

The Conflicts for the COVID-19 Pandemic Management in Mexico: An Analysis of Intergovernmental Relations

Edgar E. Ramirez¹ · Manlio F. Castillo¹

Accepted: 7 October 2022 / Published online: 23 November 2022 © The Author(s), under exclusive licence to Springer Science+Business Media, LLC, part of Springer Nature 2022

Abstract

The paper presents an exploratory case study on the operation of intergovernmental relations (IGR) in Mexico during the management of the COVID-19 pandemic to identify and explain the main conflicts faced in the management of the emergency. The main findings are: Mexico is undergoing an aggressive re-centralization process encouraged by inequalities among states and their lack of professional public administrative systems; 2) formal rules for balancing IGR lose value versus informal rules based on transitory political-partisan agreements; 3) the weakness of the rule of law, power imbalances, lack of clear rules, and communication problems difficult intergovernmental collaboration in emergencies management.

Keywords Intergovernmental Relations · Conflict · Cooperation · Pandemic management · Emergency management · COVID-19.

Introduction

After decades of centralized governments —by constitutional design or political pragmatism— Latin American countries came to associate part of their democratic achievements with a more significant role for regional and local governments in making decisions that directly affect them. The evolution to decentralization was not free of political, administrative, and social conflicts.

Manlio F. Castillo manlio.castillo@cide.edu

Edgar E. Ramirez edgar.ramirez@cide.edu

Public Administration Department, Center for Research and Teaching in Economics (Centro de Investigación y Docencia Económicas, CIDE), Carretera México-Toluca 3655, Lomas de Santa Fe, Álvaro Obregón, 01210 Mexico City, Mexico



Mexico was on this trend. After a long period of highly hierarchical governments, which concentrated power in the Federal Executive, political and economic pressures pushed the federal government towards decentralizing reforms, which substantially modified the relations between the governments of the Federation. More focused on municipalities than states, such reforms allowed subnational governments a more prominent role in public life.

However, recently, the results of the decentralization process started in the 80s began to be questioned and reversed in some essential public policy arenas, such as public safety, education, and health, among others. Despite the importance of these changes, little is known about the nature of intergovernmental relations (IGR) at this juncture. It is necessary to deepen how the governments of the Federation communicate and collaborate, to know the rules they follow in their interactions and in resolving their conflicts.

In this context, the article aims to contribute to studying the conflicts that currently determine IGR in Latin America. To achieve this goal, the case of the management of the COVID-19 pandemic in Mexico is analyzed. From this case, the empirical question is: what were the main intergovernmental conflicts faced by the management of the pandemic in Mexico?

The management of the health emergency due to the appearance of COVID-19 meant a crucial effort of intergovernmental collaboration, which pressed the management capacities of governments in Mexico to the limit and highlighted the main conflicts that hinder the proper operation of the network of relations between governments. Additionally, the pandemic came at the right time when the Mexican government was trying to implement far-reaching reforms in the public health system, which exacerbated disagreements with states and users of health services.

The analysis of the case had an exploratory character. A content analysis was carried out based on various sources of evidence to reconstruct the process of managing the health crisis up to the present.

The first section of the article provides the analytical framework for the case. It explains the pendulum nature of Mexican Federalism and its tendency to centralization. The section also describes the core elements of the relationship between emergency management and IGR. The second section explains the method of analysis. The following section is a detailed reconstruction of the pandemic management in Mexico. Finally, some conclusions are proposed.

Federalism and intergovernmental relations in Mexico

This section aims to provide an analytical framework to understand the context of IGR in Mexico and explain the main conflicts faced by the management of the COVID-19 pandemic. Firstly, the background and essential features of federalism and IGR in Mexico are presented. The next section depicts the pendular nature of Mexican federalism and its tendency towards centralization. Finally, the formal structure governing the relations between the federal government and the Mexican states is described.



Background

Before the '80s, politicians and researchers paid little attention to subnational governments in Mexico. The centralism of the political system, with a hegemonic party and a dominant Executive, nullified, in fact, almost all the constitutional precepts of Mexican federalism. The characteristics of the political structure were also reflected in bureaucracy and IGR. However, since the beginning of the 80s, Mexico started an episode of decentralization. One of the first actions of this process was the constitutional reform of 1983, which defined powers and resources for municipalities. President De la Madrid (1982–1988) also promoted decentralization in health and education policies, which were intensified during the administration of President Salinas de Gortari (1988–1994). Subsequent governments added new policy arenas to this progression. Decentralization, together with an increasing electoral competition in states and municipalities, forced changes in the structure of relations between the federal government and state and municipal governments (Rodríguez, 2018).

Thus began the conflict between centralization-decentralization, which has shaped Mexican federalism and determined the nature of IGR in recent decades. Despite these tensions, in its form of allocating the powers of each sphere of government, the Mexican Constitution still seems designed to restrict the power of the 32 state governments and the 2,471 municipal governments (including the 16 mayorships of Mexico City) (INEGI, 2022) against a powerful federal government.

Unlike the municipal and federal governments that have better defined their powers, the Mexican Constitution only imposes prohibitions on states (arts. 117 and 118), establishes concurrence with the federal government in some policy arenas, and assigns them as attributions all those not reserved to the Federation (art. 124). However, the federal government, through the federal Congress, has "implicit capacities" because Congress it is empowered (in article 73) to issue the laws necessary to comply with the government's explicit capacities, which allows it to intervene in practically all areas of national life (Tena, 1997).

In short, the Mexican federal pact has never shown the characteristics of an agreement between equals. Nor have the states been sovereign, nor have the municipalities been free in the most critical decisions for their administrations (Galeana, 2017; Rodríguez, 2018).

Political and Decisional Centralization: The Pendulum

The centralization of decision-making of all government affairs emerged over the twentieth century due to the domination of a single political party. This organization served to channel governance processes vertically and hierarchically.

Despite democratic advances and the changes of the party in power in the first decades of current century, the centralized and centralizing culture has not entirely disappeared. The persistence of this phenomenon is manifested in the submissive stance of many state and municipal officials *vis-à-vis* federal officials. Likewise, within each sphere of government, the vertical concentration of power in the executive is reproduced (Carpizo, 1978; Marván, 1997; Mendoza, 1996).



Most of the decentralizing trends launched in the 80-90 s focused on municipalities (Merino, 2007). This fact continued to leave the states in limbo about how they should insert themselves into the network of relationships that was configured during the changes in the practical organization of Mexican federalism (Cejudo, 2007). One of the results was that some municipal governments (for example, the larger cities) made professionalization and management practices progress, even more than their state counterparts (Arellano et al., 2011; Sanginés & Strazza, 2016).

