

Final Presentation – Labor II

Political Affiliation and Federal Government Hirings In Brazil

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Motivation

- Governments play a huge role in the development of a country.
- Government quality has always been emphasized by economists, **but** little evidence has been produced in relation to how its personnel affects its performance (Finan, Olken, and Pande 2017)
- More specifically, little attention has been given to how political affiliation may affect personnel composition.

This Study

- **Research Question:** does political discrimination play a role in selecting public sector workers?
- Provides a descriptive analysis on the role of political affiliation within the federal executive branch of Brazilian government (civilian only).
- Data:
 - ▶ **CGU:** information on federal workers from 2013 to 2020.
 - ▶ **TSE:** information on all political affiliations in Brazil since 1990.

Preview of Results

- Mean affiliation rates for public workers is higher than the relative rate for all labor force (~11% for career and appointed workers x 8.6%).
- Net hirings for affiliated workers have decreased more rapidly than the rest of public workers.
- Turnover is higher given affiliation and appointed workers have higher turnover than career counterparts.
- Affiliation to ruling political party is associated to a reduction in the probability of being fired/quitting by 2.1p.p. for career workers and 2.4p.p. for appointed workers. Similar estimates for the probability of being hired are -1.9p.p. and 6.5p.p., respectively.

Related Literature

- **Bureaucracy and Development:** incentives and performance (Bertrand et al., 2020a); **representation matters** (Xu, 2021); **home states and corruption** (Bertrand et al., 2020b).
- **Patronage in the Public Sector:** evidence of patronage on the municipality level in Brazil (Colonnelli, Prem, and Teso, 2020; Brollo, Forquesato, and Gozzi, 2017; Barbosa and Ferreira, 2019)); **ideological misalignment and productivity** (Spenkuch, Teso, and Xu, 2021).
- **Contribution:** evidence on the Brazilian federal level, which arguably is more likely to have a more profound impact on development.

Outline

- 1 Institutional Context
- 2 Data
- 3 Descriptive Analysis
 - Hirings and Dismissals
 - Turnover
 - Regression Models
- 4 Limitations and Next Steps
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The Public Sector in Brazil

- 3 levels: **Federal**, State and Municipal
- 3 branches: **Executive**, Legislative and Judiciary
- 3 types of contract: "**Career**", "**Appointed**" and "**Other**"¹
 - ▶ It is possible to be at the same time a Career and Appointed worker
- 2 categories of citizens: **Civilian** and Military

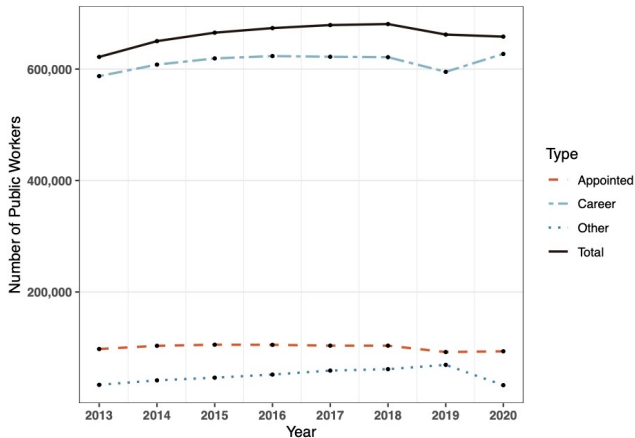
¹Contract-less workers, temporary workers, interns

Stability

- Granted only to Career workers after a 3 years probation period, evaluated by a commission 4 months before the end of the period.
- Aims to guarantee the continuity after a government change as well as shield workers against political pressures (e.g. INPE).
- When can a worker get exonerated?
 - i Definitive judicial decision.
 - ii Disciplinary administrative process.
 - iii Insufficient performance (not regulated)

