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Understanding Costa Rica's Response to the COVID-19 Pandemic: Competing Explanations

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Abstract

As the COVID-19 pandemic continues to have major impacts on the world, careful study of successful health systems is essential. Costa Rica has been identified as a country that has responded well to the pandemic with the proportion of death rates compared to infection rates being the lowest in comparison to other countries in Central America. This paper examines Costa Rica's relatively successful response to the COVID-19 pandemic as a case study in good public healthcare management. This study also highlights the importance of theory for addressing urgent, practical development challenges to explore what theoretical frameworks can best explain the relative success and failure of healthcare systems. The paper examines two broad, but different, explanations for the relative success of Costa Rica's healthcare system. The first set of explanations focuses on institutional factors, such as the design of health systems and specific policy decisions. The second set of explanations focuses on broader historical, political and economic factors, including the dismantling of the coffee oligarchy and the abolition of the military, that shaped the context within which Costa Rica's healthcare system developed. Although the political system in Costa Rica is unique, key lessons regarding leadership, government spending, and preventative medicine, can be drawn from the Costa Rican healthcare sector and the resulting experience with COVID-19.

Introduction

The COVID-19 pandemic has disrupted and adversely affected people's lives around the globe. However, some countries have fared much better than others. In media reports, Costa Rica has been identified as a country that has responded well to the pandemic with relatively low numbers of cases and deaths related to COVID-19 (Broom, 2020; Worldometer, 2021b). These statistics highlight the key questions that this paper seeks to explore. Namely, what are the reasons behind Costa Rica's successful response in mitigating the adverse effects of the COVID-19 pandemic? To answer this question, the paper examines different explanations for the relative success of Costa Rica's healthcare sector, including the implementation of one of the world's quickest and most comprehensive COVID-19 lockdowns (Gerstner, 2020). Ultimately, this paper aims to understand the healthcare decisions made between 1940 and 2021 which contributed to the country's successful pandemic response. The central argument is that the health-related decisions made by the Costa Rican healthcare sector ultimately contributed to the country's successful pandemic response. A crucial component of the effective response is that due to the government's history of providing comprehensive healthcare, there is much trust in the healthcare sector, and Costa Ricans respected the COVID-19 guidelines (Broom, 2020). Understanding Costa Rica's universal healthcare system, and the specific elements of its design that enabled it to respond effectively to COVID-19 can help identify strategies and lessons from which other countries can learn.

This is a timely and critical examination of the importance of funding public healthcare systems and the importance of preparedness in the face of biological threats. The paper also highlights the importance of theory for addressing urgent, practical development challenges to explore what theoretical frameworks can best explain the relative success and failure of healthcare systems.

Why Examine Costa Rica?

Costa Rica's successful response to the COVID-19 pandemic is a useful case study in understanding good public healthcare management. Since the 1940s, Costa Rica has prioritized public healthcare and spends a disproportionate amount of GDP on public education and healthcare in comparison to other countries in Central America (Garcia et al., 2020; Unger, 2008). The data on Costa Rica's healthcare system is enviable, both in relation to general health outcomes and regarding COVID-19 data (Worldometer, 2021b). As seen in Table 1, the proportion of death rate to infection rate is lowest in Costa Rica when compared to other Central American countries.

Some of the COVID-19 data derived from the "World in Data" website, which presents COVID-19 global statistics, may be unreliable. This inaccuracy is due to inaccurate or incomplete COVID-19 infection and death rates reported by countries (Lloyd-Sherlock et al., 2021). Certain countries' unreliable statistics are attributed to data standardization mistakes and human error (Lloyd-Sherlock et al., 2021). For this reason, media reports are also crucial to consider as these examine the reality of COVID-19 and its impacts on communities (Gawande, 2021). However, it is also acknowledged that journalistic data is not comparable between countries; thus, the raw data from "World in Data" is also used (Table 1). Overall, Costa Rica's healthcare system and response to the COVID-19 pandemic is explored as it is an outlier in health outcomes.