Between 2006 and 2018, it became evident that the decentralizing process had ended, and the pendulum started the opposite movement (Aguilar & Ramírez, 2020) Political plurality, the strengthening of civil society (Vega, 2004), and the better conditions of Mexican democracy would not allow a complete return to the centralized arrangement of the hegemonic party era. However, there would be changes in the management of important public policy arenas.

In the period mentioned above, the fight against crime and the reforms to the education sector led to the re-centralization of both policies and motivated reforms to return to the federal government essential functions for the management of educational and safety policies previously delegated to subnational governments. As discussed below, the current federal administration (2018–2024) has done the same with health services, showing a wave of re-centralization and affecting relations between governments.

Administrative Structure of States and IGR

The public administration of the states reproduces the federal organization. The state executive power is deposited in a governor who freely appoints his cabinet. In all states, public organizations similar to the federal ones are found. Most of them deal with the following issues: government, finances and tax collection, law enforcement, education, social development, economic development, public works and infrastructure, and health.

Because of the imprecision about state tasks, it is left to state governments to define their priorities. Some state constitutions specify the substantive tasks of states, but not all do. Generally, the most important functions of states are related to education, health, the administration of justice, social policy (including the fight against poverty), and economic development.

Health and education policies are especially important because both are designed and implemented through concurrent faculties. I.e., require the participation of the three levels of government, although each has specific competencies in each matter.

The concurrent powers oblige coordination for their fulfillment and, therefore, represent crucial challenges in the relations of the Federation governments. Originally, the Mexican Constitution did not subordinate the states to the federal government. However, throughout the 20th century, the Constitution was successively amended to accumulate powers over various matters in federal authorities (Cabrero, 2007, 2013). Moreover, the difficulty in defining the distribution of competencies, in practice, along with the disproportioned financial, material, and human power of the



federal government *vis-à-vis* the states and municipalities, makes it difficult for them to oppose the center's decisions.¹

The administrative agreement is the most used mechanism to shape collaboration in government areas with concurrent jurisdictions. However, due to the disparate relations between authorities at all levels, states and municipalities frequently end up as mere federal government agents (Díaz-Cayeros, 1995).

The inequality of the technical, material, and human resources available for each government is also decisive in the ineffectiveness of constitutional controls. Although there are legal mechanisms, such as controversies, for the Supreme Court to resolve ambiguities or disagreements between governments, it has not been beneficial. In practice, most resolutions have favored the higher power, both at the federal level and within the states (Eugenio, 2010; Verdugo López, 2021).

Analytical Framework: Managing Emergencies in Mexican Federal Context

Emergency management usually involves different governmental and non-governmental actors with varying degrees of participation and decision-making. The management of emergencies or complex problems in federal systems usually forces the operation or resistance of public management systems to the limit.

Emergency management has been analyzed across different public policy arenas, especially natural disasters (see, for instance, Andrew & Carr 2013; Jennings et al., 2015; Manandhar & Siebeneck, 2018). However, other "wicked problems" have also been studied through this approach, such as those of public safety or health emergencies (e.g., Martinez et al., 2019; Richmond et al., 2021; Sun et al., 2018; Sylves, 2019). Although these studies usually delve into specific cases and circumstances, general elements can be extracted from them and serve as a reference for analyzing other contexts.

The essential requirement for successful emergency management is effective collective action. Achieving such effectiveness requires building (sometimes very quickly) efficient collaboration mechanisms.

Collaboration (cooperation and coordination) has become a growing interest topic in public management. Although collaboration can be a helpful tool when objectives, rules, and responsibilities are clear, it can also lead to significant problems when these elements are not present (Peters & Pierre, 2018).

The literature on emergency management has been matched, explicitly or implicitly, with collaborative literature (Farazmand, 2017). At this coincidence, both are useful to help us understand the management of IGR in specific emergency management situations.

¹ However, coordination is not exclusive to concurrent powers. It is also necessary to fulfill even exclusive powers or functions (Rowland, 2000). For example, although the public lighting service is an obligation of municipalities, it requires connecting the lamps to electricity networks that are under the control of a federal agency.



Collaboration does not arise naturally or autonomously of the relations between governments. While certain organizational arrangements facilitate it, others hinder it, sometimes amplifying disasters' magnitude and consequences (Corbacioglu & Kapucu, 2005). This characteristic applies to formal relationships, defined by normativity, and to informal relations between governments and other actors.

The design of emergency management mechanisms is closely related to how relations between governments have historically been shaped (see, for instance, Caruson & MacManus 2006). It means that the configuration of such relationships considers their effectiveness in solving problems but also political or other factors. For instance, in American federalism, emergency management is built to operate from the bottom-up (McDonald et al., 2020) while in Mexico and most Latin American countries, it works from the top-down due to the large concentration of political and administrative power in central governments (Cabrero, 2007).

Institutional Context, Collaboration, Decentralization, and Opportunism

In Mexico, the formal setting of IGR is inserted in a context influencing it decisively. This environment is characterized by a weak rule of law, ambiguous rules, concentration of real power in the federal government, scarcity of resources and professional management capacities in the states and municipalities, patronage and patrimonialism of the public administration, mastery of informal rules, a partially subordinate justice system, low participation of non-governmental actors in public decisions, and opacity.

To this picture, we must add the degree of collaboration among the members of the Federation. We can classify IGRs as tending to be "more collaborative" or "more confrontational", according to how federalism has developed in each country. The literature has recorded the shift from a collaborative federalism (Bickerton, 2010; Simmons & Graefe, 2013) to a confrontational one. This trend, present in some countries, is due to internal asymmetries between the central and regional governments, the impulse of demands from ethnic or social minorities (Zuber, 2011), the strengthening of local cultures in plurinational states (Rius-Ulldemolins & Zamorano, 2015), political or partisan competition between governments (Bulman-Pozen, 2014; Trejo & Ley, 2016) and greater social diversity, in general (Bakke & Wibbels, 2006). Although it is not impossible to build collaborative mechanisms in such circumstances (Morris & Miller-Stevens, 2015), the complexity of addressing and managing wicked public problems increases significantly, which also contributes to conflict, fragmentation, and polarization.

