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# OPEN DATA IN MEXICO AND THE SUSTAINABLE DEVELOPMENT GOAL NO. 16 IN TERMS OF TRANSPARENCY

Martín Cutberto Vera Martínez
Universidad Autónoma de Baja California,
Campus Tijuana
México
https://orcid.org/0000-0002-3415-9357



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Abstract: The purpose of this work is to investigate the contribution of open data public policies developed in Mexico as an ideal tool for the fulfillment of the United Nations sustainable development objectives in the institutional field. Its purpose is to highlight the importance of these policies for the achievement of the goals of the sixteenth objective of the United Nations 2030 Agenda. Keywords: Open Data - Transparency - Public Policies - Sustainable Development - 2030 Agenda

### INTRODUCTION

The United **Nations** Organization (hereinafter, UN) has established in 2015 the Sustainable Development Goals (hereinafter, SDGs) within the so-called 2030 Agenda for Sustainable Development (hereinafter, Agenda 2030), through a series of concrete actions in favor of people, the planet and prosperity. The fulfillment of this Agenda lies in promoting actions carried out locally by each of the countries that assumed the commitment of the same, its purpose being to ensure the strengthening of human rights both locally and globally. Within these objectives, the creation of solid government institutions is integrated into the Sustainable Development Goal No. 16 (hereinafter, SDG 16) in order to "Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels" (ONU, 2015). Furthermore, target 16.6 of said objective proposes "creating effective and transparent institutions that are accountable at all levels". This goal has been recognized by the international community for highlighting the importance of institutions at both the national and transversal and global levels for the achievement of the 2030 Agenda. It does not seem exaggerated to affirm that the creation and strengthening of transparent institutions is directly linked to the vision of the future that the UN proposes in goal 16.6, in an international context that does not conceive the achievement of the integrality of the SDGs without the resolution, in the first instance, of institutional conflicts at the local level (Murga Menoyo, 2015).

Mexico, for its part, in addition to including the 2030 Agenda as part of its public policies as a country that is a member of it, has been carrying out in recent years crystallized openness actions in the form of open data public policies, whose purpose is consolidate the transparency of public information and allow greater collaboration by citizens in government processes. However, without prejudice to what has been stated both internationally in terms of the 2030 Agenda, as well as with respect to public open data policies in Mexico, we have noticed that to date no academic contributions have been made regarding SDG 16 and its interrelation with said policies at national and local level. In the same way, the study of open data public policies has had a generic approach, without taking into account its singularity and importance for the fulfillment of the 2030 Agenda in terms of solid institutions within the framework of target 16.6 of the aforementioned SDG. That is why our proposal in this paper aims to contribute to the debate on the recognition of open data public policies in Mexico as a tool for compliance at the local level with SDG 16, specifically in terms of creating effective institutions and transparent. To this end, this article will be divided into three sections. First, a review of the 2030 Agenda, SDG 16, target 16.6 and Mexico's participation in this context will be presented. Secondly, the main theoretical-conceptual aspects of open data public policies will be presented, as well as the main initiatives in the matter. Third, the importance of open data public policies will be highlighted, as ideal tools for Mexico's

compliance with target 16.6 of SDG 16. Finally, we will present final reflections and lines of research for future inquiries on the matter. . The methodology used is based on a qualitative analysis of a bibliographical nature, taking into account the limited extension of this work, which consists of the review of the main normative documents in relation to sustainable development at the international level and in terms of its implementation at the international level, local in Mexico, both in general and specifically regarding SDG 16; then the bibliographical review will continue regarding the implementation of open data in Mexico and its evolution in the last two decades together with the academic review regarding the main contributions in terms of open data, transparency and public policies, to finally carry out an approach qualitative with a view to evaluating the possibility of complementarity between goal 16.6 and open data public policies.