Table 1: GDP indicators, healthcare indicators, and COVID-19 data of Central American countries.

Country	Population (Rounded to closest 1000 th)	GDP (US\$) (In millions)	GDP per capita (US\$)	Current health expenditure (% of GDP)	Current health expenditure per capita (US\$)	Number of COVID-19 cases	Number of reported COVID-19 deaths	Number of COVID-19 cases per 1000 population	COVID-19 cases leading to death (%)
Belize	398,000	1,636.28	4,115.2	5.97	293.41	24,447	465	61.4	1.9
Costa Rica	5,094,000	61,520.67	12,076.8	7.56	909.67	549,084	6,744	107.8	1.2
El Salvador	6,486,000	24,638.72	3,798.6	7.17	300.05	111,102	3,490	17.1	3.1
Guatemala	16,858,000	77,604.63	4,603.3	5.71	259.62	588,262	14,436	34.9	2.5
Honduras	9,905,000	23,662.23	2,389.0	7.28	187.55	372,825	10,106	37.6	2.7
Mexico	128,932,000	1,073,915.88	8,329.3	5.43	540.37	3,757,056	284,381	29.1	7.6
Nicaragua	6,624,000	12,621.51	1,905.3	8.40	160.76	15,737	206	2.4	1.3
Panama	4,314,000	52,938.10	12,269.0	7.27	1,131.66	469,569	7,275	108.8	1.5

Note: All numbers regarding COVID-19 statistics (i.e. number of COVID-19 cases and number of COVID-19 deaths) are based on the cumulative data from the beginning of the pandemic to, and including, October 18, 2021 (Worldometer, 2021a, 2021b, 2021c, 2021d, 2021e, 2021f, 2021g, 2021h). The other data was derived from reputable sources such as The World Bank and The World Health Organization (The World Bank, 2018a, 2018b, 2020a, 2020b & 2021; World Health Organization, 2021a, 2021b & 2021c).

Table 1 explores various development indicators and COVID-19 statistics between countries in Central America. The data compares GDP (USD), GDP per capita (USD), current healthcare expenditure as a percentage of GDP, current healthcare expenditure per capita (USD), the number of COVID-19 cases, and the number of COVID-19 deaths between countries in Central America (The World Bank, 2018a, 2018b, 2020a & 2020b; World Health Organization, 2021a, 2021b & 2021c; Worldometer, 2021a, 2021b, 2021c, 2021d, 2021e, 2021f, 2021g, 2021h). From the data, Costa Rica has had significantly fewer deaths, albeit similar COVID-19 cases numbers, current health expenditures as a percentage of GDP, GDP per capita, and population to other Central American countries (Worldometer, 2021b; World Health Organization, 2021b; The World Bank 2018a, 2020a, 2021). However, Costa Rica is set apart from other Central American countries in the percentage of COVID-19 cases leading to death.

Essential countries of analysis from Table 1 are Panama and Nicaragua. Panama with its similar population, GDP per capita, and current health expenditures as a percent of GDP, and higher current health expenditure per capita is a notable country of comparison to Costa Rica (The World Bank, 2018b, 2020a & 2021). Regarding the COVID-19 statistics, it is essential to acknowledge that although Costa Rica, from the beginning of the pandemic until, and including, October 18, 2021, has had nearly 80,000 more COVID-19 cases, its death toll was still considerably lower than that of Panama (Worldometer, 2021b & 2021h). Panama also has a unique and interesting history with regard to shifting political power relations partly related to the economic revenue of the Panama Canal, and the country's close relationship with the United States (International Finance Corporation, 2016; Weeks & Gunson, 1991). Thus, Panama is a country of interest and that its history and healthcare sector also deserves future analysis. Nicaragua, however, has just reported 206 deaths and 1.3% of cases leading to death (Worldometer, 2021g). These impressive statistics are the results of under-reporting, data errors, and a lack of testing (Huete-Pérez et al., 2021). Nicaraguan doctors have expressed concern over the government's decision to list many COVID-19 related deaths as pneumonia-related deaths (Huete-Pérez et al., 2021; Seminario & Fernandez, 2020). There has also been a lack of diagnostic testing undertaken by the Nicaraguan government resulting in a lack of comprehensive statistics on the number of COVID-19 cases present in the country and has consequently skewed the total case and deaths related to the virus (Huete-Pérez et al., 2021). Although the statistics are impressive, it is crucial to understand the context of the underreporting and false statistics coming out of this authoritarian country.

