

Presidents' discourses: Lags, leads or mere words?¹

Discursos de presidentes: ¿Rezagos, adelantos o meras palabras?

Paulo Reis Mourão.

Department of Economics, Economics & Management School.
University of Minho. Portugal.

paulom@eeg.uminho.pt

[CV]  

João Pedro Baptista.

Department of Communication, Philosophy and Politics.
University of Beira Interior (UBI), Portugal.

joao.pedro.baptista@ubi.pt

[CV]  

How to cite this article / Standard reference

Reis Mourão, P. y Baptista, J. P. (2022). Presidents' discourses: Lags, leads or mere words? *Revista Latina de Comunicación Social*, 80, 313-346. <https://www.doi.org/10.4185/RLCS-2022-1741>

ABSTRACT

Introduction: This study seeks to investigate the relationship between the words of the speeches of the various presidents of the Portuguese Republic (1976–2019) and the surrounding economic context.

Methodology: We filtered all official speeches by Portuguese presidents from July 1976 to December 2019 and constructed a series of each word's frequency categorized in the group of economic words. Using autoregressive distributed lag regressions and cointegration analysis, complemented with the analysis of structural breaks, we evaluated how those words' frequencies changed relative to changing inflation and unemployment rates in Portugal. **Results and Discussion:** Our results show that certain words have tended to coincide with rises in inflation and unemployment in Portugal, which supports the hypothesis that Portuguese presidents' speeches tend to reflect economic and political events.

KEYWORDS: Economic conditions; Economic message; Political communication; Political discourse; Portugal.

RESUMEN

Introducción: Este estudio busca investigar la relación entre las palabras de los discursos de los distintos presidentes de la República Portuguesa (1976-2019) y el contexto económico circundante.

Metodología: filtramos todos los discursos oficiales de los presidentes portugueses desde julio de 1976 hasta diciembre de 2019 y construimos una serie de la frecuencia de cada palabra categorizada

¹ Authors acknowledge the suggestions provided by two anonymous reviewers. Remaining issues are authors' exclusive ones.

en el grupo de palabras económicas. Utilizando regresiones autorregresivas de rezagos distribuidos y análisis de cointegración, complementados con el análisis de rupturas estructurales, evaluamos cómo cambiaron las frecuencias de esas palabras en relación con los cambios en las tasas de inflación y desempleo en Portugal. **Resultados y Discusión:** Nuestros resultados muestran que ciertas palabras han tendido a coincidir con aumentos en la inflación y el desempleo en Portugal, lo que apoya la hipótesis de que los discursos de los presidentes portugueses tienden a reflejar eventos económicos y políticos.

PALABRAS CLAVE: Condiciones económicas; Mensaje económico; Comunicación política; Discurso político; Portugal.

CONTENT

1. Introduction. 2. Review of literature and some motivating facts. 2.1. Presidential discourses: Do they lag or lead the economy? 2.2. The Portuguese presidential system 2.3. Motivating figures: Okun's index during Portugal's democratic era. 3. Methods: Data selection, time series analysis, and searching for relations between presidents' words and economic figures. 3.1. From Discourse Analysis to the ALCESTE-based process. 3.2. Breaking presidents: Which presidents stimulated each expression? 3.3. Do words follow the economy, or vice versa? 4. Discussion 5. Conclusion and future work. 6. References. 7. Appendixes.

CONTENIDO

1. Introducción. 2. Reseña de literatura y algunos datos motivadores. 2.1. Discursos presidenciales: ¿Rezagan o lideran la economía? 2.2. El sistema presidencial portugués 2.3. Cifras motivadoras: el índice de Okun durante la era democrática de Portugal. 3. Métodos: Selección de datos, análisis de series temporales y búsqueda de relaciones entre palabras de presidentes y cifras económicas. 3.1. Del Análisis del Discurso al proceso basado en ALCESTE. 3.2. Rompiendo presidentes: ¿Qué presidentes estimularon cada expresión? 3.3. ¿Siguen las palabras a la economía, o viceversa? 4. Discusión 5. Conclusión y trabajo futuro. 6. Referencias. 7. Apéndices.

1. Introduction

Since the mid-20th century, the analysis of political discourse has become a fundamental approach to studying the evolution of government policies. In that context, examining the actions and influence of presidents has been widely popular in several countries, especially by analyzing their discourses (Bernardes & Barros, 2019; Horváth, 2009; Kahl & Leff, 2006; Smith, 2010). Michel Foucault was one of the first scholars to study discourse not only as a reflection of social practices but also as an affirmation of power and knowledge (Foucault, 1996, 2008). According to van Dijk (1997, p. 18), even in contemporary politics, "Most political actions are largely discursive." However, although political discourse relates closely to the context in which it is announced (van Dijk, 2008) and can serve to mark different positions in relation to the past, it is not always consistent with a country's economic or social realities. Several studies (e.g., Borriello, 2017; Chaves-Avila & Savall-Morera, 2019) have shown that political actors are not naïf when communicating. For example, Chaves-Avila & Savall-Morera (2019) compared the political discourse with the policies implemented during the economic recession in Spain and found that, in the context of the social economy, the political agents' discourse intended to soften the applied policies. While the political discourse sought to promote social economy measures, the political practices applied austerity measures.

In a diachronic perspective, the economic, social and political realities of Portugal, since the fall of the dictatorial regime in 1974, have suffered several displacements and crises. After a political and social crisis in the early years of its democracy, Portugal joined the European Economic Community and

pursued a policy of social and economic recovery, which in 2008 manifested itself in a critical way: by triggering a major economic crisis, namely under the influence of economic austerity. Over the years, the role and intervention of the President of Portugal, at the discursive level, have not been sufficiently studied. Throughout Portuguese democracy, the actions of the Presidents of the Republic have also been related to the surrounding social and economic context. While some presidents stood out for their intervention in government action, dictated by the powers they held (Franco, 2018), others were accused of their absence in the discussion of important government actions, labeling them as mere "spectators" of the country's internal politics (Cordeiro, 2013). Currently, the President, however, enjoys extreme popularity (Barbosa, 2021) and is at the center of the news agenda (Costa, 2021). The power to appoint and dismiss the Government and to dissolve the Parliament are among the Presidency's greatest powers (Novais, 2007, 2010). On the other hand, the President of the Republic can take advantage from other sources of power, namely by his ability to influence the political agenda and government action through his indirect actions such as participation in seminars or interviews, as well as his speeches and political statements (Araújo, 2003). Araújo (2003) argues that it would be difficult to understand the weight of the action of the President of the Republic on the Portuguese government, if the informal tools available were not considered.

The Presidents of the Republic have resorted to their informal powers to express their views on the country's political and economic situation. Marcelo Rebelo de Sousa, recently elected for his second term as President, recently alerted the Government and Parliament, through statements made to the media, about the consequences of the fall of the State Budget that was under discussion, appealing to the "good sense" of the parties and mentioning that lead would entail, politically and economically, "very high costs" (Tavares, 2021), admitting that their statements were intended to influence Parliament and the Government to reach an agreement on the Budget (Alvarez, 2021). In addition, the official speeches of the Presidents, on which we focus our study, have also served to reflect on the current economic and political situation in the country (Freire & Santana-Pereira, 2019).

It is, therefore, within the scope of the informal powers of the President of the Republic, that we intend to investigate how the speeches of Portuguese Presidents have reflected the changes in the economy. Therefore, we sought to analyse the official speeches of the presidents of Portugal from the last four decades to answer two questions. First, does the official message of Portugal's presidents tend to react to the deterioration of economic activity or anticipate it as a prophetic warning? Second, do Portugal's presidents talk more about economics when the economy gets worse? Actually, in a short way, we can confirm that our major motivation for this paper has been to try to answer to the question "Do presidential speeches anticipate the country's economic situation, trying to provoke or prophesy it, or do they simply react to it?"

Consequently, our primary objective was to conduct a comparative, diachronic analysis of Portuguese presidents' speeches from 1976 to 2019, in order to test their connections with the surrounding economic indicators. In what follows, Section 2 provides a review of literature addressing the economy's influence on political discourse and details the evolution of economic conditions observed in Portugal since 1976. Based on a synthetic index of economic conditions—the Okun's misery index—Section 3 presents the hypothesis that changes perceived in the economy are reflected in the official speeches of this chief figure of the Portuguese Republic's political structure. By filtering all official speeches by the various presidents of Portugal since 1976, we were able to identify which words and expressions have been most associated with a focus on the economic issues. Section 4 describes sources and data. In the remaining of our empirical analysis (section 5), we also examined structural breaks observed in the series of each's word's frequency with an economic focus and evaluated the dynamics of temporal reactions between their frequencies in the official speeches of Portugal's presidents and changes in the Portuguese economy. Section 6 concludes our work.

2. Review of literature and some motivations facts

2.1. Presidential discourses: Do they lag or lead the economy?

Political discourse has manifested over the years as a powerful tool for political institutions, actors, and political programs and as a skillful way of imposing political–ideological changes. It is through discourse that governments and presidents plan the future of countries. For example, Barbier (2011) has argued that the EU’s discourse changed its paradigm at the end of the 20th century, when the speech of European leaders merged economic issues with social ones, for structural reforms based on “a dominant economic language”.

Recently, especially in the countries of Southern Europe, the last decade’s economic crisis prompted governments to adopt reforms supported by the so-called “austerity discourse” (Borriello, 2017). Austerity speeches were accentuated in countries that needed economic rescue (e.g., Portugal, Italy, Greece, and Spain) following the assumption that no alternative was available and that austerity was thus inevitable (Borriello, 2017; Chaves-Avila & Savall-Morera, 2019; Freire, 2017; Freire & Santana-Pereira, 2019). The austerity discourse especially became part of the communicational and discursive strategy of political actors who sought to legitimize their social restrictions and political decisions (Borriello, 2017; Fonseca & Ferreira, 2015). In Portugal, economic issues related to the state budget, external competitiveness, and employment rates started to become concerns expressed in the speeches of the president. Until the end of the 1990s, references to economic situations and unemployment were practically nonexistent in those discourses, as justified by their minimal intervention in government action (da Cruz, 1994).

It remains unclear, however, whether the president’s speech echoes economic reality or “prophesizes”/anticipates it. For instance, in the official speech at the beginning of each year, the so-called “New Year’s Message,” Portugal’s president generally reviews what happened in the previous year and what may or what is expected to happen for the year ahead.

The literature has identified three major channels for explaining the insertion of economic issues in the political messages (Bernardes & Barros, 2019; Horváth, 2009; Kahl & Leff, 2006; Smith, 2010). The first reason is centered on providing an idea of capacity of a politician. Given the economic problem or even given the economic context of crisis, electorates award the political message based upon solutions or proposed solutions for the economic problems. Speeches represent the agenda of the public; since incumbents rely on the public’s approval to succeed in their careers, economic crises trigger narratives that address it. The second reason is for empathy. People feels more empathy for the politicians who are discussing people’s problems. Therefore, considering that empathy maximizes votes intentions, politicians strategically discuss people’s issues. Finally, as Horváth (2009) claims, the speech centered around an economic issue brings it to the public sphere; this means that other politicians, incumbents or challengers, are co-responsible for fixing the problem or for sharing the problem’s costs.

However, other literature (Huber and Stephens, 2001; Green, 2007; Hellwig, 2012) has proven that political words can anticipate political or economic issues. This literature can also be divided into three branches. The first branch recognizes that speeches affect the expectations of the economic agents. For instances, speeches alerting to economic declines are intended to minimize the political responsibility of the issuer. It is the strategy claiming later for the sentence ‘I have warned you...’. The second branch identifies that governments have private information able to better predict imminent slowdowns in economic variables. In this case, it is politically profitable to ‘alert’ the public for anticipating the need of proper policies, usually, unpopular ones (like tax raises or expenses’ cuts). Finally, the third branch identifies the intention of manipulation of voters’ expectations. By adopting an optimistic discourse,

political agents intend to increase the economic agents' intention of invest in the economy and then to motivate economic growth. Although being more speculative than the two previous strategies, this third strategy will also lead to the observation that certain discourses' contents anticipate certain economic outcomes.

