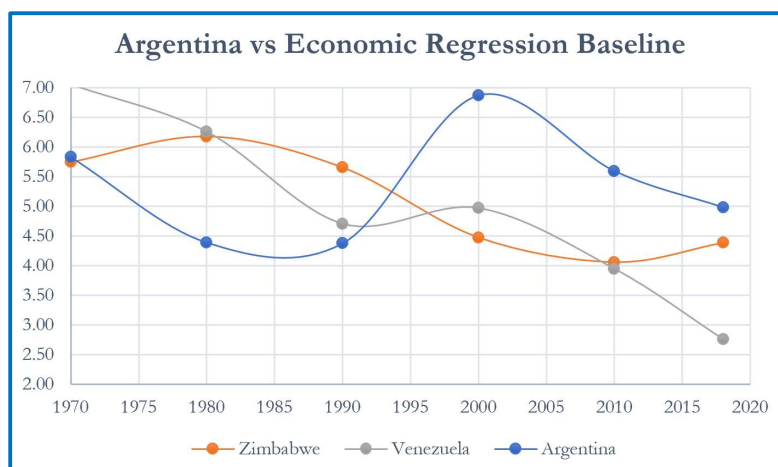
Institutional Quality Score - Venezuela					
1970	1980	1990	2000	2010	2018
7.05	6.26	4.71	4.97	3.95	2.76
Average				4.95	

Institutional Quality Score - Zimbabwe					
1970	1980	1990	2000	2010	2018
5.75	6.18	5.66	4.47	4.06	4.39
Average				5.08	



⁶ Complete data sets for additional countries is available in Appendix 2





Interpretation

The data demonstrates a clear link between institutional quality and economic development. Countries like Hong Kong and Singapore with average scores near 8.0 are the most economically prosperous, while countries like Zimbabwe and Venezuela are incredibly impoverished. This relationship holds in the test countries of Chile and Argentina where their scores align with their levels of economic prosperity based on the Legatum Prosperity Index (Legatum Institute 2020). The relationship between institutional quality and economic growth is strong. The index builds upon the theoretical relationship between institutions and development by demonstrating that countries where institutional quality is strong there is prosperity and where institutional quality is poor, there is regression.

Both Chile and Argentina are experiencing convergence with a baseline that explains how their institutional quality is impacting long-run development. Chile has largely followed the path of the Economic Freedom Baseline, despite a large gap in institutional quality between Chile and the baseline in 1970. Argentina follows the same trend with the Economic Regression Baseline, especially following the Argentine peak in 2000.

The data demonstrates a peak institutional quality score in Argentina of 6.87 in 2000 after decades spent below 5.0. This occurred due to the large amount of market liberalization in Argentina

from 1990 to 2000, conducted in response to the economic crisis facing Latin America. Argentina reduced the scope of the public sector, removed trade barriers, and allowed for foreign direct investment (Pou 2000). In 2001 Argentina closed its economy and defaulted on external debts which created a large recession. Output tanked and inflation rose exponentially. The instability of public debt made the market liberalization attempts in Argentina more volatile to natural market shifts (Moreno, 2002). The lack of institutional framework hindered the market liberalization attempts in Argentina, which explains the subsequent fall in IQ score after 2000.

The results of the IQI demonstrate what the theory has shown to be true. Countries with high quality institutions will experience economic growth, while those with poor institutions will stagnate or regress. Extrapolating these results would indicate a strong correlation between institutional quality and economic growth. Continuing to conduct the institutional quality analysis for all 162 countries included in the Fraser Index is an object for future research, but may help prove the causal link between institutions and development.

Development Policy – Going Forward

“I wish to assert a much more fundamental role for institutions in societies; they are the underlying determinant of the long-run performance of economies” – Douglass North⁷

Better performing institutions improve growth by increasing the amount of innovation and investment. Looking back to the positive theory of development, institution building is the only way to promote saving and investment resulting in long-run economic development. A society with a robust division of labor, well-defined and strongly enforced property rights, and vibrant exchange will experience large amounts of growth while societies without these institutions will struggle.