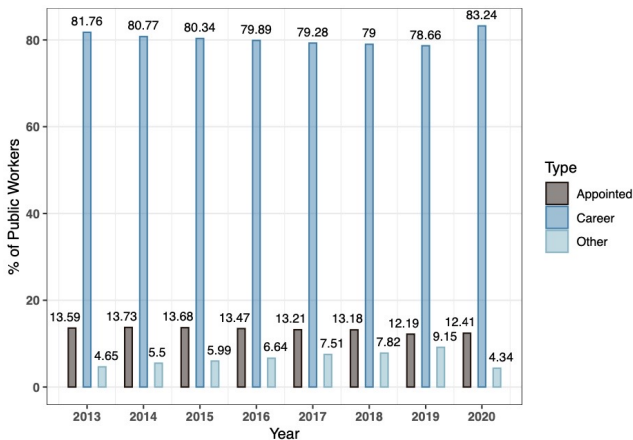
Civilians on Federal Public Sector

Figure 1: Number of Public Workers



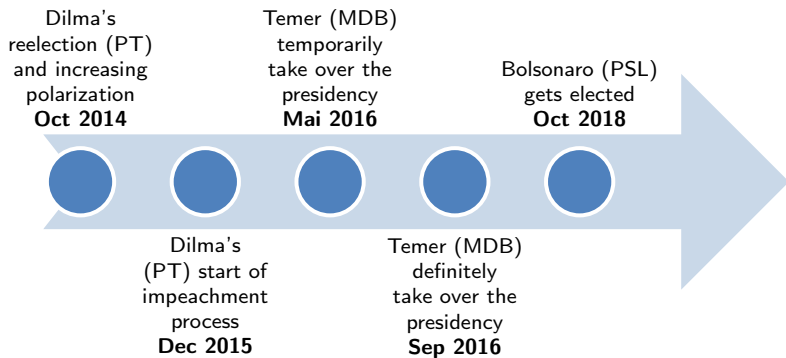
Composition

Figure 2: Composition of Public Workers



Elections in Brazil

- Presidential and State Elections occur every 4 years
- Presidential timeline:



Political Affiliation

- Every civilian with full political rights can be affiliated to a political party.
- However, elected politicians, military, judges, TCU and MP members have different deadlines for affiliation.
- Between 2013-2020, the mean affiliation rate for the labor force was 8.59%.

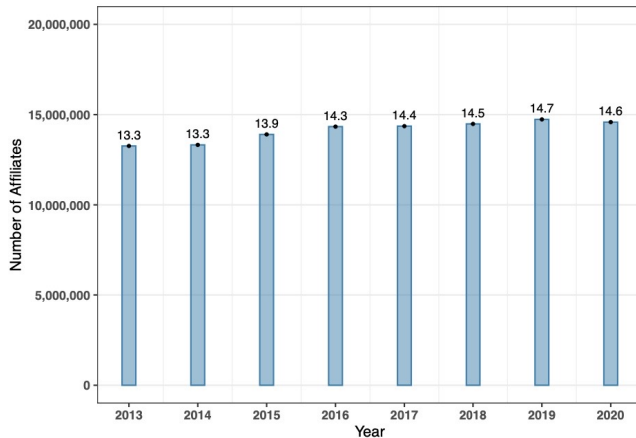
Affiliates between 2013-2020

Table 1: Number of People with More Than One Party

Number of Parties	Number of People	%
1	16,068,006	88.94
2	1,449,224	8.02
3	382,934	2.12
4	115,873	0.64
5	35,838	0.20
6	10,378	0.06
7	2,861	0.02
>= 8	1,268	0.01

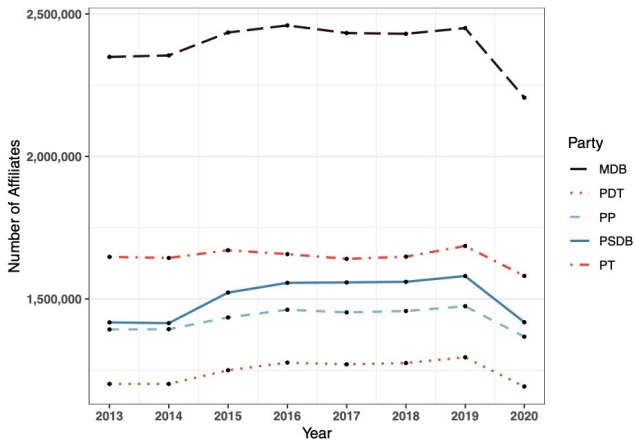
Number of Affiliates (Only One Party)

