

**Text Analysis to identify Partisan Influence in achieving Sustainable
Development Goals (SDGs): the case of Mexico**

By

LEE, Yoomin

THESIS

Submitted to

KDI School of Public Policy and Management

In Partial Fulfillment of the Requirements

For the Degree of

MASTER OF PUBLIC POLICY

2019

**Text Analysis to identify Partisan Influence in achieving Sustainable
Development Goals (SDGs): the case of Mexico**

By

LEE, Yoomin

THESIS

Submitted to

KDI School of Public Policy and Management

In Partial Fulfillment of the Requirements

For the Degree of

MASTER OF PUBLIC POLICY

2019

Professor Cho, Yoon Cheong

**Text Analysis to identify Partisan Influence in achieving Sustainable
Development Goals (SDGs): the case of Mexico**

By

LEE, Yoomin

THESIS

Submitted to

KDI School of Public Policy and Management

In Partial Fulfillment of the Requirements

For the Degree of

MASTER OF PUBLIC POLICY

Committee in charge:

Professor Cho, Yoon Cheong, Supervisor



Professor Kim, Dong-Young



Approval as of December, 2019

ABSTRACT

Text Analysis to identify partisan influence in achieving Sustainable Development Goals (SDGs): the case of Mexico

By

Yoomin LEE

Partisan influence on public policy has been studied cross-nationally in macro level by examining variables such as GDP and democracy level. Political scientist like Tufte (1992) have argued parties do matter in OECD countries as leftist parties are inclined to spend more on social policy and equality, while Huber et al. (2008) refuted partisanship does not matter in social policy spending in Latin American countries. With regards to Latin American OECD countries, parties-do-matter and parties-do-not-matter hypotheses were continuously debated as both seemed to correspond. As Mexico went through a huge political partisanship movement from non-left party to left party in the 100 years after the Mexican revolution, this paper chooses micro level country-based approach research on partisan influence on public policies with the case of Mexico. Under this sudden shift, this paper questions if partisan influence in shaping and implementing public policy is attainable through examining both incumbents' speeches. Unlike the traditional methodology identifying partisan influence, the purpose of the research is to introduce a new methodological approach analyzing partisan influence by using stenographic records of presidential speeches and discourses as a data set. Also, for the policy categorization, policies were aligned based on Sustainable Development Goals (SDGs)' social, economic, and environmental pillars. By sorting each left and non-left presidential speeches and discourses as per 17 different

categories of SDGs through computer-based unsupervised learning text analysis, the study has figured out that left incumbent in Mexico tends to put more emphasis on social policies than non-left party in rhetoric level. This is the first such analysis by using a new methodological tool scrutinizing political party's public policy direction aligned with SDGs, based on presidential speeches and discourses as a data set.

Keywords: Sustainable Development Goals (SDGs), Partisan influence, Text Analysis, Mexico

Table of Contents

| | |
|--|-----------|
| I. Introduction | 1 |
| II. Sustainable Development Goals | 2 |
| 2.1 What is SDGs, and why does it matter?..... | 2 |
| 2.2 SDGs Indicators and Classification..... | 4 |
| 2.3 Challenges in achieving SDGs..... | 5 |
| III. Theoretical Framework..... | 6 |
| 3.1 Political Partisan Influence and policy implementation..... | 6 |
| 3.2 Traditional Approaches on examining Partisan Influence | 7 |
| IV. Hypothesis Development..... | 8 |
| V. Methodology | 9 |
| 5.1 Selection of country: Why Mexico?..... | 9 |
| 5.1.1 How much Mexico have achieved SDGs so far? | 11 |
| 5.1.2 Mexican Presidential Election..... | 12 |
| 5.2 Why Presidential Speeches and Discourses? | 13 |
| 5.3 Why Computer-based Unsupervised Text Analysis?..... | 14 |
| 5.4 Data Specification | 14 |
| 5.4.1 Presidential Speeches and Discourses | 14 |
| 5.4.2 Supervised Learning for Data Classification..... | 15 |
| 5.5 Analytical Tools | 16 |
| 5.5.1 Speech classification based on SDGs..... | 16 |
| 5.5.2 Word Embedding Output..... | 23 |
| VI. Empirical Analysis..... | 28 |
| 6.1 SDG 4: Quality Education..... | 29 |
| 6.2 SDG 8: Decent Work and Economic Growth | 31 |
| 6.3 SDG 16: Peace, Justice and Strong Institution..... | 35 |
| 5.4 SDG 17: Strengthen the means of implementation and revitalize the goal partnership for sustainable development. | 37 |
| VII. Conclusion | 40 |

| | |
|--------------------|----|
| BIBLIOGRAPHY | 44 |
| [Appendix 1] | 52 |

List of Tables

| | |
|---|----|
| Table 1 Logistic Regression results for each SDG | 22 |
| Table 2 t-SNE result for Keyword 1: Desarrollo (Development) | 26 |
| Table 3 t-SNE result for Keyword 2: Corrupción (Corruption) | 27 |
| Table 4 t-SNE result for Keyword 3: Economía (Economy) | 28 |

List of Figures

| | |
|---|----|
| Figure 1 Structure of the committees that make up the National Council for the 2030 Agenda for Sustainable Development (Voluntary National Report, 2018) | 11 |
| Figure 2 Skip Gram for Word2Vec (Rong, 2014) | 18 |
| Figure 3 Category Vector Creation Mechanism | 20 |
| Figure 4 Left and Non-left Incumbents' speeches classification as per SDGs..... | 21 |
| Figure 5 Macro-level word embedding output of AMLO's speeches and discourses..... | 24 |
| Figure 6 Macro-level word embedding output of EPN's speeches and discourses | 25 |

I. Introduction

The Sustainable Development Goals (SDGs) developed by world leaders have been a meaningful indicator for nations' public policy as its Social, Economic and Environmental pillars cover a wide range of issues and policy direction. However, although acknowledging its importance, policy coherence and its measurement on accomplishment have been one of the key challenges in achieving the SDGs. One of the reasons that hinder policy coherence is the radical political changes, and numerous studies have shown how political changes affect the design of policy and its implementation.

Traditional partisan theory driven by Hibbs (1992), parties-do-matter theory argue that left-wing parties tend to spend more on social policies in most OECD countries that follow the liberal democracy. However, Huber et al. (2008) have found that in Latin American countries, partisanship does not matter when it comes to spending on social policies, which is a stark contrast to OECD countries. Thus, for the countries like Chile and Mexico that falls under both boundaries of Latin America and OECD, the hypothesis fits their reality. Both parties-do-matter and parties-do-not-matter theories were analyzed cross-nationally based on the macro-economic and regional level, by setting variables such as GDP and employment.

In order to analyze the above cases, this paper values the importance of country-based specific approach with a new methodology. Based on this, this paper utilizes Mexico, where radical political partisan shift has happened recently from the non-left party to left party in 100 years since the Mexican Revolution. Moreover, the fact that Mexico is a country that strongly aligns national policy with SDGs since the inauguration further backs this paper's guidance form selecting the country the basis for this research.

In terms of methodology, this paper raises research question whether a set of text data such as collected presidential speeches and discourses can function as another crucial indicator analyzing partisan influence in policy direction since they are highly attributable to verify policy guidelines and directions of each administration. By breaking the idea that it is hard to draw out through quantitative measurement from the speeches, the new methodology using SDGs related text data as a set of analysis will bring out further implication in analyzing SDGs. Lastly, based on the result and output, this paper offers empirical analysis with the main insights alongside concluding remarks and suggestions for future research.

II. Sustainable Development Goals

2.1 What is SDGs, and why does it matter?

On 25 September 2015, world leaders met at the United Nations in New York, where they adopted the Sustainable Development Goals. With the proper evaluation and commitments of Millennium Development Goals established in 2000, nations and international organizations gathered together to plan for 2030, the proposal contains 17 goals and 169 targets that set out a transformative agenda for sustainable development for all nations that embraces economic growth, social inclusion, and environmental protection (UN, 2015).

The SDGs were brought out from the roots of Millennium Development Goals (MDGs). SDGs roots from the United Nations Conference on Sustainable Development in Rio de Janeiro in 2012, the objective of the MDGs was to rally a global effort to fight extreme poverty. After 15 years of implementation of the 8 different goals, key MDGs achievements since 1990 officially defined by the United Nations Development Programme (UNDP) are: More than 1 billion people

have been lifted out of extreme poverty, Child mortality dropped by more than half, the number of out of school children has dropped by more than half, HIV/AIDS infections fell by almost 40 percent (UNDP, n.d.).

Although there has been a great achievement over 15 years, the above successes were not enough to tackle the chronic problem that the global society continues to face. Acknowledging that the MDGs offered culmination of decades of political mobilizations and renewed concept of development, legacy and achievements of the MDGs helped to develop the SDGs post-2015. Moreover, indicators and sector-specific approaches were established as the primary global assessment of countries' development towards the MDGs and have been advanced more recently towards the SDGs (Sachs, 2012).

The 17 SDGs are as follows:

- | |
|---|
| <p>Goal 1. Eradicate poverty: End poverty in all its forms everywhere</p> <p>Goal 2. End hunger achieve food security and improved nutrition and promote sustainable agriculture</p> <p>Goal 3. Ensure healthy lives and promote well-being for all at all ages</p> <p>Goal 4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all</p> <p>Goal 5. Achieve gender equality and empower all women and girls</p> <p>Goal 6. Ensure availability and sustainable management of water and sanitation for all</p> <p>Goal 7. Ensure access to affordable, reliable, sustainable and modern energy for all</p> <p>Goal 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all</p> <p>Goal 9. Build a resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation</p> <p>Goal 10. Reduce inequality within and among countries</p> <p>Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable</p> <p>Goal 12. Ensure sustainable consumption and production patterns</p> <p>Goal 13. Take urgent action to combat climate change and its impacts</p> <p>Goal 14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development</p> |
|---|

Goal 15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss
Goal 16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels
Goal 17. Strengthen the means of implementation and revitalize the global partnership for sustainable development

(Source: UN, 2015)

2.2 SDGs Indicators and Classification

The SDGs work as a meaningful indicator and represents a pivotal shift in development paradigms for sustainable development. Not only are the SDGs divided and classified sectorally, but also each pillar has its sub-goals to measure its development stages. Based on these indicators, annual and quarterly progress reports on achieving each goal are shared voluntarily and announced globally (UN, 2015).

There are several pillar-based classifications of SDGs. To handle macro-policy-oriented goals, upper concepts that cluster 17 goals were developed and used widely. Generally, it is widely known as the 3 pillars of development: social, economic and environmental sectors. However, there has been in-depth studies and analyses on how to classify and categorize each SDGs into different pillars in different sectors. International development organizations such as OECD and UNDP has approached this challenge with 5 pillars of SDGs classifying them as People (Goals 1, 2, 3, 4, 5), Planet (Goals 6, 7, 12, 13, 14), Prosperity (Goals 8, 9, 10, 11), Peace (Goal 16) and Partnership (Goal 17). Research institutes have utilized different approaches, as such, the Stockholm Resilience Centre has classified the SDG within the context of the economy, society and biosphere (Stockholm Resilience Center, 2016).

The Business sector is also actively adopting the SDGs in their business development plans. For example, Ambatovy, a cobalt mining enterprise in Madagascar, has officially announced its annual development plan categorizing each SDGs as following: Direct Business Approach (Goals 5, 7, 12, 13, 16, 17), Community and Environmental approach (Goals 2, 3, 4, 6, 11, 14, 15), and Ambatovy Local Business Initiative (Goals 1,8,9,10) (Ambatovy, 2017). As such, different pillar-based approaches on the classification of SDGs have been a critical policy direction and indicator in various sectors in the society.

2.3 Challenges in achieving SDGs

Although 17 different goals are set and shared in a global spectrum, the SDGs faces various problems surround its implementation. According to OECD, a blended challenge such as slower economic growth, long-lasting corruption and inequality, unfavorable demographics in various forms and widespread epidemics can slowdown achieving the SDGs. In particular, the World Bank has highlighted that conflicts reduce a country's gross domestic product (GDP) growth by two percentage points per year, on average. As one of the conflicts, radical political changes within a nation that brings about conflict can be one of the biggest challenges that can hinder accomplishing the SDGs. In this context, studies have argued that a centralized agency and leadership is conducive to policy integration mechanism (Whitfield, 2008).

Moreover, policy integration does not only depend on the willingness of policymakers to integrate policy measures. One should note that a successful implementation of the SDGs also depends on the capacity of their political and administrative system (Tosun and Leininger, 2017). Understanding political system and its stability are crucial as the way national governments

interpret the call for enhancing policy coherence for sustainable development matters in achieving SDGs.

III. Theoretical Framework

3.1 Political Partisan Influence and Policy Implementation

Partisan influence is an important analytical instrument for a better understanding of public policy, thus have has been intensely studied and developed throughout history. Two broad streams labelled as “parties-do-matter” hypotheses and “parties-do-not matter” hypotheses have shaped a long-standing debate among political scientists (Negri, 2014).

Partisan Theory (PT) which postulates the parties-do-matter stances is a mainstream theory that shows the importance of political parties charged with government responsibilities in shaping public policies. Hibbs (1992), who developed the partisan theory argues that parties’ characteristics do act as a crucial variable on their public policy designing and implementation. Through comparative studies, partisan theory has proved that those countries which follow constitutional democracies, have distinctive preferences on the policies based on the party’s characteristics.

This analysis has been widely identified cross-nationally by Tufte (1978). He employed two variables to verify a substantial proportion of variation in policy outputs: a left-right indicator of the party in government. Through this dyadic approach, he argued that leftist parties are inclined to spend more on social policy, equality and employment. His further studies measured the electoral calendar in order to account for re-election-oriented policymaking (Schmidt, 1996).

On the other hand, the stream of literature grounded on “parties-do-not-matter” hypothesis criticizes the approach of partisan theory developed by “parties-do-matter” as it overlooks the policy makers’ incentives and abilities to employ policies and outcomes under the electoral and partisan condition of the given situation. Industrialization Thesis (IT) approach claims that party platforms tend to play less influential once in office when faced with overwhelming exogenous variables such as economic, technological, and demographic imperatives (Cutright, 1965). Primarily, because social development policies tend suffer when the increasing need for public and social policy and budgetary use clashes with the availability of financial resources from the aftermath of the Second World War (Wilensky, 1975). In the late 1990s, other scholars focused on the increasing role of international markets, which influenced blurring the line between political parties executives as the increases in financial and trade openness abated left parties’ ability to implement expansionary policies (Keohane and Nye, 1989).