Development theories like the Harrod-Domar Model, Solow Growth Model, and Population Concerns rely on foreign aid to solve the development puzzle. But aid, however, cannot build the

⁷ North 1990, 107

institutions necessary to cause development. It takes a long-run attempt to alter these institutions in a way that encourages innovation and entrepreneurship throughout the economy to see development. If development economists want to see an end to global poverty, they must recognize the importance of institutions. Economists have misdirected their efforts in development away from institutions and to end the problem of poverty, there must be a refocus. The answer to poverty does not lie in mathematical models or other strategic variables but instead in changing the characteristics of the institutional environment and their enforcements (North 1971).

The future of development policy must recognize that institutions, not models dictate economic growth. Nations struggle economically because of institutions that keep countries poor and prevent them from creating a path to economic growth. The solution to poverty is transforming institutions – every country that was once poor and became prosperous did so as a result of institutional change (Acemoglu and Robinson 2012, 398-402).

Conclusion

We all feel a pull to help the poor. Previous strategies to reduce global poverty have relied on large amounts of aid and mathematical models with no avail. Going forward, inclusive institutions that encourage entrepreneurship should be the focus on development economics. Economic institutions matter for economic growth because they drive the incentives for entrepreneurs. The way humans act changes the organization of society in a way that determines if they prosper. Some ways of organization encourage innovation, education, saving, and investment while others do not. Societies are economically successful when they have a developed division of labor, strong property rights, and vibrant exchange, those without these institutions do not experience development. It is through this that we can see the causal link between institutions and development. Without an institutional framework to encourage this aspect of human action, there can be no development. If

development economists want to see the great escape from poverty for countries that have not experienced it yet institutions, not foreign aid, are the key.

References

- Acemoglu, Daron and Simon Johnson 2005 “Unbundling Institutions” *Journal of Political Economy* 113 (5) 949-995 DOI 10.3386/w9934
- Acemoglu, Daron, Simon Johnson, and James Robinson 2005 “Institutions as a Fundamental Cause of Long-Run Growth” in *Handbook of Economic Growth Vol. 1A* e.d Philippe Aghion and Steven Durlauf Amsterdam: Elsevier
- Acemoglu, Daron and James Robinson 2010 “The Role of Institutions in Growth and Development” *Review of Economics and Institutions* 2(1) DOI10.5202/rei.v1i2.1
- Acemoglu, Daron and James Robinson 2012 “Why Nations Fail: The Origins of Power, Prosperity, and Poverty” New York: Currency, Crown Publishing
- Bastiat, Frederic 1964 “Selected Essays on Political Economy” Irvington-on-Hudson: The Foundation for Economic Education Inc.
- Berggren, Niclas, James Gwartney, Joshua C. Hall, Robert A. Lawson, Fred McMahan, Ryan Murphy, and Therese Nilsson “Economic Freedom of the World: 2020 Annual Report” *Fraser Institute* September 10, 2020 <https://www.fraserinstitute.org/studies/economic-freedom-of-the-world-2020-annual-report>
- Boettke, Peter J., Christopher J. Coyne, and Peter T. Leeson 2008 “Institutional Stickiness and the New Development Economics” *American Journal of Economics and Sociology* 67 (2) 331-358 <https://doi.org/10.1111/j.1536-7150.2008.00573.x>
- Boettke, Peter J. and Christopher J. Coyne 2010 “Entrepreneurship and Development: Cause or Consequence?” *Advances in Austrian Economics* 6 67- 68 DOI: 10.1016/S1529-2134(03)06005-8
- Bosma, Niels and Donna Kelley 2019 “Global Entrepreneurship Monitor 2018/2019 Global Report” *Global Entrepreneurship Monitor* Accessed November 1, 2020 <https://www.gem>

consortium.org/file/open?fileId=50213

Boudreaux, Donald J. and Nita Ghei 2018 “The Benefits of Free Trade: Addressing Key Myths”