Figure 3: Number of Affiliates



Political Parties

Figure 4: Number of Affiliates per Political Party



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Data Sets – TSE

- Political Affiliation: all political affiliations of every individual in the country from 1990.
 - ▶ *Tribunal Superior Eleitoral* (TSE – Brazil's electoral high court)
 - ▶ Contains affiliation date, political party's identifier, name, voter registration code and affiliation's current situation.

Data Sets – CGU

- *Registros de Servidores Públicos do Executivo Federal*: monthly data on all registered public worker from 2013 to 2020
 - ▶ *Controladoria Geral da União* (CGU - Brazil's Comptroller General)
 - ▶ Type of spell, the public agency the employee is assigned to and working on, the date in which they have joined the public sector, their post, the state in which they are serving, name and CPF (national identifier).

Data Processing – TSE

- For both bases, I considered the year t as the period between November 01 of year $t - 1$ until October 31 of year t .
- TSE database: a row per affiliation (24,666,625 observations).
- I dropped people with more than one party (11.06%) for computational reasons, remaining 16,068,006 observations.

Data Processing – CGU

- Monthly data on current public workers every 1st day of the month. I gathered information for every year on Oct 1st (6,177,039 observations).
- 7.47% without starting date, but 3.7% first appear after 2013, so I allocate this first appearance as their starting date. The remaining 3.7% were dropped.
- I construct variables such as duration of employment and dummies for dismissal and hirings.
- Result: panel data with every civilian that worked at least for a period in the federal executive sector with 7,998,112 (999,764 individuals x 8 years).

Data Processing – Merge

- TSE: name and voter registration
- CGU: name and cpf
- Dropped observations with repeated names in each data base and joined them, with resulting panel of 7,697,248 observations (962,156 individuals x 8 years).

Outline

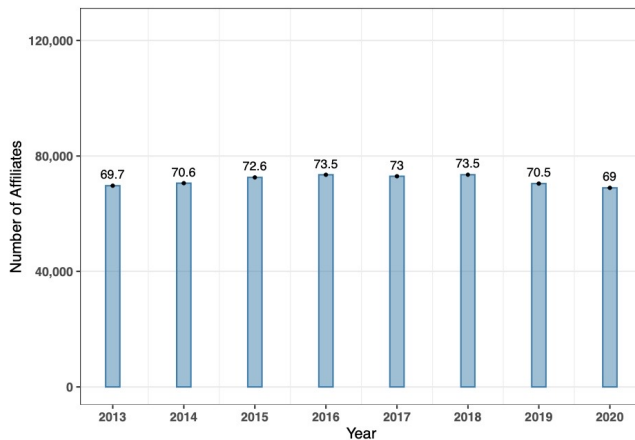
- 1 Institutional Context
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Analysis Outline

- First, I will provide some descriptive information by merging the two data sets.
- Next, I will look to hirings and dismissals of public workers, and how this differs for affiliated workers and by type of contract.
- Then, I will provide some information on job turnover.
- Finally, I will present some regressions results.

Number of Affiliated Public Workers

Figure 5: Number of Public Workers Affiliated to a Political Party



Summary Statistics

Table 2: Summary Statistics for Political Affiliation in the Public Sector

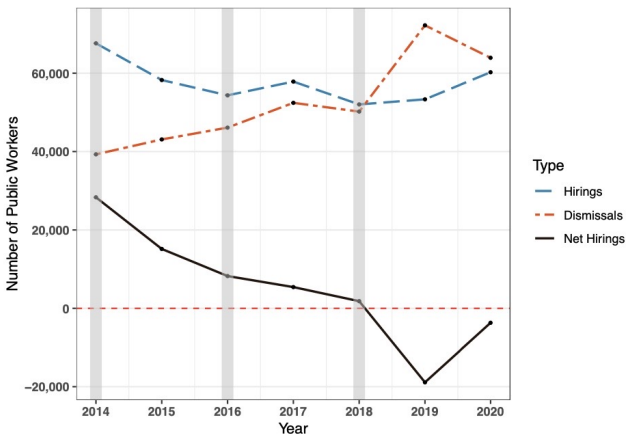
Statistic	Mean	St. Dev.	Min	Max
% Total	10.82	0.22	10.48	11.21
% Career	11.10	0.23	10.59	11.37
% Appointed	10.93	0.31	10.34	11.30
% Other	7.30	0.63	6.92	8.80
% All Labor Force	8.59	0.15	8.34	8.76