2.2. The Portuguese semi-presidential system

Our study on the political discourse of Portugal's presidents required taking a contextual approach to examine the evolution of the Portuguese presidential system under the current regime of democracy. Following the guidelines of van Dijk (1997) and knowing in advance that "text and context are mutually defined," we did not dismiss context in our analysis of political discourse. As other recent Western democracies (e.g., Spain), Portugal initiated a process of democratization in the mid-1970s that ultimately ended an authoritarian, dictatorial system. In 1976, two years after the Carnation Revolution, the first presidential and legislative elections were held (do Espírito Santo, 2007; Veiga, 1998). In other countries, political transitions were also consolidated during the 1980s, especially with the fall of the Berlin Wall and the emergence of new democracies in Eastern Europe, Africa, and Latin America (Lobo & Neto, 2009). In Portugal, the first democratic years were marked by great political instability, with minority governments that failed to complete their mandates (Veiga, 1998), and with one particular president, António Ramalho Eanes (1976–1986), whose military, nonpartisan profile allowed him to execute permanent interventions. The president's power has fluctuated over time, predominantly between being interventionist and being institutionalist (da Cruz, 1994). Since Portugal's first elections in 1976, the country has had five presidents, and all of them, except incumbent Marcelo Rebelo de Sousa (who will soon finish his first term) have served two terms.

In the same period, the intervention and influence of the president in Portugal's political life has been reduced, especially since the beginning of the 1980s, with the growth of parliamentary activity. Today, far from being an interventionist figure, as was the first president, António Ramalho Eanes, Portugal's president has lost political power to the Assembly of Portugal (da Cruz, 1994; de Matos, 1992). That shift occurred after the reform of Portugal's Constitution in 1982, which ended up redesigning the country's system of governance based on semi-presidentialism (Lobo, 1996; Lobo & Neto, 2009; Rodrigues, 2009). Elgie (1999) has formulated a simple definition of semi-presidentialism as the "the situation where a popularly-elected fixed-term president exists alongside a prime minister and cabinet who are responsible to parliament." Following that definition, herein we refer to presidents elected by direct, universal suffrage and who share powers with the prime minister, who is the most important political personage and responsible to the parliament (Duverger, 1980). Although sharing power, the president has the power to nominate and remove a government or prime minister. However, Portuguese semi-presidentialism "does not grant extensive powers" to the president, as in France (Gramacho, 2008). Although semi-presidentialism is the most common system of government in Europe (Tsai, 2008), some countries, including Russia and Ukraine, there retain presidencies with strong political power. At the same time, other countries—Slovenia, Ireland, and Austria, for instance—have weaker semi-presidential systems than Portugal's (Freire & Santana-Pereira, 2019).

Tsai (2008, p. 69-80) divided the semi-presidential regime into five subcategories: (1) president-dominant semi-presidentialism; (2) premier-dominant semi-presidentialism; (3) semi-presidential dominant parliament; (4) cohabitation semi-presidentialism and (5) balance-of-power semi-presidentialism. As a president-dominant system, the author sets as a clear example the power of the French president, by the way he exerts influence over the government and the legislative majority in Parliament. Regarding the second subcategory, the author uses the Austrian case as an example, in which the power and action of the president is similar to that of the parliamentary system, but does not have the power to dissolve the government, assuming itself as a "national symbol". which signs

and enacts the laws passed by the government. The Portuguese case is the most evident example of the third subcategory: semi-presidential dominant parliament, in which the Parliament has a very effective and decisive action in the approval of laws and in the formulation of government policies, especially in a minority government situation. If we consider (4) cohabitation semi-presidentialism, we must consider a sharing of powers between prime minister and president, Tsai (2008) uses the French system between 1986 and 1988 as an example.

Finally, its fifth sub-category encourages the president and parliament to have considerable powers and that they can even clash when there is no legislative majority. Faced with this “double legislative authority”, Tsai (2008) exemplifies the cases of the Weimar Republic and the First Russian Republic (1991-1993).

The Spanish system is an exception. Despite being a recent democracy similar to Portugal, Spain maintains a system that has not followed the same path, because the country has established a parliamentary monarchical regime (Freire & Pinto, 2005). Therefore, taking a general approach to understanding the evolution of the president’s power highlights a paradigm shift from the beginning of the 1980s with the statement of Portugal’s parliament on the presidency.

Although presidential influence has been reduced, some presidents have been more interventionist than others, and such influence has been conditioned by different social and political contexts but moreover by economic factors. A country’s domestic economy has a strong effect on the different governmental actions in the country, particularly by influencing the popularity of the government and the president and thereby prompting voters to punish or reward government officials according to economic variables (Freire & Santana-Pereira, 2019; Gramacho, 2008; Veiga, 1998). Several studies (e.g., Veiga & Veiga, 2004) have shown that unemployment and economic confidence have influenced the president of Portugal’s popularity indexes, thus the economy can be expected to rank among the most prevalent themes in official presidential speeches to the country. Due to the economic crisis suffered by Portugal due to the financial rescue of the Troika between 2011 and 2014, President Aníbal Cavaco Silva’s second term (2006–2016) was marked by a record of negative popularity for a president (Fernandes & Jalali, 2018). It should be noted that one of the major problems that governments face during serious economic crises is knowing how to deal, on the one hand, with the internal pressures placed by the electorate and, on the other hand, in dealing with the international pressure imposed by the institutions. Mair (2011) pointed out this relationship as being a “dilemma” and a conflicting position for those who govern in times of economic crisis. In Portugal, Freire and Santana-Pereira (2019) studied this “dilemma” that President Cavaco Silva had to face during the economic restrictions of the Troika. Analyzing Cavaco Silva’s speech, Freire and Santana-Pereira (2019) reflected on the problems that the president, under a semi-presidential regime, had to face, namely in the negotiation processes with the government and Parliament, prioritizing the country’s external or international responsibility for stabilizing the public debt.

With the election of Marcelo Rebelo de Sousa in 2016, public opinion about the president changed, as did presidential action (Lopes et al., 2021). Rebelo de Sousa proved to be more interventionist than his predecessor’s first term (Fernandes & Jalali, 2018). Fernandes and Jalali (2018) have argued that, from the beginning of his administration, Rebelo de Sousa adopted a more interventionist strategy, one based upon “affection” and “proximity” and taking more popular actions as Presidents Mário Soares (1986–1996) and Jorge Sampaio (1996–2006) had done in the past.

2.3. Motivating figures: Okun's index during Portugal's democratic era

A synthetic index that assesses socioeconomic conditions originally proposed by Okun (Acocella, 2002) has been widely used for illustrative purposes (Tomasz, 2011). The so-called “misery index” results from the sum of a country's unemployment rate and inflation rate, such that higher values on the index are associated with a general deterioration in the quality of life in the country. A representation of the index for Portugal between 1976 and 2019, as well as the respective components (i.e., unemployment rate and inflation rate), appears in Figure 1.

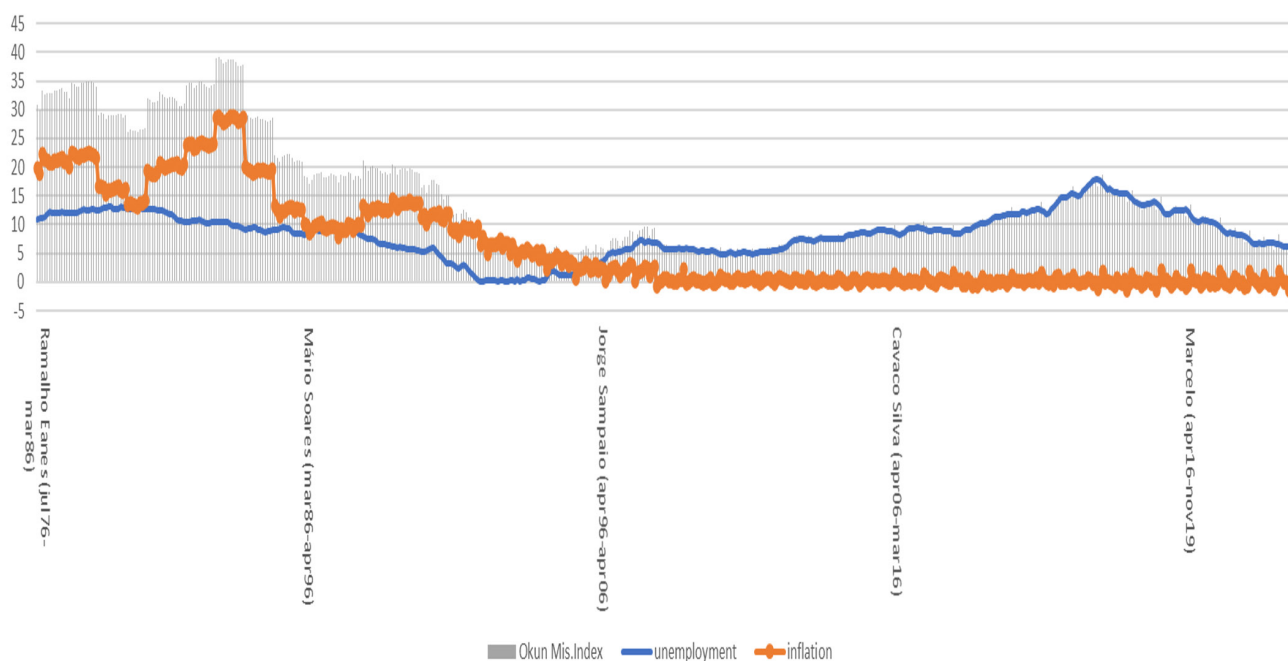


Figure 1: Okun's misery index, unemployment rate (%), and inflation rate (%) in Portugal, 1976-2019
Source: Self-made

In line with Duarte (2009), Correia and Carvalho (2016), Rosa (2011), and Blanchard and Portugal (2017), we see two distinct movements, in Figure 1. First, between 1976 and 1994, when high estimated values for the inflation rate in Portugal (maximum 29% in 1983) were the chief causes for the oscillation of Okun's index. Second, with inflation in Portugal stabilized, the dynamics of unemployment started fueling the oscillations of Okun's index, coinciding with a maximum unemployment rate of 18% in 2013. During that period, the presidents of the Portuguese Republic were:

- António Ramalho Eanes (July 14, 1976–March 9, 1986), whose administration coincided with a mean Okun's index of 30.7 (SD = 4.81), a mean unemployment rate of 11.05 (SD = 1.46), and a mean inflation rate of 19.68 (SD = 4.61);
- Mário Soares (March 9, 1986–March 9, 1996), whose administration coincided with a mean Okun's index 12.4 (SD = 6.23), a mean unemployment rate of 4.11 (SD = 3.23), and a mean inflation rate of 8.27 (SD = 3.68);
- Jorge Sampaio (March 9, 1996–March 9, 2006), whose administration coincided with a mean Okun's index 7.01 (SD = 1.43), a mean unemployment rate of 6.45 (SD = 1.35), and a mean inflation rate of 0.57 (SD = 0.82);

- Aníbal Cavaco Silva (March 9, 2006–March 9, 2016), whose administration coincided with a mean Okun's index 12.37 (SD = 2.66), a mean unemployment rate of 12.28 (SD = 2.67), and a mean inflation rate of 0.09 (SD = 0.56); and
- Marcelo Rebelo de Sousa (March 9, 2016–present), whose administration coincided with a mean Okun's index 11.94 (SD = 3.35), a mean unemployment rate of 11.83 (SD = 3.29), and a mean inflation rate of 0.10 (SD = 0.11).

In our study, we also sought to answer two questions that depart from the focus of past research. First, does the official message of Portugal's presidents tend to react to the deterioration of economic activity or anticipate it as a prophetic warning? Second, do Portugal's presidents talk more about economics when the economy gets worse?