For some Latin American countries, including Mexico, it is not easy to find a place in this classification. These countries could be placed closer to "collaboration," but bearing in mind that the organizational and normative environment in which they are nested is highly hierarchical. Here, subnational governments are *forced* to collaborate due to their inability to oppose the center's decisions. The dominance of the federal government over Mexican state and municipal governments is clearly reflected in the mechanisms for the distribution of fiscal resources, as well as in the decision-making capacity in this regard. As Cabrero (2013) and Díaz-Cayeros (2016) point out, the



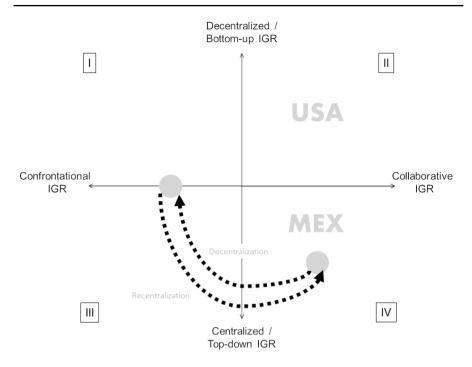


Fig. 1 Classification of the RIGs of Mexico and the United States. Source: The authors

structural traps of Mexican federalism limit and distort, in fact, the decentralization of decisions and the fiscal responsibility of subnational governments.

For this paper, we consider the IGR as more or less collaborative, according to the degree of agreement and coordination achieved between local governments and the Federation for the implementation of public policies or the joint management of public programs.

The other dimension in which we can classify IGR in Latin America and Mexico, in particular, is their verticality or hierarchy, according to the degree of concentration or decentralization of decisions. The two extremes of this classification would be those IGR systems that operate predominantly bottom-up (decentralized, from local to federal) and those that operate top-down (centralized). By combining both dimensions (collaboration/confrontation and centralization/decentralization), the pendular movement of federalism and IGR in Mexico, mentioned in the previous section, can be better located and understood. Figure 1 shows this movement between quadrants I, III and IV of the diagram. Just for reference, the United States case is a combination of more collaboration and more decentralization, without this meaning that the arrangement is static over time.

However, even in the context of Mexican IGR, it is possible to effectively manage collaborative networks to shape an organized collective action, despite the tendency to centralization. As Provan & Kenis (2008) argue, there are different forms of network management (by shared governance, lead organization, or network administrative organization). Although networks governed by central organizations



predominate in Mexico, there are also successful cases of horizontal and less concentrated networks, for example, to provide or regulate local public services (Castillo, 2019, 2022; Ramírez, 2012; Ramírez & Castillo, 2017).

In federal States, an additional variable complicates IGR and emergency management. Based on rewards and punishments, intrusive federalism has led to "opportunistic federalism," (Conlan, 2006) even in consolidated democracies. Conlan (2006) defines opportunistic federalism as a system where actors put their short-term political, economic or bureaucratic interests first, regardless of their conduct's consequences for collective action or the common welfare. An example of opportunistic behavior is when state or municipal governments divert federal programs from their goals by using their operating rules to get resources for clientelistic or partisan purposes.

In short, the management of the COVID-19 pandemic in Mexico has occurred in a context of institutional fragility, within a process tending towards the re-centralization of the IGR, and with a set of federal and local actors seeking political or group benefits (political opportunism). The general argument of this paper is that these factors have caused the main intergovernmental conflicts faced by the management of the pandemic in Mexico.

Analysis Method

This study has an exploratory character. The objective is to find out the main conflicts faced by the management of the pandemic due to the COVID-19 disease in Mexico, considering the specific features of Mexican federalism. The analysis also considers the transition of the Mexican public health system, which coincides with the beginning and development of the pandemic.

Based on the previous analytical framework, the case study was organized around the concepts of centralization/decentralization, collaboration/confrontation, and opportunism. The unit of analysis was the process of managing the COVID-19 pandemic. In this process, the relations between the different spheres of government in Mexico went through tense moments, which were not always satisfactorily resolved.

The reconstruction of the case, presented in the following section, was carried out based on the collection of documentary information (official documents, press publications, and public data). A content analysis was carried out based on these sources of evidence to reconstruct the process of managing the health crisis up to the present. The variety of information sources, its contrast and triangulation allowed a balanced narrative of the case, beyond the government versions and other groups on the health emergency management.



Managing the COVID-19 Pandemic in Mexico

Centralism, Decentralization, and the Problem of Coverage

The health management system in Mexico has gone through numerous transformations in the organizational structure, the mechanisms of operation and financing, and the attention to users. Since the beginning, and during most of the twentieth century, the National Health System (NHS) preserved centralized management with limited infrastructure and aimed at partial coverage of users (Dávila & Guijarro, 2000). Only people who enjoyed formal employment could benefit the public social security system. The two major groups that characterize the Mexican NHS were defined during this stage. On the one hand, the public sector, composed of (a) the Mexican Social Security Institute (IMSS, in Spanish), aimed at the care of workers in private companies; (b) the Institute of Social Security and Services for State Workers (ISSSTE, in Spanish); (c) the Social Security Institute of the Mexican Armed Forces (ISSFAM, in Spanish); (d) the Health Services of *Petróleos Mexicanos* (SSPEMEX, in Spanish); and (e) the Ministry of Health (SSA, in Spanish). In the second group are private and non-governmental health services.

The hyper-presidential regime that prevailed in Mexico last century contributed to constructing a centralized health system. The organizational architecture of the NHS followed this hierarchical pattern, reinforcing the paradox of a Federal State with a highly centralized government that, from the presidency, settled local conflicts and assigned political positions, undermining the autonomy of state and municipal governments in all areas (Rowland & Caire, 2001).

In the 80s, the economic crisis and the governmental and administrative reforms that followed promoted decentralizing measures in the provision of public services (Cabrero, 2004; Finot, 2007). The constitutional reform of 1983 triggered a transfer of services to the states and municipalities. However, this process was not accompanied by the technical capacities and adequate financing to ensure an efficient operation.

The NHS decentralization began with the creation of the IMSS-Coplamar, as a decentralized mechanism whose goal was to incorporate people without social security into the system, mainly informal workers or poor people. Subsequently, state governments, supported by the National System for the Integral Development of Families (DIF, in Spanish), would accompany this initiative by forming health services for state workers and non-beneficiaries (Antuñano, 1993; Frenk et al., 2007).