Both parties-do and parties-do-not-matter hypotheses were widely tested in economically advanced liberal democracies. A comparative analysis taken by Schmidt (2006), shows that partisan influence on policy choices and outputs was observed in the economically advanced democratic states such as OECD countries. On the other hand, Huber et al. (2008) analyzed that particularly in Latin America, partisanship does not matter when it comes to social security and welfare policies and its spending in contrast to most of the OECD countries.

3.2 Traditional approaches on examining Partisan Influence

Most of the theories and studies introduced above are analyzed the macro issues by emphasizing the importance of finding denominators among data sets such as OECD and Latin American countries. However, as stated previously, Latin American countries that fall under the

group of OECD countries share both parties-do-matter and parties-do-not-matter hypotheses, which brings up the necessity of country-based analysis. Moreover, due to SDGs' specificity, evaluating partisan influence in achieving SDGs based on country is highly recommended. Overseas Development Institute (2015) gives several reasons why a country lens matters for SDGs aligned policies. (1) Progress trajectories are usually not linear, meaning that each country's starting point's condition subsequent performance. (2) Several exceptional performances of a single country can mask the meaningful findings of an individual country in a whole group of data sets.

Because of this, country-level analysis on SDGs was widely attempted and verified with the indicators such as democracy level, GDP, and budgetary constraints. However, attempts to analyze partisan influence in accomplishing SDGs through rhetorical or textual level with presidential speeches have never been used because text materials are hard to quantify. However, since speeches are one of the most effective ways to discover policy directions, new attempts are worth attainable.

IV. Hypothesis Development

Based on the "parties-do-matter" hypothesis developed by the traditional political scientists, this paper plugs the idea into analyzing how the change of a political party will influence in the implementation of the SDGs. As claimed in the previous chapters, major policies issues can be aligned and categorized with SDGs as it covers a wide range of policy areas in countries.

Also, unlike partisan theory that was developed at the macro-level analysis, this study will investigate from a micro perspective by configuring one country which went through radical political change recently, and is committed aligning its national policies with the SDGs. Moreover,

tackling hypotheses in rhetorical or textual level is a new attempt at figuring out partisan influence in achieving the SDGs. For this, this paper selected Mexico and will be examining the country from the micro-level perspective through a country-level-lens; and comparing the two different incumbents' speeches: left wing for Andrés Manuel López Obrador (AMLO) and non-left wing for Enrique Peña Nieto (EPN). Thus, this paper is pioneering a new methodology that can help prove partisan influence in the implementation of the SDGs.

H1: A left-wing party's incumbent in Mexico is more likely to put an emphasis on SDGs categories that is inline with the social pillar, and this tendency will likely to be discovered in presidential speeches and discourse.

- Sub Hypothesis: Education policy (SDG 4), Eradicating corruption (SDG 16) which are regarded as the social pillar in the SDGs is expected to have more emphasis in a left-wing government as opposed to a non-left-wing one.

A detailed reason for selecting Mexico and the necessity of selecting a new methodology will be deeply analyzed in the next chapters.

V. Methodology

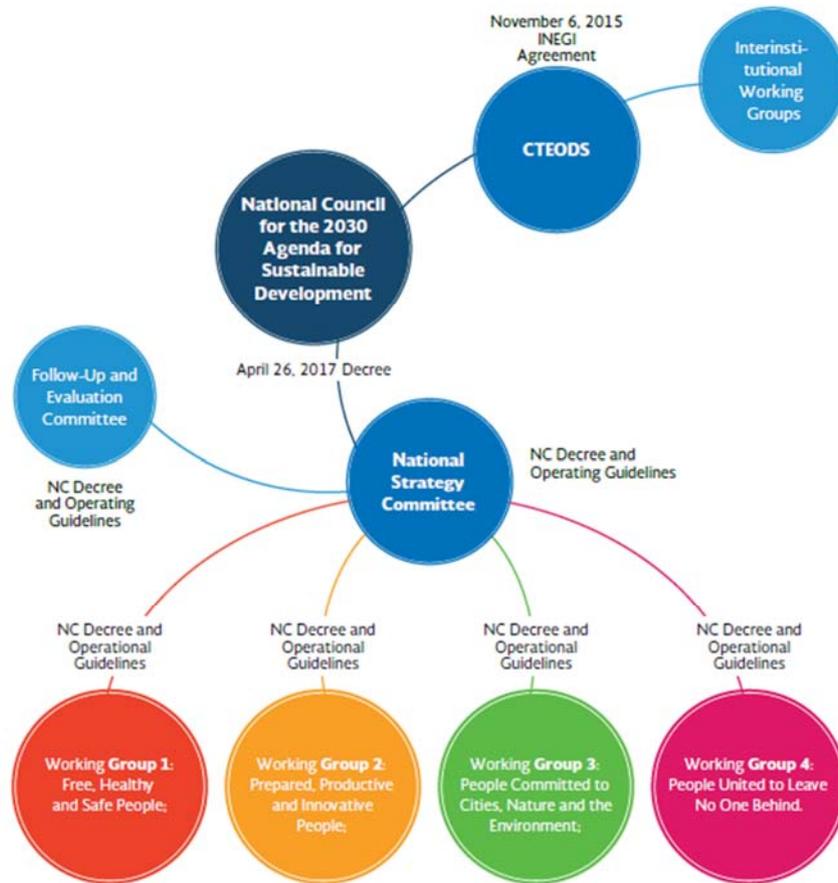
5.1 Selection of country: Why Mexico?

Mexico is the first Latin American country to introduce a multi-dimensional measure of national poverty (CONEVAL, 2013). A public agency of the Federal Public Administration, The CONEVAL (Consejo Nacional de Evaluación de la Política de Desarrollo Social: National Council for Evaluation of Social Development Policy) was created to generate objective information on

social policy and poverty measurement in Mexico. Since 2012, major Mexican inter-agency and inter-governmental (federal, state, municipal) social development strategy centers such as CONEVAL and ENI (Estrategia Nacional de Inclusión: National Inclusion Strategy), have been using 2030 Agenda and SDGs to target and coordinate multidimensional development policy implementation. (Voluntary National Report, 2018)

As of 2019, Mexico has been submitting Voluntary National Report (NVR) at the High-Level Political Forum on Sustainable Development (HLPF) since 2016 under the coordination of the Office of the President of the Republic (OPR). The HLPF is organized annually under the auspice of UN Economic and Social Council (UN ECOSOC) and once every four years under UN General Assembly. This forum provides a unique framework for UN Member states to publish their national review voluntarily, which makes monitoring more explicit. As one of the 47 countries that have issued voluntary reports, Mexico has its deep roots on its public policy and national strategies based on the SDGs goals. Many of its development policies are closely related and calibrated based on the different pillars of SDGs in the Mexican society, from federal and local government agencies to the private sector, academia, and civil society.

To hinder the inconsistency of the policy alignment with the SDGs due to changes such as change of government, legal and budgetary restrictions and temporary contingencies, Mexico has strengthened its approach by developing a new planning, implementation and follow-up mechanisms. One of the steps that the Mexican government took was mending institutional mechanism, such as constituting a specialized technical committee on Sustainable Development Goals, and creating a Senate Working Group for monitoring the legislative implementation on the SDGs.



<Figure 1> Structure of the committees that make up the National Council for the 2030 Agenda for Sustainable Development (Source: Voluntary National Report, 2018)

5.1.1 How much Mexico have achieved SDGs so far?

In May 2019, OECD published a report on measuring the distance to the SDGs targets, an assessment of where OECD countries stand. With the three steps, indicators were selected with end values that are calibrated for z-score normalization. Step 1, the UN Global indicator List (UN, 2017) were selected for the detailed analysis of the targets. Step 2, for the distance measurement purpose, a target's end-value was set for each indicator. Lastly, based on a modified z-score procedure, standardized and normalized method was done, which enables the calculation of the distance from a fixed endpoint in a standardized way for each indicator.

With high level of raw data availability, Mexico has currently achieved 10 of the 2030 targets, based on 103 available indicators allowing a coverage of 80 of the 169 SDG targets. Under the 5P classification (People, Planet, Prosperity, Peace and Partnership) that OECD concerns itself, Mexico is on average or close to reaching goals under the Planet classification, such as Ocean (SDG 14), while it is furthest from goals under the People classification especially, Food (SDG 2) and Education (SDG 4). Overall, Mexico is still far from more than 3 standardized distance from meeting some 28% targets, and many of the targets that are left are under the “People” classification (OECD, 2019).

5.1.2 Mexican Presidential Election

The incumbent president Enrique Peña Nieto (EPN) took his office for six years from 2012, in Mexico, presidents can only serve a single term according to the Mexican constitution. Under the term-limited status of all the members of Congress, The 2018 presidential election in Mexico was essential since there would be a change in government. The general election was held on the first of July 2018, and newly elected president Andrés Manuel López Obrador (AMLO) from National Regeneration Movement (MORENA) party took office. Unlike most Latin American countries, Mexico has not experienced military dictatorship nor change from the single-party system for decades. The 2018 election was the first time that an election in Mexico was won based on outright majority since 1988, which was not from Institutional Revolutionary Party (PRI). Moreover, this general election was the first time that non-PRI party backed a single presidential candidate and won majorities in both the Senate and Chamber of Deputies.

This MORENA (Movimiento Regeneración Nacional: National Regeneration Movement) won the presidency with 53% of the popular vote, it also has majority in both the Senate and

Chamber of Deputies. MORENA describes itself as a democratic left-wing party, under the name of reformism. Officially founded by the current president Andrés Manuel López Obrador, this party stimulates the anti-corruption in Mexico, while embracing the diversity. The party and the president believe that culting neo-liberalism in Mexican economy caused the endemic corruption in the Mexican society, by widening the gap between the rich and poor. In salaries and compensation, AMLO argues against opening the market but rather strengthening the national market by fair wages.

This paper would like to highlight the relationship between the changes in parties, and policy emphasis based on the regime change. Especially, during the 2017/18 electoral process, Mexico's leading political parties addressed their policy goals and campaign based on the 2030 agenda. Mexico's massive interest in SDGs and far far-reaching legislative changes introduced in the previous parts, this paper wants to bring out meaningful implication ranging over the changes in pursuing SDGs in Mexico.

5.2 Why Presidential Speeches and Discourses?

Presidential speeches and discourses are regarded as highly referable sources as they contain information, sentiment and sets signaling of the public policy. In particular, speeches tend to offer a guideline to administrators and bureaucrats by arranging specific policy-related words. As such, presidential speeches and discourses are one of the most effective ways to figure out one nation's policy intentions and implementation approach. Because of its effectiveness and clarity, the presidential speeches and discourses have been one of the major subjects on analyzing policies. Moreover, using text as a set of data requires credible methods for examining pattern assessment

for statistically significant and reduce the tendency to over-evaluate the expectation by disciplining the space of interpretations (Grimmer and Stewart, 2013).

5.3 Why Computer-based Unsupervised Text Analysis?

As stated above, the accumulation of digitized texts has already proven to be fruitful in the area of social science, including the analysis of discourses, speeches, surrounding political election and social movements (Bail, 2012). However, the traditional way of text analysis was challenged both quantitatively and qualitatively as it was challenging to produce intuitively understandable result while embracing its inherent richness and complexity in large corpus. Several researchers have attempted overcoming the problem, but still the critics continued to claim that existing methods fail to apprehend the nuances of text that could be culled from interpretive text analysis (Biernacki, 2012).

In recent years, with the increasing acceptance of big data analysis and advancement of word embedding methods, studies have proven that word embedding models are more effective to show complex semantic relations and work as a powerful tool in the area such as culture and political science (Kozlowski, Taddy, and Evans, 2018).

5.4 Data Specification

5.4.1 Presidential Speeches and Discourses

On the official website of the government of Mexico (gob.mx), the stenographic records of each presidential speeches and discourses are listed in chronological order. Each data set is classified into different categories as following: Discurso del Presidente (president's speech),

Comunicado (communicated discourses). President's speech category only contains pure presidential speeches of AMLO and EPN, while communicated discourses contains interviewers or news presenter's questions and arbitration. This paper did not intentionally exclude these noises as these questions and follow up interviews also contain meaningful undertone and implication on policy implementation. Also, from the detailed responses from presidents, emphasis of certain policy or ideology can be detected from its frequency.

For the fairness of the data of both incumbents, the initial 6 months of data of each administration were collected. It is well known that beginning period of administration's speeches tends to contain its political ideas and philosophy more strongly than other periods. Also, since AMLO has assumed the reins of government only in December 2018, 7 months' speeches were the maximum amount of speeches that could be collected.

As a result, with webpage crawling of official government website: gob.mx/presidencia, 548 stenographic version of presidential speeches and discourses of non-left partisan Enrique Peña Nieto (EPN) and 649 speeches and discourses of the left partisan Andrés Manuel López Obrador (AMLO) were collected. EPN's data was obtained from December 2012 to June 2013, while AMLO's data was collected from December 2018 to June 2019, the very first 6 months period of their respective administration.

5.4.2 Supervised Learning for Data Classification

For the classification, two different sources that can be used for word embedding were designed. The first data was collected from the UNDP website that illustrates about each goal and sub-goals of 17 SDG. Secondly, to enhance the robustness of classification, SDGs-specific keywords were selected. These keywords have primary roots in university-related data, such as research publication or course listings. Especially, where many universities looking to strengthen

their contribution to the SDGs, this paper considered that it would be meaningful to map activities that are aligned with SDGs with different approaches such as research expertise, course and institutional policies. The selected keywords have been studied and shared from the listed university: Auckland University of Technology, Macquarie University, Monash University, Victoria University of Wellington, The University of Auckland, and the University of Western Australia.

Keywords for each SDG has been listed as per Appendix [1]. English and Spanish words are both included in the table, but Spanish words were only used for supervised learning as presidential speeches and discourses are only in Spanish. For the 'Misc' keywords, a completely different category was set aside as these keywords cover a broad range in SDGs and can affect negatively classifying more than two categories. Words that fall under 'Misc' Categories are such as: "Sustainable Development Goals" and "Development". Also, for the words that were not directly covered by any of the SDGs but were deemed necessary, such as "Refugee Crisis".

5.5 Analytical Tools

5.5.1 Speech Classification based on SDGs

Traditional classification model Term Frequency-Inverse Document Frequency (TF-IDF) and word embedding for methodology were both conjunctly conducted as this method can overcome the shortcomings of traditional TF-IDF based on bag of words and offer semantic relation of each word. For example, 'politics' and 'election' are semantically related words. However, two words would be classified as a different index when only followed based on 'bag of words' an approach which only considers the frequency. On the other hand, the classification

model that expresses the meaning of words through word embedding method can take into account a semantic sharing between words in a completely different form. In other words, we can learn a classification model that can capture semantic similarities between 'politics' and 'election'.