Thus, after determining Okun's index for each month between 1976 and 2019, we analyzed the frequency with which each item was used in the presidents' speeches. To that purpose, the selection of items followed the strategy of Camargo and Justo (2013) and Justo and Camargo (2014), who proposed the ALCESTE algorithm. Their method allowed us to reveal items considered to be structural for the economic dimension in the set of presidential speeches observed from Eanes, beginning in July 1976) to Rebelo de Sousa (i.e., December 2019).

3. Methods

3.1. From Discourse Analysis to the ALCESTE-based process

Discourse analysis plays a crucial role in the interpretation of not only ideological positions but also economic ones. Graham and Luke (2011) have shown that discourse strategies are fundamental to understanding transformations in the political economy and to establishing relationships between different public and private agents. Stevenson (2019) has highlighted the importance of discourse in policies for green, sustainable economies, particularly by stressing the variety of contemporary discourses with various terminology for sustainability, which makes it difficult to identify precise points at which "to reconcile environmental sustainability with development economics". By contrast, Maesse (2015) has underscored the power of discourse in the formation and reputation of economic experts, whose crucial role in several scientific fields, along with economics, politics, academia, and the media, makes their discourse not exclusive to engaging in communicative processes but also to establishing relationships of power. In times of economic and financial crisis, discourse analysis also makes it possible to identify, for example, divergences in economic policy adopted by several countries. Based on public debates in Germany and Greece, Lahusen et al. (2016) demonstrated that both countries had different concerns about the European crisis triggered in 2008.

While the German discourse was mostly based on the smooth functioning of markets, on competitive policy, and on stable economic policy, the Greek discourse emphasized an economic policy based on prosperity, solidarity, and social justice.

The statistical analysis of data from a given text corpus -namely, political discourses - has become a commonly used method in the social and human sciences. In turn, the need to conduct mass textual analyses has prompted the development of various software programs, including ALCESTE (i.e., Analyze Lexicale by Context d'A Ensemble of Segments de Texte) and, later on, IRAMUTEQ (i.e., R Interface for les Analyses Multidimensionnelles de Textes et de Questionnaires), that allow performing lexical analyses based on the vocabulary and text-based segments of material.

Considering the wide range of Computer-Aided Qualitative Data Analysis software, several works (Gilles et al., 2017; Marpsat, 2010) state that IRAMUTEQ, created by Ratinaud (2009), allows for a greater diversity of textual analyses. In addition to the software exploiting the Python language, it works as an extension of the R statistical software, and incorporates the ALCESTE method. IRAMUTEQ enables text analysis in several languages (including Portuguese). IRAMUTEQ has often been used for statistical procedures with text from different databases in an array of fields and genres. The program can be used in the evaluation and textual analysis of public or party policy programs, in the comparative analysis of discourse, and the analysis of political ideologies in different contexts (Beauguitte et al., 2015; Borriello & Brack, 2019; Trimithiotis, 2018). In addition, its lexical analytical capacity to classify words, classes, and segments of text allows a faster, more effective study of content, especially as part of the qualitative and quantitative analysis of linguistic elements used, even in speeches given by politicians, political candidates, and presidents during election campaigns (Curbelo, 2017; da Silva et al., 2014; Junior et al., 2018; Trimithiotis, 2018). The method has thus allowed a discursive analysis of different political leaders' communications on social media by discussing themes, linguistic points of view, and ideological relations between party and political representation (Longhi et al., 2019; Smyrniaios & Ratinaud, 2017). It additionally facilitates the interpretation of discursive models adopted by politicians to justify or legitimize government austerity measures with which to face economic crises (Borriello, 2017; Takas et al., 2020).

Therefore, we used IRAMUTEQ to analyze the text corpus composed by the official speeches of Portugal's presidents, including celebratory or ceremonial national statements, presidential statements, messages to citizens, and public interventions in various formal contexts, from 1976 to 2019. IRAMUTEQ allowed us to perform analyses from the simplest to the most complex kinds—that is, from basic lexical analysis to multivariate analysis. In particular, lexical analysis focuses on words present in a text, thereby allowing the identification and calculation of the frequency of words and hapax (i.e., words that appear only once), as well as the verification of grammatical classes (e.g., verbs, adverbs, adjectives, and nouns) used in the segments of text that make up the corpus

IRAMUTEQ also allows performing specificity analysis, which itself allows establishing the relationship between specified text variables in the corpus (Camargo & Justo, 2013; Justo & Camargo, 2014). By applying the ALCESTE or Reinert method—that is, descending hierarchical classification (CHD)—it is possible to analyze the occurrence of words according to the context in which they appear and associated with a certain segment of text (Reinert, 1990). The CHD identifies then these lexical classes. This method - which we use here as an IRAMUTEQ tool and not as an isolated software - identifies the most frequent words (lexicons) in the text, based on the number of times they are evoked and the connections they establish. Developed by Max Reinert, in the 1970s, this method considers discourse as being composed of a set of “lexical worlds”, which, independently analyzed, evidence the reasoning and coherence of its author (De Alba, 2004). The selection of words prioritizes the main linguistic elements, such as nouns, adverbs and verbs, which stand out for the frequency with which they are uttered and for the text segments they share. The visual and graphic grouping of segments of text with similar words allows the identification and classification of the variables considered, as well as the description and standardization of the language (do Nascimento & Menandro, 2006). In addition to those analyses, IRAMUTEQ accommodates the graphical representation of the text corpus in so-called “similitude analysis,” a data-processing method that graphically illustrates the relationship between words, with the possibility of grouping them according to how they are connected. Based on the frequency of words, another visual method called “word cloud” involves forming sets of words with specific prominence/size depending on their frequency in the text.

Mourao (2021) details the steps behind the main mechanism supporting ALCESTE: “The textual analysis process of the Iramuteq software has already been detailed in the work of Gilles et al. (2017). Generically, it has the following steps:

- 1) Editing the document to be analyzed in a .txt file. The texts of each party are then separated by theme. The final document, including all manifestos from all parties with all topics covered, was recorded with a .txt extension.
- 2) This .txt file is then loaded into the Iramuteq software. The software then allows the selection of various parameters, namely the identification of the source language dictionary, the analysis of each word, or the reduction of each word to its root form (for example, the reduction of a verb form to its verb in the infinitive). The software also allows the identification of the priority word class (active). In our case, the active words were only three: verbs, nouns, and adjectives. This procedure minimizes, for example, problems arising from translation, while also minimizing the difference in frequency quotation of the number of words in a sentence translated into different languages.
- 3) The software then allows the separate parameterization of several lines of analysis:
 - a) Descriptive statistical analysis;
 - b) Content/words factor analysis;
 - c) Reinert method of distribution of messages by variables;
 - d) Analysis of similarity by variables and analysis of text centrality.

Each of these methods has specific steps that are covered in technical detail in Gilles et al. (2017) or in Marpsat (2010).”

Sources and description of the corpus

Our text corpus consists of 285 official speeches or interventions by the presidents of the Portuguese Republic between 1976 and 2019 (these speeches have been done along 518 months with observed documents). All speeches were collected from the Library of the Presidency of Portugal², an archive with more than 18,000 monographs, about 200 titles of periodical publications, and collections of interventions by the current and former presidents of Portugal. The speeches in our corpus were given by five presidents: António Ramalho Eanes (1976–1986) Mário Soares (1986–1996), Jorge Sampaio (1996–2006), Aníbal Cavaco Silva (2006–2016), and Marcelo Rebelo de Sousa (2016–2019). For our textual analysis we selected 285 speeches from the interventions or speeches including New Year’s Messages, official speeches at April 25 celebrations (i.e. in honor of the revolution that ended the dictatorial regime in 1974), official speeches of the day commemorating the establishment of the Portuguese Republic (i.e., referring to October 5, 1910), communications to the country upon the nominations of prime ministers, inaugural addresses, and messages during national or international elections. This methodological process has 2 steps. 1st, ALCESTE identified the relevant terms/words from the analysed texts; 2nd, researchers have identified those which are usually associated to economics or to economic discussions, considering the glossary of Roberts (1998).

The words highlighted by the ALCESTE-based method as belonging to the class of economic terms with statistical significance are listed in Table 1.

² <http://biblioteca.presidencia.pt/Pages/Help/Start.aspx>

Table 1. *Economic terms identified in the discourses of the Presidents of Republic as belonging to the group of ‘economic terms’*

#	Economic terms ('Portuguese word')	Economic terms ('Portuguese word')	#
1	Balance ('Balança')	Indebtdness ('Endividamento')	14
2	Corruption ('Corrupção')	Inequality ('Desigualdade')	15
3	Cycle ('Ciclo')	Invest, to ('Investir')	16
4	Debt ('Dívida')	Investment ('Inversión')	17
5	Development ('Desenvolvimento')	Need ('Necessidade')	18
6	Disparity ('Disparidade')	Production ('Produção')	19
7	Economic ('Económico')	Productive ('Produtivo')	20
8	Economics ('Economía')	Productivity ('Productividade')	21
9	Europe ('Europa')	Producer ('Produtor')	22
10	Finance ('Finança')	Shock ('Choque')	23
11	Financial ('Financeiro')	Unemployed ('Desempregado')	24
12	Fiscal ('Fiscal')	Unemployment ('Desemprego')	25
13	Funding ('Financiamiento')	Valorization ('Valorização')	26

Source: Self-made

Our analysis could also exhibit expressions (sets of organized words) instead of single words. The methodology and the software that we used support such procedure. However, we opted for only considering single words in this analysis for 3 main reasons, now explicit: i) as Smyrniaos & Ratinaud (2017) argue, the political discourse often duplicates notions for a rhetoric purpose; therefore, in order to analyze a specific notion, it is advisable to be focused on the shortest length (a single word) able to express the notion; ii) the relevance of the issues can be discussed by autonomous notions, complemented by auxiliary tools, like an Analysis of Similitude; iii) the available space for providing a robust discussion considering the limited number of publishable words in the format of an article. However, as stated in the last section of this work, we consider the possibility of studying such expressions/sets of organized words as a promising avenue for further researches.

To appropriately answer the question of whether the speeches of Portuguese presidents tend to react to or anticipate the deterioration of economic activity, we applied methods based on the analysis of structural breaks. Supported by the technique of exploring the dynamics of time series, one involving autoregressive distributed lags (ARDL), the method aided us in pinpointing the major moments in which each term gained special frequency. Also based on multivariate analysis, time series analysis afforded several advantages to comprehend how each term reacting to the deterioration of living conditions in Portuguese related to the speeches of Portugal's presidents. In sum, the ARDL method also made it possible to not only elucidate whether each term appeared before or after the worsening of Okun's index values but also identify how many months the reaction took. Table 1A (at Appendix) shows the descriptive statistics for our time series and the respective sources.

Although the frequencies of words related to the economy generally had low central values, in some periods their concentration was notable in the speeches of Portugal's presidents. Table 1A in the Appendix shows the use of the terms identified by each president, whereas the set of words identified by the ALCESTE-based method have already been listed in Tables 1 and 1A.

The word "shock" was used rarely during the period and never exceeded 2.06%. That peak occurred in 2014, a year marked by the financial and economic crisis. The two presidents who uttered it the most were António Ramalho Eanes, during his set of interventions in 1978, and Aníbal Cavaco Silva, during the mentioned peak in July 2014.

By contrast, "unemployment" in conjunction with "unemployed" was often used, especially in the most economically difficult years. That outcome was confirmed along with the realization that the president who used both words the most was Cavaco Silva, especially from December 2012 to September 2013, when Portugal experienced record-high unemployment. In 2013, for example, nearly 18% of the working population was unemployed (Figure 1). From late 2013 and early 2014, the term gradually decreased in use by Portugal's presidents, among whom Jorge Sampaio used it the second most often.

Unlike "unemployed," the word "cycle" more constantly appeared in the speeches analyzed. Although peaking in October 2013 at 4.24%, in 2009 it was spoken in nearly every month. A word often used to refer to various sorts of dynamics, "cycle" was always associated with "development" and "economy," which also had higher percentages of use in the mentioned months. In view of that analysis, it is understandable why Cavaco Silva most often uttered the term, again followed by Sampaio.