# BRIEF BACKGROUND ON THE 2030 AGENDA IN MEXICO, SDG 16 AND ITS TARGET 16.6

talk about When we sustainable development, we must go back to the "Brundtland Report" where for the first time reference was made to the concept as "that which meets the needs of present generations without compromising the possibilities of future generations to meet their own needs" ( Brundtland, 1987). This definition was the kickoff of a process of change, both economic and technological and institutional within the countries that are part of the UN, with the common goal of carrying out actions to comply with the satisfaction of universal human rights. This series of changes had a new redefinition at the United Nations Millennium Summit in 2000, where the signatory countries decided to frame future actions in the form of eight specific objectives to achieve economic, social and environmental sustainability (UN, 2000). However, it was not until 2015 that the details of these objectives were specifically established, through the approval of the United Nations General Assembly resolution "Transforming our world: the 2030 Agenda for Sustainable Development" (UN, 2015). There, 17 global objectives were established, to which the countries have committed to comply in their entirety in the year 2030 better known as the Sustainable Development Goals - as well as they committed to comply with the specific goals for each one of them. . With regard specifically to institutions, we find in SDG 16 the commitment assumed by nations that aims to "Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, responsible and inclusive institutions in all levels" (UN, 2015). We can then see that SDG 16 establishes the central role of public institutions, encompassing both their function and their ethos and, logically, places politics at the center of them (Whaites, 2016). It has even been recognized that the implicit conceptualization within this specific SDG has been novel, due to the way in which the link between peace, justice and institutions was built (Villanueva Ulfgard, 2019).

Now, if we focus on the specific axis "institutions" within SDG 16, we find that its goal 16.6 is the one that defines the purposes to be carried out in relation to them, which consist of "Creating effective institutions at all levels and transparent and accountable. Until now, it has only been established that it will be possible to measure its level of progress through the results of two global indicators, namely: (a) primary government spending, objectively related to the original budget, disaggregated by concept and with the corresponding codes and (b) the population perception, regarding their satisfaction with the services they have received with public

financing. Regarding this indicator, it will be built based on the social perception regarding the degree of transparency of the government and it is carried out through surveys presented to the population to know their thoughts, feelings or experiences in their relationship with government institutions, taking as In order to evaluate the degree of social trust in relation to its government institutions. The most concrete example of such measurements at the regional level has been the "Barometer of the Americas" which has presented some data resulting from its annual surveys, as an ideal way to measure the degree of progress of the SDGs, based on the hypothesis of that "surveys provide information on public perception of the services offered by the government, an important indicator of effectiveness on the ground" Lupu et al. (2020) (p. 12), however for the moment there is little information available both regarding the Barometer and also regarding other measurements of (a) and (b).

Taking into account the aforementioned 2030 Agency, we have also been able to observe that Mexico, as a country adhering to the 2030 Agenda, has already carried out concrete reforms for the implementation of said Agenda at the local level. The 2018 reform of its Planning Law stands out, the purpose of which was to implement the effective achievement of the SDGs in the country. Broadly speaking, this reform contemplated the incorporation and modification substantial elements, including a series of changes tending to establish a framework of transparency and accountability, which would take into account the actions necessary to incorporate the 2030 Agenda into National Planning. mexican. Specifically, in the Fifth Transitory article, it establishes that "the Federal Public Administrations corresponding to the periods 2018-2024 and 2024-2030 may consider in their content the strategies for the

achievement of the Sustainable Development Goals and their goals, contained in the Agenda 2030 for Sustainable Development" as well as the proposals prepared by the National Council of the 2030 Agenda for Sustainable Development" (Presidency of the Republic, 2018). Beyond the aforementioned law, we have also found other examples that demonstrate Mexico's political will to comply with the SDGs. We can cite the creation of different organizations such as the Specialized Technical Committee for the Sustainable Development Goals; the Working Group for the legislative follow-up of the SDGs; the Commission for Compliance with the 2030 Agenda within the framework of the National Conference of Governors; the National Council of the 2030 Agenda for Sustainable Development and the Mexican Chapter of the United Nations Sustainable Development Solutions Network. In the same order of actions, we have identified the preparation of working documents with a view to the implementation and development of the 2030 Agenda at the local level, such as the Voluntary National Reports and the National Strategy for the implementation of the 2030 Agenda in Mexico, among others. initiatives (Santaella, 2018; Commission on Foreign Relations and International Organizations, s/f; Morales Olmos, 2021). The examples mentioned make us observe that since 2015 Mexico has carried out concrete initiatives regarding the incorporation of the 2030 Agenda at the national level, with a view to complying with what has been agreed in its international commitments. However, when it is time to investigate progress regarding the achievement of the 16.6 goal at the local level, we have observed that little progress has been made in this regard. Thus, we have only identified the publication of data for only three national indicators created for this purpose, namely: (16.6.1) Primary government expenditures as

a proportion of the original approved budget, broken down by sector or by budget codes or similar elements; (16.6.2.a) Satisfaction with the compulsory public education service and (16.6.2.b) Satisfaction with the university public education service. Regarding the first indicator, we see that it has the purpose of verifying that the government actually spends and collects what it has estimated for each fiscal year. The other two indicators measure the degree of satisfaction of the population in relation to public educational services at all levels, based on the National Survey of Government Quality and Impact. Beyond these specific indicators, the truth is that to date there is little information available on progress in meeting target 16.6 in the country.

