

# Setting the agenda? The selective use of statistics in Brazilian media

DANIEL ZIRKER E OSCAR ARRUDA D'ALVA

**Abstract:** This article discusses the apparently selective production of political narratives by major Brazilian newspapers and the use of economic statistics during the period of 2015-2017. We employ content analyses to understand at least three phenomena: the high levels of convergence of the Brazilian print media; the increasing and selective use of specific national statistics; and instances of anomalous patterns in news production.

**Keywords:** Print Media. Narratives. Economic Statistics.



## Configurando a agenda? O uso seletivo de estatísticas na mídia brasileira

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**Resumo:** Este artigo discute a produção aparentemente seletiva de narrativas políticas pelos principais jornais brasileiros, a partir do uso de estatísticas econômicas. Empregam-se análises de conteúdo para entender, pelo menos, três fenômenos: os altos níveis de convergência da mídia impressa brasileira; o uso crescente e seletivo de estatísticas nacionais específicas; as anomalias na produção de notícias envolvendo o uso dessas estatísticas entre 2015 e 2017.

**Palavras-chave:** Mídia Impressa. Narrativas. Estatísticas Econômicas.

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## 1 Introduction<sup>1</sup>

The apparently selective production of political narratives by the three major (national) Brazilian newspapers, widely regarded as agenda setting leaders in Brazil, surrounds the use of economic statistics and, more important, the mere use of expressions that imply, without denoting as such, difficult economic conditions, and hence, apparently, criticism of the government. Three of these “loaded” terms, *unemployment*, *inflation* and the *Gross Domestic Product* (GDP) carry with them overpowering semantics, particularly when the frequency of their use is placed alongside particular political campaigns. We attempt to link the frequency of reporting of these terms, laden as they can be with negative connotations, to periods of political contestation.

Brazilians have, over the past 50 years, suffered enormously from the vicissitudes of the three economic variables noted above. The timing of their mere mention in the media, if not primarily dictated by a major economic dynamic, can be said to represent a powerful political process of agenda-setting and framing. The origins of non-economic triggers, political agenda setting in the media, is typically most visible in television coverage. While television is the primary source of information for most Brazilians regarding such potentially threatening variables, Brazilian TV depends, in turn, upon agenda-setting, framing and priming of news content by Brazil’s three national newspapers.

Are such reports triggered by the broad impact of their respective phenomena, or are reports of a more politically instrumental origin? Is there a primarily political disposition behind the selection process? Is there, we suspect, a routing protocol, an underlying political purpose, among key government agencies as to when a potentially historically threatening topic, such as “inflation rate”, irrespective of its actual rise or fall, merits discussion? We know that such discussions find their first voice in the print media, and principally in the major national newspapers, and then on to TV broadcasts. Our two hypotheses in this study illustrates the point clearly:

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1 This paper was presented at the XXXVII International Congress of the Latin American Studies Association, Boston, Massachusetts, USA, May 24-27, 2019.

H<sub>1</sub>: There is a high degree of convergence in the frequency and timing in the topics reported in the three major national newspapers of Brazil.

H<sub>2</sub>: The timing in the frequency of mentioning in the three major Brazilian newspapers of the key economic variables, correspond with political contestation or support rather than objective changes in the variables.

## **2 Statistics and politics**

Nineteenth Century British Prime Minister Benjamin Disraeli was reported by American author Mark Twain to have remarked: "There are three kinds of lies: lies, damned lies, and statistics". Nevertheless, we live in a measurement society where statistics, and the reporting of statistics, are said to represent a vital component of almost all, and particularly democratic, political decision-making. If *politics* is, as Harold Laswell noted, "who gets what, when and how," and the use of statistics has a determinant effect on that, it is logical to assume that the reporting of statistics, its timing and stimulus, have a fundamental political impact on the political system.

Brazil has experienced catastrophic swings in all three of the economic indicators in question: inflation, unemployment, and the Gross Domestic Product (GDP). All three of these measures are pre-eminently political, that is, they ultimately determine who gets what, when and how.

## **3 Agenda-setting, priming, framing and reinforcing**

The privileged role of three national newspapers in Brazil underscores the way in which the elite news media can engage narratives that introduce, shape and reinforce public perceptions relevant to the maintenance and extension of dominant political power structures. Typically, this process is described in its four overlapping parts: agenda setting, framing, priming and reinforcing. Agenda-setting, a term first mentioned in regards to elite

media, in a classic 1972 article by McCombs and Shaw, is perhaps most saliently expressed in the context of economic and social statistics, although all of the first three of these processes, framing, priming and agenda-setting, have been described as integral to “the latest paradigm shift in political-communication research” (SCHEUFELE; TEWKSBURY, 2007, p.10). This shift, they argue, can best be analysed in the growing distinction between *accessibility* and *applicability* effects in the role of media (SCHEUFELE; TEWKSBURY, 2007).

Agenda-setting, as described by McCombs and Shaw in their 1972 article, focuses upon the role of the media as “the major primary sources of national political information; for most, mass media provide the best — and only — easily available approximation of ever-changing political realities” (MCCOMBS; SHAW, 1972, p.185). In their 1993 article, McCombs and Shaw noted the increased focus of the concept of agenda-setting to a single central and critical question: “Who sets the media agenda?” (MCCOMBS; SHAW, 1972, p. 60).