Since then, concerns for the care of people without access to health services or social security have become a central issue. By 1985, 50% of the Mexican population lacked basic health services, and the problem was increasing. The problem forced the authorities to face the situation differently. One of the most important measures to serve the non-eligible population was to incorporate a health care component into the social programs implemented by the government. This strategy began with the *Programa Nacional Solidaridad* (PRONASOL) in the 90s. It continued with the *Programa de Educación, Salud y Alimentación* (PROGRESA), the *Programa de Desarrollo Humano-Oportunidades*, the *Prospera-Programa de Inclusión Social*, and, recently, with the *IMSS Bienestar* program.



The efforts promoted by these programs were limited. At the beginning of the twenty-first century, the Mexican population still suffered (as now) from inequitable, precarious, fragmented, and inefficient health services. The recognition of this reality and the State's inability to provide financial health protection to just over half of the population led, between 2006 and 2012, to undertake a reform to the NHS. The reform was proposed to establish a Social Protection System in Health (SPSH), to offer a public and voluntary health insurance called *Seguro Popular* (SP, Popular Insurance). The insurance would financially protect the population against catastrophic expenses due to illness (Frenk et al., 2007). This reform would transform health services, decentralize decision-making, and establish a Fund for Catastrophic Expenses for people who decided to enroll in the SP.

The public and private components of the NHS have different financing mechanisms. Public bodies operate through tripartite arrangements, with financial contributions from workers, the federal government, and employers. On the other hand, public health institutions require contributions from state and federal governments and, in some cases, from the beneficiaries. As an innovation, the SP made possible the subrogation of health services to expand the coverage of care to the population through the financing of the Fund for Catastrophic Expenses, which covered a defined package of medical services (Frenk et al., 2007; World Health Organization et al. 2020).

Various federal and state health institutions were integrated to operate the SPSH. In addition to the IMSS, the ISSSTE, the ISSFAM, and the SSPEMEX, the Social Security Institutes of State Workers (ISSES, in Spanish), the public health institutions in charge of the SSA (i.e., the network of national institutes, general and specialty hospitals), the state hospitals in charge of the local secretariats of health, the *IMSS Prospera* or *Bienestar* and the national and state DIF Systems were added. On the other hand, the private sector increased its offer through private hospitals and small medical offices in pharmacies.

The INSABI and the re-centralization

The political change in the federal government in 2018 began a significant debate about how Mexico had been governed until then. One of the initial discussions of the new government focused on health services, on which significant reforms were proposed.

The first important decision taken by the new administration was the disappearance of the SP, under alleged reasons of corruption, which were never clarified. The SP would be replaced by the *Instituto de Salud para el Bienestar* (INSABI, Health Institute for Wellness). In addition to assuming the functions of the SP, the INSABI would establish the rules for operating the *IMSS Bienestar* and purchasing medicines, materials, and medical equipment.

The creation of INSABI also implied the re-centralization of the management of health personnel. The institute got the powers to centralize the payroll in the federal authority, manage medical personnel for users' attention, offer incentives, build and preserve infrastructure and regularize workers (Orozco et al., 2021). Thus, INSABI would try to recover State health functions and operate them from the Federation instead of establishing horizontal collaboration ties with the states' health systems.



The 2019 reform of the General Health Law, which created INSABI, proposed that the recovery of the governance of the NHS would be through the concentration of decisions in the federal government, which would determine the guidelines for the operation of health agencies. In budgetary terms, health spending and the Fund for Catastrophic Expenditures would be incorporated into INSABI, the organization around which the sector would be ordered. On the other hand, the Ministry of Finance would intervene in purchasing medicines, materials, and medical equipment. Its participation would prevent the dispersion or transfer of resources to state governments and decentralized agencies, establishing a consolidated purchasing mechanism to generate savings in acquiring supplies and medicines.

INSABI started from a comprehensive diagnosis of the health system. The information pointed to severe problems of institutional fragmentation, low coverage, financial deficit, deficiencies in infrastructure, shortages of medicines and supplies, budgetary limitations, and operational inefficiencies. All problems showed a complex panorama.

The rough road to the new institute —which was not ready when the SP disappeared—produced conflicts with the users of health services and the state authorities, not only because of the elimination of the SP but also because of the incapacity of INSABI to serve users. For example, the sudden elimination of the SP left in distress just over 53 million affiliated people, who represented 44.7% of the country's total population in 2018 (Sánchez, 2018). Additionally, the increase in powers related to free and universal access to health services increased uncertainty about the operational viability of INSABI.

The new health policy sought to recover the leadership of the NHS under the slogan that corruption had permeated hospitals, contracts with pharmaceutical companies, medical personnel, and state governments. The supposed recovery of control of the NHS led to its paralysis by encouraging conflicts between the different local and federal actors of the health system. At the same time, contracts and agreements with private entities and non-governmental organizations (NGOs) were unilaterally canceled, arguing that their conduct was unethical or aligned with a "neoliberal" logic.

The effects of these measures were quickly felt. On the one hand, the health surrogate services provided by the SP through state and private hospitals, and NGOs, stopped, leaving many medical treatments unfinished. Secondly, the supply of medicines was paralyzed with the interruption of contracts, arguing that pharmaceutical companies were colluded in corruption networks to create oligopolies in the sale of medicines to the government —the cancellation of contracts exacerbated medicines shortages across the health sector. Finally, the Fund for Catastrophic Expenditures was also eliminated —along with other funds in the Federal Public Administration—claiming that its management was opaque and corrupt, which increased the lack of services and the charging for treatments previously covered by the fund (Reich, 2020).

The INSABI Implementation Problems

One of the main design flaws of INSABI was to assume that the institute could begin operating immediately with the unconditional collaboration of state authorities. The



new system's operation was designed to rest on collaboration agreements between the federal government and the states.

However, the lack of operational guidelines and political conflicts made it difficult to reach collaboration agreements. Additionally, the absence of information, misunderstandings, limitations of qualified technical personnel, and the scarcity of financial resources, as a result of the austerity policy promoted by the federal government, complicated the implementation of the new health management model, increasing the continuous contradictions between state health systems and INSABI (Flamand et al., 2021; Sánchez, 2018).

At the end of 2020, a decree (DOF, 2020) was issued establishing free health services at all levels. The decree did not consider the regulations and financial difficulties of the country's hospitals and health centers, nor was it accompanied by specific guidelines for their operation. When the decree went into effect, federal and state hospitals had no rules to comply with the new law.

The regulatory void produced conflicts with users of health services because the fees charged for their provision could not be eliminated immediately. The contradictions between the decree of gratuity and the regulatory framework of hospitals, on the other hand, posed a dilemma to public servants, who were not sure about the regulations they should follow.