It is also important to acknowledge that in Table 1, Costa Rica's Number of COVID-19 cases per 1000 population ranks second highest. The high case count is attributed to Costa Rica's effective COVID-19 reporting (Pearson et al., 2021). For this reason, the COVID-19 data in used together with the media reporting to determine the importance of studying Costa Rica as a case study in good public healthcare management.

Pandemic Response

The previous research completed by leading healthcare experts determined that the countries expected to fare the best during the pandemic were those able to act quickly, implement measures effectively, have public compliance during stay-at-home orders, conduct contact tracing, and enforce quarantines and isolations (Kavanagh & Singh, 2020; Pueyo, 2020). For these measures to be respected, it is also crucial that citizens trust their government systems (Pueyo, 2020; Trejos, 2013). In this way, many indicators needed to be fulfilled to ensure a sufficient initial pandemic response, which the Costa Rican government and citizens successfully accomplished.

Historic Healthcare System

Costa Rica is a country that has adopted a robust public healthcare system since the 1940s. Throughout the past eighty years, the country has implemented easy access to basic infrastructure such as water and electricity for rural and urban Costa Ricans (Barr & Michael, 2020). From the implementation of access to water and electricity, health outcomes significantly improved for Costa Ricans. Access to basic necessities is a crucial pre-requisite to good health as these provide the ground work for sanitary living situation, which are crucial to mitigate disease transmission (World Health Organization, 2022). By providing widespread access to these necessities, the health system in Costa Rica has progressed with a focus on the social determinants of health and preventative medicine, namely by preventing infectious-disease outbreaks, malnutrition, toxic hazards, and sanitary problems (Barr & Michael, 2020; Farmer, 2003; Gawande, 2021). This study demonstrates the importance of preventative medicine, which can be accomplished by respecting the social determinants of health, and the importance of the positive reinforcement of various economic and social conditions.

Literature Review and Theoretical Frameworks

There are two overarching explanations for the relative success of Costa Rica's healthcare system. One favours the institutional design of government and public healthcare systems. The other attributes Costa Rica's healthcare system's success to historical decisions and changes in economic, political and social power distribution.

The first explanation for Costa Rica's success during the COVID-19 pandemic is attributed to strong policy choices, the institutional design of the government, and the design of the public healthcare system. Within this context, there are arguments in favour of comprehensive health policies, inclusive insurance plans and systems, contemporary access to social services, health benefits, and medicines and drugs (Trejos, 2013; Pesec, 2017; Vargas & Muiser, 2013). Therefore, the literature that corresponds to this exploration examines the contemporary success of Costa Rica in terms of democratic decision-making, power-sharing, and policy choices (Trejos, 2013; Yashar, 1997). The literature that will be explored in this section is typically set post-1940. There is special emphasis placed on the time period following 1948 with the country's final civil war (Rosenberg, 1981; Winson, 1984). The emphasis of this body of literature is on understanding the healthcare sector's policy choices and institutional design.

The key strength of the institutional framework is it provides insight into the inner workings of governmental and institutional systems. Thus, providing reasoning behind the development of policies and programs (OECD, 2018; Peters, 2008; Polski & Ostrom, 1999). The institutional framework is important as it represents a step-by-step process for policy creation and institutional decision-making from which others can learn (Peters 2008). Overall, this framework explains and explores the short-term and immediate decision-making processes. The main limitation of the framework is it does not delve into historical reasoning for the creation of governmental and other decision-making systems. Therefore, although a baseline understanding of the development of various programs, policies, and systems is possible within this framework, understanding 'why' and 'how' these systems came into being is not the key focus (Polski & Ostrom, 1999). The historical reasoning for the development of institutions is lacking within the institutional framework.