#### **4 The elite print media and the conditioning of public opinion in Brazil**

Brazilian research has pointed to the concentration of agenda-setting in three national newspapers: *O Globo*, *O Estado de São Paulo*, and *Folha de São Paulo*. Hence, while TV is the primary contact with the news for most Brazilians, the elite newspapers literally direct, that is, set the agenda, frame, prime and reinforce media reports that are then picked up, simplified and marketed by the major TV networks. The monopolization of print and digital media, moreover, ensures a powerful connection between them.

The TV network, Rede Globo, is described in some sources as occupying a “hegemonic position...in the means of communication” (MIGUEL, 2002, p. 33), and as having become by 2001 a:

Giant conglomerate, including newspapers, magazines, books, recordings, software, cinemas, home-video, radio, television (both open signal and by subscription), communication of data, paging, cellular telephones,

publishing, and the use of satellites, communications equipment [...]. (MIGUEL, 2002, p. 34).

All of this growth was said to owe its origins to the military coup of 1964, and the subsequent 21-year dictatorship, and by 2001 was said to be fading in agenda-setting power from its heyday in the mid-1980s. Miguel notes that Globo was “useful to military strategy” during the dictatorship, and that it “spread a positive image of the regime and its material accomplishments” (MIGUEL, 2002, p. 35), as General *cum* President Emílio Médici was said to have commented at the time:

Sinto-me feliz, todas as noites, quando ligo a televisão para assistir ao jornal. Em outros países, greve, atentados, conflitos. No Brasil, não. O Brasil marcha em paz rumo ao desenvolvimento. É como se eu tomasse um tranquilizante, após um dia de trabalho” (MÉDICI *apud* MIGUEL, 2002, p. 35 - 36).

The unique and conservative role played by the Mesquita family, owners of *O Estado de São Paulo*, or *Estadão*, also a largely expansion-oriented corporation under the rubric of Grupo Estado, included a more independent while conservative role during the dictatorship. Controlling former rivals (e.g., *Jornal da Tarde*), Grupo Estado also controls radio stations including Rádio Eldorado AM and FM, as well as Brazil’s major news agency, Agência Estado.

*Folha de São Paulo*, with the largest circulation in Brazil, also has a controlling corporation, Grupo Folha, which is a massive corporation that also controls UOL (*Universo Online*), the largest Internet provider in Brazil, as well as the newspaper *Agora São Paulo*. It also includes the political polling company, *Datafolha*, the publisher *Publifolha*, the book publisher *Três Estrelas*, the printing company *Plural*, and, in a joint-venture with *Globo*, the business daily paper *Valor*, among a range of other holdings.

As it happens, all three of these lead newspapers have included in their publicly available software packages, applications that provide the frequency of mention of hundreds of terms, including those of interest to us. Thus we have been able to assess the historical incidence of increased and decreased mention of the key terms in question.

In view of the impact of the electronic media in reconstructing and re-designing the civil space post-dictatorial Brazil, and the agenda-setting and framing influence of the three national newspapers on the electronic media, principally television and radio, it is difficult to exaggerate the depth of influence that the major national newspapers exercise over the electronic media, principally television. The electronic media, in turn, are said to have developed in Brazil to such an extent in that post-dictatorial era that they can be said to have participated directly in the establishment of civil society, even as it was shaped by these fundamental social changes. As one author has put it, “the Brazil that emerged from the dictatorship was a country *mediatized* (*mediatizado*), with all of the consequences that this situation brings to the culture, the institutions, and politics” (MIGUEL, 2002, p. 28). Also:

[...] o impacto da mídia eletrônica, em especial da TV, é diferente [from previous eras]. Ela reconstrói todo o espaço social, rompendo barreiras entre setores antes incomunicáveis. No campo específico da política, ela exige candidatos e governantes que *se adaptem a ela*, mais do que meramente a levem em conta (MIGUEL, 2002, p. 28 - *emphasis in the original*).

Historical mention of terms laden with threatening implications, then, might well serve conservative interests, for example, where more leftist regimes, such as those of Lula (2003 - 2011) and Dilma Rousseff (2011 - 2016), were most politically vulnerable. Beginning with the presumption in all countries, voiced by McCombs and Shaw (MCCOMBS; SHAW, 1972), that the digital media for most people are the only source of political information, and that the agenda-setting power of the three national newspapers in Brazil means that they routinely exercise major interpretations of national politics, typically at key junctures, the introduction of even a mention of a statistic such as inflation can have a significant impact. The development of the national newspapers, their connection with television, and their “capture” of huge parts of “the market” have been noticeably critical in this regard.

## 5 Media and political destabilization in Brazil

Brazil's recent republican political history is marked by the interruption of presidential mandates. The suicide of Getúlio Vargas in 1954, the civil military coup that deposed João Goulart in 1964, and the impeachments of Fernando Collor in 1992 and Dilma Roussef in 2016 have in common a strong political pressure orchestrated by large media vehicles in Brazil, especially the newspapers *O Globo*, *O Estado de São Paulo* and *Folha de São Paulo*:

O papel da imprensa na crise política que levou ao suicídio de Getúlio Vargas na década de 50 é conhecido. Em seu clássico sobre a UDN, Benevides (1981, p. 88) demonstra como o próprio Júlio de Mesquita Filho, dono do jornal *O Estado de S. Paulo*, procurou o então comandante da Escola Superior de Guerra, General Juarez Távora, para “sondá-lo da possibilidade de um golpe contra Getúlio”[...] Arêas (2015, p. 75) recorda que dentre aqueles que “voltaram-se para a desestabilização e derrubada do governo Goulart participaram os principais órgãos de imprensa, como O Globo, Jornal do Brasil, O Estado de S. Paulo e a Folha de S. Paulo (RODRIGUES, 2018, p. 40).