Mercatus Center at George Mason University May 23, 2018 [https://www.mercatus.org/](https://www.mercatus.org/publications/trade-and-immigration/benefits-free-trade-addressing-key-myths)

[publications/trade-and-immigration/benefits-free-trade-addressing-key-myths](https://www.mercatus.org/publications/trade-and-immigration/benefits-free-trade-addressing-key-myths)

Buchanan, James M. and Yong J. Yoon 2002 “Globalization as Framed by the Two Logics of

Trade” *Independent Review* 6 (3) 339-405 ISSN 1086-1653

Burnside, Craig and David Dollar 2000 “Aid, Policies, and Growth” *The American Economic*

Review 90 (4) 847-868 <https://www.jstor.org/stable/117311>

Dalgaard, Carl-Johan, and Lennart Erickson 2006 “Solow Versus Harrod-Domar: Reexamining the

Aid Costs of the First Millennium Development Goal” *International Monetary Fund* No.

06/284 ISSN: 9781451865448/1018-5941

Deaton, Angus 2013 “The Great Escape: Health, Wealth, and the Origins of Inequality” Princeton:

Princeton University Press

Driscoll, Gerald P and Lee Hoskins 2003 “Property Rights: The Key to Economic Development”

Cato Institute August 7, 2003 <https://www.cato.org/sites/cato.org/files/pubs/pdf/pa482.pdf>

Easterly, William 1997 “The Ghost of Financing Gap: How the Harrod-Domar Model Still Haunts

Development Economics” *World Bank Policy Research Working Paper Series* 1807

<https://ssrn.com/abstract=11020>

Easterly, William 2002 “The Elusive Quest for Growth: Economists’ Adventures and Misadventures

in the Tropics” Cambridge: MIT Press

Easterly, William 2006 “The White Man’s Burden: Why the West’s Efforts to Aid the Rest Have

Done So Much Ill and So Little Good” New York: Penguin Books

Easterly, William 2008 “Institutions: Top Down or Bottom Up?” *American Economic Review* 98(2)

95-99 DOI: 10.1257/aer.98.2.95

- Easterly, William 2013 “The Tyranny of Experts: Economists, Dictators, and the Forgotten Rights of the Poor” New York: Basic Books
- Ehrlich, Paul R. 1978 “The Population Bomb” New York: Ballantine Books, Random House
- Fraser Institute 2020 “Economic Freedom of the World – Approach” *Fraser Institute* Accessed November 17, 2020 <https://www.fraserinstitute.org/economic-freedom/approach>
- Fridman, Daniel 2010 “A New Mentality for a New Economy: Performing the *Homo Economicus* in Argentina (1976-83)” *Economics and Society* 39 (2) 271-302 DOI: 10.1080/03085141003620170
- Friedman, Milton 2000 “Up for Debate: Reform Without Liberty: Chile’s Ambiguous Legacy” *PBS* Accessed November 17, 2020 https://www.pbs.org/wgbh/commandingheights/shared/minitext/ufd_reformliberty_full.html
- Global Entrepreneurship Monitor n.d. “Argentina” *Global Entrepreneurship Monitor* Accessed November 27, 2020 <https://www.gemconsortium.org/economy-profiles/argentina-2>
- Harper, David A. 2003 “Foundations of Entrepreneurship and Economic Development – Foundations of the Market Economy” London: Routledge
- Hayek, Friedrich A. 1945 “The Use of Knowledge in Society” *The Library of Economics and Liberty* Accessed November 17, 2020 <https://www.econlib.org/library/Essays/hykKnw.html>
- Hayek, Friedrich A. 1988 “The Fatal Conceit: The Errors of Socialism” e.d. WW Bartley Chicago: University of Chicago Press
- Hernandez, Leonardo and Fernando Parro 2008 “Economic Reforms, Financial Development, and Growth: Lessons from the Chilean Experience” *Latin American Journal of Economics* 35(131) 59-103 RePEc:ioe:cuadec:v:45:y:2008:i:131:p:59-103
- Keech, William R. 2004 “Democracy, Dictatorship and Economic Performance in Chile” *Econometric Society Latin American Meetings* 332 <https://ideas.repec.org/p/ecm/latm04/>