The second explanation is linked to historical changes in the distribution of political, economic and social power. In the first half of the 20th century in Costa Rica, the working class struggled to influence the country's political decisions (Benton, 2016; Yashar, 1997). As a result of those struggles, in the 1940s the accumulation of the gradual changes in political power relations resulted in the abolition

of two key systems that limited civil decision-making (Benton, 2016); namely, the coffee oligarchy and the military. Understanding these moments in history helps to explain power sharing in Costa Rica and the subsequent development of its healthcare system.

The strength of the historical political economy framework is that it provides a historical lens into the reasoning behind Costa Rica's current political and decision-making sectors (Boettke, 2013; Muntaner, 2015). Therefore, the framework provides fundamental insight into power relations and the strength of civil society in Costa Rica. The key weakness of the framework is that it does not provide contemporary insight into how historical moments inform the policy choices and the institutional design of the Costa Rican government (Boettke, 2013; Muntaner, 2015). Meaning, it does not offer an explanation for the current policies that have been put into place to mitigate the adverse effects of the pandemic, such as the implementation of mask mandates. Overall, present-day reasoning for the development of institutions and decision-making is lacking within the historical political economy framework.

Methodology

Various questions and criteria have been determined to classify whether the literature examined argues in favour of an institutionalist framework, a historical political economy framework, or both.

Given that the institutional framework places emphasis on strong policy choices, leadership, and the design of Costa Rica's universal healthcare system, the criteria for analyzing and evaluating literature within this framework focused on two guiding questions:

- Is it explicitly stated that the exploration centers on an institutional framework?
- Is it explicitly or implicitly stated that strong policy choices, strong leadership, and/or the design of universal healthcare in Costa Rica directly correlates to the creation of the strong healthcare system?

If the answer to either or both of these questions was 'yes,' the work was deemed to relate to the institutional framework.

The criteria for understanding and evaluating literature that argued in favour of the historical political economy framework were those that answered 'yes' to either, or both, the following questions:

- Is it explicitly stated that the exploration centers around a historical political economy or a neo-Marxist framework?
- Is it explicitly or implicitly stated that the dismantling of the coffee oligarchy and/or the abolition of the military directly correlate to the present-day political structures in Costa Rica?

If either of these questions were deemed true, the analysis was considered to fit into the historical political economy framework. Regarding the second question, this analysis pays special attention to the abolition of the military and the dismantling of the coffee oligarchy in Costa Rica as indicators of historical power redistribution within the country. These two notable moments in the country's history indicate the re-organization of power, which is indicative of the historical political economy framework.

For the literature that is neither 'mostly institutionalist' nor 'mostly historical political economy' leaning, the information was placed, and analyzed, in a third category. This category, named as the 'combination framework,' aimed to evaluate the literature from both lenses, to gain a great

understanding regarding whether these frameworks were entirely competing, or shared some common themes. The literature that is explored in this category agreed with at least one question per framework described above.

Explaining Costa Rica’s Healthcare System: Competing Explanations

Institutional Framework

The institutional framework is characterised by understanding the role of service-providing formalized structures, such as governments, in facilitating co-ordination and discourse (Peters, 2008). The institutional framework focuses on various components of government structures such as policy choices and leadership (OECD, 2018; Trejos, 2013). As a result, this framework is used to explore the advancement of Costa Rica’s healthcare indicators attributed to strong policy choices, leadership, and healthcare system design, with an emphasis on universal healthcare.