The situation encouraged protests from users and complaints against hospital officials. The federal government downplayed the protests and, in some cases, fired hospital directors arguing that they refused to abide by the new rules or were committing acts of corruption, which were never solidly proven.

The decree of free health services added new and vital pressure to the finances of hospitals and public health centers, which had already operated with budgetary difficulties for a long time and were looking for alternatives to sustain their operation (Béland et al., 2021). The charge of recovery fees was preserved as an additional income to supplement the budget that, over the years, had become insufficient to meet the growing demand for public health. The decree eliminated fees without carrying out financial studies or proposing instruments that would allow the budgetary consolidation of the health sector and ensure its operation in the short, medium, and long term.

Managing the COVID-19 Pandemic

The health crisis caused by the spread of the SARS-CoV2 virus reached Mexico amid the problems caused by the implementation of INSABI, the re-centralization of the health sector, and the precariousness of the public health system. The need to respond to the COVID-19 pandemic would amplify existing conflicts and highlight the severe deficiencies and imbalances in the NHS (Ramírez de la Cruz & Gómez Granados, 2021).

Health crisis management required to put in action a complex network between federal, state, and local authorities and actors (Ramírez de la Cruz et al., 2020). Although the SSA and the President himself placed themselves at the head of the management of this network, the erratic government position on the measures that should be taken to manage the pandemic increased uncertainty and disagreements



between the actors involved (Dunn & Laterzo, 2021). The design and implementation of interventions by decree, ignoring the states and municipalities, caused resistance, confusion, polarization, and even rejection about the actions and objectives intended to be achieved (Knaul et al., 2021).

The emergence and spread of COVID-19 prompted the federal government to issue an epidemiological alert on January 21, 2020. The medical and scientific community demanded the urgent installation of the National Health Council (NHC) to analyze the pandemic's development and establish the sanitary measures that should be taken to reduce the contagion and the effects of the virus.

NHC was established in 1986 as a coordinating body for the programming, budgeting, and evaluation of public health policy. It is a collegiate organization that reports directly to the President and has the character of a health authority, with normative, advisory, and executive powers. According to the law, the orders issued by the Council are mandatory in the country. Ordinarily, NHC meets three times a year, but it can call an extraordinary meeting to deal with matters that, due to their seriousness, require urgent attention, such as a pandemic.

Despite the COVID-19 health emergency, the federal government initially refused to convene NHC, arguing that the SSA was already carrying out the necessary measures. However, several former officials, legislators of the opposition parties, academics, former ministers, and specialists insisted on bringing together all actors with knowledge and experience to address the emergency.

Due to pressures, the federal government decided to call NHC to an extraordinary session on March 19, 2020. At this meeting, which some sectors considered belated, the Council recognized the gravity of the pandemic and committed to issue measures for the preparation, prevention, and control of COVID-19. State governments and NHS members were urged to establish hospital reconversion plans and increase their capacity to serve the public (DOF, 2020). Although the result was not as expected, NHC declared itself in a permanent session to address the emergency.

NHC was integrated with the minister of health as president, a technical secretariat, the 32 state secretaries of health, and the counselors of SEDENA, SEMAR, ISS-FAM, ISSSTE, DIF, IMSS, and SSPemex. The Council established three permanent commissions: the public health commission, the economic problems commission, and the training commission.

For the analysis of the pandemic, an extraordinary meeting of the National Committee for Health Security (NCHS) was also held, headed by the Underministery of Prevention and Health Promotion, and composed by representatives of the Ministries of Labor and Social Welfare, Tourism, Education, and Communications and Transport, as well as the IMSS, the ISSSTE, the medical services of armed forces and *Petróleos Mexicanos*, among others.

The NCHS was created in 2003 as a body responsible for the analysis, definition, coordination, monitoring, and evaluation of health security policies, strategies, and actions carried out by the public bodies of the NHS. The purpose of the NCHS is to contribute to forming a shield of health care and prevention and develop the instruments capable of dealing quickly, orderly, and effectively with epidemiological and other health emergencies.



The recommendations of the NCHS to address the pandemic were made available to NHC. At its special session, NHC decided to approve the recommendations as general measures to address the health emergency. The measures recommended were published as official rules on March 20, 2020.

The intervention of the NCHS in the NHC decisions raised a discussion on the legality of the approved measures. The unilateral decisions of NHC upset the authorities of the states and other actors, who denounced that they had been excluded and that the SSA had acted without transparency in decision-making.

NHC was accused of validating the SSA through the NCHS by illegally expanding the authority of the SSA. NHC authorized the SSA all decisions related to the pandemic management without having the power to do so. Actually, these actions meant that the SSA representative at the NCHS (i.e., the undersecretary for prevention and health promotion) would concentrate all decision-making power (Cossío, 2020).

The centralization of decisions in the federal health authority produced significant discomfort in the states' governors, especially those from parties opposed to the federal government. The governors demanded more information, resources, technical support, and decentralization of actions to face the pandemic in their jurisdictions.

Feeling ignored by federal authorities, seven governors of Jalisco, Coahuila, Nuevo León, Tamaulipas, Durango, Colima, and Michoacán agreed to apply their own strategies to address the health emergency, regardless of the measures ordered by the federal government. The orders of federal authorities contradicted the principle of NHS coordination and were met with suspicion. The governors argued that the actions undertaken by the Federation did not reflect the reality of each state and considerably affected local dynamics to prevent the pandemic (Nájar, 2020).

Despite the disagreements, the federal government continued delegating responsibilities to subnational governments to control the pandemic without transferring additional financial resources. For this reason, some states refused to assume the responsibility transferred to them and continued to implement their strategies with their resources (Patiño & Cruz, 2020).

The fragmentation, confusion, and rejection of some actions proposed by the federal government moved, in fact, much of the responsibility for the pandemic management to the state governments. However, the state health systems faced many problems to serve the growing number of people who continuously request medical attention, especially in the critical moments of the health emergency (Velázquez, 2021).

The case of Jalisco state was one of the most representative of rejections to the federal government's decisions. In this state, the governor proposed a set of measures, according to his powers, to deal with the pandemic. First, the state government sought alliances with local universities and experts, who contributed to designing epidemiological state models. Based on these models, the state health secretariat established the Jalisco-COVID Plan, which offered local contingency measures, such as a call center to offer information about the disease and follow up on some detected cases. A COVID-19 testing system was also created (called "*Radar Jalisco*"), and prevention measures were promoted, such as the massive use of masks, among other actions. As cases and hospitalizations increased, some hospitals were converted to serve the population.