So far we have seen then that although Mexico has carried out concrete acts with a view to the implementation of the 2030 Agenda at the local level, these actions have not had a concrete crystallization when we inquire about SDG 16 and its goal 16.6. Notwithstanding this state of the art, we will try in the following sections to make a proposal to be able to replace this lack of actions by proposing an effective tool to achieve the purposes proposed in goal 16.6, which refers to the use of open data for the generation of institutional transparency and above all to open data public policies and propose them as effective instruments for the fulfillment of goal 16.6.

# OPEN DATA AND OPEN DATA PUBLIC POLICIES IN MEXICO

Attempts to find new ways of perceiving the transparency of Mexican institutions is a fact of reality related to the loss of legitimacy and credibility of public bodies before citizens (Homs, 2013). This loss is due to multiple factors, but mainly to issues related to corruption in different government agencies (Stephen, 2011). Within the framework of this

information age (Serrano Santoyo & Martínez, 2003), citizen demands have focused on demanding actions for the transparency of public information as an important means of combating corruption and optimizing the efficiency of government agencies. In order to generate answers to the situation raised, the bibliography indicates that the reform process of the Mexican public administration in recent decades has developed, in a certain way, different initiatives against a citizenry that demands solutions due to the lack of public credibility, bureaucratization, inflexibility, disproportionate costs and displacement of the needs of citizens (Berman, 1997). Among the responses and initiatives provided by the government to satisfy social discontent, open data (hereinafter DA) have stood out as an innovative and concrete tool, used by the government to try to reduce citizen complaints about corruption, recover the legitimacy, efficiency and credibility of public organizations (Ruiz et al., 2014; Sánchez, 2010).

However, when defining what DAs are, the doctrine refers to them as a tool that seeks greater transparency and efficiency of the public service, allowing, on the one hand, the reuse of public data to generate new economic activities. and forms of accountability (Cruz Rubio & Ramírez Alujas, 2012, p. 56) and on the other, return to citizens their own data, thus increasing government transparency (Ramirez Alujas, 2011). The DA are presented as published data in an open and standard format, which allows their employability in useful services and/or applications. According to the Open Knowledge Foundation (2009) organization, they must also meet the condition of being able to be accessed at any time, thus being redistributable and reusable.

It is also highlighted that such features must be complemented by being available free of charge and in its entirety. In the same order of ideas, the Open Data Charter proposes that government data must be open by default, timely, exhaustive, accessible, usable, comparable and interoperable, given that such characteristics tend to favor governance and citizen participation (Open Data Charter, 2015). Thus, we see how, for government data to be considered open, it must be freely available to citizens and without any type of limitation, in order to allow government and institutional information to be accessible, open and interoperable, allowing participation. and government transparency. This collaborative dynamic between government and citizens places the AD, according to Hoffman (2015, p. 5), as a fundamental component to make the public function transparent, thanks to its suitability to promote co-production, and collaboration citizen participation (Puron Cid et al., 2012). It is necessary to underline that access to DA makes exploitable data sets available to the public, which in turn, by relating them to information from other data sets, allows for better decisionmaking, requiring as a condition of trust, the transparency of its institutions Gilli (2017, p. 45).

Taking into account the above with respect to AD, there is a later stage regarding the use of the advantages of AD and this happens when the State decides to intervene in the promotion of the use, opening and reuse of AD in favor of the citizenry, through the design of certain concrete actions. We have to call this type of political decisions open data public policies (PPDA), defining them as the political decisions that are integrated with technology and data, typical of the information society and that shape it over the course of time. of time (Vera Martínez & Martínez Rodriguez, 2020). Thus, a PPDA is one that can identify specific mechanisms that make it possible to highlight the real value of AD in favor of citizens, with a view to generating their interest and justifying

actions to facilitate their reuse. PPDAs are presented as a way of exercising public policy (Prince et al., 2013) and making political decisions -related to technology and data- that have a positive impact on society. They are characterized by guaranteeing different forms of access and reuse of public data in education, social welfare, foreign policy, citizenship and of course specific data on government characteristics institutions. One of its consists in its design, since they are aimed at identifying and generating concrete actions that allow highlighting the real value of AD, that is, generating interest and actions that allow the reuse of such data for the benefit of citizens. especially transparency. We see in the following table an illustrative synthesis that, far from being exhaustive, is intended to exemplify the main initiatives related to PPDAs that were promoted by Mexico until 2022:

When reviewing the main initiatives that have had an impact on Mexico's approach to PPDAs, we observe that the Open Government Alliance, through its action plans, has favored the adoption of ideas related to the value of open data for the promotion of transparency and accountability. In fact, Bhargava & Little (2016) have recognized that there is a great coincidence between SDG 16 and the institutional mission of the Open Government Partnership, its purposes and the government commitments that the member states of the Partnership have assumed by participating in this international coalition. Given the characteristics indicated. we consider the PPDA as a useful and concrete tool to achieve transformations in citizenship through the redefinition of the governmentdata-citizen relationship and institutional transparency. In the following section we will see how it is possible to use the path already traveled with respect to PPDA in Mexico, not only to generate impact and benefit in society, but also as ideal tools to achieve goal 16.6.