1) TF-IDF (Term Frequency-Inverse Document Frequency)

TF-IDF scores words based on its frequency in a document. The TF is aggregated using the frequency with which individual words appear within a context. By this, specific words to represent the document is calculated and weighted. The method for calculating TF in this paper is based on the following equation (Salton and McGill, 1983):

$$(1) \text{TF}(t, d) = 0.5 + \frac{0.5 \times f(t, d)}{\max\{f(w, d) : w \in d\}}$$

$f(t, d)$ means the frequency of a word in a particular document group. Through equation (1), the normalization was made based on the frequency of individual words divided by the number of occurrences of the most frequent words. This was to calibrate the distortion that document length could bring out.

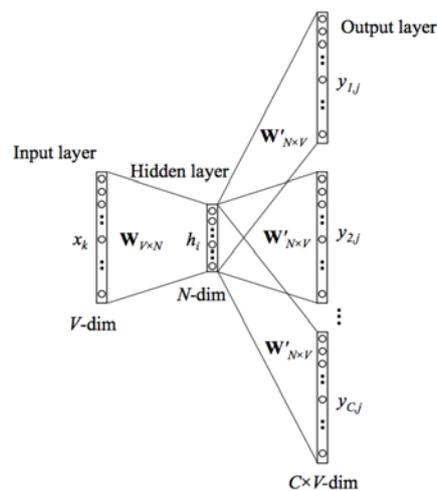
IDF refers to the inverse proportion of the document in which individual words appeared relative to the entire document cluster. If a word appears in every document in a document cluster, the word's IDF is 1. The IDF calculation is based on the following equation (Salton and McGill, 1983):

$$(2) \text{IDF}(t, D) = \log \frac{|D|}{1 + |\{d \in D : t \in d\}|}$$

In other words, the total the total number of documents is divided by the number of documents containing the word. Log scaling was performed to prevent IDF value from explosion for the case the increase in the total number of documents. Also, for the case of calculating IDF of a word that has not appeared once, 1 was added in order to prevent the case the denominator becoming 0. Finally, the TF-IDF weights of each word are multiplied by the results of (1) and (2).

2) Word2Vec

Word embedding is unsupervised learning to represent semantics and syntactic information of each word in low dimensional vector. When used with this method, this could not only calculate the similarity between words, but also can classify documents based on generated category vectors by combining word vectors. <Figure 2> shows the Skip-gram learning methodology of Word2vec based on distributional hypothesis (Sahlgren, 2008) that words that share the same context are similar in meaning.



<Figure 2> skip gram for word2vec (source: Rong, 2014)

First, an input word given in one-hot encoding is mapped to a hidden layer h_i of N -dimension through an input weight matrix. Next, by using output weight matrix $W'_{N \times V}$, hidden and output layers are connected to predict upcoming word's probability distribution. Through this process, $W_{V \times N}$ and $W'_{N \times V}$ are updated to maximize the probability distribution in the given context words. This learning mechanism conceptually proceeds to maximize the log-likelihood of the objective function represented by Equation (3) (Mikolov et al., 2013b).

$$(3) \frac{1}{T} \sum_{t=1}^T \sum_{-c \leq j \leq c, j \neq 0} \log p(w_{t+j} | w_t)$$

In other words, the goal of Skip-gram learning is to increase the probability of occurrence of neighboring words w_t within context size c from the words to be embedded. In general, it is conceptually more appropriate when an input weight matrix that serves to map the original hot-encoded input word into the hidden layer serves as word embedding. However, this paper uses $W_{V \times N}$ and $W'_{N \times V}$, with a linear combination to use final word embedding. This idea supplements previous studies that discarded output weight matrix could also function as a part of word embeddings. The final embedding combined linearly with element-wise summation follows the below equation.

$$(4) E_{dual} = E_{input} \oplus E_{output}$$

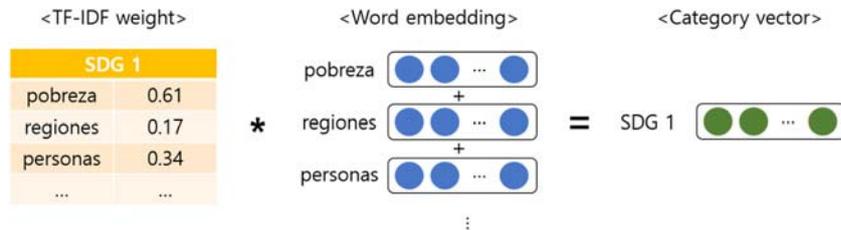
As a result, the final word embedding is generated by a linear combination of two weight matrices $E_{input} \in \mathbb{R}^{N \times d}$, $E_{output} \in \mathbb{R}^{N \times d}$ of rows of words and columns of hidden layer dimensions. This combination increases the word embedding E_{dual} performance while maintaining the word dimension size without increasing the computational complexity. By doing

so, this study was able to strengthen semantic relationship while maintaining word dimension size without increasing computational complexity.

3) Category vector generation and speech classification

First of all, each word vector \vec{w} was created using the Word2Vec method, and the final word vector was generated by multiplying the TF-IDF weights. A category vector is then generated from the sum of the final vector values of all words appearing in each SDG category. This mechanism follows Equation (5) (Kim et al, 2018) and is illustrated in Figure 3.

$$(5) \vec{C}_i = \sum_{w \in W_i} \mu_i(w) \cdot \vec{w}$$

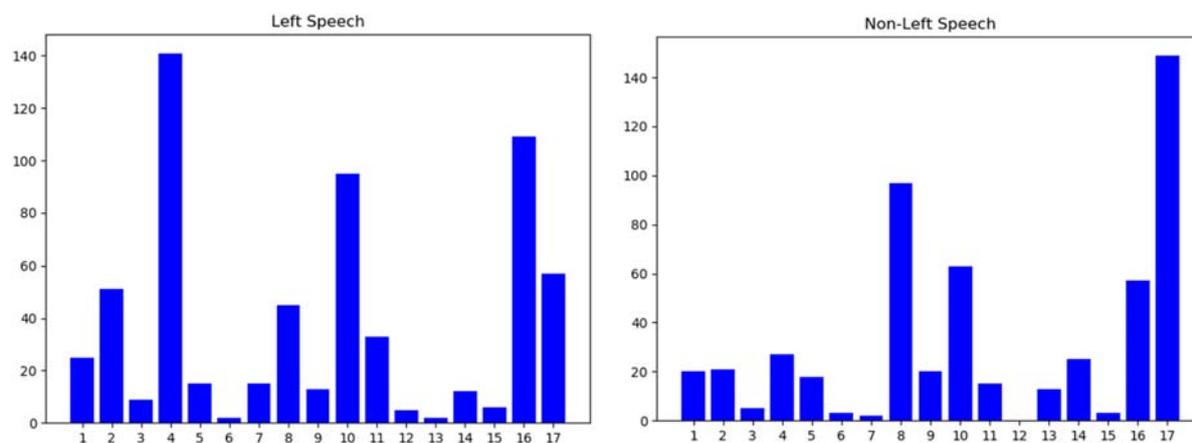


<Figure 3> Category Vector Creation Mechanism

Each speech vector $\vec{v}(d)$ is also generated by the same methodology. The speech is then classified into the nearest category by calculating cosine similarity between each speech vector and the 17 SDGs category vectors c_i . This methodology follows the equation (6) (Lee et al, 2013).

$$(6) \arg \max_{c_i} \cos(c_i, (\vec{v}(d)))$$

As a result, the speeches were classified as below visualized plot, <figure 4>



<Figure 4> Left and Non-left incumbent’s speeches classification as per SDG

<Figure 4> Shows how many speeches fit in each SDG. The left plot shows left-wing incumbent AMLO’s speeches and discourses, and the right plot shows non-left incumbent EPN’s speeches and discourses. AMLO put more emphasis on social issues in his speeches such as education and justice, while EPN lays emphasis on economic development and global partnerships.

With classified SDGs, logistic regression of each SDG was conducted. With the data classified with TF-IDF and word embedding, each speech data was into binary form. For example, to conduct a logistic regression for SDG 1, 1 was tagged if the speeches that were classified as SDG 1, while remaining other speeches tagged as 0. By conducting testing for each 17 SDG, below tables bring out meaningful coefficient and P-values that can be considered statistically significant.

| | coef | std err | z | P> z | [0.025 | 0.975] |
|------------------|---------|---------|---------|-------|--------|--------|
| Intercept | -1.7377 | 0.111 | -15.619 | 0.000 | -1.956 | -1.52 |
| SDG 1 | -0.2825 | 0.174 | -1.621 | 0.105 | -0.624 | 0.059 |

| | coef | Std err | z | P> z | [0.025 | 0.975] |
|------------------|---------|---------|---------|-------|--------|--------|
| Intercept | -2.4381 | 0.146 | -16.698 | 0.000 | -2.724 | -2.152 |

| | | | | | | |
|------------------|---------|---------|---------|-------|--------|--------|
| SDG 2 | -0.7654 | 0.266 | -2.875 | 0.004 | -1.287 | -0.244 |
| Intercept | coef | std err | z | P> z | [0.025 | 0.975] |
| SDG 3 | -4.2421 | 0.336 | -12.636 | 0.000 | -4.9 | -3.584 |
| Intercept | coef | std err | z | P> z | [0.025 | 0.975] |
| SDG 4 | -1.2538 | 0.095 | -13.131 | 0.000 | -1.441 | -1.067 |
| Intercept | coef | std err | z | P> z | [0.025 | 0.975] |
| SDG 5 | -1.6868 | 0.219 | -7.69 | 0.000 | -2.117 | -1.257 |
| Intercept | coef | std err | z | P> z | [0.025 | 0.975] |
| SDG 6 | -3.7217 | 0.261 | 14.243 | 0.000 | -4.234 | -3.21 |
| Intercept | coef | std err | z | P> z | [0.025 | 0.975] |
| SDG 7 | 0.3582 | 0.355 | 1.01 | 0.312 | -0.337 | 1.053 |
| Intercept | coef | std err | z | P> z | [0.025 | 0.975] |
| SDG 8 | -5.7573 | 0.708 | -8.129 | 0.000 | -7.145 | -4.369 |
| Intercept | coef | std err | z | P> z | [0.025 | 0.975] |
| SDG 9 | 0.5737 | 0.915 | 0.627 | 0.531 | -1.219 | 2.367 |
| Intercept | coef | std err | z | P> z | [0.025 | 0.975] |
| SDG 10 | -3.7217 | 0.261 | -14.243 | 0.000 | -4.234 | -3.21 |
| Intercept | coef | std err | z | P> z | [0.025 | 0.975] |
| SDG 11 | -1.8693 | 0.755 | -2.476 | 0.013 | -3.349 | -0.389 |
| Intercept | coef | std err | z | P> z | [0.025 | 0.975] |
| SDG 12 | -2.5735 | 0.155 | -16.64 | 0.000 | -2.877 | -2.27 |
| Intercept | coef | std err | z | P> z | [0.025 | 0.975] |
| SDG 13 | 1.0591 | 0.191 | 5.544 | 0.000 | 0.685 | 1.434 |
| Intercept | coef | std err | z | P> z | [0.025 | 0.975] |
| SDG 14 | -3.868 | 0.28 | -13.803 | 0.000 | -4.417 | -3.319 |
| Intercept | coef | std err | z | P> z | [0.025 | 0.975] |
| SDG 15 | 0.6137 | 0.361 | 1.699 | 0.089 | -0.094 | 1.322 |
| Intercept | coef | std err | z | P> z | [0.025 | 0.975] |
| SDG 16 | -1.7377 | 0.111 | -15.619 | 0.000 | -1.956 | -1.52 |
| Intercept | coef | std err | z | P> z | [0.025 | 0.975] |
| SDG 17 | -0.2825 | 0.174 | -1.621 | 0.105 | -0.624 | 0.059 |
| Intercept | coef | std err | z | P> z | [0.025 | 0.975] |
| SDG 18 | -2.9037 | 0.179 | -16.242 | 0.000 | -3.254 | -2.553 |
| Intercept | coef | std err | z | P> z | [0.025 | 0.975] |
| SDG 19 | -0.6478 | 0.317 | -2.043 | 0.041 | -1.269 | -0.026 |
| Intercept | coef | std err | z | P> z | [0.025 | 0.975] |
| SDG 20 | -5.7573 | 0.708 | -8.129 | 0.000 | -7.145 | -4.369 |
| Intercept | coef | std err | z | P> z | [0.025 | 0.975] |
| SDG 21 | 0.5737 | 0.915 | 0.627 | 0.531 | -1.219 | 2.367 |
| Intercept | coef | std err | z | P> z | [0.025 | 0.975] |
| SDG 22 | -5.7573 | 0.708 | -8.129 | 0.000 | -7.145 | -4.369 |
| Intercept | coef | std err | z | P> z | [0.025 | 0.975] |
| SDG 23 | 2.0589 | 0.762 | 2.702 | 0.007 | 0.566 | 3.552 |
| Intercept | coef | std err | z | P> z | [0.025 | 0.975] |
| SDG 24 | -3.9496 | 0.291 | -13.552 | 0.000 | -4.521 | -3.378 |
| Intercept | coef | std err | z | P> z | [0.025 | 0.975] |
| SDG 25 | 0.9282 | 0.356 | 2.606 | 0.009 | 0.23 | 1.626 |
| Intercept | coef | std err | z | P> z | [0.025 | 0.975] |
| SDG 26 | -4.6524 | 0.41 | -11.342 | 0.000 | -5.456 | -3.848 |

| SDG 15 | -0.5313 | 0.71 | -0.749 | 0.454 | -1.922 | 0.859 |
|------------------|---------|---------|---------|-------|--------|--------|
| | coef | std err | z | P> z | [0.025 | 0.975] |
| Intercept | -1.574 | 0.105 | -14.956 | 0.000 | -1.78 | -1.368 |
| SDG 16 | -0.5202 | 0.174 | -2.998 | 0.003 | -0.86 | -0.18 |
| | coef | std err | z | P> z | [0.025 | 0.975] |
| Intercept | -2.3165 | 0.139 | -16.686 | 0.000 | -2.589 | -2.044 |
| SDG 17 | 1.3382 | 0.169 | 7.908 | 0.000 | 1.007 | 1.67 |

<Table 1> Logistic regression result for each SDG

With the logistic regression conducted, the result that showed P-value smaller than 0.003 were sorted out to be analyzed deeply. Usually, when the P-value is lower than 0.05, it is well known that two groups are statistically significant. However, for the detailed analysis, this study chooses to increase the threshold of P-value, by selecting the smallest P-value. Based on this approach, four SDGs were highlighted: SDG 4, SDG 8, SDG 16, and SDG 17. Among these four SDGs that were statistically significant and have the smallest p value, SDG 4 and SDG 16 had negative coefficient while SDG 8 and 17 had positive coefficient. In other words, AMLO's speech had more emphasis on the Goal 4 and 16, while EPN's speeches were more closely related to Goal 8 and 17.