The presidents who most used the word "corruption" were Soares and Cavaco Silva. As other countries, Portugal experiences the problem of corruption in its institutions. According to the Transparency International report from 2019, corruption worsened in Portugal 2013 and 2016, which may explain Cavaco Silva's relatively frequent use of the term.

The words "developed" and "development" often appear together and can be analyzed as such, considering that the former is used to describe high levels of the latter. For that reason, the two terms were almost equally used in presidential speeches in Portugal over the years that we examined. Nevertheless, "developed" was used less percentage-wise, peaking only at 1.54%, than "development," which peaked at 7.13%. Both terms relate closely to the theme of the economy and are so similar that they ended up being used often by the same presidents—again, Sampaio and Cavaco Silva.

Despite similar meanings, the word "inequality" surfaced in various contexts and thus at a constant frequency, whereas "disparity" was used residually by the first four presidents examined and had yet to be enunciated by Portugal's current president. The ones who ended up uttering it most often were Soares, at a peak usage in 1987 with 1.41%, and Cavaco Silva.

Although Cavaco Silva also often used "debt," the word has rarely been spoken by Portugal's presidents on the whole. Even so, it had a great impact—peaked in usage at 5.94%—in May 1981 during the presidency of Eanes, who used the term the most frequently. Another adjacent term that can be linked with "debt" is "indebtedness," which demonstrated a similar frequency of use over the years and was spoken most often by the same two presidents: Eanes and Cavaco Silva.

Two other related words in our dataset were "economy" and "economic." Taking the theme of our analysis into account, they were the two most spoken words over the years and uttered by all presidents. Of course, both often emerged hand in hand, first peaking in September 1979 at 7.94%, often with values exceeding 2%, and peaking later in March 1996 with a frequency of 11.09%. The presidents who used both terms most often were, once again, Sampaio and Cavaco Silva.

The word “Europe” showed a first peak in 1983, when it reached 10.87%, and a second peak of 5.71% in March 1986, when Portugal entered the European Economic Community. With Portugal’s adherence to the single currency in 2002, “Europe” became a recurring theme in presidents’ speeches. In 2004, the term demonstrated its highest-ever peak—25.63%—possibly in relation to the European football championship in Portugal. Of all five presidents, Sampaio and Cavaco Silva uttered “Europe” most often.

Another pair of words that can be analyzed together owing to their nature are “finance” and “financial,” which were used most often by Eanes and Cavaco Silva. Along similar lines, “funding” was a recurring term, although only once Portugal entered the European Union. It reached a peak of 2.37% in 2010, thanks to support from abroad to overcome the global financial crisis. For that reason, and similar to “finance” and “financial,” the president who spoke the term most was Cavaco Silva, followed by Eanes.

By contrast, “fiscal” seldom appeared in the dataset, and even in months when it was mentioned, it never bore any special statistical relevance. That term experienced its greatest frequency between 2009 and 2010. The two presidents who spoke it most often were Cavaco Silva and Eanes.

Indicating a recurring theme since the beginning of the studied period, “investment” and “to invest” demonstrated an identical path. The former peaked in 1987 with a frequency of 3.62%, while the latter peaked in 1980 with a frequency of 1.81%.

The everyday word “need” also surfaced as a significant term, albeit one used with unsurprising consistency and without any relevant spikes. In February 2004, “need” experienced its greatest use: 3.97% of all studied terms spoken in that month by Portugal’s presidents. The presidents who used it most were once again Sampaio and Cavaco Silva.

“Production,” “productivity,” and “productive” also demonstrated significant frequencies of use. The most common, “production,” had particular relevance between 1980 and 1981 and peaked at 3.71% in May 1981. Conversely, “producer” appeared in three months only—May 1977, April 2001, and June 2009—always around 1.81%.

Last, “valuation,” a recurring term over the period, exhibited its greatest use at 1.69% in March 2002. It was spoken most frequently by Soares and Cavaco Silva.

4. Results: Time series analysis and searching for relations between presidents’ words and economic figures

To investigate the stationarity of our series—the frequencies of each economically related word identified in the speeches of Portugal’s presidents from 1976 to 2019—we examined the results of augmented Dickey–Fuller tests. Table 2 shows the results of the tests conducted on our series for discussing their level of integration. As shown in the table, most of the series formed by the frequencies of economically related terms in the presidents’ speeches were I (0)—that is, stationary series at the levels.

Table 2. *Augmented Dickey-Fuller (ADF) Statistics of the series studied in this work*

y_t	$\Delta^d y_t$	ADF		
		No interception; No trend	With interception; No trend	With interception; With trend
Balance ('Balança')	d=0	-22.78	-23.05	-23.09
	d=1	-39.42	-39.38	-39.35
Corruption ('Corrupção')	d=0	-19.28	-19,62	-19.62
	d=1	-35.27	-35.24	-35.20
Cycle ('Ciclo')	d=0	-22.05	-23.40	-23.51
	d=1	-39.63	-35.60	-39.56
Debt ('Dívida')	d=0	-20.60	-21.20	-21.18
	d=1	-38.25	-38.21	-38.18
Development ('Desenvolvimento ')	d=0	-16.58	-26.40	-20.66
	d=1	-37.58	-37.81	-37.78
Disparity ('Disparidade')	d=0	-22.78	-23.13	-23.13
	d=1	-39.42	-39.38	-39.35
Economic ('Económico')	d=0	-18.06	-20.98	-20.97
	d=1	-41.36	-41.33	-41.29
Economics ('Economia')	d=0	-16.60	-20.17	-20.21
	d=1	-34.82	-34.78	-34.75
Europe ('Europa')	d=0	-17.72	-19.53	-19.53
	d=1	-40.01	-39.97	-39.94
Finance ('Finança')	d=0	-20.47	-20.98	-20.96
	d=1	-38.05	-38.02	-37.98
Financial ('Financeiro')	d=0	-19.09	-21.19	-21.18
	d=1	-37.35	-37.31	-37.27
Fiscal ('Fiscal')	d=0	-21.70	-22.64	-22.63
	d=1	-43.01	-42.97	-42.93
Funding ('Financiamento')	d=0	-17.97	-18.72	-18.76
	d=1	-37.57	-37.53	-37.50

Indebtdness (‘Endividamento’)	d=0	-20.50	-21.34	-21.34
	d=1	-39.63	-39.58	-39.55
Inequality (‘Desigualdade’)	d=0	-19.80	-21.52	-21.81
	d=1	-37.38	-37.34	-37.30
Invest, to (‘Investir’)	d=0	-21.77	-23.03	-23.01
	d=1	-39.98	-39.94	-39.91
Investment (‘Investimento’)	d=0	-19.06	-20.93	-20.92
	d=1	-40.64	-40.60	-40.56
Need (‘Necessidade’)	d=0	-17.75	-20.92	-20.97
	d=1	-38.79	-38.76	-38.72
Production (‘Produção’)	d=0	-16.03	-16.58	-16.64
	d=1	-35.96	-35.93	-35.89
Productive (‘Produtivo’)	d=0	-20.16	-21.51	-21.49
	d=1	-37.46	-37.43	-37.39
Productivity (‘Produtividade’)	d=0	-20.60	-21.70	-21.69
	d=1	-40.77	-40.73	-40.69
Producer (‘Produtor’)	d=0	-22.78	-22.82	-22.84
	d=1	-39.42	-39.38	-39.35
Shock (‘Choque’)	d=0	-22.78	-23.15	-23.13
	d=1	-42.28	-42.24	-42.19
Unemployed (‘Desempregado’)	d=0	-22.34	-22.70	-22.73
	d=1	-54.48	-84.43	-54.38
Unemployment (‘Desemprego’)	d=0	-19.38	-20.69	-20.67
	d=1	-39.52	-39.49	-39.45
Valorization (‘Valorização’)	d=0	-17.09	-21.46	-21.46
	d=1	-37.12	-37.09	-37.05

Note: All the reported values are significant at 1%.

Source: Self-made

In the following subsections, we analyse which presidents showed more fractured usage of each word over time and how changes in Portugal’s socioeconomic conditions interfered with the use of each word, in terms of either the respective frequency in official speeches or the temporal stimulus. In sum, we observe whether the terms appeared immediately in reaction to changes in economic conditions or in a more consistent way.

4.1 Breaking presidents: Which presidents stimulated each expression?

To study the relevance of each president in infusing new importance into each term studied, we referred to the analysis of structural breaks in time series. According to Mourão (2018, pp. 8-9),

The history of the analysis of structural breaks in time series is well documented in works like Aue and Horvath (2013) or Lu and Ito (2008). From the first generations, focused on testing the statistical significance of structural breaks identified for precise moments (like the Chow test), we now have tests for unknown dates. Within those modern tests, we find the tests for multiple time breaks, like Clemente et al. (1998), whose critical values were previously suggested by Perron and Vogelsang (1992).

Using Clemente et al.'s (1998) test, we analyzed the nature of breaks by differentiating sudden breaks in the series (i.e., additive outliers) from smooth changes (i.e., innovational outliers). Mourão and Martinho (2016) have reported that tests such as Clemente et al.'s (1998) have additional convenience properties, for they lack some restrictions on the stationarity of series imposed by Bai and Perron's (2003) test, for example, which required a series to be $I(0)$ —that is, stationary at levels.

Using Baum's (2005) forms, we made b_t refer to our series derived for each word observed in the speeches. Therefore, we examined each of the identified words in Tables 1 and from July 1976 to December 2019. To test the presence of multiple additive outliers, we estimated the system represented in Equation 1:

$$\begin{aligned}
 b_t &= \alpha + \delta_1 DU_{1t} + \delta_2 DU_{2t} + e_t \\
 e_t &= \sum_{i=1}^k w_{1i} DT_{b1,t-i} + \sum_{i=1}^k w_{2i} DT_{b2,t-i} + \rho e_{t-i} + \sum_{i=1}^k \theta_i \Delta e_{t-i} + z_t
 \end{aligned}$$

Eq. 1

DU_{1t} equals 1 for month t after the first break point and 0 otherwise. Likewise, DU_{2t} equals 1 for time observation t after the second break and 0 otherwise (Mourão, 2018). T_{b1} and T_{b2} represent the break points to be analyzed by grid search (i.e., by identifying the minimal t ratio for the hypothesis $\rho = 1$). Following Baum (2005) and Mourão and Stawska (2020), we used $DT_{bm,t} = 1$ for $t = T_{bm} + 1$ and 0 for $m = 1, 2$

To test $\rho = 1$ with the presence of innovational outliers, we analyzed the model represented by Equation 2 (Baum, 2005):

$$b_t = \alpha + \delta_1 DU_{1t} + \delta_2 DU_{2t} + w_1 DT_{b1,t} + w_2 DT_{b2,t} + \alpha b_{t-i} + \sum_{i=1}^k \theta_i \Delta b_{t-i} + z_t$$

Eq. 2

Table 3 provides details about the profile of each series, with particular focus on the structural breaks identified.