332.html

Kirzner, Israel M. 1973 “Competition and Entrepreneurship” Chicago: University of Chicago Press

Legatum Institute 2020 “The Legatum Prosperity Index 2020” *Legatum Institute* Accessed November 28, 2020 https://docs.prosperity.com/2916/0568/0539/The_Legatum_Prosperty_Index_2020.pdf

Lucas, Robert E. 1988 “On the Mechanics of Economic Development” *Journal of Monetary Economics* 22 (1) 3-42 [https://doi.org/10.1016/0304-3932\(88\)90168-7](https://doi.org/10.1016/0304-3932(88)90168-7)

Malthus, Thomas 1798 “An Essay on Population” London: St. Paul’s Church Yard

Manish, GP and Benjamin Powell 2015 “From Subsistence to Advanced Material Production Austrian Development Economics” in *The Oxford Handbook of Austrian Economics* ed. Peter Boettke and Christopher Coyne New York: Oxford University Press 698-712

Mises, Ludwig V. 1949 “Human Action: A Treatise on Economics” New Haven: Yale University Press

Moreno, Ramon 2002 “Learning from Argentina’s Crisis” *Federal Reserve Bank of San Francisco* October 18, 2002 <https://www.frbsf.org/economic-research/publications/economic-letter/2002/october/learning-from-argentina-crisis/>

North, Douglass C. 1971 “Institutional Change and Economic Growth” *Journal of Economic History* 31(1) 118-125 <https://www.jstor.org/stable/2117023>

North, Douglass C. 1990 “Institutions, Institutional Change, and Economic Performance” New York: Cambridge University Press

North, Douglass C. 1991 “Institutions” *Journal of Economic Perspectives* 5(1) 97-112 <https://www.jstor.org/stable/1942704>

North, Douglass C. 1992 “Institutions and Economic Theory” *The American Economist* 36(1) 3-6 <https://www.jstor.org/stable/25603904>

A NEW INQUIRY INTO THE NATURE AND CAUSES OF THE WEALTH OF NATIONS

- Packenham, Robert A. and William Ratliff 2007 “What Pinochet Did for Chile” *the Hoover Institution* January 30, 2007 <https://www.hoover.org/research/what-pinochet-did-chile>
- Pou, Pedro 2000 “Argentina’s Structure Reforms of the 1990s” IMF Finance and Development 37(1) <https://www.imf.org/external/pubs/ft/fandd/2000/03/pou.htm>
- Powell, Benjamin 2002 “Private Property Rights, Economic Freedom, and Well Being” *Mercatus Center at George Mason University* Accessed November 11, 2020 <https://www.mercatus.org/system/files/Private-Property-Rights-Economic-Freedom-and-Well-Being.pdf>
- Richter, Rudolf 1988 “The New Institutional Economics Applied to Monetary Economics” *Journal of Institutional and Theoretical Economics* 144 (1) 208-224 <https://www.jstor.org/stable/40751065>
- Sachs, Jeffrey D 2005 “The End of Poverty: Economic Possibilities for Our Time” New York: Penguin Books
- Sautet, Frederic 2005 “The Role of Institutions in Entrepreneurship: Implications for Development Policy” *Mercatus Center at George Mason University* Accessed November 24, 2020 <https://ssrn.com/abstract=1264033>
- Sigmund, Paul E. 1983 “The Rise and Fall of the Chicago Boys in Chile” *SAIS Review of International Affairs* 3(2) 41-58 <https://doi.org/10.1353/sais.1983.0040>
- Silverthorne, Sean 2016 “Solving an Economic Mystery Surrounding Argentina and Chile” *Harvard Business School Working Knowledge* March 8, 2016 <https://hbswk.hbs.edu/item/solving-an-economic-mystery-around-argentina-and-chile>
- Smith, Adam 1776 “An Inquiry into the Nature and Causes of the Wealth of Nations” New York: Alfred A. Knopf Publishing
- Solow, Robert M. 1956 “A Contribution to the Theory of Economic Growth” *The Quarterly Journal of Economics* 70 (1) 65-94 <http://www.jstor.org/stable/1884513>