5.5.2 Word Embedding Output

a) Macro-level of word embedding output

After converting all the words in each incumbent's presidential speeches into 300-dimensional real number vector based on context, the contextual structure was extracted by projecting the cluster structure between words. This extraction can be performed in various ways, but this paper chooses a method to examine the cluster structure by projecting the similarity between words in a two-dimensional space. For transforming into a real number vector, this

Micro-level text analysis in this paper is to analyze the semantic and structural differences of two incumbent's individual words, not the entire speeches collected. The reason why the micro-level analysis is highly appreciated in the text analysis results from (1) the number of speeches and discourses collected are limited, (2) the importance of certain words that cannot be expressed only by its frequency and (3) the characteristics of word used that can be used to understand the policy approach of each incumbent.

By using t-SNE (Van der Maaten and Hinton 2008), the similarities between major words that are related to the SDG and development policy were calculated. The three keywords that were selected to analyze the difference between both parties are desarrollo (development), corrupción (corruption) and economía (economy), as these three keywords represents each SDG's social and economic pillar development. With context window size 5, minimum count 10, and word dimension 300, the following were the main differences between AMLO speech and EPN speech respectively.

Keyword 1: Desarrollo (Development)

| AMLO (left-wing) | EPN (non left-wing) |
|--|----------------------------|
| Crecimiento (growth) | Económico (economy) |
| Social (social) | Crecimiento (growth) |
| Acción (action) | Progreso (progress) |
| SEDESOL (Secretaría de Desarrollo Social, Ministry of Social Development) | Acelerar (accelerate) |
| Secretaría (Ministry) | Motor (driving power) |
| Paz (peace) | Integral (integral) |
| Tranquilidad (peace) | Banca (bank) |
| Cabo (final) | Sustentable (sustainable) |

<Table 2> t-SNE result for Keyword 1: Desarrollo (Development)

The words are listed from the top which is closely related to each keyword, and have the biggest cosine similarity. When defining the development in Mexico, AMLO highlighted the word ‘social’, while EPN highlighted ‘economy’ as the most relevant word for development. Other words such as SEDESOL (Secretaría de Desarrollo Social: Ministry of Social Development), paz (peace) are closely related to social development, while progreso (progress), acelerar (to speed up) are the words that are mostly used in economic development. From this result, the paper found out that left-wing incumbent tend to relate more on social issue in development.

Keyword 2: Corrupción (corruption)

| AMLO (left-wing) | EPN (non left-wing) |
|-------------------------|----------------------------|
| Acabar (terminate) | Daño (damage) |
| Impunidad (impunity) | Enfocar (focus) |
| Permitir (allow) | Variables (different) |
| Desterrar (banish) | Lastiman (hurt) |
| Ganso (stupid) | Fórmula (formulate) |
| Canso (useless) | Medibles (mesurable) |
| Acaba (terminate) | Sistemas (systems) |
| Fórmula (formulate) | Diagnóstico (diagnosis) |

<Table 3> t-SNE result for Keyword 2: Corrupción (corruption)

The second keyword ‘corruption’ was selected as it is considered as one of the main keywords in social policy. Corruption has been undermining the Mexican society for decades. Both incumbents are very well aware of the termination of corruption is necessary, but there is a different approach in policy implementation with the usage of the word. While EPN delivered his speeches regarding corruption based on diagnosing current situation in Mexico by using the word such as Daño (damage), Lastiman (hurt), no strong words were detected. On the other hand, AMLO commonly referred the word corruption that carries punitive connotations such as Acabar

(terminate), Impunidad (impunity). As a left-wing incumbent, AMLO assured a pledge to the publics terminating corruption as one of his main social policy.

Keyword 3: economía (economy)

| AMLO (left-wing) | EPN (non left-wing) |
|--------------------------|----------------------------|
| Reactivar (reactivate) | Banca (bank) |
| Popular (popular) | Ciencia (science) |
| Impulsar (boost) | Nivel (level) |
| Apoyar (help) | Motor (driving power) |
| Abajo (down) | Mundial (world) |
| Productivas (productive) | Tecnología (technology) |
| Propósito (purpose) | Humano (human) |
| Tandas (work) | Sustentable (sustainable) |

<Table 4> t-SNE result for Keyword 3: Economía (economy)

Finally, the last keyword that was selected which can represent the economic pillar of SDGs is ‘economy’. There were no strong connotative or standing words detected from both incumbents but was able to find out non-left incumbent’s policy approach on economic development. However, in terms of methodological approach, EPN strongly believed that Mexico’s sustainable economic development can be achieved through investment in Science and Technology, which is a driving source of Mexican economy.

VI. Empirical Analysis

This chapter analyses the major differences that were shown in the <Graph1> and the logistic regression results in the previous chapter. Selected SDGs are the ones that showed to be statistically significance, and this chapter further develops the empirical analysis on selected SDGs.

6.1 SDG 4: Quality Education

While in the office, both incumbents realized the seriousness and necessity of educational reform, as the educational system in Mexico has been hindering socio-economic development in terms of its quality and operation. Mexico has shown a great interest in improving access to early childhood education and care (ECEC) in recent years, especially targeting on the SDG Target 4.1: By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes.

Mexico's educational performance has improved during the last 10 years, in terms of enrolment rate. Within the age range of 15 to 24 years old, the literacy rate is close to 100 percent, and the students entering first grade that later finish sixth grade exceeds 96 percent. (OECD, 2018b). However, in terms of quality and sustainable education, there is much left to be desired. In terms of measurement of quality education, 24% of teachers in Mexico as reported in Teaching and Learning International Survey (TALIS) 2013 are not feeling prepared to perform their work while average was marked as 7%. Moreover, Mexico had the lowest proportion of teachers who reported having completed a teacher education or training program among countries participating in TALIS 2013 by marking 62%.

Mexican Education Reform

Mexican education reform first started in the past government. EPN has signed "Pacto por Mexico" at Chapultepec castle the day after he took office on the 2nd of December 2013. This Pact for Mexico includes 95 public policy proposals to strengthen the Mexican states with the democratized economy and social rights while reversing citizen participation for the critical

implementation of the pact. One of the reform bills was education reform, which included major elements such as but not limited to: Increase education coverage and quality, improving teacher quality by banning hereditary succession of profession, introducing competitive process for the hiring, recognition of teachers, promotion and continuous assessment to wean-off the unqualified teacher to enhance education quality in Mexico. Moreover, the bill included the necessity of improving system management by creating credential rating and statistical institution which can calibrate the quality of education consolidating the national education evaluation system (INEE) while making it fully autonomous. Overall, most educational reforms targeted and moved toward privatization of education.

Among the major reforms introduced by the EPN administration, the part which evoked strong opposition was evaluation program of teachers. One of the aspects of this law that has divided public opinion is the stipulation that teachers who do not pass the test after three attempts would be suspended from offering educational service. This aspect of that law was the reform's most controversial point since some people have interpreted it as affecting teachers' labor rights, while others think it is indispensable for ensuring quality teaching. Some of them felt that provision could result in the abolition of the retirement age and convert teaching profession, which was considered to be one of the most stable jobs into a 3-year contract.

Since teachers are evaluated and hierarchized based on students' grades, the educational reform tried to shift to more test-score oriented competitive system worsening teachers' working conditions. Besides, the education budget cut made parents to pay their own school electricity and water bills, which caused definite backlash from the poor.

AMLO's Policy Direction towards Educational Reform

Since 2018, new left-wing incumbent AMLO showed his willingness to repeal the past president's reform, especially on the teacher evaluation. Instead of imposing punitive measures from the results of assessments, he signaled the transition into a formative style of evaluation. Moreover, with his saying "Becarios sí, sicarios no" (Scholarships yes, contract killings no), he promised universal access to education and public colleges, while offering monthly scholarship of 2,400 Mexican pesos especially to low-income university students (Godínez, 12th DEC 2017). He also criticized that the past incumbent's policy as the impetus for widening the gap between the rich and poor through the privatization of Mexican education system (Aristeguinoticias, 2018).

Although AMLO followed policy lines against the former administration, his will on promoting quality education on SDG Target 4.1 were highlighted from his speeches. Among 17 different goals of SDGs, SDG 4 was the most concern of AMLO as 141 speeches were classified as SDG 4-related speeches.

6.2 SDG 8: Decent Work and Economic Growth

In SDG 8, target 8.2: "Achieve higher levels of economic productivity through diversification, technological upgrading and innovation, including through a focus on high value-added and labor-intensive sectors" was especially aligned with the non-left wing incumbent EPN's speeches.

According to the t-SNE result that was shown in the word 'economy', both incumbents delivered speeches regarding economic growth and productivity, but the actual words to reach the goal were highly detected from EPN, the non-left-wing president. Words such as science and technology which can be the main driving power of the economy were frequently used.

Low Productivity in Capital, a Chronic Problem of Mexican Economy

Throughout decades, the World Bank has reported that Mexico has been showing 2% to 3% of annual economic growth. However, when we look at the GDP per capita, Mexico's economic situation is instead defined as "following the low growth rate" and low growth rates likely results from poor labor productivity performance that is reflected through the lowest GDP per capita level among the OECD countries. A Wilson Center Mexico Institute publication has once stated that "Mexico is poor no more, but developed not yet". Thus, diagnosing Mexico's current situation and looking was to boost up productivity has been considered as one of the most important agendas that the country has set up.

The mediocre economic growth performance was mainly caused by the weak multifactor productivity (MFP) growth. While factor accumulation, disappointing productivity levels resulted from misallocation of productive resources, primarily labor and capital (Cordova and Padilla, 2016). According to the National Geography and Statistics Institute of Mexico, 6 out of 10 workers work in the informal sector, and this impedes the integration of workers into the workforce with mismatched demands. Moreover, misallocation of capital resulted in low productivity. According to "Domestic Credit to Private Sector Statistics" by the World Bank, Credit handled through the financial sector represents 31.4% of GDP in Mexico, and this is lower than Latin American average (53.3%) and OECD member countries (145.4%).

Especially, misallocation of capital has been causing interrelated problems in Mexico. According to the latest Inter-American Development bank report published in 2018, still Mexico spends less than 1% of its gross domestic output on research and technological development. This low spending naturally leads to low innovativeness and weak productivity of firms by deforming

industrial structure. Over one-third of manufacturing R&D is carried out in low and medium-technology sectors. Compared to other OECD and BRICS (Brazil, Russia, India, China, South Africa) countries, Mexico's private sector R&D expenditure is well below the average of the above countries, which makes the lowest labor productivity levels from these small and medium-sized enterprises (OECD, 2016). Moreover, 22.5% of micro-enterprise owners stated that they were unable to expand their innovative business due to a lack of credit (ENAPROCE, 2014). As private expenditure for R&D is more likely to bring out the significant positive impact on productivity, R&D related patent rate also shows a positive relationship with its expenditure. Due to this result, only 8.4% of the application of patent is driven by the Mexican national firms or individuals, while foreign firms or nationals register the majority of patents.

To overcome these circumstances, Mexico has shown a commitment to fostering research and development through the National Science and Technology Council (Consejo Nacional de Ciencia y Tecnología: CONACYT) to advance the role of science and technology. Financially, by establishing state-run development bank, the government of Mexico seed-funded high-tech startups through National Finance (Nacional Financiera, S.N.C. Institucion de Banca de Desarrollo: NAFIN). Moreover, in January 2013, the National Entrepreneur Institute (Instituto Nacional del Emprendedor: INADEM) was created as a parastatal under the Ministry of Economy to support small and medium-size businesses where innovative ideas and developments can be made. Although several institutional and legal support were made, policy inconsistency on R&D cooperation continues to make coordination challenging in Mexico, especially the pursuance of target 8.2.

Budget cut off for R&D cooperation

Boosting up R&D should be supported with external integration. The degree of cooperation on research and innovation is influenced by ability to absorb knowledge and innovation from both within the economy and from abroad. OECD evidence suggests that more intensive collaboration between firms and universities – as proxied by the share of higher education R&D financed by industry – is associated with more diffusion of foreign advanced technologies (OECD, 2015a). Moreover, the studies have found out that productivity gap between 1st-tier firms and followers tend to be lower where there is more intense R&D collaboration (Andrews, Criscuolo and Gal, 2015).

By acknowledging its importance, CONACYT aimed to link Mexico's scientific, technological and innovative community with research and innovation groups of its partner countries and regions through international cooperation (Zezer, 2017). By doing so, it was expected to effectuate valid technology transfers, while tackling national challenges through developing best practices in Science and Technology management policies. As such, during the non-left-wing incumbency, Mexico has shown its willingness to participate as a part of the ERANET-LAC (the Network of the European Union, Latin America and Caribbean Countries), by building networks with joint innovation and research activities among these countries and regions.

However, after the regime change to the left-wing presidency, policy coherence on R&D development and integration with other countries seems to have lost its way. AMLO, who promised to support science and technology during his 2018 campaign decided to cut off the budget by abiding by his austerity plan. On May 3rd 2019, he included 50% cut to international travel funds and payment for contract researchers and workers, by stating researcher's travel abroad as "Tourism" (Wade, July 23rd 2019). Although both incumbents recognize the necessity

of expanding the investment in R&D by emphasizing words from the speeches, policy implementation failed to align with the presidential speeches, especially for left-wing president AMLO.

6.3 SDG 16: Peace, Justice and Strong institution

Among different targets that SDG 16 brings out, the left-wing president AMLO showed his strong will to tackle target 16.5: substantially reduce corruption and bribery in all forms and 16.6: Develop effective, accountable and transparent institutions at all levels. As one of his main mottos during his election campaign, willingness to combat the obstacles to achieve SDG 16 was noticeable.

Corruption as a Significant in Mexico

Each year, an international organization Transparency International puts out the Corruption Perception Index (CPI). By using scale of 0 to 100, where 0 is highly corrupt and 100 is very clean, Mexico scores 28 out of 100, ranking 138th among 180 countries and territories as 2019. Mexico placed at least 71 places behind all other member government among OECD. Not only the research conducted by third party, Mexican citizens also share the low-ranked transparency rate within the society. As if to reflect the sentiment, according to the 2015 Gallup Poll, over 70% of citizens reported they believed corruption to be widespread in government.

Corruption brings out a negative effect throughout the society, by eroding public confidence in a political system and dealing a severe blow to national competitiveness. According to the annual report by the Mexican Institute for Competitiveness (El Instituto Mexicano para la

Competitividad: IMCO), it is estimated that 5% to 9% of Mexican GDP is lost to corruption every year, which affects spillover onto poor economic performances. As such, tackling corruption and improving institutional quality would significantly boost GDP per capita levels given Mexico's quality of institutions, which is the lowest among the OECD countries, and that better governance has a tremendous impact on productivity (Guillemette and Turner, 2018).