Table 3. *Structural breaks in the frequency of the economically related words'*

Word	Structural breaks (Estimated coefficients)		Breaking Presidents
	Additive Outlier	Innovational Outlier	
Balance ('Balança')	1998m12 (1.098***) 2015m7 (1.745***)	1998m7 (0.068***) 2015m11 (0.082***)	Jorge Sampaio & Cavaco Silva
Corruption ('Corrupção')	1986m10 (11.935***) 2010m11 (6.758***)	1986m4 (1.228***) 2010m11 (0.717***)	Mário Soares & Cavaco Silva
Cycle ('Ciclo')	2002m5 (15.53***) 2013m10 (15.75***)	2002m4 (0.185***) 2013m5 (0.251***)	Jorge Sampaio & Cavaco Silva
Debt ('Dívida')	1999m11 (12.738***) 2015m1 (12.64***)	1999m5 (0.178***) 2015m2 (0.243***)	Jorge Sampaio & Cavaco Silva
Development (('Desenvolvimento'))	1999m2 (130.456***) 2010m1 (95.056*)	1997m9 (1.020***) 2007m7 (0.638***)	Jorge Sampaio & Cavaco Silva
Disparity ('Disparidade')	1987m2 (2.633***) 2010m1 (3.127***)	1986m11 (0.085*) 2009m10 (0.093***)	Mário Soares & Cavaco Silva
Economic ('Económico')	1998m3 (166.71***) 2015m3 (127.72***)	1996m1 (1.237***) 2016m1 (0.899***)	Jorge Sampaio & Cavaco Silva
Economics ('Economía')	1999m7 (80.912***) 2014m3 (68.66***)	1998m2 (0.645***) 2009m9 (0.751***)	Jorge Sampaio & Cavaco Silva
Europe ('Europa')	1990m10 (87.16***) 2002m1 (221.83***)	1996m7 (1.51***) 2001m11 (2.18***)	1996m7 (1.51***) 2001m11 (2.18***)
Finance ('Finança')	2004m4 (6.855***) 2015m5 (7.991***)	1980m2 (0.338***) 2009m6 (0.280***)	Jorge Sampaio & Cavaco Silva
Financial (('Financeiro'))	2004m5 (49.21***) 2015m4 (45.75***)	1980m10 (0.339**) 2009m6 (0.505***)	Jorge Sampaio & Cavaco Silva
Fiscal ('Fiscal')	1998m2 (6.903***) 2009m11 (6.353***)	1985m4 (0.129***) 2003m3 (0.179***)	Jorge Sampaio & Cavaco Silva
Funding (('Financiamiento'))	1993m7 (7.902***) 2010m10 (15.47***)	1999m3 (0.117***) 2009m5 (0.229***)	Mário Soares & Cavaco Silva
Indebtdness (('Endividamento'))	1999m10 (5.384***) 2015m6 (10.643***)	1980m9 (0.199***) 2014m1 (0.408***)	Jorge Sampaio & Cavaco Silva
Inequality (('Desigualdade'))	2004m10 (17.70***) 2009m6 (11.59***)	2004m9 (0.144***) 2009m12 (0.183)	Jorge Sampaio & Cavaco Silva
Invest, to ('Investir')	1994m6 (10.59***) 2014m12 (8.06***)	1994m4 (0.236***) 2014m8 (0.224***)	Mário Soares & Cavaco Silva
Investment ('Inversión')	1998m12 (28.82***) 2015m4 (24.21***)	1998m3 (0.181***) 2009m8 (0.279***)	Jorge Sampaio & Cavaco Silva
Need (('Necessidade'))	1999m6 (56.27***) 2009m12 (4.29***)	1998m3 (0.328***) 2013m10 (0.165***)	Jorge Sampaio & Cavaco Silva

Producer ('Produção')	2001m05 (1.817***) – 2009m07 (0.225***)	2001m5 (1.172***) – 2009m3 (0.139***)	Jorge Sampaio & Cavaco Silva
Production ('Produtivo')	1981m7 (18.45***) – 2001m5 (12.72***)	1980m9 (0.489***) – 1999m7 (0.317***)	Mário Soares & Cavaco Silva
Productive ('Productividade')	1998m11 (12.44*) – 2010m10 (10.0*)	1994m2 (0.233***) – 2008m3 (0.244***)	Mário Soares & Jorge Sampaio
Productivity ('Productor')	1998m10 (9.603***) – 2015m5 (7.74***)	1998m7 (0.113***) – 2014m10 (0.143***)	Jorge Sampaio & Cavaco Silva
Shock ('Choque')	1996m2 (2.890***) – 2014m8 (2.2775***)	1996m3 (0.175***) – 2014m9 (0.208)	Mário Soares & Cavaco Silva
Unemployed ('Desempregado')	1998m11 (8.776***) – 2013m10 (15.421***)	1997m9 (0.452***) – 2013m10 (0.940***)	Jorge Sampaio & Cavaco Silva
Unemployment ('Desemprego')	2008m6 (24.217***) – 2014m12 (22.045***)	2008m1 (0.238**) – 2012m10 (0.206*)	Cavaco Silva
Valorization ('Valorização')	1987m11 (8.13***) – 2002m4 (13.84***)	1986m2 (0.088***) – 1997m11 (0.176***)	Ramalho Eanes & Jorge Sampaio

Note: Estimated coefficients appear between parentheses.

Significance level: * = 10%, ** = 5%, *** = 1%.

With reference to Table 3, after running Clemente et al.'s (1998) test, we observed profound changes in each series formed by the frequency of the selected words. Between the columns of additive outliers and innovational outliers, we noticed, as expected, that the estimated coefficients for additive outliers were significantly greater than the ones for innovational outliers.

Table 3 also allows interpreting the magnitude of the estimated coefficients, which allowed us to confirm which words gained stimulus in becoming responsible for more focused speeches from the identified breaks for additive outliers. The following words in the column of sudden breaks (i.e., “Additive outliers”) are illustrative examples:

- “Development” (estimated coefficients for additive outliers: 130.46 in February 1999 and 95.06 in January 2010);
- “Economic” (estimated coefficients for additive outliers: 166.71 in March 1998 and 127.72 in March 2015); and
- “Europe” (estimated coefficients for additive outliers: 87.16 in October 1990 and 221.83 in January 2002).

Those words gained significant relevance from the respective structural breaks. In turn, in the column of gradual breaks (i.e., “Innovational outliers”), the following words were representative examples:

- “Corruption” (estimated coefficients for innovational outliers: 1.23 in April 1986 and 0.717 in November 2010);
- “Development” (estimated coefficients for innovational outliers: 1.020 in September 1997 and 0.638 in July 2007);

- “Europe” (estimated coefficients for innovational outliers: 1.51 in July 1996 and 2.18 in November 2001); and
- “Producer” (estimated coefficients for innovational outliers: 1.172 in May 2001 and 0.139 in March 2009).

Those terms are all words that, from the identified moments, have gained presence in the various discourses of Portugal’s presidents that we analyzed.

However, of all words, cases in which different presidents are identified between the two columns are rare. For example, “balance” showed a monthly evolution in frequency of appearance in the official messages of Portuguese presidents between July 1976 and December 2019, including initial momentum with Jorge Sampaio (i.e., president from March 1996 to March 2006). Its frequency gained a second stimulus with Aníbal Cavaco Silva (i.e., president from March 2006 to March 2016). In that case, regardless of whether we consider sudden structural breaks (i.e., additive outliers) or gradual (i.e., innovational outliers), both identify those two presidents as responsible for the higher frequencies of the term “balance.”

To pinpoint the reason for such increases in frequency, we referred to work by do Espírito Santo (2007) and Marques (2019). Among the insights afforded, we found that most of the series associated with the frequencies of those words had two significant structural breaks. We also verified the following concentration of breaking moments considering the list of presidents, which appears in chronological order:

- António Ramalho Eanes: 1.92%
- Mário Soares: 15.38%
- Jorge Sampaio: 36.54%
- Aníbal Cavaco Silva: 46.15%
- Marcelo Rebelo de Sousa: 0.0%

This breakdown shows a concentration of structural breaks in the speeches of Sampaio and Cavaco Silva. In particular, marked by higher frequencies of terms concerning the economy, Cavaco Silva’s profile as a so-called “breaking president” is unsurprising. He served as full professor of economics, and his administration was concentrated in the period marked by the international crisis in the financial markets, circa 2008, and by the Portuguese sovereign debt crisis. By comparison, the profile of breaking president found for Sampaio can also be anticipated by the explanations of Magone (2006) and Reestman (2006). Sampaio’s administration coincided with a period marking Portugal’s preparation to join the Eurozone, as well as latent tensions with the governments of Durão Barroso and Santana Lopes, which were marked by programs focused on budgetary stabilization.

4.2 Do words follow the economy, or vice versa?

To explore the temporal dynamics of the observed series, namely by studying ARDL models while considering error-correction models assessed by proper bond tests (Pesaran et al., 2001), we studied the cointegration of Okun’s index and each series composed by the frequency of each economically themed term in the presidents’ speeches. We began by employing ARDLs to model the relationship between each word’s frequency and the value of Okun’s index for the period 1976–2019. We also used the bounds-testing approach to analyze cointegration relations proposed by Pesaran et al. (2001).

Extensive literature has shown that the ARDL-based approach offers empirical advantages over other cointegration techniques; whereas those techniques require all variables integrated to be of the same order, the ARDL-based procedure provides valid results whether the variables are I(0) or I(1) or mutually cointegrated. Additionally, it allows estimating the long- and short-term relationships between the variables while efficiently providing consistent test results in small and large samples (Pesaran et al., 2001; Dritsakis, 2011).

The general form for ARDL ($p, q1, q2, \dots, qk$), in which p is the extension of lags of the dependent variable included in the estimation and $q1 \dots qk$ is the extension of lags for the k independent variables, is:

$$A(L)y_t = \mu + B_1(L)x_{1t} + \dots + B_k(L)x_{kt} + u_t$$

We also defined $A(L)$ as the lag polynomial and $B(L)$ as the vector polynomial:

$$A(L) = 1 - \alpha_1 L - \alpha_2 L^2 - \dots - \alpha_p L^p$$

$$B(L) = 1 - \beta_1 L - \beta_2 L^2 - \dots - \beta_q L^q$$

For our purposes, we observed the following specification of the respective ARDL:

$$A(L)i_t = \mu + B_1(L)y_t + u_t$$

In that specification, i represents the frequency of each word in the presidential discourse, and y represents the respective Okun index, observed at each month t . If we model the previous equation ARDL (1,1) as an error correction model, we obtain:

$$\Delta i_t = \mu + \beta_1 \Delta y_t - \lambda [i_{t-1} - \varphi_1 y_{t-1}] + u_t$$

Eq. 3

in which $i_{t-1} - \varphi_1 y_{t-1}$ is the error correction term obtained from the cointegration model. The error correction coefficient (λ) is associated with the speed of adjustment to restore the long-term relationship of equilibrium. A significant negative coefficient for λ implies that any short-term movement between the dependent and explanatory variables converges with the long-term relationship, in which a higher λ means a quicker convergence. The estimated coefficient β_1 is identified as the short-term coefficient related to expected changes in the initial differences in the dependent variable stimulated by the initial differences in the independent variable (i.e., by $y_t - y_{t-1}$, respectively).

Additional tests can be run to assess the stability and provide overall diagnoses of the estimated relationships. In particular, the traditional Breusch–Godfrey test for serial correlation, the ARCH test for heteroscedasticity, the Jarque–Bera normality test, and the Ramsey RESET test tend to be run to assess the normality of residuals and the absence of residual autocorrelation. The CUSUM test (or its

cumulative version) is also employed to verify the stability of long-term coefficients together with short-term dynamics. All of those tests have suggested no relevant problems in the estimations exhibited in Table 4; their results are available upon request.

Table 4 shows the adjustment term (λ) and the lags wherein each word follows the values of Okun's index. It also shows the cointegration relation between the frequency of each word and the evolution in living conditions in Portugal.

Although our primary objective was to analyze the short-term dynamics established between the frequency of words marked and the deterioration in the Portuguese people's standard of living, Table 4 also shows the results of Pesaran et al.'s (2001) bounds test, developed to evaluate the robustness of the possibility that the variables involved have a long-term relationship (i.e., that they are cointegrated).