After the impeachment of Fernando Collor de Mello in 1992, the specialized literature deepened its knowledge about the dynamics of media interference in Brazilian politics and several studies point out that the history of media performance in processes of destabilization of governments in Brazil remains current (RODRIGUES, 2018). In fact there is a consensus in recent research (RODRIGUES, 2018; OLIVEIRA, 2016; GIRELLI, 2018) that there was active action and interference of the media in the destabilization of the government of the president Dilma Roussef in 2016, this being one of the fundamental factors that led to her removal.

In 2014, Dilma Roussef was re-elected in a second round vote with 51.6% of the valid votes against the right wing candidate Aécio Neves, who had the support of the main media outlets in Brazil. The economic crisis combined with allegations of corruption involving the Workers' Party were destabilizing factors of Roussef's government, which added to an active action by the media fed growing popular dissatisfaction. With no majority in Congress, Rousseff has

been prosecuted for a crime of fiscal responsibility. The process began in December 2015 with the acceptance of the request for impeachment in the Chamber of Deputies, in April 2016 the Chamber voted for the admissibility of the process. In May, the President was dismissed by the Federal Senate and Vice-President Michel Temer (PMDB - SP) asserted the position temporarily. On 31 of August of 2016 the senate voted for the impeachment of the president, withdrawing the mandate but retaining the political rights in controversy and unprecedented vote.

Two days after the removal of President, ironically, the Senate approved the law 13,332 / 2016 which relaxed the rules for the opening of additional credits without the need to authorize the National Congress, a practice known as a "fiscal pedal" and which was the ground of the crime of fiscal responsibility imputed to the removed President.

For Alvarez and Novion (2016), the political events of 2016 in Brazil are inserted in the context of a new conservative cycle in Latin America, who came to succeed a previous cycle marked by the presence of progressive governments in the region. The authors analyze the deposition of President Manuel Zelaya of Honduras in 2009 as the beginning of a new methodology of coups in Latin America in which the media plays a fundamental role:

agindo coligada a um judiciário e a um Congresso conservadores, confere ao golpe "suave" ares democráticos. Utiliza-se, para isso, uma narrativa liderada por atores supostamente isentos, respaldados por manifestações supostamente espontâneas e "livres de ideologia". (ALVAREZ; NOVION, 2016, p. 328).

Oliveira (2016) after analyzing the coverage of popular demonstrations for and against the impeachment of President Dilma Roussef in 2015 and 2016 by the newspapers *O Globo*, *O Estado de São Paulo* and *Folha de São Paulo* concludes that the media contributed to the building of a public opinion favorable to the impeachment of the president, with ample space in the news for the manifestations contrary to the government of Dilma, which was not evident in the journalistic coverage of manifestations in defense of the president. While the press coverage of the pro-impeachment demonstrations used full page openings to the event, aerial images,

open photos in large proportions, and highlights for the numbers of the protesters, the demonstrations in favor of Dilma Rousseff's government followed a lean coverage, with little emphasis on the first and interior pages, still expressed in closed photos, without large aperture angles, as well as highlighting the smaller numbers of protesters that here different from the protesters against the government were not called people, but "*petistas*", "*syndicalists*" and "*militants*".

Rodrigues (2018) analyzed 34 editorials of the main Brazilian newspapers between 2015 and 2017 to test the hypothesis of media as an analytically autonomous and conjuncturely decisive factor in the current processes of destabilization of governments. The author compared the position of the newspaper in relation to Rousseff and Temer governments, the second having complaints and impeachment requests been filed by the congress, the author concludes that the country's major print newspapers, in varying degrees, demonstrated their sympathies for Dilma's departure from the presidency, with regard to the deposition of Temer the result was not the same. While *O Globo* defended the resignation and *Folha* the cassation by the TSE, *O Estado de São Paulo* argued in favor of Temer.

There are a number of other recent studies that corroborate the above observations (QUIRINO; GUAZINA, 2018; GIRELLI, 2018), mainly based on the qualitative analysis of editorials and articles. In the present study we set out to analyze the media's role in framing agendas for the purpose of destabilizing or supporting governments in Brazil using a different approach, the political use of economic indicators. In this sense Girelli (2018) highlights the analysis of Biroli and Miguel (2013) for whom the economic crisis and the 'inability' of Dilma Rousseff to overcome it were discourses presented in a very homogeneous way by the media after 2014's presidential elections.

As we will see in the following analysis, the production of narratives about the economic crisis, through the selective use of indicators was equally relevant both as a strategy to destabilize the Dilma Rousseff government as to support the government of Michel Temer, president with the lowest index of popular approval of the history of the new Brazilian republic, only 3% of approval according to an opinion survey carried out by the IBOPE Institute in September of 2017.

## 6 Hypothesis 1

H<sub>1</sub>: There is a high degree of convergence in the frequency and timing in the topics reported in the three major national newspapers of Brazil.

The following procedures were used to test the hypothesis 1:

- (i) Search in the digital collections of the newspapers O Globo, O Estado de São Paulo and Folha de São Paulo of the annual citation frequencies of the following terms: rising unemployment, falling unemployment, rising inflation, falling inflation, rising GDP, falling GDP, pessimism, crisis, recession, governability, military intervention.
- (ii) Elaboration of historical series of the frequencies of citations of the selected terms in the period between 1990 and 2018;
- (iii) Linear regression of comparable variables and bivariate correlation analysis using Pearson's coefficient.