Historical Political Economy Framework

The historical political economy framework attributes the development of Costa Rica’s robust healthcare system to historical changes in economic, political and social power relations. The gradual changes in political power relations in Costa Rica enabled investments in the healthcare sector in the 1940s (Boettke, 2013; Muntaner, 2015). These changes are symbolized most importantly by the dismantling of the coffee oligarchy and the abolition of the military. These key historical shifts have been significant in re-allocating political power and government spending. It is essential to recognize that these events were the cumulation of gradual changes in political power relations in the country rather than singular events. Exploring the significance of the dismantling of the coffee oligarchy and the abolition of the military allows for two things: a historicized understanding of the creation of Costa Rica’s strong healthcare sector and its subsequent success in facing current biological threats.

Combination Framework

The literature reviewed in this category considers that a combination of historical political economy factors and institutional approaches has created the strong healthcare sector in Costa Rica. Authors whose work fits into this framework argue that without the historical-political context of the country, the current public healthcare system could not have developed. In this section, crucial social and historical factors, and the country’s democratization are explored.

Evaluation of Literature

Institutional Framework

The key messages derived from the institutional perspective have allowed for an explanation regarding why the current healthcare system in Costa Rica is strong. Understanding the importance of policy choices, leadership, and investment in universal health coverage has been crucial to understanding the development of the current system (Nielsen, 2001; Peters, 2008). In this way, the institutional framework has been successful. This framework has also allowed for a comprehensive exploration of the policies that have aided the Costa Rican healthcare system, such as the creation of the *Equipo Básico de Atención Integral de Salud* (EBAIS). The EBAIS is a primary health system integral to good health outcomes in Costa Rica and to put this into practice, the system was created. However, the institutional framework does not explain the political and economic contexts that led to

the healthcare sector's creation (Polski & Ostrom, 1999). Therefore, understanding the current institutional circumstances present in Costa Rica helps uncover part of how the country has effectively coped with the social and health effects of COVID-19, namely, through strong public health measures such as the fast implementation of lockdowns.

Furthermore, it is crucial to understand the importance and limitations of good leadership. From 1940 to 1944, Calderón was the president of Costa Rica; his presidency was significant as it emphasised social reform and social security (Rosenberg, 1981; Yashar, 1997). The social security program implemented in 1940 by the Calderón government remains one of the most important state-sponsored social programs in Costa Rica and is one of the most respected and successful programs in Central America (Rosenberg, 1981). It is easy to acknowledge Calderón for advancing healthcare and the social sector (Bolaños, 2010; Rosenberg, 1981). However, it is essential to recognize that he was elected by a population who valued his views and goals. Citizens' views on workers' rights during the liberal period were a precursor to the election of Calderón and the ensuing social structures that his government put in place. Therefore, without a socially-minded population, and a political support base who desired more rights for workers, his decisions and policy-making would not have been possible.

In places where the power of elite groups had been more entrenched, the changes that occurred in Costa Rica may not have been possible. Influential leadership and the consequent funding of strong public sectors has not been the case in the history of other Central American countries such as Nicaragua. Because there was a less significant shift in leadership styles and dictatorships in Nicaragua, governmental decisions were highly influenced by the coffee elites (Mahoney, 2001). Thus, there are limitations to the work that can be accomplished by strong leadership in terms of the development of a strong public healthcare sector.

Historical political economy framework

The historical political economy framework provides a historical portal into changes in economic, political, and social power relations. These changes have particularly aided in the country's ability to re-allocate funds. This framework also provides a more holistic understanding of the effects of power redistribution and the positive security effects of dismantling the military (Benton, 2016). Although the coffee oligarchy's dismantling and the military's abolition were significant events, these are symbolic of the country's cumulative changes of interdependence on economic and political developments. Understanding the changes in power relations is the crux of historical political economy.

Furthermore, the historical political economy framework does not explain the decisions made during the COVID-19 pandemic that ensured a strong initial response. Although the abolition of the military and the dismantling of the coffee oligarchy have aided in shaping the present political context of Costa Rica, these moments do not provide a reasoning for the current policy choices made by the government in the face of COVID-19. The historical political economy framework explains why the government can make its decisions but not how the government makes its decisions. Therefore, this framework provides a portion of the explanation for how Costa Rica has effectively coped with the social and health effects of COVID-19.