Mexico's National Anticorruption System (NACS)

By acknowledging its seriousness, General Law of the National Anticorruption System (Sistema Nacional Anticorrupción: SNA) was enacted on 18 of July 2016. The main idea of the system was to strengthen the institution for both state and national level, and one of the unique aspects of the system was having a Citizen Participation Committee alongside a board-like entity called coordinating committee led by more than one body. (National Anticorruption System, n.d.) This structure was to maintain the citizen's role to lead in anti-corruption fight by bridging between institution and civil society. However, the implementation was stalled as the EPN administrations postponed the several appointments of several key actors and blocked important anti-corruption investigation from moving forward, which overall resulted ineffectiveness of the system (Ahmed, December 2nd 2017).

Since the new left-wing incumbent AMLO took office, some progress has been made as one of his major pledges was to lead a frugal lifestyle and slashing bureaucratic expenditures to create a government in rigorous budget spending. His strong willingness on austere government mainly results from the fact that during the past decade, over 22 current or former governors have been interrogated for corruption offences, many of whom have been accused of embezzling

millions of dollars' worth of public funds designated for education, health and social programs. As stated in the previous chapters, through t-SNE analysis, AMLO's strong willingness to combat the corruption and revive National Anti-corruption System is shown thoroughly from his speeches. With the strong word used, his determined promise can be found in the most speeches. Among collected speech data, more than 110 speeches contained his strong enthusiasm for corruption as a key strategy to improve the country's capacity to prevent and combat corruption and impunity. Unlike the other SDGs that were considered to be crucial in the previous pages, no other significant policy inconsistency was shown for achieving SDG 16.

5.4 SDG 17 : Strengthen the means of implementation and revitalize the goal partnership for sustainable development

SDG 17 includes a wide range of the goals as can be seen from the goal's title. Especially with the global theme partnership entitled, SDG 17 emphasized the collaboration among the member states for achieving sustainable social, economic, and environmental growth. SDG 17 typically covers a wide range of sectors such as finance, technology, capacity building, trade, and systemic issues to fully back up the policy and institutional coherence in achieving SDGs. Among these sub-sectors, this paper found out that there are significant differences in the views of sub goals of SDG 17, target 17.10 states: "Promote a universal, rules-based, open, non-discriminatory and equitable multilateral trading system under the World Trade Organization, including through the conclusion of negotiations under its Doha Development Agenda", which are related to trade openness and foreign direct investment with the approach on neoliberalism. "Neo-liberalismo (Neo-liberalism)" has been one of the keywords that have been under hot debate in Mexican economy model. Like more of the Latin American countries in the 1970s and 1980s, The Mexican

government implemented one of the most market-oriented reforms among developing countries, mainly privatizing public firms and downsizing the role of states, step by step. Mexico's neoliberal reforms can be divided into 3 parts: state-led growth strategy (1970-1981), Structural Adjustment program (1982-1993), and a period of full operation of NAFTA (1994-2015) (Napoles, 2017).

However, the poverty rate rapidly increased after the structural adjustment imposed. This increase was a common denominator that Latin American countries shared at that time, suffering from so-called "Latin American Lost Decade". Progressive government from Latin American countries such as Brazil, Venezuela, Ecuador, Bolivia and El Salvador have abandoned the structural adjustment model and instead pursued redistributive policies, to strengthen the internal agricultural and industrial markets. However, Mexico was a case which the government maintained the neoliberal paradigm despite recurrent crisis under the argument that structural changes need to be deepened as it seemed very insufficient (Laurell, 2015).

Expectations and Socio-economic Consequences from the Free Trade Agreements

Free-trade agreements are found to have a significant positive effect on Foreign Direct Investment (FDI) flows, and free-trade deals are found to matter more for the smaller members of the agreement. (Cuevas, Massmacher and Werner, 2005). Especially, as NAFTA contains specific provisions form liberalizing international investment in the North American region, over the past 3 decades, the positive prospects that effect on FDI flows into Mexico would be much larger than its effect of flows into the US or Canada were shared from the beginning of the agreement by the neoliberalist who fostered more trade-openness. Not only FDI but also Mexico was able to benefit from the system that NAFTA created, in particular, Rules of Origins. The agreement helped

Mexico to become a bridge for countries which are outside North America (especially Japanese and Chinese firms) to enter the US market (Velut, 2011).

However, unlike its clear macroeconomic consequences, its socio-economic impact brought up controversies. Although there are assessments still ongoing since the ratification, by analyzing political and social trajectory of neoliberalism, many studies and articles have showed how neoliberalism has resulted in negative social consequences in Mexico. The export-led economy with the influx of free trade has used low wages as a comparative advantage, poverty issue combined with labor sovereignty have not necessarily reduced. According to the CONEVAL, regressive income distribution and pre-neoliberal wages were never recuperated as average income from work stagnated between 1992 and 2010. The issue on minimum wage turned out to be the worse, decreasing 26 percent from 1994 to 2014 data given by the National Minimum Salary Committee (Comisión Nacional de Salarios Mínimos: CONASAMI). Moreover, Otero (2011) argued that Mexico's asymmetrical integration into the North American economy combined with neoliberalism had detrimental impact on its food self-sufficiency, labor sovereignty resulting in a substantial increase in out-migration rates. In order to improve these conditions and transformed political circumstances, demand for renegotiation of NAFTA accelerated at the end of EPN's tenure in 2018.

Renegotiating NAFTA 2.0 under Left-wing Incumbent AMLO

As a leftist candidate who had denounced the neoliberal economic model and previously spoken out against NAFTA, AMLO incited both fear in financial markets and the national and international business community and hope among grassroots groups advocating for change that he might challenge the ongoing trade talks (Watts, 2019).

His inauguration speech started by emphasizing the importance of sublation of neoliberalism in Mexico by stating, “Crisis in Mexico originated not only because of the failure of the neoliberal economic model, but also because of the deep predominance during this period of the dirtiest display of public and private corruption”.

However, a closer look is required for the speech-implementation consistency. For example, to combat the long-standing problem that the Mexican society faced due to NAFTA, he promised to revitalize the agricultural sector by introducing specific economic support programs for Mexican farmers which ultimately can help to achieve food sovereignty. However, in reality, there are huge concerns if the policy would be handled as it is said. Under NAFTA 2.0 agricultural products that Mexico has a comparative advantage on such as corn, is expected to keep loose its price competitiveness as zero tariffs are maintained consistently. Moreover, strengthened patent on agricultural varieties may aggravate Mexican farmers’ situation as all seeds now have to be bought from the US. Under these circumstances, many critics have pointed out that his strategy acquiescing to NAFTA 2.0 can contradict AMLO’s policy programs and future plans to enact reforms.

VII. Conclusion

This paper focused on text analysis to identify partisan influence in approaching SDGs in the case of Mexico. As highlighted in the previous chapters, there has been a continuous hot debate whether parties matter on designing and implementing policies. Especially in Latin American countries that falls under the boundary of OECD nations, scholars have found out that two major main streams of partisan studies both correspond: “parties-do-matter” and “parties-do-not-

matter”. As Mexico is representing one of the Latin American countries in OECD, and has undergone a massive political change recently, this paper selects Mexico as a country-based case studies to identify partisan influence.

Rather than following traditional footsteps on examining partisan influence in public policy, this paper analyzes stenographic records of both left and non-left incumbents’ presidential speeches and discourses. By utilizing the TF-IDF and word-embedding model based on unsupervised computer text-analysis, this paper succeeded in classifying total 1197 speeches into 17 different categories of SDGs. Moreover, macro-level and micro-level word embedding output on left and non-left incumbents were conducted to analyze partisan influence by using t-SNE. Lastly, by conducting logistic regression analysis, this research found out that SDG 4, SDG 8, SDG 16 and SDG 17 were considered statistically significant. Based on these four selected SDGs, concentrated on empirical assessment were developed and narrowed down the further analysis.

This paper’s argument and empirical analysis using presidential speeches and discourses as a dataset provides two significant implications. First, new attempts have been made in analyzing partisan influence in analyzing the SDGs. Traditionally, external variables to identify policy outcomes, such as GDP or inflation level were used to verify partisan influence. Although stenographic textual records clearly show the policy direction word by word, no such previous attempts have been made as text materials are hard to be processed as a set of quantitative data. By overcoming this traditional barrier, this paper offers possibility of new approach of proving partisan influence in different angle. Secondly, a country-based text analysis in partisan influence achieving SDGs offers a country-specific lens defining partisan influence. As widely known, there have been studies and researches done under the goal-specific approach of each SDG. Traditionally, international organizations such as OECD and UNDP have issued reports assessing

how close does a country stands for implementing SDGs or if they share policy coherence for sustainable development in the SDGs framework. However, a new approach that links SDGs and policy direction and partisan influence is a new concept that this paper brings out.

Still, there are several limitations of this study merit consideration. First, since the new incumbent took office last 2018, only a limited amount of data was taken into account. As stated in the data specification chapter, only seven months of speeches of AMLO and EPN were analyzed. For better comparison, the same study with the provided methodology can further be developed after finishing AMLO's term. Secondly, only social and economic pillar was analyzed among the three pillars of SDG, leaving the environmental pillar behind. However, this resides in lack of speech data related to environment as both AMLO and EPN had less than 30 speeches for 7 months. Moreover, the most recent OECD's report on measuring distance to the SDGs targets (2019) shows that Mexico has already fulfilled their targets on environmental pillars, which justifies this paper focusing on social and economic pillar.

Although this research has proved and offered a newly designed qualitative and quantitative analysis, future studies must be conducted verifying each incumbent's actual policy implementation and its aligned budgetary usage, as speech-actual policy inconsistency is a whole separate issue. The publics tend to conclude that budgetary allocation will follow accordingly based on the frequency of topics covered in speeches. However, according to the financial report from the Ministry of Finance (Secretaría de Hacienda y Crédito Público: SHCP), each government's budget planning did not align with their speeches. For example, as stated in the empirical analysis chapter, although AMLO campaigned the importance of R&D and its expenditure, but ultimately, he withdrew from his commitment by cutting of the budget for CONACYT. Moreover, AMLO has put more emphasis on education, that focus is clear from the

budgetary allocation on education policy. However, by looking at the official budget planning report (Presupuesto De Egresos De La Federación el Ejercicio Fiscal) for both 2013 and 2019, budgetary allocation for sector education dropped from 17.5% to 12.3%. In other words, although this paper has succeeded in providing partisan influence on public policy in a textual level, proving whether the policies came into effect or rather be defined as a cheap talk should be investigated as a matter with the in-depth budgetary usage analysis.

BIBLIOGRAPHY

- Andrews, D., Criscuolo, C., and Gal, P. (2015). Frontier firms, technology diffusion and public policy: Micro evidence from OECD countries, *OECD Productivity Working Papers*, N°2, OECD Publishing, Paris.
- Ahmed, A. (December 2nd, 2017). Mexico's Government is Blocking its own Anti-Corruption Drive, Commissioners Say. *New York Times*. Retrieved from <https://www.nytimes.com/2017/12/02/world/americas/mexico-corruption-commission.html>
- Ambatovy. (2017). Retrieved from: <http://ambatovy.com/ambatovy-html/2017report/index.html#president-message>
- Aristeguinoticias. (2018). Vamos a cancelar la Reforma Educativa, reitera AMLO. *Aristeguinoticias*. Retrieved From: <https://aristeguinoticias.com/1105/mexico/vamos-a-cancelar-la-reforma-educativa-reitera-amlo/>
- Bail, A.(2014). The Cultural Environment: Measuring Culture with Big Data. *Theory and Society*, 43 (3-4), 465–482
- Biernacki, R. (2012). *Reinventing Evidence in Social Inquiry: Decoding Facts and Variables*. Springer
- Consejo Nacional de Evaluación de la Política de Desarrollo Social (CONEVAL). (2013).

Retrieved from:

<https://www.coneval.org.mx/informesPublicaciones/FolletosInstitucionales/Documents/Multidimensional-Measurement-of-poverty-in-Mexico.pdf>

Córdova, J. and Padilla, J. (2016). Productivity in Mexico: Trends, Drivers and Institutional Framework. International Productivity Monitor, *Centre for the Study of Living Standards*, vol. 30, 28-42

Cuevas, A. Messmacher, M. and Werner, A. (2005). Foreign direct investment in Mexico since the approval of NAFTA (English). *The World Bank economic review*. 473-488.

Cutright, P. (1965). Political structure, economic development, and national social security programs. *American Journal of Sociology*, 70: 537-550.

Grimmer, J. and Stewart, M. (2013). Text as Data: The Promise and Pitfalls of Automatic Content Analysis Methods for Political Texts. *Political Analysis: An Annual Publication of the Methodology Section of the American Political Science Association*

Godínez, L. (12th DEC, 2017). Reitera AMLO propuesta de “becarios sí, sicarios no”. *El Universal*.

Retrieved from: <https://www.eluniversal.com.mx/elecciones-2018/reitera-amlo-propuesta-de-becarios-si-sicarios-no>

Government of Mexico. (2012). Pacto por México, Retrieved from:

www.presidencia.gob.mx/wpcontent/uploads/2012/12/Pacto-Por-México-TODOS-los
acuerdos.pdf

Government of Mexico. (2013), *Diario Oficial de la Federación*, 26 February 2013.

Guillemette, Y. and Turner, D. (2018). “The Long View: Scenarios for the World Economy to 2060”, OECD Economic Policy Papers, No. 22, *OECD Publishing*, Paris, Retrieved from: <https://dx.doi.org/10.1787/b4f4e03e-en>.

Huber, E. Mustillo, T. and Stephens, J.D. (2008). Politics and Social Spending in Latin America. *Journal of Politics*, 70 (2): 420 – 436

Keohane, R., Nye, J. S. (1989). *Power and Interdependence*. New York: Harper

Kim, K. Aliyeva, D. Choi, B. and Lee, S. (2018). Incorporating Word Embeddings into Open Directory Project based Large-scale Classification. The 22nd Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD’18). 376–388

Kozlowski, A. Taddy, M. and Evans, J. (2018). The Geometry of Culture: Analyzing Meaning through Word Embeddings. *arXiv preprint arXiv:1803.09288*

Laurell, A. (2015). Three Decades of Neoliberalism in Mexico: The Destruction of Society. *International Journal of Health Services* ,2015 Vol 45(2), 246-264

- Lee, J. Ha, J. Jung, J. and Lee, S. (2013). Semantic Contextual Advertising based on the Open Directory Project. *ACM Trans*, 4 Nov, 2013, 24:1–24:22.
- Mikolov, T. Kai, C. Greg, C. and Dean, J. (2013a). Efficient Estimation of Word Representations in Vector Space. Paper presented at the ICLR in Banff, Canada, April.
- Mikolov, T. Sutskever, I. Chen, K. Corrado, G. and Dean, J. (2013b). Distributed Representations of Words and Phrases and their Compositionality. *NIPS*, arXiv:1310.4546
- Napoles., P. (2017). Neoliberal reforms and NAFTA in Mexico. *Journal of Economic Literature*, *Economia*, 14, mayo-agosto, 75-89
- Nalisnick, E. Mitra, B. Craswell, N. and Caruana, R. (2016) Improving document ranking with dual word embeddings. *WWW*. Montréal, Québec, Canada April 11–15, 2016
- National Anticorruption System. (n.d) Retrieved from : <http://sna.org.mx/en/about-us/>
- Negri, F. (2015). Partisan influence on social and labour policies in times of crises: Do parties matter?. 73rd MPSA Conference, Chicago, 16-19 April
- OECD. (2013). Improving education in Mexico: A state-level perspective from Puebla. OECD. p. 58. ISBN 978-92-64-20019-7

OECD. (2016) *Entrepreneurship at a Glance 2016*, OECD Publishing, Paris, Retrieved from:

http://dx.doi.org/10.1787/entrepreneur_aag-2016-en.