Affiliation Through Time

Net Hirings

- If there is enough time: share of new jobs on total workforce.

Figure 6: Net Hirings of Public Workers

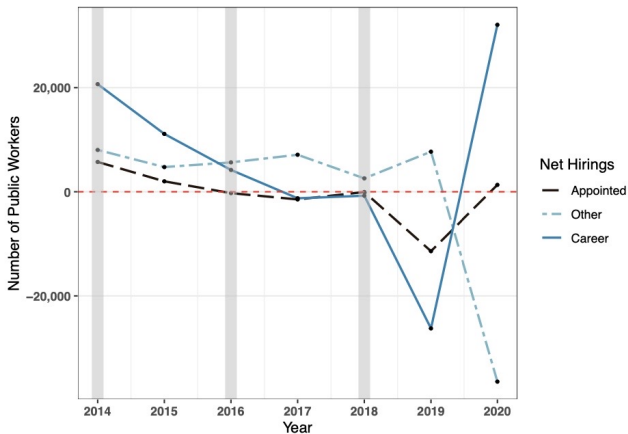


Composition of Net Hirings

Career Net Hirings

Appointed Net Hirings

Figure 7: Composition of Net Hirings per Category

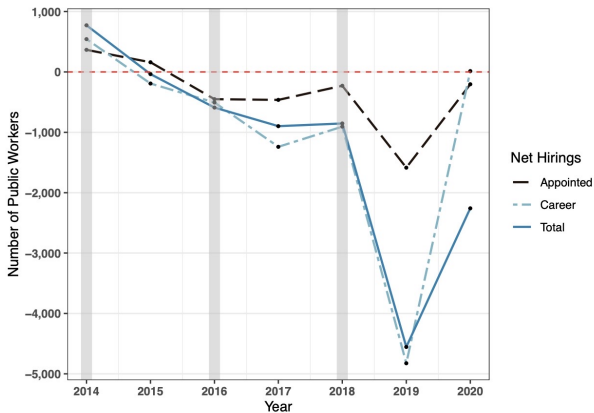


Composition of Net Hirings

Career Net Hirings

Appointed Net Hirings

Figure 8: Composition of Net Hirings per Category If Affiliated



The Importance of Turnover

- Gozanga and Cayres Pinto (2014) discuss the effects of high turnover in the economy, although focusing on the private sector:
 - ▶ A certain amount of turnover is necessary for optimizing allocation.
 - ▶ But a high degree hinders human capital accumulation.

Hazard Function

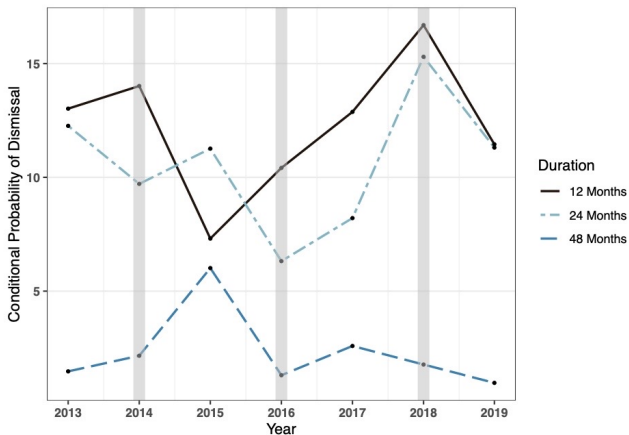
- Following Barros et al. (1999), I calculate a hazard function:

$$h_t(d_t) = \frac{T_{t+1}(d_t)}{N_t(d_t)} \quad (1)$$

- I will consider $d \in D$, such that $D = \{12, 24, 48\}$
- This estimator is useful for measuring how duration of employment is changing \Rightarrow proxy for turnover.