Combination Framework

The combination of the frameworks allows for a more holistic understanding of the reasoning behind how the healthcare system in Costa Rica has responded effectively to the COVID-19 pandemic.

Many unique factors have led the country's healthcare sector to develop into a robust system, including historical and more recent institutional decisions.

There are tensions between these frameworks as they are fundamentally different. One framework highlights the importance of good institutional design, and the other highlights the importance of historical changes in political and economic power relations (Barr & Michael, 2020). It is not always possible to argue that these explanations agree with one another. However, it is possible to understand both of these frameworks as mutually beneficial. They provide very different, yet complementary, reasons for Costa Rica's success in creating a robust healthcare system, which led to good health outcomes during the COVID-19 pandemic.

However, because this paper seeks to understand why Costa Rica has been so effective at responding to the contemporary COVID-19 pandemic, the institutional lessons learned suggest that they could be replicated in other countries. But, arguably, the institutional recipes for good healthcare would not be replicable without changes in political and economic power relations.

Lessons Learned

Some key short-term and long-term lessons can be drawn from this analysis to help remedy and strengthen health systems across the world. These lessons are crucial to ensure strong responses that could help during future crises, such as pandemics.

The first short-term recommendation includes the importance of respecting the social determinants of health (Barr & Michael, 2020; Farmer, 2003). The second pertains to the importance of strong leadership to help citizens maintain their trust in institutions which is crucial during times of crisis (Rosenberg, 1981; Yashar, 1997). The idea of the importance of strong leadership is not meant to overlook the historical, political, and economic contexts in which the good decision-making, and good leadership took place. This takeaway does not suggest that Costa Rica's healthcare system can only be explained through strong leadership and the institutional design favouring access to social services. It also does not indicate that the only prerequisites to healthcare system improvement are strong leadership and good institutional design. Instead, this exposes how good leadership and institutional design continues help ensure that Costa Ricans' social determinants of health are respected and, therefore, allow for good health outcomes.

The long-term recommendations and lessons learned include the fact that health does not require wealth. Instead, health requires direct and purposeful spending and relatively equitable power relations in society (Bertodano, 2003). The final recommendation relates to the importance of investing in preventative healthcare (Barr & Michael, 2020). By applying the lessons learned to other contemporary health systems to mitigate the adverse effects of future biological threats.

Conclusion

Regarding the literature, because this paper seeks to understand why Costa Rica has been so effective at responding to the contemporary COVID-19 pandemic, the institutional lessons learned suggest that they could be replicated in other countries. But, arguably, the institutional recipes for good healthcare would not be replicable without changes in political and economic power relations. Thus, the combination of the frameworks allows for a more holistic understanding of the reasoning behind how the healthcare system in Costa Rica has responded effectively to the COVID-19 pandemic. As well, the immediate changes explored can be viewed primarily as reflections of the institutional framework and

long-term changes reflect historical changes in economic, political and social power relations. However, it is crucial to remember that theory helps explore how to address and approach urgent development challenges. Therefore, although the theoretical underpinnings of explanations of successes and failures have allowed for a comprehensive understanding of replicable lessons, the lessons learned do not fit into a single framework at the analytical level.

Overall, Costa Rica has had a very particular history concerning economic and political decisions, allowing the country to develop its current healthcare system. Due to the country's strong policy choices and because the Costa Rican democracy has had time to mature, the government was able to act quickly in the face of the biological threat (Trejos, 2013; Paige, 1997; Pesec, 2017). Exploring the development of healthcare in Costa Rica has uncovered that economic growth is not necessarily the catalyst for good health outcomes. Instead, investing in public healthcare through the reallocation of funds is possible (Barr & Michael, 2020). Thus, it is clear that public and universal healthcare systems are vital in ensuring good health and many lessons can be learned from this sector and applied to other contemporary health systems to mitigate the adverse effects of future biological threats.

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