Spruk, Rok 2019 “The Rise and Fall of Argentina” *Latin American Economic Review* 28 (16)

<https://doi.org/10.1186/s40503-019-0076-2>

Tirado, Pablo 2019 “Entrepreneurial Activity in Chile is Ranked Third in the World” *Economia Y*

Negocios January 21 2019 <http://www.economiaynegocios.cl/noticias/noticias.asp?id=540105>

Undurraga, Tomas 2015 “Neoliberalism in Argentina and Chile: Common Antecedents, Divergent

Paths” *Revista de Sociologia e Politica* 23 (55) 11-35 ISSN: 0104-4478

United Nations n.d. “Ending Poverty” *United Nations* Accessed November 24, 2020 [https://www.un](https://www.un.org/en/sections/issues-depth/poverty/)

[.org/en/sections/issues-depth/poverty/](https://www.un.org/en/sections/issues-depth/poverty/)

Uvin, Peter 1998 “Aiding Violence: The Development Enterprise in Rwanda” West Hartford:

Kumarian Press

Van den Berg, Hendrik 2013 “Growth Theory after Keynes, part I: The Unfortunate Suppression of

the Harrod-Domar Model” *Journal of Philosophical Economics* 7 (1) 2-2 3 <http://jpe.ro/pdf.php?id=4995>

Young, Allyn A. 1928 “Increasing Returns and Economic Progress” *Economic Journal* 38(152) 527-

542 <https://doi.org/10.2307/2224097>

Appendix 1 – Methodology

The Institutional Quality Index (IQI) presented in this paper is a supplement to the Fraser Index of Economic Freedom (IEF). This appendix highlights the methodology utilized to create the IQI.

Determining Variables

Not every variable included in the Fraser Index is an institutional factor that is considered relevant in development literature. To maintain consistency, the Fraser Index needed to be refined to create the IQI. Acemoglu and Robinson's *Why Nations Fail* was a primary source in the development of an "inclusive institutions" framework.

"To be inclusive, economic institutions must feature secure private property, an unbiased system of law, and a provision of public services that provides a level playing field in which people can exchange and contract; it almost must permit the entry of new businesses and allow people to choose their careers" (Acemoglu, Robinson 2012, 74-75).

Utilizing Acemoglu and Robinson to begin, I consulted additional works by Acemoglu (co-authors Robinson and Johnson), as well as Boettke, Coyne, and Leeson 2008, Easterly 2008 and 2013, North 1991 and 1992, and Richter 1998 to determine which institutions should be included in the analysis.

Based upon my literature review, it was clear that economists largely agree that the largest institutional factors influencing development outcomes are [1] the size of government, [2] property rights and the legal framework surrounding them, [3] monetary policy and the money supply, [4] openness to trade and size of trade barriers, and [5] opening and sustaining a business. Utilizing these five benchmarks as a starting point, I consulted the IEF to pick which variables would align with the five institutional factors and the literature surrounding it. I cross-checked my selection with Dr. Shawn Ritenour as well as Dr. Anne Rathbone Bradley to ensure that my variables were properly selected and removed any that appeared to be inconsistent with literature or theory.

Completing the Analysis

I largely followed the Fraser Index's methodology while building my index. Since the variables were pulled from an outside data source, I did not want any major analytical inconsistencies

between the results of my index and the results of the Fraser Index. After building the subcomponents, I averaged them to get the score for the overall component to get an institutional component score. I averaged all of the institutional component scores together to give me the final institutional quality score. None of the components were weighted stronger than any other components making the final Institutional Quality Score an evenly weighted average.