OECD. (2018a). *Getting it Right: Strategic Priorities for Mexico*, OECD Publishing, Paris.

Retrieved from: <http://dx.doi.org/10.1787/9789264292062-en>

OECD (2018b), *Education Policy Outlook: Mexico*, Retrieved from:

www.oecd.org/education/policyoutlook.html

OECD. (2019). *Measuring Distance to the SDG Targets 2019: An Assessment of Where OECD*

Countries Stand, *OECD Publishing*, Paris, Retrieved from:

<https://doi.org/10.1787/a8caf3fa-en>.

Ortero, G. (2011). Neoliberal Globalization, NAFTA, and Migration: Mexico's Loss of Food and

Labor Sovereignty, *Journal of Poverty*, 15:4, 384-402

Rong, X. (2014). word2vec Parameter Learning Explained, arXiv:1411.2738 [cs.CL]

Sachs, J.D. (2012). *From millennium development goals to sustainable development goals*. *Lancet*

379 (9832), 2206–2211.

Sahlgren, M. (2008). The distributional hypothesis. *Rivista di Linguistica*, 20.1 (2008), 33-53

Salton, G. and McGill, J. (1983). *Introduction to modern information retrieval*. New York, McGraw-Hill, ISBN 0-07-054484-0.

Schmidt, M. (1996). When parties matter: A review of the possibilities and limits of partisan influence on public policy, *European Journal of Political Research*, Vol. 30, 155-183

Stockholm Resilience Center. (2016). Retrieved from:

<https://www.stockholmresilience.org/research/research-news/2016-06-14-how-food-connects-all-the-sdgs.html>

Tosun, J. and Leininger, J. (2017). Governing the Interlinkages between the Sustainable Development Goals: Approaches to Attain Policy Integration. *Global Challenges*, DOI: 10.1002/gch2.201700036

United Nations. (2017), Global indicator framework for the Sustainable Development Goals and targets of the 2030 Agenda for Sustainable Development, *United Nations*, Retrieved from: https://unstats.un.org/sdgs/indicators/Global%20Indicator%20Framework%20after%20refinement_Eng.pdf.

UNDP. (n.d.) Retrieved from: <https://www.undp.org/content/undp/en/home/sustainable-developmentgoals/background.html>https://www.un.org/development/desa/dpad/wp-content/uploads/sites/45/publication/2015wess_ch1_en.pdf

- Wade, L. (July 23rd, 2019). Mexico's new president shocks scientists with budget cuts and disparaging remarks. *Sciencemag*. Retrieved from:
<https://www.sciencemag.org/news/2019/07/mexico-s-new-president-shocks-scientists-budget-cuts-and-disparaging-remarks>
- Watts, R. (2019). NAFTA in the Time of AMLO, *NACLA Report on the Americas*, 51:1, 9-12,
DOI: 10.1080/10714839.2019.1593681
- Wilensky, H. (1975). *The Welfare State and Equality*. Berkeley and Los Angeles: University of California Press.
- Whitfield, L. (2018). *The Politics of Aid: African Strategies for Dealing with Donors*. Oxford University Press, Oxford, UK, Ch. 12.
- Van der Maaten, L. and Hinton, G. (2008). Visualizing data using t-SNE. *Journal of Machine Learning Research*, 85(9): 2579-2605
- National Voluntary Report. (2018). Voluntary National Review for the High-Level Political Forum on Sustainable Development Basis For A Long-term Sustainable Development Vision in Mexico. Retrieved from:
https://sustainabledevelopment.un.org/content/documents/20122VOLUNTARY_NATIONAL_REPORT_060718.pdf

Velut, J. (2011). NAFTA's Developmental Impact on Mexico: Assessment and prospects.

Intégrations dans les Amériques, DOI : 10.4000/ideas.71

Zerzer. (2017). What's Ahead for Mexico? Mexico's Science and Technology System and

Pathways to R&D Cooperation in Changing Political Circumstances. *Transnational*

Lecture Series on the Internationalization of Science, Technology and Innovation

[Appendix 1]

| SDG 1 | SDG1 (español) | SDG 2 | SDG 2 (español) | SDG3 | SDG 3 (español) | SDG 4 | SDG 4 (español) |
|---|---|-------------------------------------|--|---|--|---------------------------------|--|
| Africa | África | Agricultural Orientation index | índice de orientación agrícola | Access to clean water and sanitation | El acceso al agua potable y saneamiento | Access to education | Acceso a la educación |
| Basic services | Servicios básicos | Agricultural productivity | La productividad agrícola | Affordable medicines | medicamentos asequibles | Basic education | Educación básica |
| Class | Clase | Agriculture | Agricultura | AIDS | SIDA | Basic literacy | La instrucción básica |
| Developing countries | Países en desarrollo | Consume | Consumir | Air contamination | la contaminación del aire | Basic literacy skills | habilidades básicas de alfabetización |
| Disadvantaged | Perjudicado | Crop diversity | La diversidad de cultivos | Air pollution | La contaminación del aire | Cultural diversity | Diversidad cultural |
| Economic resources | Recursos económicos | Crops | cultivos | Alcohol abuse | Abuso de alcohol | Disability | Discapacidad |
| End poverty | acabar con la pobreza | Doha Development Round / Doha Round | Ronda de Doha para el Desarrollo / Ronda de Doha | Antenatal care | Cuidado prenatal | Disability and education | La discapacidad y la educación |
| Environment | Ambiente | End hunger | Erradicación del hambre | Antiretroviral | antirretroviral | Early childhood | Niñez temprana |
| Equality | Igualdad | Environment | Ambiente | Antiretroviral therapy | Terapia antirretroviral | Early childhood development | El desarrollo de la primera infancia |
| Extreme poverty | Pobreza extrema | Food | Comida | Biomedical | biomédica | Education | Educación |
| Financial inclusion | Inclusión financiera | Food gap | brecha alimentaria | Bodily autonomy | autonomía corporal | Education sustainability for | Educación para la sostenibilidad |
| Income | Ingresos | Food production | La producción de alimentos | Child deaths | Las muertes de niños | Education in developing | La educación en el desarrollo |
| Income equality | igualdad de ingresos | Food reserves | Las reservas de alimentos | Contraceptive use | El uso de anticonceptivos | Enrolment | Inscripción |
| Microfinance | microfinanzas | Food Security | Seguridad alimentaria | Death rate | Índice de mortalidad | Equal access | Acceso igual |
| Non-discrimination | No discriminación | Genetic diversity | Diversidad genética | Dental | Dental | Equal education | educación igual |
| Poor | Pobre | Genetic diversity of seeds | La diversidad genética de las semillas | Disability and family support | apoyo a la discapacidad y la familia | Equitable education | educación equitativa |
| Poor and vulnerable | Pobres y vulnerables | Genetics | Genética | Disability and inclusion | Discapacidad y de inclusión | Gender disparities in education | Las disparidades de género en la educación |
| Poverty | Pobreza | Hunger | Hambre | Disability and politics of location | La discapacidad y la política de la localización | Gender disparity | La disparidad de género |
| Poverty eradication | Erradicación de la pobreza | Hungry people | Gente hambrienta | Diseases | enfermedades | Gender equality | Igualdad de género |
| Poverty line | Línea de pobreza | Improved nutrition | Una mejor nutrición | Family planning | Planificación familiar | Gender equity | Equidad de género |
| Quality of Life | Calidad de vida | Innovations and health | Innovaciones y la salud | Health | Salud | Gender sensitive | sensibles al género |
| Resources | recursos | Legumes | Las legumbres | Health in resource-constrained settings | La salud en entornos con recursos limitados | Global citizenship | Ciudadanía global |
| Social protection systems / social protection | sistemas de protección social / protección social | Maize | Maíz | Health worker density | densidad de trabajadores sanitarios | Global education | La educación global |

| | | | | | | | |
|---------------------|----------------------------|----------------------------------|---|-------------------------------------|--|---------------------------|---------------------------------|
| Sustainable | Sostenible | Malnourished | desnutridos | Healthy | Sano | Inclusion and education | La inclusión y la educación |
| Third World | Tercer Mundo | Malnutrition | Desnutrición | Healthy lives | una vida saludable | Inclusive | Inclusivo |
| Vulnerable | Vulnerable | Nutrition | Nutrición | Hepatitis | Hepatitis | Innovation | Innovación |
| Wealth distribution | Distribución de la riqueza | Nutritional needs | Las necesidades nutricionales | HIV | VIH | International cooperation | Cooperación internacional |
| | | Nutritious | Nutritivo | Improving mortality | La mejora de la mortalidad | Learning opportunities | Oportunidades de aprendizaje |
| | | Poverty | Pobreza | Increasing life expectancy | El aumento de la esperanza de vida | Lifelong learning | El aprendizaje permanente |
| | | Produce | Produce | Indigenous | Indígena | Literacy | Alfabetismo |
| | | Productivity | Productividad | Infected | Infectado | Literacy skills | alfabetización |
| | | Quality of life | Calidad de vida | International health policy | política de salud internacional | Numeracy | aritmética |
| | | Resilient agriculture | la agricultura resiliente | International health regulations | Las regulaciones internacionales de salud | Preprimary education | educación preescolar |
| | | Rural infrastructure | infraestructura rural | Malaria | Malaria | Primary education | Educación primaria |
| | | Small-scale food producers | los productores de alimentos a pequeña escala | Maternal mortality | Mortalidad materna | Qualified teachers | profesores cualificados |
| | | Stunted growth | Retraso en el crecimiento | Measles | Sarampión | Refugees and learning | Los refugiados y el aprendizaje |
| | | Stunting | El retraso del crecimiento | Medical | Médico | Scholarships | becas |
| | | Sufficient food | alimentos suficientes | Mental health | Salud mental | School | Colegio |
| | | Sustainable | Sostenible | Mortality | Mortalidad | School enrolment | La matrícula escolar |
| | | Sustainable agriculture | Agricultura sostenible | Mortality rate | Tasa de mortalidad | Secondary education | Educación Secundaria |
| | | Sustainable food production | producción sostenible de alimentos | Narcotic drug abuse | el abuso de estupefacientes | Teacher training | La formación del profesorado |
| | | Trade diversity | la diversidad del comercio | Neonatal mortality | La mortalidad neonatal | Universal education | educación universal |
| | | Trade restrictions | Restricciones comerciales | Polio | Polio | Vocational training | Entrenamiento vocacional |
| | | Under nourished / Undernourished | Desnutridos / desnutrida | Premature mortality | Mortalidad prematura | Vulnerable | Vulnerable |
| | | Wasting | Debilitante | Preventable deaths | muerdes prevenibles | Women's rights | Derechos de las mujeres |
| | | World's hungry | El mundo de hambre | Reducing malaria | La reducción de la malaria | | |
| | | | | Reducing mortality | reducción de la mortalidad | | |
| | | | | Refugees and health services | Los refugiados y los servicios de salud | | |
| | | | | Reproductive health | Salud reproductiva | | |
| | | | | Road traffic accidents | Los accidentes de tráfico | | |
| | | | | Sexual and reproductive health-care | -Cuidado de la salud sexual y reproductiva | | |
| | | | | Sexual health | La salud sexual | | |
| | | | | Soil contamination | Contaminación de suelo | | |
| | | | | Soil pollution | La contaminación del suelo | | |
| | | | | Tobacco control | El control del tabaco | | |
| | | | | Treatment of substance abuse | El tratamiento de abuso de sustancias | | |
| | | | | Tuberculosis | Tuberculosis | | |
| | | | | Universal health | universal de salud | | |
| | | | | Universal health coverage | cobertura universal de salud | | |