On the other hand, the federal government based its strategy to contain the pandemic on a continuous communication campaign, through daily press conferences, where it was informed about the progress of COVID-19, the measures that the government was taking, and the actions that the population should carry out. At first, the communication strategy was well received by the public. However, as the days went by, confusing signals were sent when precise indications were needed, in relatively simple measures, such as the use of masks. Federal authorities were also accused of minimizing the severity of the pandemic and providing manipulated, biased or false information about the number of people infected with COVID-19, the availability of places to treat them in public hospitals, the equipment of health centers, and the conditions in which medical personnel worked.

At the beginning of 2022, the actions undertaken by the Mexican government have not restrained the infections and deaths caused by the health crisis. The National Institute of Statistics and Geography (INEGI) calculated an excess of COVID-19 deaths of 145,000 people in the second half of 2021.

Conclusion

This study aimed to explore the conflicts that determine IGR in Latin American countries, taking the case of Mexico and the management of the COVID-19 pandemic as a reference. Even when the analysis refers to a specific country, the findings can contribute to understanding the reality of other countries in the region. The review of the Mexican federal experience and the management of the pandemic makes it possible to distinguish several elements and conflicts as determinants of the configuration of the IGR in Mexico.

Firstly are the conflicts produced by aggressive processes of re-centralization (after a long period of reforms in the opposite direction), without the consensus of the states and municipalities, as happened with the creation of INSABI (see Bennouna et al., 2021, for other example). However, the response of Mexican state governments is differentiated: only the states with resources and robust and professional systems of public administration achieve some degree of opposition to the center's decisions. In contrast, the weakest states are forced to align with the federal government. Such difference suggests that, in practice, local public administrations' technical, professional, and financial resources give states tools to pursue more equitable IGR with federal authorities.

The capacity of federal authorities to ignore the law with few consequences (at least in terms of coordination) is a significant factor in conflict. The federal government's ability to act in this way comes from its economic and political power and the support of the states, those of the same political party, and the weak ones. Substantial power imbalances between states prevent them from creating a common front *vis-à-vis* the central government, and this situation contributes to perpetuating centralized IGR between highly unequal actors.

In a politically captured administrative system, such as Mexico's, opportunistic federalism finds one of its maximum expressions. Agreements or disagreements due to partisan affinities are decisive in defining confrontational or collaborative IGR.



960 E. E. Ramirez, M. F. Castillo

For example, in the case of pandemic management, part of the federal government's communication strategy was to discredit the health measures taken by disgruntled states, increasing confusion in the population. This kind of opportunism makes IGR fragile and changing because they depend on the parties and personal leaderships of those in power. Thus, IGR become unpredictable when there is political alternation in governments.

An additional element fueling conflicts in the IGR is the lack of clear rules, defined objectives, and specific responsibilities. Both in the implementation of INSABI and the pandemic management, the organizations and officials who placed themselves at the head of both processes were characterized by a volatile behavior and relativized the importance of formal rules, for example, for the management of hospitals.

The unclarity in the messages of the federal authorities increased the conflict with the governors, raising the distrust in the leadership of the Federation and reducing the chances for effective collaboration. Thus, communication proved to be a critical element, both informing the public and favoring or blocking coordination between authorities.

Finally, mandates without a budget pushed the IGR to the limit in the pandemic. Even some states decided to make their own decisions against the emergency. Although this type of mandate would have been ignored in other circumstances, in the pandemic context, it was considered an abuse of power by the Federation to force the disgruntled states to align with the orders dictated from the center.

In summary, in the current trend towards the re-centralization of Mexican federalism, the IGR are partially confrontational (with the strong and politically opposed states) and partially collaborative (with the weak states and those of the same political party). In this dual relationship, based on inequalities between states, the relevance of formal norms and the legal system has reduced to favor the predominance of informal rules based on transitory political-partisan agreements.

Funding information None/not applicable.

Ethical approval - None/not applicable.

Compliance with Ethical Standards

Conflict of interest None/not applicable.

Informed consent None/not applicable.

References

Aguilar, A., & Ramírez, K. (2020). El reflujo del centralismo en México. In J. Mendoza, Ruiz, & E. J. Grin (Eds.), Federaciones de las Américas: descentralización, relaciones intergubernamentales y recentralización (pp. 477–526). INAP

Andrew, S. A., & Carr, J. B. (2013). Mitigating Uncertainty and Risk in Planning for Regional Preparedness: The Role of Bonding and Bridging Relationships. *Urban Studies*, 50(4), 709–724. https://doi.org/10.1177/0042098012455718