## 7 Method

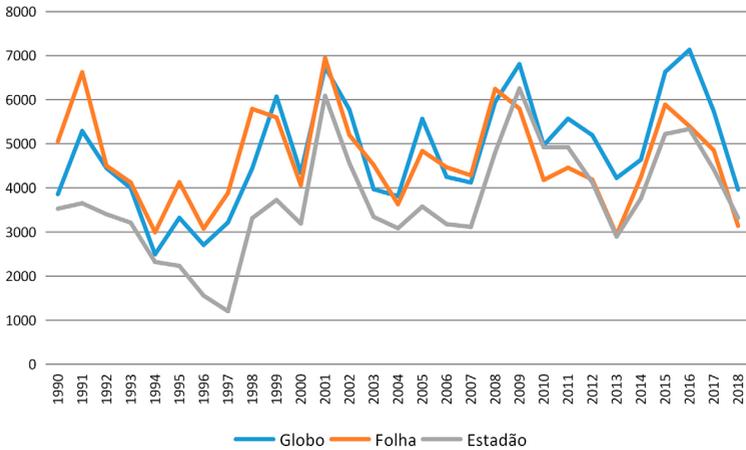
The method for testing the hypothesis followed the following main steps: (i) analysis of the annual frequencies of citations of the terms chosen in the three newspapers; (ii) linear regression and bivariate correlation of comparable variables. The method was adopted for the 11 chosen terms, establishing comparisons between the annual frequencies of citations of the same terms by the newspapers, seeking to verify quantitative evidence of convergence between the coverage of the newspapers.

For the purpose of illustration of the method we will present the data for the variables 'crisis' (C) and 'Increasing Unemployment' (AD) which showed respectively strong significant correlation and weak significant correlation.

The charts below illustrate the annual citation frequencies of selected terms, 'crisis' (C) and 'increasing unemployment' (AD) by the three newspapers. The strong correlation between the 3 newspapers can be visually identified in the first graph for the frequencies of the term 'crisis', while in the second graph it is possible to observe visually the lowest correlation between the

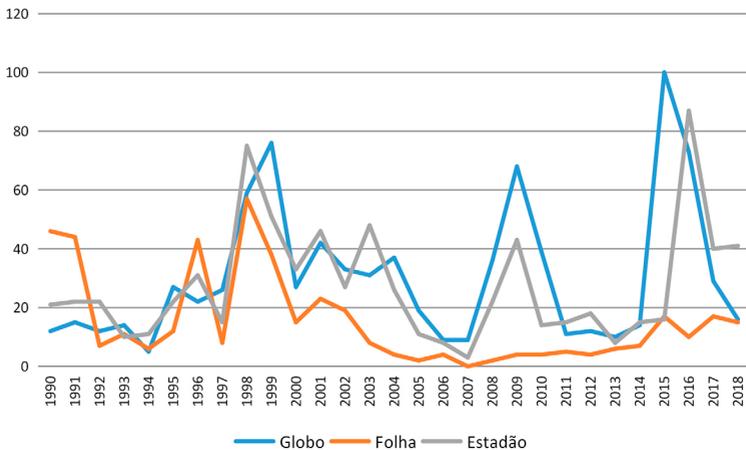
newspaper *Folha de São Paulo* in comparison with the newspapers *O Globo* and *O Estado de São Paulo* (*Estadão*).

**Chart 1 – Annual Frequencies – Term “Crisis” by *O Globo*, *Folha de São Paulo* and *Estado de São Paulo* (1990 – 2018)**



Source: Created by the authors.

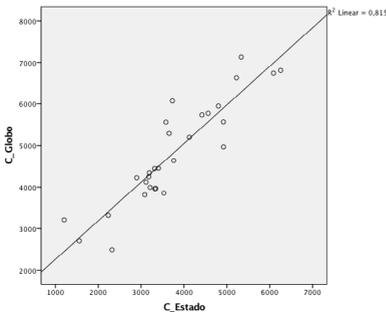
**Chart 2 – Annual Frequencies of Citations – Term “Increase in Unemployment” by *O Globo*, *Folha de São Paulo* and *O Estado de São Paulo* (1990 – 2018)**



Source: Created by the authors.

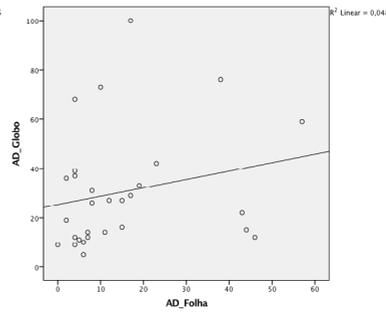
The second step of the analysis was the linear regression and bivariate correlation of the variables, the following scatter plots present a case of strong correlation between the newspapers *O Globo* and *O Estado de São Paulo* for the annual frequencies of citations of the term “Crisis” and a case of absence of significant correlation between the newspapers *O Globo* and *Folha de São Paulo* for the expression ‘increasing unemployment’.

**Chart 3 - High and Significant Correlation –Term “crisis” (C) by *O Globo* and *O Estado de São Paulo* (1990 to 2018)**



Source: Created by the authors.

**Chart 4 - Non-Significant Correlation - Term “increasing unemployment” (AD) by *O Globo* and *Folha de São Paulo* (1990 to 2018)**



Source: Created by the authors.

The bivariate correlation was then generated for each group of variables using the Pearson’s coefficient and a two-tailed significance test. The table below shows the results for the terms ‘crisis’ (C) and ‘increasing unemployment’ (AD).