Year	Initiative
1997	The constitutional reform recognizes the right to information (Art. 6)
2001	Publication of the National Development Plan 2001-2006, which recognizes the objective of building an open and transparent government
2002	Creation of the Federal Law on Transparency and Access to Public Government Information
2002	Creation of the Federal Institute for Access to Public Information (IFAI)
2007	Permanent Constituent approves minimum standards for access to information, personal data and the right to rectification.
2009	The establishment of bodies that guarantee access to information begins
2010	Creation of the Federal Institute for Access to Information and Data Protection
2011	Mexico is a founding country of the Alliance for Open Government (AGA)
2012	First Open Government Action Plan of Mexico
2013	National Digital Strategy 2013-2018 to promote the adoption and development of open data
2013	Publication of the Bases of Collaboration: guidelines and methodology for the release of open data groups
2013	Creation of the General Directorate of Open Data
2013	Second Open Government Action Plan of Mexico
2014	Formation of the "Data Squad Group"
2014	Constitutional autonomy is provided to the Federal Institute for Access to Information and Data Protection
2015	National Open Data Policy
2015	Decree establishes the regulation on Open Data (DOF: 02/20/2015)
2015	Publication of the Implementation Guide for the Open Data Policy
2015	Mexico Open Network
2016	Third Open Government Action Plan of Mexico (2016-2018)
2016	Federal Law on Transparency and Access to Public Information
2017	New version of the Open Data Policy Implementation Guide
2019	Fourth National Open Government Action Plan of Mexico (2019-2022)
2021	Transparency Policy, Open Government and Open Data of the Federal Public Administration 2021-2024.
2022	Acuerdo de reformas y derogaciones parciales de la Política de Transparencia, Gobierno Abierto y Datos Abiertos.

**Table** N°1: Initiatives and public policies linked to open data.

Source: Author's own elaboration

# OPEN DATA PUBLIC POLICIES IN MEXICO, AS A TOOL FOR COMPLIANCE WITH SDG 16 IN TERMS OF TRANSPARENCY AND EFFECTIVE INSTITUTIONS

As we have observed in the first part, the binding nature that emerges from the 2030 Agenda of the United Nations System implies that Mexico carry out concrete actions based on and supported by a sustainable development model. Specifically with regard to SDG 16, the need for data to be increasingly timely, inclusive, comprehensive and relevant to the process of designing, implementing and monitoring the goals, which the objective proposes, has been made explicit, especially to expand transparency and accountability of institutions. Now, considering the initiatives and proposals made by Mexico regarding PPDA, is it possible that they are an effective tool for compliance with SDG 16 and in particular its target 16.6? We believe that the answer to this question is positive and is specified in the use of existing and future PPDAs as an effective tool to achieve said purposes. Firstly, because PPDAs allow projections to be made in a predictive and analytical way (Schonberger & Cukier, 2014) with a view to sustainable development and building an evolutionary bridge from "open data" to "linked data" (Tauberer, 2009), including monitoring and compliance for effective and responsible management (Calvo & Osal, 2018) of the data available in relation to the institutions. Secondly, because, according to Ontiveros (2004), it is a key instrument to make public management transparent, favoring accountability to citizens, making available precise, reliable and verifiable information on government acts (Doyle, 2003). Third, taking transparency as a central concept (Elster, 1998), PPDAs allow and promote the idea of monitoring government activities. In this sense, we believe that the PPDAs maximize the public value that the data have for institutional transparency and a more efficient and effective action of the public administration. An example of this dynamic has been published by Tostado et al. (2022), who, using open data, have shown that it was possible to link the existing reports of the Superior Audit of the Federation (ASF) to know the degree of transparency and accountability of the municipalities of each State of the Mexican Republic. In this example, they have determined that the majority (60% of the municipalities) have a rating of -medium high- to -very low- in these specific areas.