I then, conducted the same analysis for each decade from 1970 to 2018 – the latest update of the Fraser Index. This provided my index with six distinct data points to demonstrate a trend in institutional quality. In the future, I aim to conduct the analysis for each year provided in the Fraser Index as well as each country but that is an object for future research. The same analysis was then conducted for Hong Kong, Singapore, Zimbabwe, and Venezuela. These four countries provided baselines for economic freedom and economic regression. Hong Kong and Singapore are the top ranked countries for economic freedom on the Fraser Index, while Zimbabwe is ranked 155th and Venezuela is ranked last at 162nd. Zimbabwe was chosen over the other economically unfree countries due to the lack of major conflict or refugee crisis that influences the institutional framework.

In some cases, a proxy variable was necessary to replace missing data. When data was missing (denoted blue in the data set), the original component score from the Fraser Index was utilized in place of a subcomponent score. The earlier decades (1970 and 80) had a particular lack of data, resulting in potential discrepancies. However, when compared to other years with more complete data the data with proxies was consistent with data without proxies. For scores under “Ease of Business” 1995 is used in place of 1970, 1980, and 1990. 1995 is the first-year data was published for the subcomponents utilized in Ease of Business and so 1995 was substituted to maintain completeness of data. Like with other proxies, the data was consistent for the decades before 1990 and the decades after 1990.

Appendix 2 – Additional Data Sets

Only summary data was presented in text for the supplementary countries (Hong Kong, Singapore, Zimbabwe, and Venezuela). This appendix includes the full data for the baselines.

HONG KONG						
	1970	1980	1990	2000	2010	2018
1. Government Controlled Resources	9.12	9.20	8.94	8.30	8.29	7.86
A. Size of Government	9.29	9.46	9.11	8.84	8.77	8.48
B. Government consumption	8.87	9.02	8.36	7.58	8.06	8.05
C. Government investment	10.00	10.00	10.00	9.02	9.48	7.97
D. State Ownership of Assets	8.30	8.30	8.30	7.74	6.83	6.94
2. Property Rights and Rule of Law	6.44	6.87	7.08	6.98	7.15	7.20
A. Legal System & Property Rights	6.44	7.32	7.48	6.98	7.55	7.49
B. Judicial independence	6.68	6.68	7.16	7.09	7.33	7.17
C. Impartial courts	5.68	5.68	6.87	7.18	7.22	7.40
D. Protection of property rights	6.41	6.41	6.24	6.36	7.24	7.59
E. Integrity of the legal system	7.00	7.82	7.05	7.92	7.89	7.43
F. Legal enforcement of contracts	6.44	7.32	7.69	6.34	5.66	6.13
3. Monetary Factors	8.56	8.14	8.78	8.89	9.14	9.74
A. Sound Money	8.85	8.51	9.02	9.11	9.31	9.79
B. Money growth	8.85	9.04	8.36	9.46	8.21	9.95
C. Standard deviation of inflation	8.26	7.99	8.86	7.73	9.50	9.70
D. Inflation: most recent year	8.29	7.01	8.86	9.25	9.53	9.52
4. International Exchange	10.00	9.86	9.94	9.68	9.42	9.50
A. Tariffs	10.00	9.83	9.91	9.93	10.00	10.00
(i) Mean tariff rate	10.00	10.00	10.00	10.00	10.00	10.00
(ii) Standard deviation of tariff rates	10.00	9.83	10.00	10.00	10.00	10.00
B. Regulatory trade barriers	10.00	9.83	9.91	9.38	8.84	8.99
(i) Non-tariff trade barriers	10.00	9.83	9.91	8.94	8.25	8.32
(ii) Compliance cost of importing and exporting	10.00	9.83	9.91	9.83	9.43	9.67
5. Ease of Business	8.89	8.89	8.89	8.94	9.58	9.69
A. Hiring regulations and minimum wage	7.40	7.40	7.40	10.00	10.00	10.00
C. Business regulations	9.54	9.54	9.54	8.90	8.89	9.04
(i) Regulatory Burden	9.55	9.55	9.55	7.25	9.55	9.78
(ii) Starting a business	9.08	9.08	9.08	9.61	9.88	9.95