| | | | | | | | |
|--|---|---------------------------|-----------------------------------|---------------------------------------|--|-------------------------------|---|
| | | | | Vaccines | vacunas | | |
| | | | | Vaccines in developing countries | Las vacunas en los países en desarrollo | | |
| | | | | Violence | Violencia | | |
| | | | | WASH | LAVAR | | |
| | | | | Water, Sanitation and Hygiene for All | Agua, saneamiento e higiene para todos | | |
| | | | | Water-borne disease | Enfermedad transmitida por el agua | | |
| | | | | wellbeing/well being/well-being | bienestar / bienestar / bienestar | | |
| | | | | World Health Organisation | Organización Mundial de la Salud | | |
| SDG 5 | SDG 5 (español) | SDG 6 | SDG 6 (español) | SDG 7 | SDG 7 (español) | SDG 8 | SDG 8 (español) |
| Basic living standards | niveles de vida básicos | Accessible water | agua accesible | Affordable energy | energía asequible | Aid for trade | Ayuda para el comercio |
| Dignity | Dignidad | Affordable drinking water | agua potable a precios asequibles | Alternative energy | Energía alternativa | Banking | Bancario |
| Disadvantaged | Perjudicado | Aquifer | Acuífero | Animal waste | Desperdicio animal | Child labour | Trabajo infantil |
| Discrimination | Discriminación | Cities | ciudades | Battery | Batería | Child soldiers | Niños soldado |
| Employment | Empleo | Clean water | Agua limpia | Carbon | Carbón | Creativity and innovation | Creatividad e innovación |
| Empower girls | empoderar a las niñas | Contaminated | Contaminado | Charcoal | Carbón | Culture | Cultura |
| Empowerment | Empoderamiento | Defecation | Defecación | Clean energy | Energía limpia | Decent work | Trabajo decente |
| Empowerment of women / empower women / women's empowerment | Potenciación de la mujer / autonomía de la mujer / potenciación de la mujer | Desalination | Desalinización | Clean energy technology | tecnología de energía limpia | Decent work for all | trabajo decente para todos |
| Equal access | Acceso igual | Diarrhoeal diseases | Las enfermedades diarreicas | Clean fuel technology | tecnología de combustible limpio | Development oriented policy | política orientada al desarrollo |
| Equal opportunities | Oportunidades iguales | Drought | Sequía | Clean fuels | combustibles limpios | Economic growth | Crecimiento económico |
| Equality | Igualdad | Dumping | Dumping | Cleaner fossil fuel technology | Limpiador de la tecnología de combustibles fósiles | Economic productivity | La productividad económica |
| Exploitation | Explotación | Ecosystem protection | la protección del ecosistema | Climate goal | objetivo climático | Economy | Economía |
| Female genital mutilation | Mutilación genital femenina | Ecosystem restoration | restauración de los ecosistemas | Coal | Carbón | Enterprises | empresas |
| Feminism | Feminismo | Equitable sanitation | saneamiento equitativa | Electricity | Electricidad | Entrepreneurship | Emprendimiento |
| Forced marriage | Matrimonio forzado | Floods | inundaciones | Electricity infrastructure | infraestructura eléctrica | Equal pay | Igualdad de salarios |
| Gender | Género | Fresh water | Agua dulce | Emissions | emisiones | Finance | Financiar |
| Gender discrimination | Discriminación de género | Hydropower | La energía hidroeléctrica | Energy | Energía | Financial services | Servicios financieros |
| Gender equality/parity | La igualdad de género / paridad | Hygiene | Higiene | Energy efficiency | Eficiencia energética | Forced labour | Trabajo forzado |
| Governance and gender | Gobernabilidad y género | Improving water | mejorar el agua | Energy infrastructure | infraestructura energética | GDP growth | El crecimiento del PIB |
| Human rights | Derechos humanos | Inadequate water | inadecuado de agua | Energy research | La investigación energética | Global efficiency resource | eficiencia de los recursos globales |
| Human trafficking | La trata de personas | Inadequate water supply | Suministro de agua inadecuado | Energy technology | La tecnología energética | Global trade | Comercio global |
| Humanitarian | Humanitario | Infrastructure | Infraestructura | Fossil-fuel | Combustible fósil | Gross domestic product growth | el crecimiento del producto interno bruto |

| | | | | | | | |
|--------------------------------|---------------------------------|------------------------------|--|-----------------------------|--|-----------------------------|-------------------------------------|
| Marginalised | marginados | Irrigation | Irrigación | Green economy | Economía verde | Human trafficking | La trata de personas |
| Parity | Paridad | Lakes | lagos | Greenhouse gas | Gases de efecto invernadero | Inclusive economic growth | crecimiento económico inclusivo |
| Pay | Paga | Latrines | letrinas | Greenhouse gas emissions | Emisiones de gases de efecto invernadero | Innovation | Innovación |
| Reproductive rights | Derechos reproductivos | Open defecation | defecación al aire libre | Hydroelectric | Hidroeléctrico | Insurance | Seguro |
| Sexual and reproductive health | La salud sexual y reproductiva | Pollution | Contaminación | Low carbon | Bajo en carbon | Job creation | Creación de empleo |
| Sexual exploitation | La explotación sexual | Recycled water | El agua reciclada | Modern electricity | electricidad moderna | Jobs | Trabajos |
| Sexual violence | La violencia sexual | Reuse | Reutilizar | Modern energy | La energía moderna | Labour market | Mercado laboral |
| Social inclusion | Inclusión social | River basins | Las cuencas hidrográficas | Reliable energy | energía confiable | Labour rights | Los derechos laborales |
| Trafficking | el tráfico | Rivers | ríos | Renewable | renovable | Micro finance | micro finanzas |
| Universal health coverage | cobertura universal de salud | Safe drinking water | agua potable | Renewable energy | Energía renovable | Migrant workers | Los trabajadores migrantes |
| Violence | Violencia | Sanitation | Saneamiento | Renewable power | Energía renovable | Modern slavery | La esclavitud moderna |
| Violence against girls | La violencia contra las niñas | Sanitation and hygiene | Saneamiento e higiene | Solar | Solar | Poverty eradication | Erradicación de la pobreza |
| Violence against women | La violencia contra las mujeres | Sanitation management | la gestión del saneamiento | Solar energy | Energía solar | Poverty line | Línea de pobreza |
| Women | Mujer | Sewerage | Alcantarillado | Solar power | Energía solar | Productive employment | El empleo productivo |
| Women in work | Las mujeres en el trabajo | Sustainable water management | Gestión sostenible del agua | Sustainable energy | Energía sostenible | Productivity | Productividad |
| Women's rights | Derechos de las mujeres | Sustainable withdrawals | retiros sostenibles | Sustainable energy services | servicios de energía sostenible | Public policy | Política pública |
| Workplace equality | igualdad en el trabajo | Third world | Tercer Mundo | Sustainable power | energía sostenible | Quality jobs | empleos de calidad |
| | | Toilets | Baños | Vehicles | vehículos | Quality of life | Calidad de vida |
| | | Untreated wastewater | aguas residuales no tratadas | Wave | Ola | Resource efficiency | eficiencia de los recursos |
| | | Urban | Urbano | Wind | Viento | Safe work | Trabajo seguro |
| | | Waste | Residuos | Wind power | Energía eólica | Secure work | trabajo seguro |
| | | Wastewater | Aguas residuales | Wind turbine | Turbina eólica | Slavery | Esclavitud |
| | | Wastewater treatment | Tratamiento de aguas residuales | Wood | Madera | Social policies | Políticas sociales |
| | | Water | Agua | | | Society | Sociedad |
| | | Water access | El acceso al agua | | | Stable employment | El empleo estable |
| | | Water disasters | desastres hídricos | | | Stable jobs | puestos de trabajo estables |
| | | Water ecosystems | ecosistemas acuáticos | | | Sustainable consumption | El consumo sostenible |
| | | Water efficiency | Eficiencia de agua | | | Sustainable economic growth | El crecimiento económico sostenible |
| | | Water harvesting | La captación de aguas | | | Sustainable production | La producción sostenible |
| | | Water quality | Calidad del agua | | | Sustainable tourism | El turismo sostenible |
| | | Water resources management | la gestión de los recursos hídricos | | | Trade | Comercio |
| | | Water scarcity | Escasez de agua | | | Unemployment | Desempleo |
| | | Water supply | Suministro de agua | | | Well-paid jobs | empleos bien remunerados |
| | | Water-related ecosystems | los ecosistemas relacionados con el agua | | | Women migrants | mujeres migrantes |
| | | Water-use efficiency | eficiencia en el uso del agua | | | Work | Trabajo |
| | | | | | | Work opportunities | Oportunidades de trabajo |

| | | | | | | World trade | Comercio mundial |
|--|--|--------------------------|-----------------------------------|-------------------------|---------------------------------|----------------------------|--------------------------------------|
| | | | | | | Youth employment | El empleo juvenil |
| | | | | | | Youth unemployment | Desempleo juvenil |
| SDG 9 | SDG 9 (español) | SDG 10 | SDG 10 (español) | SDG 11 | SDG 11 (español) | SDG 12 | SDG 12 (español) |
| Access to the internet | Acceso a Internet | Affordable housing | Vivienda asequible | Adaptable | Adaptable | Capitalism | Capitalismo |
| Affordable access | El acceso asequible | Age | Años | Adaptation | Adaptación | Cars | Coches |
| Affordable credit | créditos asequibles | Ageism | La discriminación por edad | Affordable housing | Vivienda asequible | Circular economy | economía circular |
| Clean technologies | Las tecnologías limpias | Business | Negocio | Air pollution | La contaminación del aire | Commercial enterprises | Las empresas comerciales |
| Cooperation | Cooperación | Children | Niños | Air quality | Calidad del aire | Consumer levels | los niveles de consumo |
| Data banks | bancos de datos | Culture | Cultura | Cities | ciudades | Consumerism | Consumismo |
| Economic development | Desarrollo económico | Developing countries | Países en desarrollo | Climate change | Cambio climático | Consumption | Consumo |
| Electrical power | Energía eléctrica | Developing states | estados en desarrollo | Community | Comunidad | Deep decarbonisation | descarbonización profunda |
| Energy | Energía | Development assistance | Asistencia para el desarrollo | Cultural heritage | Patrimonio cultural | Ecological | Ecológico |
| Enterprises | empresas | Disabilities | discapacidades | Decentralisation | Descentralización | Efficient use of resources | El uso eficiente de los recursos |
| Environmentally sound technologies | tecnologías ecológicamente racionales | Discrimination | Discriminación | Development planning | La planificación del desarrollo | Energy | Energía |
| Financial services | Servicios financieros | Discriminatory | Discriminatorio | Disaster management | Gestión de desastres | Energy consumption | Consumo de energía |
| ICT infrastructure | infraestructura de las TIC | Economy | Economía | Disaster risk reduction | Reducción de Desastres | Energy efficiency | Eficiencia energética |
| Industrial diversification | La diversificación industrial | Education | Educación | Disaster Strategy | Estrategia de desastres | Energy use | Energía usada |
| Industrialisation | Industrialización | Empower | Autorizar | Disasters | desastres | Food | Comida |
| Information and communication technology | Tecnología de la información y la comunicación | Equal opportunity | Igualdad de oportunidades | Fine particulate matter | Las partículas finas | Food losses | Las pérdidas de alimentos |
| Infrastructure | Infraestructura | Equality | Igualdad | Green spaces | Espacios verdes | Food supply | Suministro de alimentos |
| Innovation | Innovación | Equity | Equidad | Heritage | Patrimonio | Food waste | Desechos alimentarios |
| Internet access | acceso a Internet | Ethnicity | etnicidad | Housing | Alojamiento | Fossil fuel subsidies | subsidios a los combustibles fósiles |
| Irrigation | Irrigación | Financial assistance | Asistencia financiera | Human settlements | Asentamientos humanos | Future proof | Prueba del futuro |
| Knowledge in education for all | El conocimiento en la educación para todos | Foreign aid | Ayuda externa | Impact of cities | Impacto de las ciudades | Global food waste | residuos de alimentos mundial |
| Mobile networks in developing countries | La red móvil en los países en desarrollo | Foreign investment | Inversión extranjera | Inadequate housing | La vivienda inadecuada | Greenhouse gasses | Gases de efecto invernadero |
| National Security | Seguridad nacional | Gender | Género | Informal settlements | Los asentamientos informales | Harvest losses | Las pérdidas de cosechas |
| Network infrastructure | Infraestructura de red | Global financial markets | Los mercados financieros globales | Infrastructure | Infraestructura | Life cycle | Ciclo vital |
| Phone service | Servicio telefónico | Health | Salud | Land | Tierra | Market distortions | Las distorsiones del mercado |

| | | | | | | | |
|-------------------------------|----------------------------------|---------------------|-----------------------------|--------------------------|------------------------------------|------------------------------------|---------------------------------------|
| Public policy | Política pública | Homelessness | La falta de vivienda | Land consumption | el consumo de suelo | Materialism | Materialismo |
| Quality of life | Calidad de vida | Homophobia | homofobia | local materials | materiales locales | Materials goods | bienes materiales |
| Regional infrastructure | infraestructura regional | Human rights | Derechos humanos | mitigation | mitigación | Monitoring sustainable development | Seguimiento del desarrollo sostenible |
| Research | Investigación | Inclusion | Inclusión | Natural disasters | Desastres naturales | Natural resources | Recursos naturales |
| Resilient infrastructure | infraestructura resistente | Income growth | Crecimiento de los ingresos | Natural heritage | Patrimonio natural | Obsolescence | Obsolescencia |
| Resource use efficiency | eficiencia en el uso de recursos | Income inequality | La desigualdad de ingresos | Over crowding | superpoblación | Overconsumption | El consumo excesivo |
| Roads | Carreteras | Indigenous | Indígena | Pollution | Contaminación | Production | Producción |
| Sanitation | Saneamiento | Inequalities | Las desigualdades | Population | Población | Recycle | Reciclar |
| Scientific research | Investigación científica | Inequality | Desigualdad | Population growth | Crecimiento de la población | Recycling | Reciclaje |
| Society | Sociedad | Migrant remittance | remesas de migrantes | Public spaces | Espacios públicos | Reduce waste generation | Reducir la generación de residuos |
| Sustainable industrialisation | la industrialización sostenible | Migration | Migración | Public transport | Transporte público | Reduction | Reducción |
| Sustainable infrastructure | infraestructura sostenible | Population growth | Crecimiento de la población | Resilient | Elástico | Renewable | renovable |
| Technological capabilities | capacidades tecnológicas | Poverty | Pobreza | Resilient buildings | edificios resistentes | Resource efficiency | eficiencia de los recursos |
| Technology | Tecnología | Public policy | Política pública | Resource efficiency | eficiencia de los recursos | Responsible production chains | cadena de producción responsables |
| Trade | Comercio | Quality of life | Calidad de vida | Resource needs | las necesidades de recursos | Retail | Al por menor |
| Transborder infrastructure | infraestructura transfronteriza | Race | Raza | Risk reduction strategy | estrategia de reducción del riesgo | Retail industry | industria al por menor |
| Transport | Transporte | Racism | racism | Road safety | Carretera segura | Reuse | Reutilizar |
| Value chains | Cadenas de valor | Reduce inequalities | reducir las desigualdades | Safe cities | ciudades seguras | Sustainable | Sostenible |
| Value chains and markets | Las cadenas de valor y mercados | Religion | Religión | Shanty | Chabola | Sustainable consumption | El consumo sostenible |
| Water infrastructure | infraestructura de agua | Rural | Rural | Slums | barrios pobres | Sustainable management | Gestión sostenible |
| Water resources | Los recursos hídricos | Sex | Sexo | Smart cities | Ciudades inteligentes | Sustainable practices | prácticas sostenibles |
| | | Sexism | sexismo | Solid waste | Residuo sólido | Sustainable production | La producción sostenible |
| | | Social protection | Protección social | Suburban | Suburbano | Sustainable public procurement | contratación pública sostenible |
| | | Society | Sociedad | Sustainable | Sostenible | Sustainable resource use | el uso sostenible de los recursos |
| | | Vulnerable nations | naciones vulnerables | Sustainable building/s | La construcción sostenible / s | Sustainable supply chain | cadena de suministro sostenible |
| | | World trade | Comercio mundial | Sustainable cities/city | ciudades sostenibles / ciudad | Sustainable tourism | El turismo sostenible |
| | | | | Sustainable communities | comunidades sostenibles | Vehicles | vehículos |
| | | | | Sustainable urbanisation | La urbanización sostenible | Waste | Residuos |
| | | | | Town planning | Urbanismo | Wasteful consumption | el consumo excesivo |
| | | | | Transport | Transporte | Water | Agua |
| | | | | Transport systems | Los sistemas de transporte | Water pollution | La contaminación del agua |
| | | | | Urban | Urbano | Water supply | Suministro de agua |
| | | | | Urban development | Desarrollo Urbano | | |
| | | | | Urban planning | La planificación urbana | | |
| | | | | Urban sustainability | sostenibilidad urbana | | |
| | | | | Urbanisation | Urbanización | | |
| | | | | Waste | Residuos | | |
| | | | | Waste generation | Generación de residuos | | |