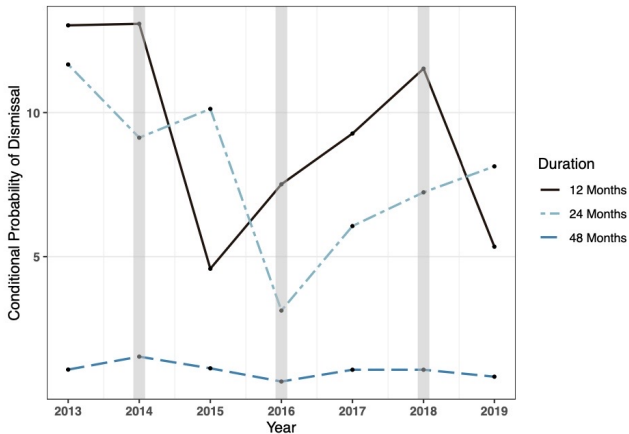
Turnover of Public Workers

Figure 9: Turnover of Public Workers



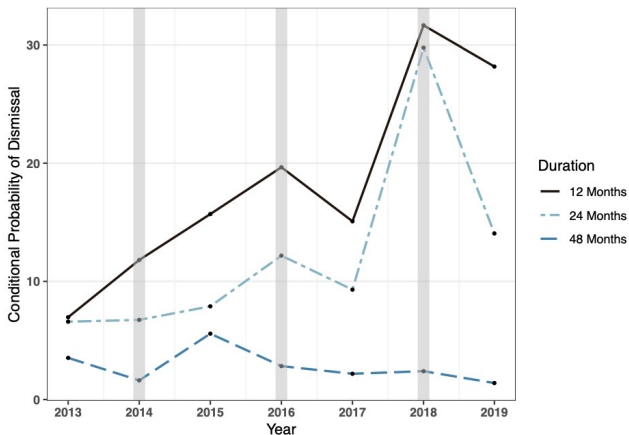
Turnover of Career Workers

Figure 10: Turnover of Career Workers



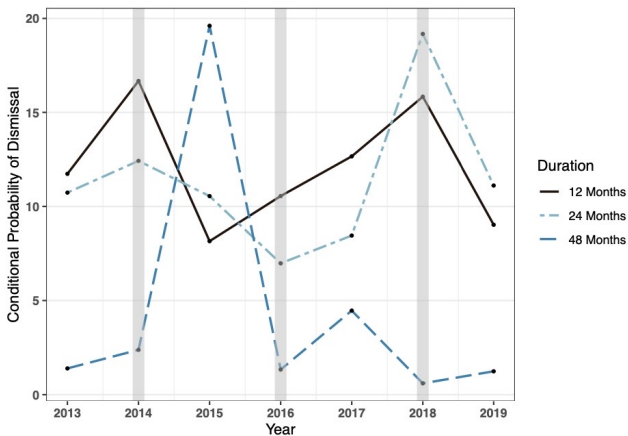
Turnover of Appointed Workers

Figure 11: Turnover of Appointed Workers



Turnover of Affiliated Public Workers

Figure 12: Turnover of Affiliated Public Workers

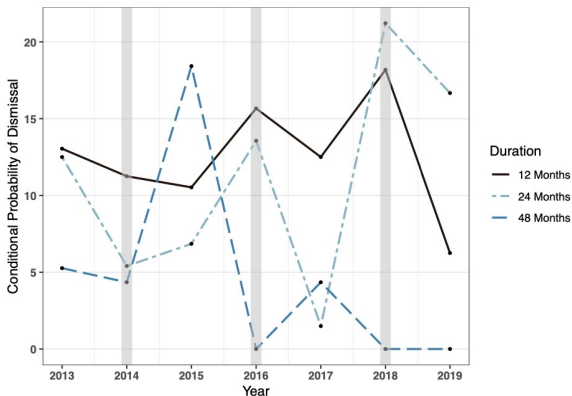


Turnover of Affiliates of Political Party in Power

Career in Power

Appointed in Power

Figure 13: Turnover of Public Workers Affiliated to Political Party in Power



Affiliation and Dismissals

Model Specification

Table 1: Affiliation and Dismissals Correlation

	Dismissals						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Power	−0.006*** (0.001)	−0.012*** (0.001)	−0.014*** (0.001)	−0.014*** (0.001)	−0.003 (0.002)	0.002 (0.002)	−0.007*** (0.002)
Affiliation	−0.003*** (0.000)	0.004*** (0.001)	−0.005*** (0.001)	−0.005*** (0.001)	−0.005*** (0.001)	−0.010*** (0.001)	−0.005*** (0.001)
Lag(Duration)	0.000*** (0.000)	0.001*** (0.000)	0.000*** (0.000)	0.000*** (0.000)	0.000*** (0.000)	0.000*** (0.000)	0.000*** (0.000)
Lag(Out of Gov)			−0.255*** (0.000)	−0.379*** (0.000)	−0.379*** (0.000)	−0.377*** (0.000)	−0.379*** (0.000)
Lag(Career)				−0.201*** (0.001)	−0.201*** (0.001)	−0.200*** (0.001)	−0.201*** (0.001)
Lag(Appointed)				−0.025*** (0.000)	−0.025*** (0.000)	−0.024*** (0.000)	−0.025*** (0.000)
Lag(Career)*Power					−0.014*** (0.002)	−0.013*** (0.002)	−0.014*** (0.002)
Lag(Appointed)*Power					−0.017*** (0.003)	−0.017*** (0.003)	−0.017*** (0.003)
GC							0.003*** (0.000)
GC*Lag(Power)							0.009*** (0.001)
Individual FE	No	Yes	Yes	Yes	Yes	Yes	Yes
Time FE	No	No	No	No	No	Yes	No