SINGAPORE						
	1970	1980	1990	2000	2010	2018
1. Government Controlled Resources	5.90	6.15	6.60	6.31	6.58	6.35
A. Size of Government	6.21	6.41	7.47	7.21	7.72	7.27
B. Government consumption	7.35	7.08	6.45	5.65	5.24	4.95
C. Government investment	6.21	7.28	8.63	8.53	9.53	9.52
D. State Ownership of Assets	3.84	3.84	3.84	3.84	3.84	3.67
2. Property Rights and Rule of Law	5.92	6.21	7.07	7.37	7.25	7.27
A. Legal System & Property Rights	5.92	6.75	7.67	8.04	7.63	7.70
B. Judicial independence	4.71	4.80	5.57	5.80	5.77	5.82
C. Impartial courts	5.68	5.68	6.86	7.07	7.37	7.18
D. Protection of property rights	5.56	5.49	6.41	6.55	7.13	7.57
E. Integrity of the legal system	6.65	7.56	7.56	8.39	7.56	7.51
F. Legal enforcement of contracts	7.00	7.00	8.36	8.36	8.01	7.83
3. Monetary Factors	9.15	8.14	9.17	9.33	8.64	9.81
A. Sound Money	7.32	6.51	9.34	9.46	8.91	9.84
B. Money growth	9.66	9.76	9.42	9.42	7.65	10.00
C. Standard deviation of inflation	9.80	8.57	8.91	8.70	8.56	9.47
D. Inflation: most recent year	9.82	7.71	9.02	9.73	9.44	9.91
4. International Exchange	9.13	9.86	9.67	9.63	9.50	9.39
A. Tariffs	9.13	9.84	9.70	9.95	10.00	10.00
(i) Mean tariff rate	9.13	9.94	9.92	9.92	10.00	10.00
(ii) Standard deviation of tariff rates	9.13	9.84	9.28	10.00	10.00	10.00
B. Regulatory trade barriers	9.13	9.84	9.70	9.31	9.00	8.78
(i) Non-tariff trade barriers	9.13	9.84	9.70	8.79	8.50	8.36
(ii) Compliance cost of importing and exporting	9.13	9.84	9.70	9.83	9.50	9.20
5. Ease of Business	8.89	8.89	8.89	7.81	9.68	9.77
A. Hiring regulations and minimum wage	7.40	7.40	7.40	4.56	10.00	10.00
C. Business regulations	9.54	9.54	9.54	8.89	9.26	9.34
(i) Regulatory Burden	9.55	9.55	9.55	8.05	9.55	9.78
(ii) Starting a business	9.08	9.08	9.08	9.73	9.90	9.95