**Table 1 - Correlation Bivariate – ‘Crisis’ (C)**

		C_Globo	C_Folha	C_Estado
C_Globo	Pearson Correlation	1	, 762 **	, 903 **
	Sig. (2-tailed)		, 000	, 000
	N	29	29	29
C_Folha	Pearson Correlation	, 762 **	1	, 675 **
	Sig. (2-tailed)	, 000		, 000
	N	29	29	29
C_Estado	Pearson Correlation	, 903 **	, 675 **	1
	Sig. (2-tailed)	, 000	, 000	
	N	29	29	29

Source: Created by the authors.

**Table 2 - Correlation Bivariate - 'Increase in Unemployment' (AD)**

		AD_Globo	AD_Folha	AD_State
AD_Globo	Pearson Correlation	1	, 220	, 590 **
	Sig. (2-tailed)		, 251	, 001
	N	29	29	29
AD_Folha	Pearson Correlation	, 220	1	, 434 *
	Sig. (2-tailed)	, 251		, 019
	N	29	29	29
AD_State	Pearson Correlation	, 590 **	, 434 *	1
	Sig. (2-tailed)	, 001	, 019	
	N	29	29	29
*. Correlation is significant at the 0.05 level (2-tailed).				
**. Correlation is significant at the 0.01 level (2-tailed).				
Source: Created by the authors.				

## 8 Results

The frequencies analysis of the selected terms from 1990 to 2018, between the 3 newspapers, presented a high degree of correlation. Of the 33 analyzes performed, 26 cases (79%) presented a strong correlation with Pearson coefficients above 0.5 and statistical significance at the 0.01 level; 2 cases (6%) presented a medium degree of correlation with coefficients between 0.4 and 0.5 and statistical significance at the level of 0.01 and 0.05; and 4 cases (12%) showed no significant correlation.

In all cases a strong and significant correlation was observed between the newspapers *O Globo* and *O Estado de São Paulo*. In general, there was a lower degree of correlation between *Folha de São Paulo* and the other newspapers, where cases of medium correlation (between 0.4 and 0.5) and no significant correlation were identified, although there are also strong and significant correlations in certain topics (crisis and military intervention, for example) for this newspaper in relation to the others.

**Table 3 - Media bivariate correlation analysis**

Topics	Globo - Estadão	Globo - Folha	Folha - Estadão
Crisis	0.903 **	0.762 **	0.675 **
Recession	0.900 **	0.700 **	0.581 **
Governability	0.862 **	0.561 **	0.634 **
Falling Inflation	0.890 **	0.629 **	0.705 **
GDP fall	0.772 **	0.620 **	0.487 **
Military Intervention	0.747 **	0.901 **	0.666 **
Increasing Inflation	0.838 **	0.356	0,337
Pessimism	0.739 **	0.547 **	0.555 **
Falling Unemployment	0.691 **	0.590 **	0.602 **
Increasing GDP	0.656 **	0.233	0.532 **
Increasing Unemployment	0.590 **	0.220	0,434 *

\* Correlation is significant at the 0.05 level

\*\* Correlation is significant at the 0.01 level

Source: Created by the authors.

The strong correlations observed suggests that the hypothesis is true and that there is indeed a convergence in the topics reported by the main Brazilian print media. In fact, there was a greater convergence between the newspapers *O Globo* and *O Estado de São Paulo*, and to a lesser degree between them and the newspaper *Folha de São Paulo*.

Such a convergence could be interpreted as a mere reflection of the reality objectively reported by the media, that is, by observing that a given phenomenon occurs in reality, the increasing unemployment, for example, based on an index of public knowledge, there is a coherent and convergent response of the media, which would justify the high correlation between newspapers. We will see later in the test of hypothesis 2 that the tactual fluctuations of the corresponding economic indicators do not corroborate this argument.

It is curious to note that subjective terms (crisis, recession, governability) presented higher degrees of correlation than economic objective terms (inflation, GDP, unemployment). This seems to corroborate that the convergence observed is not a mere response to objective facts of reality.

It can be argued that effective confirmation of the hypothesis, however, requires the use of qualitative analysis tools, however the significant correlations in the majority of the terms researched, and particularly stronger with the subjective terms, suggests that it is plausible to infer by the existence of a convergence in the topics reported by the three newspapers, confirming the hypothesis.

## 9 Hypothesis 2

H<sub>2</sub>: The timing in the frequency of mentioning in the three major Brazilian newspapers of the key economic variables (inflation, GDP and unemployment), corresponds with political contestation and support rather than objective changes in the variables.

The following procedures were used to test the hypothesis:

- (i) Search in the digital collections of newspapers *O Globo*, *O Estado de São Paulo* and *Folha de São Paulo* of the frequencies of citations per year of the following expressions: increasing unemployment, falling unemployment, increasing inflation, falling inflation, increasing GDP, falling GDP;
- (ii) Research in the digital collections of the newspapers *O Globo*, *O Estado de São Paulo* and *Folha de São Paulo* of the frequencies of citations per year of the same expressions indicated in item I followed by the use of the expression IBGE;
- (iii) Elaboration of time series of the economic indexes produced by the Brazilian Institute of Geography and Statistics (IBGE) between 1990 and 2018 for: (a) unemployment - Monthly Employment Survey (PME) and National Survey by Continuous Household Sample (PNAD-C); (b) Inflation - Extended Consumer Price Index (IPCA) and; (c) Gross Domestic Product (GDP) - GDP Growth Rate.
- (iv) Production of Index numbers (0 to 1) for comparison of the time series of the media frequencies and the economic indexes (PME, PNAD-C, IPCA, GDP). The process comprised the transformation of the original values of the variables to normalized values by the standard deviation (z-score) and the conversion of the z-score values of each variable to an index value using the formula: (observed value - lower value of the variable / higher value - lower value).
- (v) Linear regression of variables and bivariate correlation analysis using the Pearson coefficient.