- Antuñano, F. J. L. (1993). Evolución de los servicios de salud de la Secretaría de Salud. Salud pública de México, 35(5), 437–439
- Arellano, D., Cabrero, E., Montiel, M. J., & Aguilar, I. (2011). Gobierno y administración pública municipal: un panorama de fragilidad institucionalizada. In E. Cabrero & D. Arellano (Eds.), Los gobiernos municipales a debate. Un análisis de la institución municipal a través de la Encuesta INEGI 2009 (pp. 29–116). CIDE
- Bakke, K. M., & Wibbels, E. (2006). Diversity, Disparity, and Civil Conflict in Federal States. World Politics, 59(1), 1–50
- Béland, D., Marchildon, G. P., Medrano, A., & Rocco, P. (2021). COVID-19, Federalism, and Health Care Financing in Canada, the United States, and Mexico. *Journal of Comparative Policy Analysis: Research and Practice*, 23(2), 143–156. https://doi.org/10.1080/13876988.2020.1848353
- Bennouna, C., Giraudy, A., Moncada, E., Rios, E., Snyder, R., & Testa, P. (2021). Pandemic Policymaking in Presidential Federations: Explaining Subnational Responses to Covid-19 in Brazil, Mexico, and the United States. *Publius: The Journal of Federalism*, 51(4), 570–600. https://doi.org/10.1093/publius/pjab025
- Bickerton, J. (2010). Deconstructing the New Federalism. Canadian Political Science Review, 4(2-3), 56-72
- Bulman-Pozen, J. (2014). Partisan Federalism. Harvard Law Review, 127(4), 1078–1146
- Cabrero, E. (2004). Capacidades institucionales en gobiernos subnacionales de México: ¿un obstáculo para la descentralización fiscal? *Gestión y Política Pública*, 13(3), 753–784
- Cabrero, E. (2007). Para entender el federalismo en los Estados Unidos Mexicanos. Nostra
- Cabrero, E. (2013). Fiscal Federalism in Mexico: Distortions and Structural Traps. Urban Public Economics Review, 18, 12–36
- Carpizo, J. (1978). El presidencialismo mexicano. Siglo XXI
- Caruson, K., & MacManus, S. A. (2006). Mandates and Management Challenges in the Trenches: An Intergovernmental Perspective on Homeland Security. *Public Administration Review*, 66(4), 522–536. https://doi.org/10.1111/j.1540-6210.2006.00613.x
- Castillo, M. F. (2019). Beyond Institutional Collective Action: Why and When Do Metropolitan Governments Collaborate? State and Local Government Review, 51(3), 197–209. https://doi.org/10.1177/0160323X19884618
- Castillo, M. F. (2022). Coalitions, agendas, and funding in the public transport arena: exploring urban governance arrangements in two Mexican cities. *Urban Research & Practice*, 15(3), 321–349. https://doi.org/10.1080/17535069.2020.1805640
- Cejudo, G. (2007). Para entender los gobiernos estatales en los Estados Unidos Mexicanos. Nostra
- Conlan, T. (2006). From Cooperative to Opportunistic Federalism: Reflections on the Half-Century Anniversary of the Commission on Intergovernmental Relations. *Public Administration Review*, 66(5), 663–676
- Corbacioglu, S., & Kapucu, N. (2005). Intergovernmental Relations in Response to the 1999 Marmara Earthquake in Turkey: A Network Analysis. *International Journal of Mass Emergencies and Disas*ters, 23(3), 73–102
- Cossío, J. (2020). Acuerdos para la pandemia en México. El País, 01 de abril de 2020.
- Dávila, E., & Guijarro, M. (2000). Evolución y reforma del sistema de salud en México. *Financiamiento para el desarrollo*. Santiago
- Díaz-Cayeros, A. (1995). Desarrollo económico e inequidad regional: hacia un nuevo Pacto Federal en México. Fundación Friedrich Naumann, CIDAC y Miguel Ángel Porrúa
- Díaz-Cayeros, A. (2016). Fiscal Federalism and Redistribution in Mexico. Retrieved on August 26, 2022 from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2886703
- DOF (2020). ACUERDO por el que se modifica el diverso por el que se emiten los criterios generales y la metodología a los que deberán sujetarse los procesos de clasificación socioeconómica de pacientes en los establecimientos que presten servicios de atención médica de la Secretaría de Salud y de las entidades coordinadas por dicha Secretaría. Gobierno de México, November, 30, 2020.
- Dunn, C., & Laterzo, I. (2021). State-level Citizen Response to COVID-19 Containment Measures in Brazil and Mexico. *Journal of Politics in Latin America*, 13(3), 328–357. https://doi.org/10.1177/1 866802X211057135
- Eugenio, A. D. (2010). Nuevo federalismo. Fortalecimiento de la autonomía de las entidades federativas. (Impacto de la reforma electoral federal 2007 en el estado de Guerrero). Revista Justicia Electoral, 1(5), 365–388



Farazmand, A. (Ed.). (2017). Crisis and Emergency Management. Routledge. https://doi. org/10.4324/9781315095264

- Finot, I. (2007). Los procesos de descentralización en América Latina. Investigaciones Regionales-Journal of Regional Research, 10, 173–205
- Flamand, L., Naime, M., & Olmeda, J. C. (2021). COVID-19 in the Mexican federation. In R. Chattopadhyay, F. Knüpling, D. Chebenova, L. Whittington, & P. Gonzalez (Eds.), Federalism and the Response to COVID-19 (pp. 135–144). Routledge. https://doi.org/10.4324/9781003251217-15
- Frenk, J., González-Pier, E., Gómez-Dantés, O., Lezana, M., & Knaul, F. (2007). Reforma integral para mejorar el desempeño del sistema de salud en México. *Salud Pública de México*, 49 (Supl. 1), s23-s36. Retrieved on January 18, 2022 from http://www.scielo.org.mx/scielo.php?script=sci_arttext&pid=S0036-36342007000700007&lng=es&tlng=es
- Galeana, J. C. (2017). El federalismo en México tras la transición a la democracia [Doctoral dissertation]. Universidad Complutense
- INEGI. Cuéntame de México. Territorio. Available at https://cuentame.inegi.org.mx/territorio/division/default.aspx?tema= [Accessed August 22, 2022]
- Jennings, E., Arlikatti, S., & Andrew, S. (2015). Determinants of Emergency Management Decision Support Software Technology: An Empirical Analysis of Social Influence in Technology Adoption. *Journal of Homeland Security and Emergency Management*, 12(3), https://doi.org/10.1515/ ihsem-2014-0079
- Knaul, F. M., Touchton, M., Arreola-Ornelas, H., Atun, R., Anyosa, R. J. C., Frenk, J., Martínez-Valle, A., McDonald, T., Porteny, T., Sánchez-Talanquer, M., & Victora, C. (2021). Punt Politics as Failure of Health System Stewardship: Evidence from the COVID-19 Pandemic Response in Brazil and Mexico. The Lancet Regional Health Americas, 4, 100086. https://doi.org/10.1016/j.lana.2021.100086
- Manandhar, R., & Siebeneck, L. K. (2018). Return-Entry Risk Communication Challenges: Experiences of Local Emergency Management Organizations following Superstorm Sandy. *International Journal* of Mass Emergencies & Disasters, 36(2), 120–148
- Martinez, D., Talbert, T., Romero-Steiner, S., Kosmos, C., & Redd, S. (2019). Evolution of the Public Health Preparedness and Response Capability Standards to Support Public Health Emergency Management Practices and Processes. *Health Security*, 17(6), 430–438. https://doi.org/10.1089/hs.2019.0076
- Marván, I. (1997). ¿Y después del presidencialismo? Reflexiones para la formación de un nuevo régimen. Océano
- McDonald, B. D., Goodman, C. B., & Hatch, M. E. (2020). Tensions in State–Local Intergovernmental Response to Emergencies: The Case of COVID-19. *State and Local Government Review*, 52(3), 186–194. https://doi.org/10.1177/0160323X20979826
- Mendoza, E. (1996). El presidencialismo mexicano, génesis de un sistema imperfecto. El Colegio de la Frontera Norte
- Merino, M. (2007). Para entender el régimen municipal en los Estados Unidos Mexicanos. Nostra
- Morris, J. C., & Miller-Stevens, K. (Eds.). (2015). Advancing Collaboration Theory. Routledge. https://doi.org/10.4324/9781315749242
- Nájar, A. (2020). Coronavirus en México: ¿por qué AMLO enfrenta una rebelión de gobernadores en la etapa crítica de la pandemia de covid-19? *BBC News Mundo*, [online] Available at: https://www.bbc.com/mundo/noticias-america-latina-52900134 [Accessed 14 January 2022]
- Orozco, D., Morales, R., Rivera, C., Borja, J., Leyva, V. H., R., & Bautista, S. (2021). Retos actuales de la salud pública: firma del convenio de colaboración entre el. Instituto Nacional de Salud Pública y el IBD
- Patiño, M. P., & Cruz, G. (2020). Las medidas adoptadas por las entidades federativas ante la emergencia del Covid-19 (p. 162). DGDyP/IBD. Cuaderno de Investigación No. 7
- Peters, B. G., & Pierre, J. (2018). The Next Public Administration: Debates and Dilemmas. Sage Publications Ltd.
- Provan, K. G., & Kenis, P. (2008). Modes of Network Governance: Structure, Management, and Effectiveness. *Journal of Public Administration Research and Theory*, 18(2), 229–252
- de la Ramírez, E. E., & Gómez Granados, D. P. (2021). Mexican Federalism in the Pandemic. In G. Peters, E. Grin, & F. L. Abrucio (Eds.), *American Federal Systems and COVID-19* (pp. 107–127). Emerald Publishing Limited. https://doi.org/10.1108/978-1-80117-165-620211006
- de la Ramírez, E. E., Grin, E. J., Sanabria-Pulido, P., Cravacuore, D., & Orellana, A. (2020). The Transaction Costs of Government Responses to the COVID-19 Emergency in Latin America. *Public Administration Review*, 80(4), 683–695. https://doi.org/10.1111/puar.13259