R ²	0.010	0.091	0.188	0.204	0.204	0.204	0.205
Adj. R ²	0.010	−0.061	0.053	0.072	0.072	0.071	0.072
Num. obs.	6735092	6735092	6735092	6735092	6735092	6735092	6735092

Affiliation and Hirings

Model Specification

Table 4: Affiliation and Hirings Correlation

	Hirings						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Power	0.004*** (0.001)	0.010*** (0.001)	0.013*** (0.001)	0.005*** (0.001)	0.023*** (0.002)	0.026*** (0.002)	0.017*** (0.002)
Affiliation	-0.017*** (0.000)	0.006*** (0.001)	0.016*** (0.001)	0.006*** (0.001)	0.006*** (0.001)	0.003** (0.001)	0.006*** (0.001)
Lag(In the Gov)			-0.226*** (0.000)	-0.414*** (0.000)	-0.414*** (0.000)	-0.415*** (0.000)	-0.414*** (0.000)
Career				0.458*** (0.000)	0.458*** (0.000)	0.460*** (0.000)	0.459*** (0.000)
Appointed				0.008*** (0.000)	0.007*** (0.000)	0.008*** (0.000)	0.007*** (0.000)
Career*Power					-0.036*** (0.002)	-0.035*** (0.002)	-0.036*** (0.002)
Appointed*Power					0.048*** (0.002)	0.048*** (0.002)	0.048*** (0.002)
GC							0.007*** (0.000)
GC*Lag(Power)							-0.001 (0.001)
Individual FE	No	Yes	Yes	Yes	Yes	Yes	Yes
Time FE	No	No	No	No	No	Yes	No
R ²	0.000	0.000	0.098	0.340	0.340	0.340	0.340
Adj. R ²	0.000	-0.143	-0.053	0.230	0.230	0.230	0.230
Num. obs.	7697248	7697248	6735092	6735092	6735092	6735092	6735092

***p < 0.001; **p < 0.01; *p < 0.05

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Limitations and Next Steps

- No causal inference (match), measure of dismissal and effects on quality.
- Merge quality and lack of demographic information \Rightarrow RAIS
- Include military in the analysis and new available database on earnings.
- Include information on outsourced workers (only available between 2019-2022)
- Explore reallocation, managerial posts and heterogeneity between public agencies.