For this study we opted to research the use of simple economic indicators with strong popular appeal, since they directly affect the imaginary of the population: inflation, unemployment and growth of the country's economy. The hypothesis suggests the occurrence of selective use of certain terms and indexes by the print media as a strategy to promote certain narratives, whether negative or positive, in order to intervene in the country's political agenda, especially in the period from 2015 to 2017, which coincides with the impeachment of President Dilma Rousseff and the beginning of the government of President Michel Temer.

In order to test the hypothesis we opted to analyze the period from 1990 to 2018, for two reasons: (i) politically in Brazil it corresponds to the recent democratic period with elected governments (Collor, FHC, Lula and Dilma) and governments resulting from processes of impeachment (Itamar Franco and Michel Temer); (ii) the analyze of the fluctuations of the media and economic indexes over a historical period of 28 years, provides a greater security to the analysis of inflections and anomalies in the time series curves.

In addition to the frequencies of the terms "Increase / Fall" in inflation, unemployment and GDP, it was also decided to analyze the use of these terms followed by 'IBGE', acronyms corresponding to the Brazilian Institute of Geography and Statistics, source of the main official economic indexes, and which mention in a journalistic text is a reference to the use of such statistics, whether to technically reinforce the information or to confer credibility to the news.

## **10 Unemployment**

From 2012 on, the National Continuous Survey by Household Sample (PNAD-C) started to present quarterly data on unemployment, replacing in 2015, the Monthly Employment Survey (PME). The data of the two surveys are comparable, but have different methodologies and geographic areas of calculation.

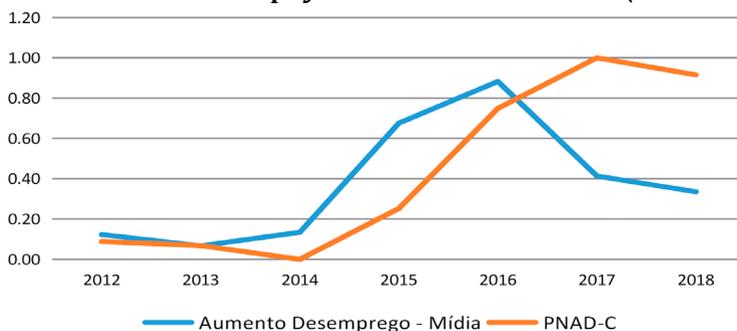
In the period between 1990 and 2018, there were no statistically significant correlations between the annual variations of the PME and PNAD-C indexes and the frequencies of the media citations to the terms 'increased unemployment' and 'falling unemployment', with or without the use of the acronym IBGE. Therefore, according to this

methodology, we do not identify evidence that the use of expressions related to the increase or decrease of unemployment by the newspapers researched effectively reflects the behavior of the indexes.

Some anomalies, however, were identified in the comparative analysis of the media uses of the term unemployment against the IBGE indexes between 2015-2017:

i) The highest positive variations in the unemployment indexes, indicating an increase in the unemployment, occurred in the years 2015, 2016 and 2017, respectively 1.51, 2.97 and 1.5 percentage points variations. In the same period, however, the media frequencies for the use of the term “increasing unemployment” followed an anomalous pattern. There were a strong increase in the use of the term in 2015, with a positive variation of 4.57 percentage points in relation to 2014, a moderate increase in 2016 (1.74 pp) and a significant drop in 2017 (-3.96 pp), which is inconsistent with the unemployment rate, that actually peaked in 2017, reaching 12.77% of unemployment, the highest historical value of the time series.

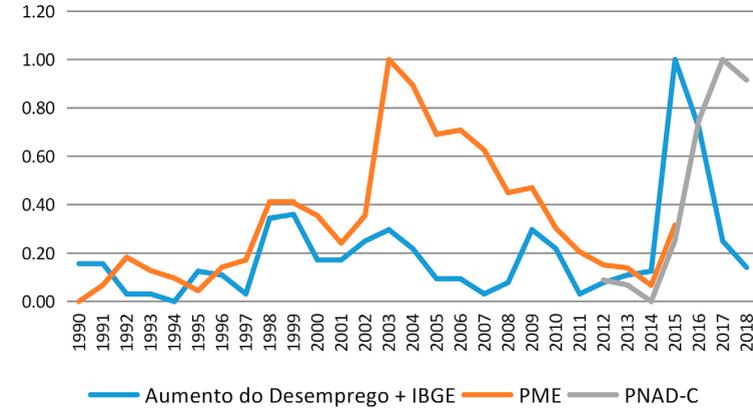
**Chart 5 – Increase in Unemployment Print Media x PNAD-C (2012 – 2018)**



Source: Created by the authors.

ii) The results for the term ‘increase of unemployment’ coupled with the term ‘IBGE’, reinforce the anomaly. The terms peaked in 2015, which indicates a strong reference to the increase of the unemployment rate in that year, but in 2017, when it reached the highest value in the historical series, there is a significant drop in the media citations to ‘increasing unemployment’ plus ‘IBGE’, which can be seen in the chart below.