VENEZUELA						
	1970	1980	1990	2000	2010	2018
1. Government Controlled Resources	7.48	6.37	7.02	5.56	3.99	3.65
A. Size of Government	7.95	7.01	7.27	6.33	4.79	4.31
B. Government consumption	6.6	6.56	8.25	6.06	7.06	8.96
C. Government investment	7.95	7.01	7.27	5.06	0	0
D. State Ownership of Assets	7.42	4.89	5.29	4.78	4.1	1.34
2. Property Rights and Rule of Law	5.23	5.32	4.75	4.14	3.00	2.42
A. Legal System & Property Rights	5.23	5.75	5.69	4.25	3.25	2.76
B. Judicial independence	4.81	4.74	3.98	2.67	1.68	1.73
C. Impartial courts	3.39	3.33	3.42	3.68	2.35	1.79
D. Protection of property rights	6.58	6.58	5.15	4.67	3.75	3.31
E. Integrity of the legal system	6.39	6.54	6.54	5.98	3.34	2.49
F. Legal enforcement of contracts	5	5	3.73	3.61	3.61	2.44
3. Monetary Factors	9.64	6.75	3.42	4.45	4.34	0.87
A. Sound Money	9.53	7.79	7.28	5.48	5.9	2.77
B. Money growth	9.71	7.4	4.74	5.56	3.47	0.69
C. Standard deviation of inflation	9.58	7.02	0	0	3.81	0
D. Inflation: most recent year	9.74	4.8	1.66	6.76	4.19	0
4. International Exchange	8.07	8.00	3.50	6.64	5.09	6.87
A. Tariffs	8.07	8	4.22	7.61	7.8	7.26
(i) Mean tariff rate	8.07	8	3.88	7.3	7.5	7.24
(ii) Standard deviation of tariff rates	8.07	8	0.24	7.64	7.45	6.08
B. Regulatory trade barriers	8.07	8	4.22	5.77	2.59	6.88
(i) Non-tariff trade barriers	8.07	8	4.22	4.87	3.56	3.76
(ii) Compliance cost of importing and exporting	8.07	8	4.22	6.67	1.62	10
5. Ease of Business	4.97	4.97	4.97	5.30	3.66	1.61
A. Hiring regulations and minimum wage	4.85	4.85	4.85	4.07	3.33	0
C. Business regulations	5.13	5.13	5.13	4.71	3.1	1.98
(i) Regulatory Burden	5.31	5.31	5.31	6.15	1.82	0
(ii) Starting a business	4.57	4.57	4.57	6.27	6.39	4.44

ZIMBABWE						
	1970	1980	1990	2000	2010	2018
1. Government Controlled Resources	6.01	6.43	5.77	5.61	6.34	3.64
A. Size of Government	6.01	6.29	5.42	5.37	6.62	4.51
B. Government consumption	7.81	5.56	4.84	3.65	7.48	6.58
C. Government investment	6.01	10	8.96	10	7.52	0
D. State Ownership of Assets	4.21	3.85	3.85	3.43	3.75	3.47
2. Property Rights and Rule of Law	3.47	3.57	4.80	4.46	3.39	3.73
A. Legal System & Property Rights	2.08	2.2	4.48	4.54	3.66	4.07
B. Judicial independence	4.06	4.1	4.95	4.15	3.15	3.79
C. Impartial courts	4.57	4.06	4.83	4.82	3.1	3.36
D. Protection of property rights	3.43	4.24	4.5	3.08	3.06	3.86
E. Integrity of the legal system	4.59	4.63	4.63	4.71	5	4.94
F. Legal enforcement of contracts	2.08	2.2	5.43	5.43	2.37	2.37
3. Monetary Factors	6.30	7.94	7.09	2.36	2.47	5.04
A. Sound Money	5.04	6.35	5.67	2.89	1.97	5.03
B. Money growth	5.04	7.96	7.24	3.92	0	1.99
C. Standard deviation of inflation	7.52	8.75	8.38	2.64	0	5.26
D. Inflation: most recent year	7.59	8.69	7.05	0	7.89	7.88
4. International Exchange	8.36	8.36	6.02	4.99	3.38	3.82
A. Tariffs	8.43	8.43	5.71	4.56	3.67	5.3
(i) Mean tariff rate	8	8	7.98	5.72	6.1	6.5
(ii) Standard deviation of tariff rates	8.43	8.43	5.28	2.84	0	1.32
B. Regulatory trade barriers	8.43	8.43	5.71	5.61	3.5	3.26
(i) Non-tariff trade barriers	8.43	8.43	5.71	5.22	5.84	5.2
(ii) Compliance cost of importing and exporting	8.43	8.43	5.71	6	1.16	1.33
5. Ease of Business	4.60	4.60	4.60	4.95	4.73	5.71
A. Hiring regulations and minimum wage	5.85	5.85	5.85	3.52	6.67	6.67
C. Business regulations	4.58	4.58	4.58	5.5	3.8	5.15
(i) Regulatory Burden	4.3	4.3	4.3	7.05	2.88	2.67
(ii) Starting a business	3.68	3.68	3.68	3.73	5.55	8.33