| | | | | | | | |
|--------------------------------|---|--------------------------------------|--|---------------------------|------------------------------------|--------------------------|-----------------------------|
| | | | | Waste management | Gestión de residuos | | |
| | | | | Water | Agua | | |
| | | | | Water-related disasters | desastres relacionados con el agua | | |
| | | | | | | | |
| SDG 13 | SDG 13 (español) | SDG 14 | SDG 14 (español) | SDG 15 | SDG 15 (español) | SDG 16 | SDG 16 (español) |
| Average global temperature | la temperatura media global | Artisanal fishers | Los pescadores artesanales | Afforestation | Repoblación forestal | Abuse | Abuso |
| Carbon | Carbón | Biodiversity | biodiversidad | Agriculture | Agricultura | Accountability | Responsabilidad |
| Carbon dioxide | Dióxido de carbono | Carbon dioxide | Dióxido de carbono | Animals | animales | Accountable institutions | instituciones responsables |
| Changing weather patterns | Los cambios del clima | Coastal biodiversity | biodiversidad costera | Arable land | Tierra cultivable | Arbitrary detention | Detención arbitraria |
| Climate | Clima | Coastal ecosystems | Los ecosistemas costeros | Bees | Abejas | Arms | Brazos |
| Climate action | acción por el clima | Coastal habitats | Los hábitats costeros | Biodiversity | biodiversidad | Arms trafficking | Tráfico de armas |
| Climate adaptation | La adaptación al clima | Coastal parks | parques costeros | Biodiversity loss | Pérdida de biodiversidad | Birth registration | Registro de nacimiento |
| Climate and gender | Climático y género | Coastal resources | Los recursos costeros | Conservation | Conservación | Bribery | Soborno |
| Climate and infectious disease | El clima y las enfermedades infecciosas | Coastlines | líneas costeras | Deforestation | Deforestación | Combat terrorism | lucha contra el terrorismo |
| Climate and politics | El clima y la política | Conserve | Conservar | Desertification | desertificación | Conflict resolution | La resolución de conflictos |
| Climate change | Cambio climático | Conserve oceans | conservar los océanos | Drought | Sequía | Conflicts | conflictos |
| Climate change management | gestión del cambio climático | Coral bleaching | decoloración de los corales | Drylands | Las tierras secas | Corruption | Corrupción |
| Climate change planning | planificación del cambio climático | Coral reef | Arrecife de coral | Ecosystem | Ecosistema | Discrimination | Discriminación |
| Climate change policy | política de cambio climático | Ecosystem management | gestión de los ecosistemas | Ecosystem restoration | restauración de los ecosistemas | Education | Educación |
| Climate early warning | alerta temprana climático | Fish species | Especies de peces | Ecosystems | ecosistemas | Enforced disappearance | La desaparición forzada |
| Climate hazards | los riesgos climáticos | Fish stocks | Población de peces | Extinct | Extinto | Equal access | Acceso igual |
| Climate impact | impacto sobre el clima | Fish stocks AND FISHERIES MANAGEMENT | Las poblaciones de peces y una ordenación pesquera | Extinct species | Especies extintas | Equity | Equidad |
| Climate mitigation | mitigación del cambio climático | Fisheries | la pesca | Extinction | Extinción | Exploitation | Explotación |
| Climate refugees | refugiados climáticos | Fishers | pescadores | Forest | Bosque | Flow of arms | Flujo de armas |
| Climate related hazards | los riesgos relacionados con el clima | Fishing | Pescar | Forest management | gestión de bosques | Freedom | Libertad |
| Climate resilience | la resistencia al clima | Fishing practices | prácticas pesqueras | Forests | bosques | Geography of poverty | Geografía de la pobreza |
| CO2 capture | captura de CO2 | Global warming | Calentamiento global | Genetic resources | Los recursos genéticos | Governance | Gobernanza |
| CO2 conversion | la conversión de CO2 | Illegal fishing | La pesca ilegal | Illegal wildlife products | productos silvestres ilegales | Hate crime | Crimen de odio |
| COP 21 | COP 21 | Kelp | Quelpo | Illicit trafficking | El tráfico ilícito | Human rights | Derechos humanos |

| | | | | | | | |
|--|---|----------------------------|-------------------------------------|---------------------------------|--|--------------------------------|--------------------------------------|
| COP 22 | COP 22 | Law of the Sea | Derecho del Mar | Indigenous | Indígena | Human trafficking | La trata de personas |
| Ecosystems | ecosistemas | Marine | Marina | Indigenous populations | poblaciones indígenas | Illegal arms | ilegal de armas |
| Emissions | emisiones | Marine areas | Las áreas marinas | Invasive alien species | Las especies exóticas invasoras | Illicit financial flows | los flujos financieros ilícitos |
| Extreme weather | Clima extremo | Marine biodiversity | La biodiversidad marina | Land conservation | conservación de la tierra | Inclusion | Inclusión |
| Extreme weather events | Los fenómenos meteorológicos extremos | Marine ecosystems | Los ecosistemas marinos | Land degradation | La degradación del suelo | Inclusive institutions | instituciones inclusivas |
| Global mean temperature | la temperatura media global | Marine fisheries | La pesca marina | Land loss | la pérdida de tierras | Inclusive societies/society | sociedades inclusivas / sociedad |
| Global temperature | la temperatura global | Marine Parks | Parques marinos | Land use and sustainability | uso de la tierra y la sostenibilidad | Institutions | instituciones |
| Global warming | Calentamiento global | Marine pollution | contaminación marítima | Manage forests | manejar los bosques | Internally displaced | Desplazado internamente |
| Greenhouse gas | Gases de efecto invernadero | Marine resources | recursos marinos | Managed forests | bosques gestionados | Judiciary | Judicial |
| Greenhouse gas emissions | Emisiones de gases de efecto invernadero | Ocean | Oceano | Micro-organisms | Los microorganismos | Justice | Justicia |
| Greenhouse gases | Gases de invernadero | Ocean acidification | Acidificación oceánica | Permaculture | Permacultura | Justice for all | Justicia para todos |
| Ice loss | pérdida de hielo | Ocean temperature | la temperatura del océano | Plants | plantas | Legal identity | La identidad legal |
| Low-carbon economy | economía baja en carbono | Oceanography | Oceanografía | Poaching | Caza furtiva | National Security | Seguridad nacional |
| Natural disasters | Desastres naturales | Oceans | océanos | Poverty | Pobreza | Non-violence | No violencia |
| Natural systems | Los sistemas naturales | Overfishing | La sobrepesca | Protected fauna | fauna protegida | Organized crime | Crimen organizado |
| Ocean warming | el calentamiento del océano | Productive oceans | océanos productivos | Protected flora | flora protegida | Paris principles | principios de París |
| Paris Agreement | Acuerdo de París | Protected areas | Áreas protegidas | Protected species | Especies protegidas | Peace | Paz |
| Pollution | Contaminación | Sea grasses | pastos marinos | Reforestation | Repoblación forestal | Peaceful societies | sociedades pacíficas |
| Renewable | renovable | Seas | mares | Soil | Suelo | Physical abuse | Abuso físico |
| Sea level rise / Rising sea / Rising sea level | aumento del nivel del mar / mar Rising / El aumento del nivel del mar | Sustainable ecosystems | ecosistemas sostenibles | Soil degradation | Degradación del suelo | Police | Policía |
| Temperature | Temperatura | Unregulated fishing | La pesca no regulada | Species | Especies | Prevent violence | Prevenir la violencia |
| Warming | calentamiento | Water resources and policy | los recursos y la política de aguas | Strategic plan for biodiversity | Plan estratégico para la biodiversidad | Psychological abuse | Abuso psicológico |
| | | | | Terrestrial ecosystems | los ecosistemas terrestres | Public policy | Política pública |
| | | | | Threatened species | Especies amenazadas | Quality of life | Calidad de vida |
| | | | | Tree | Árbol | Representative decision-making | la toma de decisiones representativa |
| | | | | Tree species | Las especies de árboles | Rule of law | Imperio de la ley |
| | | | | Wetlands | humedales | Security threats | Amenazas de seguridad |
| | | | | | | Sexual abuse | El abuso sexual |
| | | | | | | Sexual violence | La violencia sexual |
| | | | | | | Stolen assets | activos robados |
| | | | | | | Tax evasion | Evasión de impuestos |
| | | | | | | Theft | Robo |
| | | | | | | Torture | Tortura |
| | | | | | | Trafficking | el tráfico |
| | | | | | | Transparency | Transparencia |
| | | | | | | Un-sentenced detainees | detenidos condenados por la ONU |
| | | | | | | Unstable societies | sociedades inestables |

| | | | | | | | |
|--|--|---|---|--|--|-------------------------------------|---|
| | | | | | | Victims of violence | Las víctimas de la violencia |
| | | | | | | Violence | Violencia |
| | | | | | | Violence against women and children | La violencia contra las mujeres y los niños |
| | | | | | | Violence rates | los índices de violencia |
| | | | | | | Weapon seizures | Arma convulsiones |
| SDG 17 | SDG 17 (español) | Misc | Misc (español) | | | | |
| Capacity building | Creación de capacidad | Accountability | Responsabilidad | | | | |
| Civil society partnerships | asociaciones de la sociedad civil | Alternative energy | Energía alternativa | | | | |
| Communication technologies | Tecnologías de la comunicación | Biodiversity | biodiversidad | | | | |
| Debt sustainability | sostenibilidad de la deuda | Capacity building | Creación de capacidad | | | | |
| Development assistance | Asistencia para el desarrollo | Caring for country | El cuidado de país | | | | |
| Disaggregated data | Los datos desglosados | CO2 emissions | emisiones de CO2 | | | | |
| Doha Development Agenda | Programa de Doha para el Desarrollo | Developing countries | Países en desarrollo | | | | |
| Entrepreneurship | Emprendimiento | Disability | Discapacidad | | | | |
| Environmentally sound technologies | tecnologías ecológicamente racionales | Eco tourism | turismo ecológico | | | | |
| Foreign direct investments | Las inversiones extranjeras directas | Ecology | Ecología | | | | |
| Fostering innovation | El fomento de la innovación | Energy efficiency | Eficiencia energética | | | | |
| Free trade | Libre comercio | Environment | Ambiente | | | | |
| Fundamental principles of official statistics | Principios fundamentales de las estadísticas oficiales | Environmental | Ambiental | | | | |
| Global partnership | asociación mundial | Environmental degradation | Degradación ambiental | | | | |
| Global partnership for sustainable development | asociación mundial para el desarrollo sostenible | Environmental policy | Política de medio ambiente | | | | |
| Global stability | La estabilidad global | Environmental sustainability | Sostenibilidad del medio ambiente | | | | |
| International aid | Ayuda internacional | Equal rights to economic resources | La igualdad de derechos a los recursos económicos | | | | |
| International cooperation | Cooperación internacional | Ethical | Ético | | | | |
| International population and housing census | internacional de la población y censo de vivienda | Food-energy-water nexus / Water-energy-food nexus | relación entre alimentos-energía-agua / agua-energía-alimentos nexo | | | | |
| International support | El apoyo internacional | Forced displacement | El desplazamiento forzado | | | | |
| International support for developing countries | El apoyo internacional a los países en desarrollo | Good governance | Buen gobierno | | | | |
| Knowledge sharing | El intercambio de conocimientos | Governance | Gobernancia | | | | |
| Multi-stakeholder partnerships | asociaciones de múltiples interesados | Governance and policy | Gobernabilidad y la política | | | | |
| Poverty eradication | Erradicación de la pobreza | Governance and risk | La gobernabilidad y el riesgo | | | | |

| | | | |
|-----------------------------------|-------------------------------------|--------------------------------------|--|
| Public-private partnerships | Asociaciones Público-Privadas | Human rights | Derechos humanos |
| Science cooperation agreements | acuerdos de cooperación Ciencia | Human well-being | Bienestar humano |
| Technology cooperation agreements | acuerdos de cooperación tecnológica | Inclusive | Inclusivo |
| Technology transfer | Transferencia tecnológica | Indigenous knowledge | El conocimiento indígena |
| Weighted tariff average | arancel medio ponderado | Inter-generational | Intergeneracional |
| Women entrepreneurs | Las mujeres empresarias | Irregular migration | La migración irregular |
| World Trade Organization | Organización de Comercio Mundial | Kaitiakitanga | kaitiakitanga |
| | | Land locked developing countries | Tierra cerrada países en desarrollo |
| | | Least developed countries | Países menos desarrollados |
| | | Leave no one behind | Deja atrás a nadie |
| | | Low impact agriculture | la agricultura de bajo impacto |
| | | Low impact farming | agricultura de bajo impacto |
| | | Low impact horticulture | horticultura bajo impacto |
| | | Migrant rights | derechos de los migrantes |
| | | Migration and policy | La migración y la política |
| | | Policy coherence | La coherencia política |
| | | Pollution - Air/Soil/Water | Contaminación - aire / tierra / agua |
| | | Promotion of shared responsibilities | Promoción de la responsabilidad compartida |
| | | Recycling | Reciclaje |
| | | Refugee crisis | Crisis de refugiados |
| | | Refugee rights | derechos de los refugiados |
| | | Renewable | renovable |
| | | Resilient | Elástico |
| | | Reuse technologies | tecnologías de reutilización |
| | | Small island developing states | Los pequeños Estados insulares en desarrollo |
| | | Smart cities | Ciudades inteligentes |
| | | Smart grid | Red inteligente |
| | | Smart houses | casas inteligentes |
| | | Social protection policies | políticas de protección social |
| | | Social responsibility | Responsabilidad social |
| | | Sustainability | sostenibilidad |
| | | Sustainable | Sostenible |
| | | Sustainable development | Desarrollo sostenible |
| | | Sustainable Development Goals | Objetivos de Desarrollo Sostenible |
| | | Sustainable development indicators | indicadores de desarrollo sostenible |
| | | Sustainable management | Gestión sostenible |

| | | | |
|--|--|--|--|
| | | Sustainable public transport | transporte público sostenible |
| | | Sustainable societies | Las sociedades sostenibles |
| | | Sustainable transport | El transporte sostenible |
| | | Technology for sustainable development | Tecnología para el desarrollo sostenible |
| | | Tele-working | El teletrabajo |
| | | Transboundary cooperation | La cooperación transfronteriza |
| | | Water sensitive revitalisation | revitalización sensible al agua |