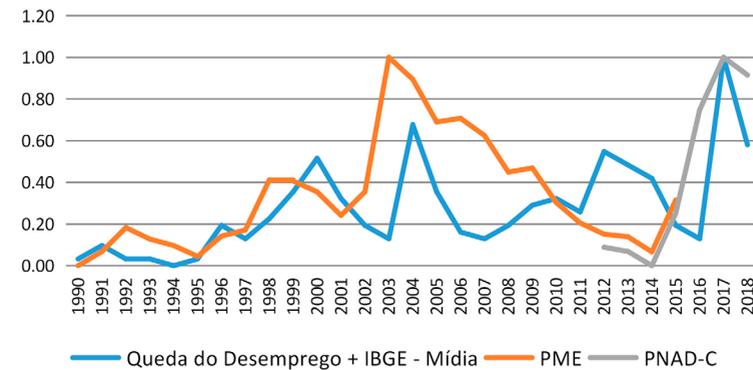
**Chart 6 - "Increase in Unemployment" and "IBGE" Print Media x PME and PNAD-C (1999 - 2018)**



Source: Created by the authors.

iii) Contradictorily, the term 'falling unemployment' coupled with the term 'IBGE' peaked in 2017, a curious fact considering the poor performance of the index in the period.

**Chart 7 - "Fall of Unemployment" + "IBGE" Press Media x PME and PNAD-C (1990 - 2018)**



Source: Created by the authors.

A column by the journalist Mírian Leitão of the newspaper O Globo helps to explain the contradiction on the unemployment reporting on 2017, and provides a good illustration of the kind of

use one can make of statistics for producing narratives. Although aware of the worst performance of the annual indicator during President Temer government, the journalist frames it report on the almost insignificant improvement of the quarterly indicator, the column title is revealing: “First Improvement”:

O desemprego teve ‘a primeira queda estatisticamente significativa desde o último trimestre de 2014’, segundo o IBGE. A situação do mercado de trabalho continua dramática, mas o número veio melhor que o esperado[...] Depois de atingir 14,2 milhões de brasileiros no primeiro trimestre, o número de desempregados caiu para 13,5 milhões no trimestre encerrado em junho[...] Quando a comparação é feita com o mesmo período de 2016, o número é 16% maior, o que significa 1,6 milhão de brasileiros a mais sem emprego[...] Em suma há mais desempregados agora que no ano passado, mas há menos que no primeiro trimestre[...]’. (LEITÃO, 2017, p. 26).

Very different use of the IBGE unemployment index was made by the same journalist in the column entitled “Roots of Rejection” in which she deals with the fall of popularity of the government Dilma Roussef, the journalist cites irritation and fear of the population and accuses the president of lying during elections:

Aqui neste espaço sempre escrevi várias vezes que a política econômica estava errada[...] com a inflação alta o brasileiro sempre se irrita com o governo [...] O fator novo é o medo do desemprego [...] O que piora tudo é a sensação de que o eleitor foi enganado pela campanha eleitoral [...] Em entrevista no Bom dia Brasil perguntei sobre o desemprego de jovens que estava em 13,7% nas seis regiões metropolitanas pesquisadas pelo IBGE [...] hoje esse mesmo indicador está em 16,2%. A presidente se preparou para a campanha não com um olhar sincero sobre os problemas que teria que resolver nos quatro anos que postulava, mas com truques e pedaladas poderia esconder tudo e jogar para a frente”. (LEITÃO, 2015, p. 18).

The youth unemployment, measured by the unemployment rate of people between the ages of 18 and 24, which in the second

quarter of 2015 was 16.2%, a number that the journalist uses to deal with “fear of unemployment” and “roots of rejection “of the Dilma Government, in the second quarter of 2017 registered 27.3%, the highest percentage of the historical series of PNAD-C. The journalist, however, preferred, to address a “First Improvement” of the economic indicators at President Temer administration referring to the almost negligible fall of 0.7 percentage points in the unemployment rate between the first and second quarters 2017.

## **11 Inflation**

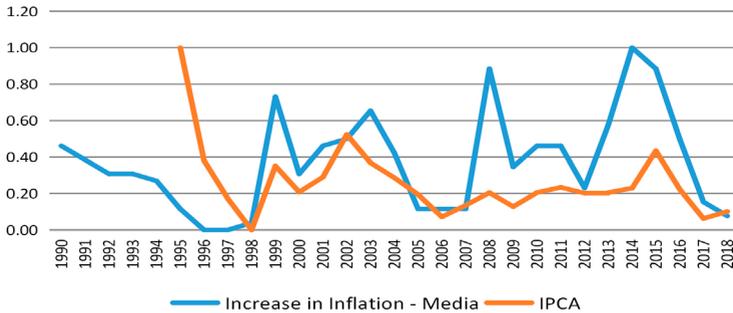
The Extended National Consumer Price Index - IPCA is the official indicator for the measurement of inflation in Brazil, calculated and published monthly by IBGE based on a set of products and services sold in retail, referring to the personal consumption of households. In view of the hyperinflation context registered until 1994, we restricted the IPCA series analysis for 1995-2018.

In the period between 1995 and 2018, no statistically significant correlations were identified between the annual variations in the IPCA and the media frequencies of citations of the terms ‘increasing inflation’ and ‘falling inflation’, with or without the use of the acronym IBGE. Therefore, according to this methodology, we do not identify evidence that the use of expressions related to the increase or decrease of inflation by the newspapers researched effectively reflects the behavior of the indexes.