Table 4. *Adjustment terms, significant lags, and long-term equations between the Okun index and each economy-focused word's frequency*

Word	Adjustment term	Significant lags [leads]	Long-run equation (F-value acc PSS/2001 & K&S/2018)
Balance ('Balança')	-0.756***	L6D: 0.008	Wit=0.004IOkun (F-val: 10.23***)
Corruption ('Corrupção')	-0.563***	LD: -0.02	Wit=0.004IOkun (F-val: 9.38***)
Cycle ('Ciclo')	-1.179***	L7D:0.100*	Wit=0.012IOkun (F-val: 18.075***)
Debt ('Divida')	-0.702***	L2D: 0.023*	Wit=0.04IOkun (F-val: 13.80***)
Development ('Desenvolvimento')	-0.868***	LD:0.234*** L3D:0.412**	Wit=-0.009IOkun (F-val: 17.065***)
Disparity ('Disparidade')	-0.903***	LD:0.281***	Wit=0.004IOkun (F-val: 11.36***)
Economic ('Económico')	-0.814***	L2D: 0.356*	Wit=0.070IOkun (F-val: 21.179***)
Economics ('Economía')	-0.639***	L2D:0.193***	Wit=0.176IOkun (F-val: 17.991***)
Europe ('Europa')	-0.650***	L2D:0.546***	Wit=-0.128IOkun (F-val: 13.918***)
Finance ('Finança')	-1.264***	L3D:-0.066** L5D: -0.080***	Wit=0.007IOkun
Financial ('Financeiro')	-0.794***	LD:-0.142***	Wit=0.013IOkun (F-val:12.81***)
Fiscal ('Fiscal')	-0.693***	L2D:-0.038*	Wit=0.003IOkun (F-val: 11.23***)

Funding ('Financiamiento')	-0.900***	L4D:0.041	Wit=0.009IOkun (F-val:19.28***)
Indebtdness ('Endividamento')	-0.995***	LD: -0.048* L3D: -0.066** L4D: -0.055*	Wit=0.01IOkun (F-val: 18.029***)
Inequality ('Desigualdade')	-0.921***	L3D: 0.056*	Wit=0.012IOkun (F-val:29.953***)
Invest, to ('Investir')	-0.685***	L2D: -0.04*** L4D: -0.03***	Wit=0.04IOkun (F-val: 9.19***)
Investment ('Inversión')	-0.566***	L5D:-0.100*	Wit=0.014IOkun (F-val: 14.99***)
Need ('Necessidade')	-0.724***	L2D: 0.117***	Wit=0.025IOkun (F-val: 8.67***)
Production ('Produção')	-1.155***	L7D: -0.116	Wit=0.005IOkun (F-val: 17.98***)
Productive ('Produtivo')	-1.022***	L5D: -0.059	Mário Soares & Cavaco Silva
Productivity ('Productividade')	-0.749***	D1=-0.044*	Wit=0.011IOkun (F-val: 12.59***)
Productor ('Productor')	-1.095***	L5D: 0.016	Wit=0.012IOkun (F-val: 16.51***)
Shock ('Choque')	-1.099***	L2D:-0.031** L5D: -0.045***	Wit=0.002IOkun (F-val: 16.45***)
Unemployed ('Desempregado')	-0.827***	D1: -0.161*** L2D:-0.152***	Wit=0.032IOkun (F-val: 17.58***)
Unemployment ('Desemprego')	-1.239***	L2D: 0.165***	Wit=0.031IOkun (F-val: 18.19***)
Valorization ('Valorização')	-0.661***	L2D: 0.228** L6D: 0.256**	Wit=-0.040IOkun (F-val: 9.46***)

Source: Self-made

Table 4 will allow us a synthesis of the discussion about the following dimensions concerning the terms associated with economics in the speeches of Portuguese presidents since 1976:

- Number of months in which each term is expected to persist in the presidents' discourse, via an analysis of the so-called "adjustment speed" in the first column;
- Time elapsed between the onset of worsening living conditions and the intensification of the frequency of each word in presidential messages, via an analysis of the statistical significance of the lags of the variation of Okun's index on the observed values of the frequency each word, visible in the second column; and
- Long-term relationship between Okun's index and the frequency of each word, via the values present in the third column, referring to the cointegration relationship whose significance can be inferred from the *F* test statistical values evaluated according to Pesaran et al. (2001) and to Kripfganz and Schneider (2018).

First, we found that the adjustment speed of each word, evaluated by $1/\lambda$, meant that the lower the estimated coefficient, in absolute terms, for the adjustment term of each word, the longer the adaptation period to the long-term equilibrium value. In practice, that dynamic means that the word persisted in presidents' speeches into subsequent periods. At the same time, the higher the value of the estimated coefficient for the λ , in absolute terms, the less likely the word's persistence in the speeches. That other dynamic was associated with words chosen for critical moments and used under specific conditions (Graham & Luke, 2011).

Analyzing the values in the first column of Table 4 we found that the top three words mostly structuring the economically related content of Portuguese presidents' messages in terms of persistence were "corruption" (estimated adjustment term: -0.563), "investment" (estimated adjustment term: -0.566), and "economics" (estimated adjustment term: -0.639). Performing the respective conversion ($1/\lambda$) additionally revealed that the frequency of those words generally extended for 2 months after the stimulus due to changes in unemployment and inflation in Portugal. In line with Charaudeau (2005), those terms can be labeled as "structural terms," which indicate a more frequent repetition of the topic even though at different times and over continuous periods.

By contrast, words such "finance" (estimated adjustment term: -1.264), "unemployment" (estimated adjustment term: -1.239), and "cycle" (estimated adjustment term: -1.179) tended to appear in epiphenomena—that is, at unique moments—with a high frequency in the month in which they appeared, as supported by data in Table 1A, but without the expected capacity to continue emerging in the presidents' speeches.

The second column of Table 4 particularly identifies the lags of the variables related to Okun's index with statistically significant estimated coefficients, at least considering the monthly variation in the frequency of each word as a dependent variable (Equation 3). Values in that column imply that some terms react more quickly when living conditions deteriorated for the Portuguese; examples include not only "development" and "disparity" but also "financial" and "indebtedness." Thus, when living conditions deteriorated, shown by rises in Okun's index, presidents tended to quickly mobilize the terms "development" and "disparity." At the same time, the same presidents tended to abandon terms such as "financial" and "indebtedness" more quickly. As associated values, LD and L2D respectively identify the first and second lags of the difference, thereby suggesting that the words identified emerged mostly within 2 months following changes in Okun's index.

By contrast, the slowest words to emerge were mostly observed with reactions after 6 months. Such was the case with "cycle," "investment," and "financial," all of which tended to be mobilized later. The deterioration in living conditions exerted the expected decrease in the frequency of words such as "cycle" and "investment" 6 months after the combined changes in the unemployment rate and inflation rate, thus representing what Angenot (1997) and Barbet et al. (2006) have identified as "regime words."

The third column of Table 4 presents the estimated long-term coefficient between Okun's index and the frequency observed in each signaled word. For each of the observed words, we used the estimated F value according to Pesaran et al. (2001) and according to Kripfganz and Schneider (2018). In relation to those F values, all words identified had a statistically significant cointegration relationship; thus, they emerged in significant reaction to changes in economic conditions involving the Portuguese.

Considering words with positive estimated coefficients, Table 4 shows that the terms with the highest values were "economics" (+0.176), "economic" (+0.07), and "valorization" (+0.04). Thus, when the combined result of unemployment and inflation increased, a reinforcement in the presidential use of those words in speeches can be expected. By contrast, some terms became less preferred and even

tended to be omitted from presidential speeches: “Europe” (-0.128), “production” (-0.02), and “development” (-0.009). All of these latter words tended to show declining frequency in the presidential speeches due to increased values recorded in Okun’s index. Following Amossy (2006), we have identified those words as ones that, similar to inferior goods, tend to show decreases in use when economic situations deteriorate.

5. Discussion

To discuss our results, we propose three lines of approach. The first line relates to authors such as Amossy (2006) or Charaudeau (2005) who have focused on the political message as a product resulting from the management of several intervening dimensions: the objectives of individual management and of the political supporting groups of the politician, combined with the expectations of voters, along with exogenous shocks in which the evolution of the national economy and of the international economic structures is inserted.

The second line of discussion further specifies the role of the economy in political discourse. Scholars such as Adeishvili (2016) have set precedents for our results concerning economic and political realities that nevertheless differ from ours. Although with methodological procedures that also differ from ours, those authors observed how the political message included economic concerns as the surrounding economic conditions deteriorated.

Last, although politicians may be so-called “shock managers” perceived in the population and in the electorate, as Longuet and Pereira (2015) have put it, there are themes that can be called “structuring” and can be analyzed as topics with a certain autonomy in the face of economic shocks. In our analysis, especially as represented by results shown in Tables 3 and 4, we found how topics related to corruption or development were less reactive to short-term fluctuations felt in the economy and can be highlighted as structuring themes of the various profiles that have exercised presidential functions in Portugal.

Let us start with the first line. Specifically in the case of economic fluctuations, we found that the changes in the economic climate in Portugal combined with the personal agenda of each President of the Republic led to definite choices of certain words. As we have observed, when there is a combined result of unemployment and increased inflation, it is expectable a reinforcement in the presidential use of words like 'economics', 'economic' or 'valorization' in speeches. By contrast, other words became less preferred and even tended to be omitted from presidential speeches: “Europe” (-0.128), “production” (-0.02), and “development” (-0.009).

In line with Amossy (2006) or Charaudeau (2005), our work has shown that the use of economic words is not random in presidential speeches in Portugal. On the contrary – the worsening of the economic situation leads to the more recurrent use of words centered on the word ‘Economics’ itself, in an attempt by politicians to draw attention to the seriousness of the matter. For this purpose, not only we did carry out work supported by the ALCESTE method (using the ‘Iramuteq’ software) to extract the relevant words in the speeches, but also resorted to the potential of cointegrated time series analysis (through ‘Autoregressive Distributed Lags’). Above all, this last analysis made it possible to show that the choices of political terms react to the economic climate and that the choice of each specific word is also defined by the moment lived. We are aware that, for future work, we hope to be able to detail whether the President x Economic Climate combination presents significant differences (between the various Presidencies). This will be a promising challenge for scientific research in the area.

In the second line, and respecting the results achieved by Adeishvili (2016), our Tables of results, especially Table 4, showed that also for the case of the Presidents of the Republic of Portugal there is a significant influence of the economic climate on the concerns expressed in the speeches. Even though the education and academic sensitivity of each President of the Republic varies, our Table 4 showed that there is a co-integration relationship between the economic climate and the frequency of economic words in presidential speeches. In response to one of our original questions, we can even say that our evidence suggests that presidential speeches are reactive to economic problems.

Finally, in the third line of discussion, we confirmed the presence of persistent words in presidential speeches. These words maintain a stable frequency, regardless of who holds the position of President of the Republic or the moment of the economic cycle. This line of discussion had relevant contributions from authors such as Longuet and Pereira (2015). Thus, for the Portuguese case, we found that terms such as 'corruption' or 'economic development' are less reactive to the phases of the economic cycle and should be seen, instead, as problems of the Portuguese economy in the view of the various Presidents of the Republic.

6. Conclusion and future work

Our study began with a clear objective: to observe the association between the economic evolution felt by the Portuguese and the frequency of the use of certain terms or expressions in the official speeches of Portugal's presidents. Based on that objective, and considering the suggestions arising from the literature review, we devised the hypothesis that the official messages of Portuguese presidents since 1976 have reflected the evolution of the country's economic conditions. However, also supported by the literature review, we additionally proposed that not all terms would be used with the same intensity.

Thus, we structured our analysis around three empirical moments: the selection of economic terms used in the official speeches of Portuguese presidents, the identification of presidents who introduced special uses of each term or expression, and the analysis of the temporal dynamics observed between the economic evolution and evolution of the frequency of terms in each speech.

For the first empirical moment, we used an ALCESTE-based method (Kalampalikis, 2005; Ratinaud & Marchand, 2012) shown to be the most suitable for analyzing the frequency of each term as well as for discussing the statistical significance of the connections established by the terms in order to identify the groups of words that belong to the same topic. Thus, for the topic of economic affairs, for example, we identified 26 terms using the aforementioned method. We subsequently observed the evolution of the frequency of those terms in the official speeches of Portuguese presidents. In general, the presidents used those words more frequently after 1996, which coincided with the deterioration of living conditions in Portugal, as visible in the increased values of Okun's misery index (i.e., resulting from the sum of unemployment and inflation rates).