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Conclusion

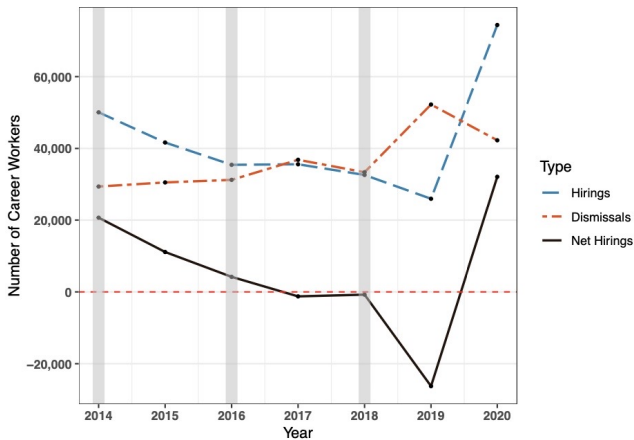
- Although not causal, evidence was provided that political affiliation is important in the selection of public workers on the federal level in Brazil.
- This suggests that political discrimination might be present in the federal public sector.
- More effort is necessary to infer a causal relation and to measure possible inefficiencies created by this process.

Outline

6 Appendix

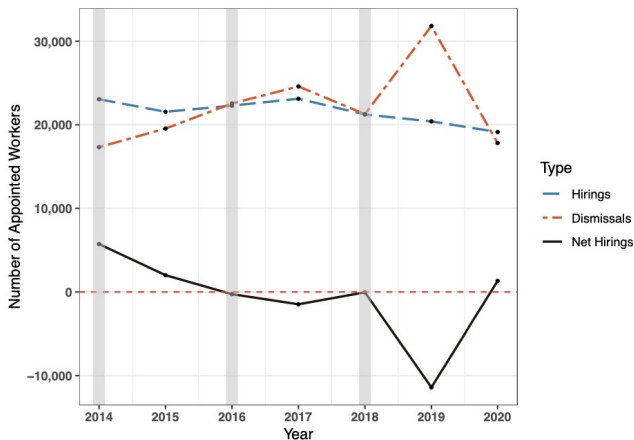
Career Net Hirings

Figure 14: Career Net Hirings

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Appointed Net Hirings

Figure 15: Appointed Net Hirings

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Career Net Hirings If Affiliated

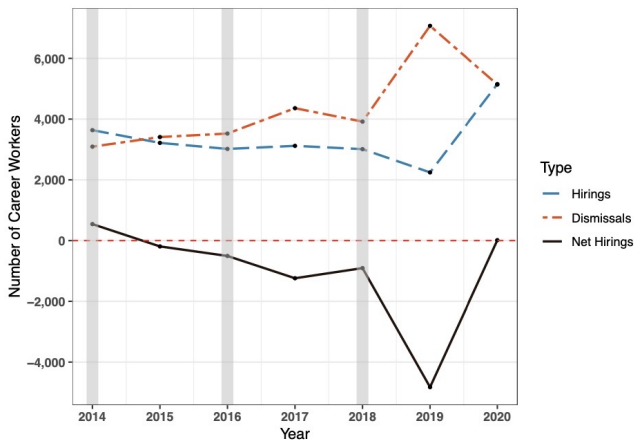
Table 4: Proportion of Affiliated Public Workers

Year	Total	Career	Appointed	Other	All Labor Force
2013	11.21	11.37	11.30	7.46	8.42
2014	10.86	11.09	11.04	6.92	8.34
2015	10.91	11.16	11.27	7.05	8.60
2016	10.91	11.22	11.07	7.01	8.76
2017	10.75	11.10	10.85	7.01	8.68
2018	10.80	11.17	10.85	7.09	8.66
2019	10.65	11.07	10.71	7.09	8.72
2020	10.48	10.59	10.34	8.80	8.54