In the comparative analysis of the media frequencies against the inflation index, two facts draw our attention:

(i) The term “increasing inflation” plus “IBGE” peaked in 2008, 2014 and 2015. Although it corresponds to an increase of the inflation rate in 2008 (2 pp.) and 2015 (5 pp.), in previous periods in which there were also comparable and even higher increases in the inflation rate, for example 1999 (7 pp.) and 2002 (5 pp.), the media response was comparatively lower, as can be seen in the graph below.

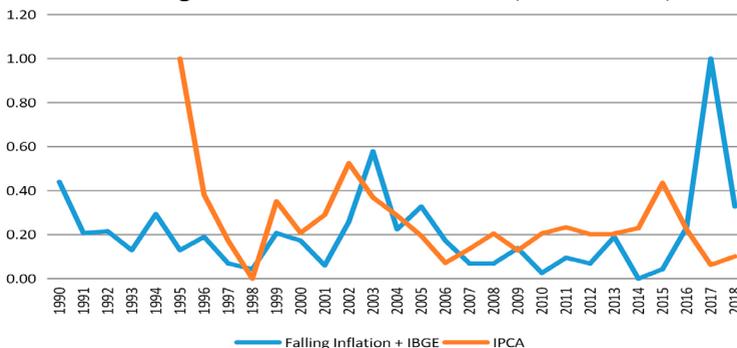
**Chart 8 – “Increasing Inflation” and “IBGE” Press Media x IPCA (1990 – 2018)**



Source: Created by the authors.

(ii) The term “Fall of Inflation” plus “IBGE” peaked in 2017, there were a total of 120 citations in this year, the highest in the whole series. The frequency of the term alone, without the acronym IBGE, in 2017 (362 citations) is comparable to the year 1994 (375 citations) when the country emerges from a context of hyperinflation with a sudden drop in inflation in the context of the currency stabilization. There was a fall of 3 percentage points in the inflation of 2017 when compared to the previous year. The years of 2016 and 2003 presented stronger drops in inflation rates, with a much lower response from the media. Data reveals that newspapers have promoted above normal the good result of the inflation rate in 2017.

**Chart 9 – “Falling Inflation” + “IBGE” x IPCA (1995 – 2018)**



Source: Created by the authors.

We resort once again to journalist Mirian Leitão of the O Globo newspaper to exemplify the profile of journalistic coverage in the post-impeachment context of President Dilma Rouseff, which demonstrates the effort of the print media to frame the improvement of inflation in 2017 as an indicator of economic improvement in the Temer government, the column title is “Way Back”:

“O país começa enfim a sair do buraco em que despencou em 2014, mas essa caminhada será com números positivos e negativos se alternando, e muito lenta [...] a queda da inflação é a principal vitória da economia que há ano e meio enfrentava os preços em dois dígitos” (LEITÃO, 2017, p. 16).

## 12 GDP

The Gross Domestic Product (GDP) is measured by the system of national accounts of the IBGE. The indicator is released quarterly. Differently from what was observed with respect to unemployment and inflation, it was observed significant correlations between the media reports and the variations of the annual GDP indicator. There was a negative correlation of -0.610 with a statistical significance level of 0.01 between the frequencies of the term “Falling GDP” and the annual GDP growth rate and a positive correlation of 0.394 with statistical significance at the level of 0,05 between the frequencies of the term “increasing GDP” and the annual GDP growth rate.

In fact, the media frequencies related to GDP growth presented a more regular behavior than the ones observed with respect to the inflation and unemployment rates, not being observed anomalies worth noting in the historical series from 1990 to 2018. Apparently the economic coverage related to the GDP does not present fluctuations that refer to a biased political use of the term.

## 13 Results

The absence of correlation between the inflation and unemployment indexes compared to the media coverage of such phenomena seems to indicate that these terms are more susceptible to political use aimed to construct narratives favorable or unfavorable to

the stabilization or destabilization of the government according to the interests of the media groups. The same, however, was not observed in relation to GDP growth.

The main anomalies observed in the time series related to the media coverage of unemployment and inflation is concentrated in the years 2015 to 2017. There were an above normal report of negative economic indexes in 2015, during the last year of government Dilma Rousseff, contrasting with a frame over positive indicators in the year 2017, during the Government Michel Temer.

The observations were reinforced by the increased use of the IBGE source by media coverage on inflation and unemployment in the period from 2015 to 2017, in the time series from 1990 to 2018, which seems to indicate an above normal disposition in using economic statistics for the production of narratives in this period.

## 14 Conclusions

The frequencies of reporting using the mention of inflation and unemployment, suggest that the setting of the agenda as regards changes in economic and political variables bore little relation to actual economic change. Rather, the increased and decreased mention of said variables seem to have represented politics. Our two hypotheses, then, seem to have significant support in the frequencies and their timing of reporting in the three major Brazilian newspapers. As regards the first hypothesis:

$H_1$ : There is a high degree of convergence in the frequency and timing in mentioning unemployment, inflation, the GDP and governability in the three major national newspapers in Brazil.

There was, indeed, significant evidence that mention of objective and subjective terms converged historically in the three newspapers. As regards our second hypothesis:

$H_2$ : The timing in the frequency of mentioning in the three major Brazilian newspapers of the key economic variables, corresponds with political contestation and support rather than objective changes in the variables.

Political contestation appears to have explained the newspapers' agenda setting and framing of key terms, specially in the context of 2015 to 2017, corresponding Rousseff's election and impeachment and Temer's government given that actual economic changes did not correspond in time with the peaks and valleys in the mention of these threatening and, it turns out, politically destabilizing or supporting reports.

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