In the second empirical moment, we verified that Portuguese presidents demonstrated special breaks in the frequencies of each word in their official speeches. Among the 26 identified terms, certain ones achieved relevance for most presidents at certain times. However, Presidents Sampaio and Cavaco Silva concentrated the greatest number of the most intense uses of words associated with economic matters.

Last, we observed that most terms followed the deterioration of living conditions in Portugal in a period extending from the first month following the deterioration perceived by Okun's index to a maximum period of 6 months. In our cointegration tests, all identified terms showed long-term relationships with Okun's index.

Aware of the pioneering work sustained here, which has explored not only methods of content analysis but also time series analysis, we propose seven possibilities for further development. The first relates to the generation of alternative research that, using the methods proposed here, also focuses on the fluctuation of words in an enlarged group of terms from topics such as welfare, citizenry, and international affairs. The second possibility involves using the official speeches of Portugal's prime ministers to find common reactions with the reactions perceived in the speeches of Portugal's President. Third, we also propose to expand our work by evaluating changes in the speeches of leaders of European institutions (e.g., presidents of the European Commission or the European Parliament) due to changes in Okun's index observed for the European community. Fourth, as our analysis could also exhibit expressions ('sets of organized words') instead of single words, we also recognize this potentiality – the use of expressions – as a relevant challenge for further work. Fifth, we also consider as a promising avenue the possibility of replicating our methodological steps, but now substituting the Okun Index for each component (unemployment rate and inflation rate). Additionally, we also consider as relevant the potentialities of detailing these relationships with different measures of prices indexes and with different terms of unemployment rates (e.g., short-term versus long-term unemployment rates) – whenever available by data sources. Sixth, although recognizing the interest on dividing the analysis for each type of President's discourse (celebratory, ceremonial national statements, presidential statements, messages to citizens and various public interventions during the analyzed period), we are not able to properly extend the current length of the article given the current extension. However, we also suggest this potentiality as a promising avenue for further research. Seventh, at this version, the difference in results for each president according to their ideological tendency or affiliation party (PS/PSD) has not been analyzed. The ideology of the presidents can be fundamental when presenting results, both to mention differences and similarities. We are talking about political discourse, and so we have to value the influence of ideology in the terms, frameworks and meanings of that discourse. We consider it would improve further researches to introduce a "more political" analysis of the results obtained and a detail about the party's differences in the presidential discourses.

7. References

- Adeishvili, K. (2016). *L'analyse du discours politique. Identités nationales. Argumentation. Implicite*. University Europeene.
- Amossy, R. (2006). *L'argumentation dans le discours*. Armand Colin.
- Angenot M. (1997). *La propagande socialiste. Six essais d'analyse du discours*. Balzac.
- Araújo, A. (2003). El Presidente de la República en la evolución del sistema político de Portugal. In Barreto, A., Fortes, B. G., & Magalhães, P. (Eds.), *Portugal: democracia y sistema Político*. Madrid: Siglo Veintiuno. Siglo Veintiuno.
- Aue, A., & Horvath, L. (2013). Structural breaks in time series. *Journal of Time Series Analysis*, 34(1). <https://doi.org/10.1111/j.1467-9892.2012.00819.x>
- Bai, J., & Perron, P. (2003). Critical values for multiple structural change tests. *Econometrics Journal*, 6(1), 72-78. <https://doi.org/10.1111/1368-423X.00102>
- Barbet D., Bonhomme M., & Rinn M. (2006). La politique mise au net. Mots. *Les langages du politique*, 80. <https://doi.org/10.4000/mots.69>
- Barbier, J. C. (2011). Changes in political discourse from the Lisbon Strategy to Europe 2020:

tracing the fate of 'social policy.' *ETUI Working Paper*. <http://dx.doi.org/10.2139/ssrn.2221839>

- Barbosa, R. (2021, April 4). *Popularidade de Marcelo volta a subir. Costa deixa pandemia para trás*. Diário de Notícias. <https://www.dn.pt/politica/popularidade-de-marcelo-volta-a-subir-costa-deixa-pandemia-para-tras-13530813.html>
- Baum, C. (2015) 'Stata: The language of choice for time-series analysis?' Stata J.
- Beauguitte, L., Richard, Y., & Guérin-Pace, F. (2015). The EU and its neighbourhoods: A textual analysis on key documents of the European neighbourhood policy. *Geopolitics*, 20(4), 853-879. <https://doi.org/10.1080/14650045.2015.1075512>
- Bernardes, C., & Barros, C. (2019). Populismo no Brasil contemporâneo: Uma Análise de Discursos de Lula e de Bolsonaro. *COMPOLÍTICA*8.
- Borriello, A. (2017). 'There is no alternative': How Italian and Spanish leaders' discourse obscured the political nature of austerity. *Discourse & Society*, 28(3), 241-261. <https://doi.org/10.1177/0957926516687419>
- Borriello, A., & Brack, N. (2019). 'I want my sovereignty back!' A comparative analysis of the populist discourses of Podemos, the 5 Star Movement, the FN and UKIP during the economic and migration crises. *Journal of European Integration*, 41(7), 833-853. <https://doi.org/10.1080/07036337.2019.1665658>
- Camargo, B. V., & Justo, A. M. (2013). IRAMUTEQ: um software gratuito para análise de dados textuais. *Temas Em Psicologia*, 21(2), 513-518.
- Cavaco Silva, A. (2009). Portugal. Presidente da República, 2006-2016 (Aníbal Cavaco Silva) - Mensagem de Ano Novo. In: Cavaco Silva, A. *Roteiros III*, pp. 77-80. Imprensa Nacional-Casa da Moeda.
- Cavaco Silva, A. (2010). Portugal. Presidente da República, 2006-2016 (Aníbal Cavaco Silva) - Mensagem de Ano Novo. In: Cavaco Silva, A. *Roteiros IV*, pp. 59-63. Imprensa Nacional-Casa da Moeda.
- Cavaco Silva, A. (2012). Portugal. Presidente da República, 2006-2016 (Aníbal Cavaco Silva) - Mensagem de Ano Novo. In: Cavaco Silva, A. *Roteiros VI*, pp. 95-98. Imprensa Nacional-Casa da Moeda.
- Cavaco Silva, A. (2014). *Mensagem de Ano Novo do Presidente da República*. Arquivo Da Presidência Da República.
- Charaudeau, P. (2005) *Le discours politique*, Paris: Vuibert.
- Chaves-Avila, R., & Savall-Morera, T. (2019). The Social Economy in a Context of Austerity Policies: The Tension Between Political Discourse and Implemented Policies in Spain. *Voluntas*, 30(3), 487-498. <https://doi.org/10.1007/s11266-018-00075-3>
- Clemente, J., Montañés, A. & Reyes, M. (1998) Testing for a unit root in variables with a double change in the mean, *Econ. Lett*, 59, 175–182. [https://doi.org/10.1016/S0165-1765\(98\)00052-4](https://doi.org/10.1016/S0165-1765(98)00052-4)

- Cordeiro, A. D. (2013, March 9). *Analistas dizem que Presidente escreveu prefácio auto-justificativo. Público*. <https://www.publico.pt/2013/03/09/politica/noticia/presidente-expos-limites-da-sua-actuacao-com-prefacio-que-nao-abrandara-contestacao-1587186>
- Costa, B. F. da. (2021). Representação mediática do Presidente dos afetos num tempo de pandemia. *Mediapolis-Revista de Comunicação, Jornalismo e Espaço Público*, 12, 157-170.
- Curbelo, A. A. (2017). Analysing the (ab)use of language in politics: the case of Donald Trump. *Working Paper*.
- da Cruz, M. B. (1994). O Presidente da República na génese e evolução do sistema de governo português. *Análise Social*, 29(125/126), 237-265. <https://www.jstor.org/stable/41011055>
- De Alba, M. (2004). El Método ALCESTE y su Aplicación als Estudio de las Representaciones Sociales del Espacio Urbano: El Caso de la Ciudad de México. *Papers on Social Representations*, 13(1).
- de Matos, L. S. (1992). O sistema político português ea Comunidade Europeia. *Análise Social*, 27(118/119), 773-787. <https://www.jstor.org/stable/41010935>
- do Espírito Santo, P. (2007). Comunicação e política nos discursos presidenciais de tomada de posse: 1976-2006. *Revista de Estudos Em Comunicação*, 2.
- do Nascimento, A. R. A., & Menandro, P. R. M. (2006). Análise lexical e análise de conteúdo: uma proposta de utilização conjugada. *Estudos e Pesquisas Em Psicologia*, 6(2), 72-88.
- Dritsakis, N (2011) Demand for Money in Hungary: An ARDL Approach, *Review of Economics & Finance*, 1, 01-16.
- Duverger, M. (1980). A new political system model: Semi-presidential government. *European Journal of Political Research*, 8(2), 165-187. <https://doi.org/10.1111/j.1475-6765.1980.tb00569.x>
- Elgie, R. (1999). Semi-presidentialism and comparative institutional engineering. In R. Elgie (Ed.), *Semi-Presidentialism in Europe*, (pp. 281-299). Oxford University Press.
- Fernandes, J., & Jalali, C. (2018). Uma presidência renovada? O semipresidencialismo português e as eleições de 2016. In Pinto, C., & Rapaz, P. (Eds.), *Presidentes e (Semi)Presidencialismo nas Democracias Contemporâneas* (pp. 253-278). Imprensa de Ciências Sociais da Universidade de Lisboa.
- Fonseca, P., & Ferreira, M. J. (2015). Through ‘seas never before sailed’: Portuguese government discursive legitimation strategies in a context of financial crisis. *Discourse & Society*, 26(6), 682-711. <https://doi.org/10.1177/0957926515592780>
- Foucault, M. (1996). *Ordem do discurso (A)* (vol. 1). Edições Loyola.
- Foucault, M. (2008). *A arqueologia do saber* (L. F. Baeta Neves, trad.). *Forense Universitária*.
- Franco, V. S. D. (2018). *Semipresidencialismo e m Portugal: Poderes presidenciais e interação com o governo (1982-2016)*. Universidade Nova de Lisboa.

- Freire, A., & Santana-Pereira, J. (2019). The President's dilemma: The Portuguese semi-presidential system in times of crisis (2011-16). *International Journal of Iberian Studies*, 32(3), 117-135. https://doi.org/10.1386/ijis_00001_1
- Freire, André, & Pinto, A. C. (2005). *O poder dos presidentes: a República Portuguesa em debate*. Campo da comunicação.
- Freire, André. (2017). *Para lá da "geringonça": o governo de esquerdas em Portugal e na Europa*. Contraponto.
- Gilles, I., Mayer, M., Courvoisier, N., & Peytremann-Bridevaux, I. (2017). Joint analyses of open comments and quantitative data: Added value in a job satisfaction survey of hospital professionals. *PLoS ONE*, 12. <https://doi.org/10.1371/journal.pone.0173950>
- Graham, P., & Luke, A. (2011). Critical discourse analysis and political economy of communication: Understanding the new corporate order. *Cultural Politics*, 7(1), 103-132. <https://doi.org/10.2752/175174311X12861940861824>
- Gramacho, W. (2008). Popularidade e economia no semipresidencialismo português. *Análise Social*, 188, 531-550. <https://www.jstor.org/stable/41012651>
- Green, J. (2007). When voters and parties agree: valence issues and party competition. *Political Studies* 55(3), 629-655. <https://doi.org/10.1111/j.1467-9248.2007.00671.x>
- Hellwig, T. (2012). Constructing Accountability: Party Position Taking and Economic Voting. *Comparative Political Studies*, 45(1), 91-118. <https://doi.org/10.1177/0010414011422516>
- Horváth, J. (2009). Critical discourse analysis of Obama's political discourse. *Language, Literature and Culture in a Changing Transatlantic World, International Conference Proceedings*, 45-56.
- Huber, E., & J. Stephens. (2001). *Development and Crisis of the Welfare States, Parties and Politics in Global Markets*. University of Chicago Press.
- Junior, F. I., Cardoso, M., & Junior, T. P. (2018). Os "nós" de Temer: uma análise dos discursos de posse de 2016. *Compólitica*, 8(1), 65-96. <https://doi.org/10.21878/compolitica.2018.8.1.139>
- Justo, A. M., & Camargo, B. V. (2014). Estudos qualitativos e o uso de softwares para análises lexicais. In: Novikoff, C., Santos, S. R. M., & Mithidieri, O. B. (Orgs.) *Caderno de artigos: X SIAT & II Serpro (2014: Duque de Caxias, RJ)* (pp. 37-54). Duque de Caxias: Universidade do Grande Rio "Professor José de Souza Herdy".
- Kahl, M. L., & Leff, M. (2006). The Rhetoric of war and remembrance: An analysis of president Bill Clinton's 1994 D-day discourses. *Qualitative Research Reports in Communication*, 7(1), 15-21. <https://doi.org/10.1080/17459430600964604>
- Kalampalikis, N. (2005) 'L'apport de la méthode Alceste dans l'analyse des représentations sociales', in *Méthodes d'étude des représentations sociales*, eds Jean-Claude Abric, Toulouse, France: ERES, 147-163.