As we have reflected in Table 1, since 2001, there are initiatives and political will in Mexico for the implementation of the PPDA, with effective instruments, which wield the intention of allowing a reengineering of the system of access to information and the establishment of new action mechanisms to generate greater public value from the data available to the public. On the other hand, we also understand that the evident and broad impact of digitization on society (Serrano Santoyo & Martínez, 2003) located within the framework of the 2030 Agenda, demands another type of interaction between the government, institutions and citizens, which to date has not been entirely duly considered by the political doctrine dedicated to the study of PPDAs and sustainable development and which, however, narratively places PPDAs as solid political-technological tools to respond to the commitments assumed by Mexico in relation to SDG 16. As Tostado et al. (2020) "The Mexican government has designed strategies to promote transparency, democracy, and sustainability, and for this, it requires that government organizations become organizations that promote a new culture, in which citizens consciously assume their responsibility as active subjects and of In the same way, institutions must participate in processes of continuous improvement and evaluation." (p. 184). In this sense, we believe that the PPDA and its proven effectiveness in terms of accessibility, reuse, citizen participation and auditing, among others, allow us to contribute to the creation of accessible government institutions in terms of information, transparent in terms of management, participatory in in terms of citizenship and contributions in terms of achieving goal 16.6 that the 2030 Agenda proposes.

The millennium goals (up to 2015) and sustainable development (from 2015 onwards) came to impact the genesis of the formulation of global and national public policies with a view to a joint effort worldwide for a better future for subsequent generations. . We understand that this paradigm shift requires Mexico to build public policies with a sustainable approach, where the operationalization of SDG 16 and the 2030 Agenda will require the implementation of public policies capable of mobilizing and organizing all concerned actors (Torres Bernardino & Bastida Miranda, 2018). We believe that this new context -and as a specific response given to public affairs (Bauman, 2004)- places the PPDAs as suitable for compliance with target 16.6, hoping that they will be carried out through a system that, although complex and coherent ideas, also make assumptions, justifications, purposes, objectives, resources, tools and legal provisions that the government must protect in order to ensure compliance (Cruz Rubio & Ramirez Alujas, 2012). The foregoing does not prevent us from recognizing that when analyzing the issue of transparency and the SDGs, certain obstacles emerge, such as the lack of intergovernmental cooperation, an incipient cultural change, political will that needs to be more decisive, and ignorance on the part of society. civic, among others. That is

why one of the biggest challenges for Mexico in terms of transparency and SDG 16 will be the development of strategies to raise awareness among public servants and the promotion of citizen participation and collaboration.

Sustainable development is the central axis of the Mexican government as part of the global pact on social, economic and environmental development for the coming years. Bearing in mind that the State is constantly defined and redefined (Carballeda, 2002), this new national and international context will demand public policies that provide specific responses to public affairs in the form of concrete actions that seek to transform an unwanted reality. to be able to build another reality" (Chachagua, 2014, p. 5), within the framework of the era of digital government transparency. In this context, initiatives and proposals related to open data, framed in the form of public policy, offer various opportunities for fully exploiting the benefits of open data transparency. We estimate that a consistent and robust data infrastructure, together with public policies with a view to achieving target 16.6 will inevitably contribute to making better decisions for its scope, as well as the possibility of obtaining an overview of the progress and progress of the same.

### CONCLUSIONS

Since its approval in 2015, the 2030 Agenda and its Sustainable Development Goals have become the blog towards sustainable development, where public policies carried out by countries have become the central axis for compliance with the goals. desired goals. In the same sense and coincidentally in time, it has been pointed out internationally that having timely, inclusive, comprehensive and relevant data for the supervision of institutions, access to information, transparency and generation of new useful and reusable data constitutes an action necessary that must be carried out

by the States, an action that was taken into account by the Mexican government and operationalized through different concrete actions in recent decades in relation to the generation of PPDA.

This is how Mexico already has to its credit more than two decades of reforms and implementation of different systems of access to public information and initiatives related to the PPDA that, we estimate, are ideal for achieving the objectives of sustainable development. and specifically with target 16.6 of SDG 16, a commitment that was assumed by the state itself at the international level. We believe that the PPDAs are presented as a useful

tool for the generation of a greater and better organization of the available government data, in order to be able to manage actions that allow Mexico to consolidate effective, transparent and accountable institutions, as required. United Nations, improving the experience of citizens and increasing their trust in public institutions. We conclude that the use of the PPDAs already carried out, together with the generation of new PPDAs that take into account goal 16.6, will allow Mexico to achieve said goal within the 2030 Agenda and, of course, contribute more consistently to the possibility of success in the whole of the SDGs of the Millennium.

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