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Appointed Net Hirings If Affiliated

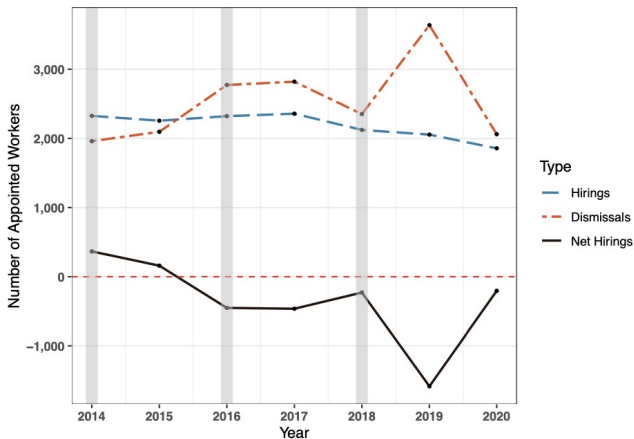
Figure 16: Career Net Hirings If Affiliated



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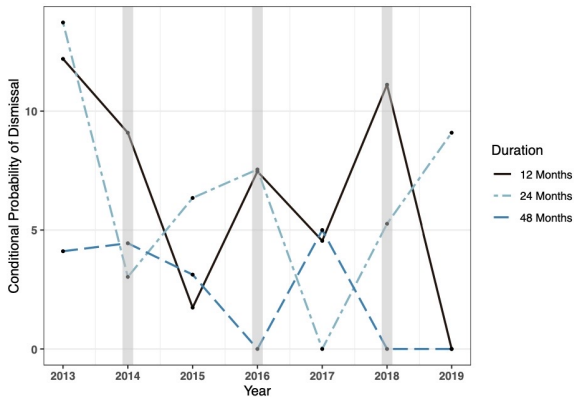
Turnover

Figure 17: Appointed Net Hirings If Affiliated

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Turnover of Career Workers of Political Party in Power

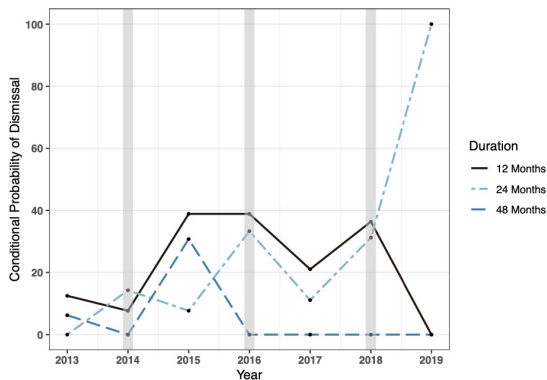
Figure 18: Turnover of Career Workers Affiliated to Political Party in Power



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Turnover of Appointed Workers of Political Party in Power

Figure 19: Turnover of Appointed Workers Affiliated to Political Party in Power



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Regression Models

■ For dismissals:

$$\begin{aligned} \mathbb{1}\{Dismissed_{i,t}\} = & \alpha_i + \beta_1 Pwr_{i,t} + \beta_2 Affl_{i,t} + \beta_3 Dur_{i,t-1} + \beta_4 Out \\ & + \mathbf{Type}'_{i,t-1} \gamma + \mathbf{Type}'_{i,t-1} \mathbf{Pwr}_{i,t} \lambda \\ & + \theta_1 GC + \theta_2 GC * Pwr_{i,t-1} + \epsilon_{i,t} \quad (2) \end{aligned}$$

■ For hirings:

$$\begin{aligned} \mathbb{1}\{Hired_{i,t}\} = & \alpha_i + \beta_1 Pwr_{i,t} + \beta_2 Affl_{i,t} + \beta_3 In_Gov \\ & + \mathbf{Type}'_{i,t} \gamma + \mathbf{Type}'_{i,t} \mathbf{Pwr}_{i,t} \lambda \\ & + \theta_1 GC + \theta_2 GC * Pwr_{i,t-1} + \epsilon_{i,t} \quad (3) \end{aligned}$$