- Kripfganz, S. & Schneider, D. (2018) Response Surface Regressions for Critical Value Bounds and Approximate p-values in Equilibrium Correction Models. Manuscript, University of Exeter and Max Planck Institute for Demographic Research. Available at www.kripfganz.de/research/Kripfganz_Schneider_ec.html
- Lahusen, C., Kousis, M., Kiess, J., & Paschou, M. (2016). Political claims and discourse formations: A comparative account on Germany and Greece in the Eurozone crisis. *Politics & Policy*, 44(3), 525-552. <https://doi.org/10.1111/polp.12162>
- Lobo, M. C. (1996). A evolução do sistema partidário português à luz de mudanças económicas e políticas (1976-1991). *Análise Social*, 1085–1116. <https://www.jstor.org/stable/41011245>
- Lobo, M. C., & Neto, O. A. (2009). O semipresidencialismo e a democratização da lusofonia. In: Lobo, M. C., & Neto, O. A. (Org.), *O Semipresidencialismo Nos Países de Língua Portuguesa*, 15-24. Imprensa de Ciências Sociais.
- Longhi, J., Marinica, C., & Després, Z. (2019). Political language patterns' dissemination between a political leader and his campaign community: a CMC corpora analysis. *European Journal of Applied Linguistics*, 7(2), 281-304. <https://doi.org/10.1515/eujal-2019-0009>
- Longuet, S & Marques Pereira, J. (2015) Discours de la crise, crise du discours, *Économie et Institutions*, 22, 1-15. <https://doi.org/10.4000/ei.971>
- Lopes, F., Santo, P. E., Botelho, L., & Sá, S. (2021). Marcelo Rebelo de Sousa: um Presidente da República que reconfigurou o cargo com a colaboração dos média noticiosos. *Estudos em Comunicação*, 32. <https://doi.org/10.25768/21.04.03.32.01>
- Maesse, J. (2015). Economic experts: a discursive political economy of economics. *Journal of Multicultural Discourses*, 10(3), 279-305. <https://doi.org/10.1080/17447143.2015.1050029>
- Magone, J. (2006) The Rise and Fall of the Centre-right Coalition Government in Portugal (2002-2005), *Lusotopie*, 13(1), 39-59.
- Mair, P. (2011). Bini Smaghi vs. the parties: Representative government and institutional constraints, EUI RSCAS Working paper 2011/22, Florence: EUI.
- Marpsat, M. (2010). La méthode Alceste. *Sociologie*, 1(1). <http://journals.openedition.org/sociologie/312>
- Marques, M. (2019) Discursos políticos presidenciais de Ano Novo. Gerir a incerteza Gragoatá', *Niterói*, 24(50), 717-736. <https://hdl.handle.net/1822/63406>
- Mourao, P. (2018) Smoking Gentlemen—How Formula One Has Controlled CO2 Emissions, *Sustainability*, 10(6) 1841, 1-23. <https://doi.org/10.3390/su10061841>
- Mourao, P. (2021). Health by Words—A Content Analysis of Political Manifestos in the Portuguese Elections of 1975. *International Journal Environmental Research and Public Health*, 18(13). <https://doi.org/10.3390/ijerph18137119>

- Mourao, P., & Martinho, V (2016) Discussing structural breaks in the Portuguese regulation on forest fires—An economic approach, *Land Use Policy*, 54, 460–478. <https://doi.org/10.1016/j.landusepol.2016.03.003>
- Mourao, P., & Stawska, J (2020) Governments as bankers - how European bonds have substituted bank deposits, *Applied Economics*, 1-16. <https://doi.org/10.1080/00036846.2020.1738328>
- Novais, J. R. (2007). *Semipresidencialismo: teoria do sistema de governo semipresidencial*. Livraria Almedina.
- Novais, J. R. (2010). *Semipresidencialismo o Sistema Semipresidencial Português* (vol. 2). Almedina.
- Rebello de Sousa, M. (2018). *Mensagem de Ano Novo do Presidente da República*. Página Oficial Da Presidência Da República Portuguesa.
- Reinert, M. (1990). Alceste une méthodologie d'analyse des données textuelles et une application: Aurelia De Gerard De Nerval. *Bulletin of Sociological Methodology/Bulletin de Méthodologie Sociologique*, 26(1), 24-54.
- Roberts, J. (1998). *A glossary of technical terms on the economics and finance*. World Health Organization.
- Rodrigues, L. M. B. (2009). O modelo de governo na constituição portuguesa de 1982. *Revista de Ciências Empresariais e Jurídicas*, 15, 245-260.
- Sampaio, J. (2004). *Mensagem de Ano Novo 2004*. Biblioteca Virtual.
- Sampaio, J. (2005). *Mensagem de Ano Novo 2005*. Biblioteca Virtual.
- Smith, D. N. A. (2010). *A corpus-driven discourse analysis of transcripts of Hugo Chávez's television programme 'Aló Presidente'*. University of Birmingham.
- Smyrniotis, N., & Ratinaud, P. (2017). The Charlie Hebdo attacks on Twitter: A comparative analysis of a political controversy in English and French. *Social Media+ Society*, 3(1), <https://doi.org/10.1177/2056305117693647>
- Stevenson, H. (2019). Contemporary discourses of green political economy: AQ method analysis. *Journal of Environmental Policy & Planning*, 21(5), 533-548.
- Takas, E., Prodromitis, G., & Papastamou, S. (2020). Representing Europe in times of crisis. Rhetorical construction of “Europe” in the parliamentary discussions regarding the voting of the three Memoranda in Greece. *Journal of Education*, 2(1).
- Tavares, R. (2021, October 13). *Marcelo pressiona acordo e avisa que sem Orçamento não há duodécimos, mas eleições antecipadas*. Observador. <https://observador.pt/2021/10/13/marcelo-pressiona-acordo-e-avisa-que-sem-orcamento-nao-ha-duodecimos-mas-eleicoes-antecipadas/>
- Trimithiotis, D. (2018). Understanding political discourses about Europe: A multilevel contextual approach to discourse. *Discourse & Society*, 29(2), 160-179. <https://doi.org/10.1177/0957926517734425>
-

Tsai, J.-H. (2008). Sub-types of Semi-presidentialism and Political Deadlock. *French Politics*, 6(1), 63-84.

van Dijk, T. A. (1997). What is political discourse analysis. *Belgian Journal of Linguistics*, 11(1), 11-52.

van Dijk, T. A. (2008). *Discourse and context. A Sociocognitive Approach*. Cambridge University Press.

Veiga, L. G., & Veiga, F. J. (2004). Economia, popularidade e intenções de voto em Portugal: uma análise longitudinal com dados agregados. In Freire, A., Lobo, M. & Magalhães, P. (Eds.), *Portugal a Votos: As Eleições Legislativas de 2002*. Imprensa de Ciências Sociais.

Veiga, L. R. F. G. (1998). Popularity functions for the Portuguese prime minister, government, parliament and president. *European Journal of Political Research*, 33(3), 347-361.

8. Appendix

Table 1A. Descriptive statistics

	Observations	Mean	Standard Deviation	Maximum	Minimum
Balance ('Balança')	518	0.0066	0.0587	0.8800	0.0000
Corruption ('Corrupção')	518	0.0460	0.3152	5.9900	0.0000
Cycle ('Ciclo')	518	0.0899	0.3600	4.2500	0.0000
Debt ('Dívida')	518	0.0737	0.4093	5.9400	0.0000
Development ('Desenvolvimento')	518	0.6553	1.1920	7.1300	0.0000
Disparity ('Disparidade')	518	0.0124	0.0981	1.4100	0.0000
Economic ('Económico')	518	0.8779	1.6960	11.0900	0.0000
Economics ('Economía')	518	0.4322	0.9932	7.9400	0.0000
Europe ('Europa')	518	0.7919	2.2456	25.6400	0.0000
Finance ('Finança')	518	0.0517	0.3073	3.9000	0.0000
Financial ('Financeiro')	518	0.2896	0.8169	6.4200	0.0000
Fiscal ('Fiscal')	518	0.0416	0.1950	1.8500	0.0000
Funding ('Financiamento')	518	0.0662	0.2915	2.3700	0.0000
Indebtdness ('Endividamento')	518	0.0470	0.2212	1.9800	0.0000
Inequality ('Desigualdade')	518	0.1137	0.3654	2.9800	0.0000
Invest, to ('Investir')	518	0.0517	0.2123	1.8100	0.0000
Investment ('Inversión')	518	0.1523	0.4551	3.6200	0.0000
Need ('Necessidade')	518	0.2720	0.5913	3.9700	0.0000
Production ('Produção')	518	0.0764	0.3541	3.7100	0.0000

Productive ('Produtivo')	518	0.0520	0.2151	1.9700	0.0000
Productivity ('Productividade')	518	0.0690	0.2537	2.9100	0.0000
Producer ('Productor')	518	0.0049	0.0828	1.8100	0.0000
Shock ('Choque')	518	0.0164	0.1262	2.0600	0.0000
Unemployed ('Desempregado')	518	0.0575	0.4382	7.4600	0.0000
Unemployment ('Desemprego')	518	0.1554	0.5602	6.0600	0.0000
Valorization ('Valorização')	518	0.0549	0.2127	1.6900	0.0000

AUTHORS

Paulo Reis Mourão

Department of Economics, Economics & Management School, University of Minho, Portugal

Paulo Reis Mourao was born in Vila Real (Portugal). He is the author of several scientific articles indexed by ISI Thompson and of some books. His works are focused on Economics, Public Finance, Social Economics and Sports Economics. He appears often in national and international media for commenting social and economic issues. Paulo Mourao has been awarded several times for his scientific works.

paulom@eeg.uminho.pt

Índice H: 19

Orcid ID: <https://orcid.org/0000-0001-6046-645X>

Google Scholar: <https://scholar.google.com/citations?user=mxXUFTUAAAAJ&hl=pt-PT&oi=sra>

ResearchGate: <https://www.researchgate.net/profile/Paulo-Mourao-5>

João Pedro Baptista

Department of Communication, Philosophy and Politics, University of Beira Interior (UBI), Portugal

João Pedro Baptista is a journalist and researcher at the Research Unit Labcom – Communication, Philosophy and Politics, of the Department of Communication, Philosophy and Politics at the University of Beira Interior, in Portugal. He holds a master's degree in Communication Sciences: Public, Political and Intercultural Communication from the University of Trás-os-Montes and Alto Douro and, currently, he has a PhD fellowship in Communication Sciences, from the Foundation for Science and Technology (FCT), at the University of Beira Interior. His research interests are related to the growing problem of fake news and online disinformation, as well as the study of the situation of the Left-Right political dichotomy framed with the study of political-party communication.

joao.pedro.baptista@ubi.pt

Índice H: 4

Orcid ID: <https://orcid.org/0000-0002-3684-1923>

Google Scholar: <https://scholar.google.com/citations?user=BBvTAGsAAAAJ&hl=pt-PT>

ResearchGate: <https://www.researchgate.net/profile/Joao-Baptista-13>