- Ramírez, E. E. (2012). Instituciones y gobernanza metropolitana: una primera aproximación al caso de México. Estudios Demográficos y Urbanos, 27(2), 491–520. https://doi.org/10.24201/edu.v27i2.1420
- Ramírez, E. E., & Castillo, M. F. (2017). Gestionando redes colaborativas urbanas: el caso de la Línea 4 del Metrobús. Economía Sociedad y Territorio, 17(53), 145–170. https://doi.org/10.22136/est002017746
- Reich, M. R. (2020). Restructuring health reform, Mexican style. Health Systems & Reform, 6(1), e1763114. https://doi.org/10.1080/23288604.2020.1763114
- Richmond, J. G., Tochkin, J., & Hertelendy, A. J. (2021). Canadian health emergency management professionals' perspectives on the prevalence and effectiveness of disaster preparedness activities in response to COVID-19. *International Journal of Disaster Risk Reduction*, 60, 102325. https://doi.org/10.1016/j.ijdrr.2021.102325
- Rius-Ulldemolins, J., & Zamorano, M. M. (2015). Federalism, Cultural Policies, and Identity Pluralism: Cooperation and Conflict in the Spanish Quasi-Federal System. *Publius: The Journal of Federalism*, 45(2), 167–188. https://doi.org/10.1093/publius/pju037
- Rodríguez, V. E. (2018). Decentralization in Mexico. Routledge. https://doi.org/10.4324/9780429501104Rowland, A. (2000). La organización territorial de la administración y las políticas públicas. CIDE,Working paper DTAP 83
- Rowland, A., & Caire, G. (2001). Federalismo y federalismo fiscal en México: una introducción. CIDE, Working paper DTAP 94
- Sánchez, A. M. (2018). Sistema universal de salud. CIEP. Available at http://saludenmexico.ciep.mx/ images/sistema-universal-de-salud.pdf [Accessed 14 April 2022]
- Sanginés, M., & Strazza, L. (2016). Profesionalización de la función pública en los estados de México. IADB
- Simmons, J. M., & Graefe, P. (2013). Assessing the Collaboration That Was "Collaborative Federalism" 1996–2006. Canadian Political Science Review, 7(1), 25–36
- Sun, M., Xu, N., Li, C., Wu, D., Zou, J., Wang, Y., Luo, L., Yu, M., Zhang, Y., Wang, H., Shi, P., Chen, Z., Wang, J., Lu, Y., Li, Q., Wang, X., Bi, Z., Fan, M., Fu, L., & Hao, M. (2018). The public health emergency management system in China: trends from 2002 to 2012. *Bmc Public Health*, 18(1), 474. https://doi.org/10.1186/s12889-018-5284-1
- Sylves, R. T. (2019). Disaster Policy and Politics. Emergency Management and Homeland Security (3rd ed.). CQ Press
- Tena, F. (1997). Derecho constitucional mexicano. Porrúa
- Trejo, G., & Ley, S. (2016). Federalism, drugs, and violence. Why intergovernmental partisan conflict stimulated inter-cartel violence in Mexico. *Política y Gobierno*, 23(1), 9–52
- Vega, O. (2004). IX Congreso Internacional del CLAD sobre la Reforma del Estado y de la Administración Pública. La emergencia de nuevos actores en la dinámica de las relaciones intergubernamentales en México: un caso de estudio en Guadalcázar (San Luis Potosí), 1–18
- Velázquez, R. (2021). Mexico's Social Policy Response to Covid-19: A Path of Minimal Action. Working paper SSOAR
- Verdugo López, M. (2021). Relaciones intergubernamentales y controversia constitucional. 25 años de conflicto y resistencia del municipio mexicano. *Revista Iberoamericana de Estudios Municipales*, 12(24), 69–92. https://doi.org/10.32457/riem24.1451
- World Health Organization. Regional Office for Europe, European Observatory on Health Systems and Policies, Miguel Á. González Block, Hortensia Reyes Morales, Lucero Cahuana Hurtado. et al. (2020). Mexico: Health System Review. World Health Organization. Regional Office for Europe. Available at https://apps.who.int/iris/handle/10665/334334 [Accessed January 15, 2022]
- Zuber, C. I. (2011). Understanding the Multinational Game: Toward a Theory of Asymmetrical Federalism. Comparative Political Studies, 44(5), 546–571. https://doi.org/10.1177/0010414010364350

Publisher's Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

Springer Nature or its licensor (e.g. a society or other partner) holds exclusive rights to this article under a publishing agreement with the author(s) or other rightsholder(s); author self-archiving of the accepted manuscript version of this article is solely governed by the terms of such publishing agreement and applicable law.

