Political Affiliation and Federal Government Hirings In Brazil

Bernardo Duque

Paper for Labor II

PUC-Rio

December 09, 2022

1 Feedbacks Ursula

- Indicar se os papers que existem pro brasil usam cargos comissionados ou com estabilidade. Se so usarem comissionados, justificar o motivo de ver com estabilidade (ela pode nao ocorrer na pratica) – tambem devo olhar para realocacao dentro do setor publico

- Ideia de aferir causalidade eh usar um match com pessoas parecidas do partido perdedor

- Olhar para promocoes (classe cargo)

- Nao to medindo demissao, e sim desligamento. Uma forma de ver se eh demissao msm seria cruzar com a RAIS e ver quantas pessoas tao pro mercado privado imediatamente depois

- Transition probability matrix?

- Grafico com partido dominante por estado

- Limitacoes:

– Join por nome (sem cpf)

– Excluindo quem tem mais de um partido da analise

– So olhando para o partido que esta no poder (sem contar coligacao e ate msm vice) (obs 2020 considerando PSL)

• Falar sobre filiacao em contexto e incluir a 1a tabela e 1o grafico

2 Introduction

Governments play a huge role in the development of a country. However, although government quality has always been emphasized by economists, 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, i.e. if political discrimination[1] plays a role in selecting public sector workers.

Some channels which bureaucracy affects development have already been documented[2]. For instance, the career design matters. Bertrand, Burgess, Chawla, et al. (2020) found that career incentives to reach higher positions can have substantial impacts on the performance of civil servants. In times of crisis, representation is also important. In the context of the 1918 pandemics in India, Xu (2021) found that towns led by Indian bureaucrats had fewer deaths than the ones where British headed. Similarly, bureaucrats assigned to home states in India tend to be perceived as less effective in their performance because of higher corruption (Bertrand, Burgess, Xu, et al. 2020).

In relation to patronage in the public sector, evidence is more scarce worldwide, although in Brazil a few papers have been produced. In relation to worldwide evidence, in the context of the US, Spenkuch, Teso, and Xu (2021) find that ideologically misalignment between bureaucrats and political leaders leads to "morale costs" and consequently less productivity in the public sector.

---

[1]Although the two concepts are not exactly the same, here I will use interchangeably political discrimination and patronage, since in this context patronage is a form of political discrimination.

[2]See Besley et al. (2022) for a review of the ties between bureaucracy and development.

In terms of Brazil, Colonnelli, Prem, and Teso (2020) document the existence of patronage within the public sector in the municipal level and that it leads to selection of less competent individuals.[3] Their findings are partially consistent with Brollo, Forquesato, and Gozzi (2017), that found that mayors used their discretion power to employ members of their party, although workers quality actually rose in their study. Barbosa and Ferreira (2019) also find similar results for the rise in employment of affiliated workers, but the magnitude is less severe.

However, none of them have provided evidence on the federal level, which arguably is more likely to have a more profound impact on development than the municipal level – used by all of them –, both because of the size of the federal bureaucracy and because of its more broadly attributions. Hence, in this study I will try to address this lack of evidence and contribute to this literature.

Because of the amount of data I will have to handle within a small period of time, this research project will have a descriptive approach. I will try to provide some information and insights on the following questions. Has increased polarization led to political discrimination within the federal public sector? Did it lead to increased dismissals of employees affiliated to the opposing party[4] despite their stability? What is the magnitude of job turnover when there is a government change? Are appointed workers or outsourcing firms hired because of their qualification or solely because of their political affiliation or of their owners? Does this lead to inefficiency in the public sector?

This study aims to contribute to two branches of the literature. First, to the growing literature of the role of politics in the the public sector labor market. Second, more generally to the broad literature of discrimination in the labor market and more specifically to discrimination in the public sector labor market.

The following section will provide some guidelines to describe the context of the study. Next,

---

[3]This is aligned to the finds made by Colonnelli, Neto, and Teso (2022), that document the existence of political discrimination also in private firms in Brazil. The authors find that this discrimination leads to copartisans workers being paid more and getting promoted more often, even when underqualified, and that this may lead firms to grow less.

[4]I will in fact consider political coalitions in my analysis instead of party-by-party, although I can also test for heterogeneity in terms of being affiliated to the party and the coalition.

I will discuss more about the data that will be used, and the subsequent section will briefly discuss the empirical strategy. The last section will conclude presenting a roadmap for this project.

3   Institutional Context

In this section I briefly describe some dynamics and facts related to the public sector in Brazil, as well as the electoral cycles and political affiliation in the country.

3.1   The Public Sector in Brazil

The public sector in Brazil is divided in three levels – Federal, State, and Municipal – and three branches – Executive, Legislative and Judiciary. Each state has a number of municipalities, and the federal level encompass all 26 states (plus the federal district). Each level has their own three branches. Workers can also be civilians or military. In this study I only focus on civilians workers[5], although military workers have gained a more prominent role in the executive federal level.

There are three types of ties that a worker can have with the public sector: "career" contract, "appointed" contract or "other". The first type corresponds to all public workers that have been admitted to the public sector through a public examination; while the second type are workers in posts of trust, that is, they are nominated to their posts. The last type refers to a minority that includes contract-less workers, temporary workers, interns and so forth. Workers can be of two type simultaneously if one post has no interference on the other (e.g. an individual can have a career job and get nominated to an appointed one, without losing their career post).

As can be seen in Figures 1 and 2, the great majority of public workers in the federal executive level are career ones. The number of workers are relatively stable both in absolute

---

[5]Because of the time restriction.

and proportional terms; the mean for career workers is 80.37%, while for appointed workers is 13.18%.

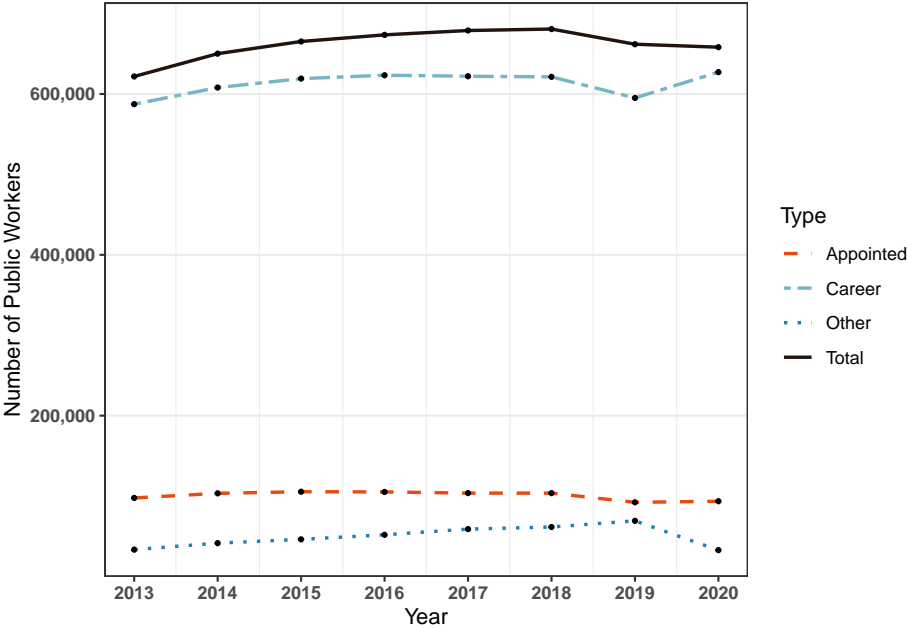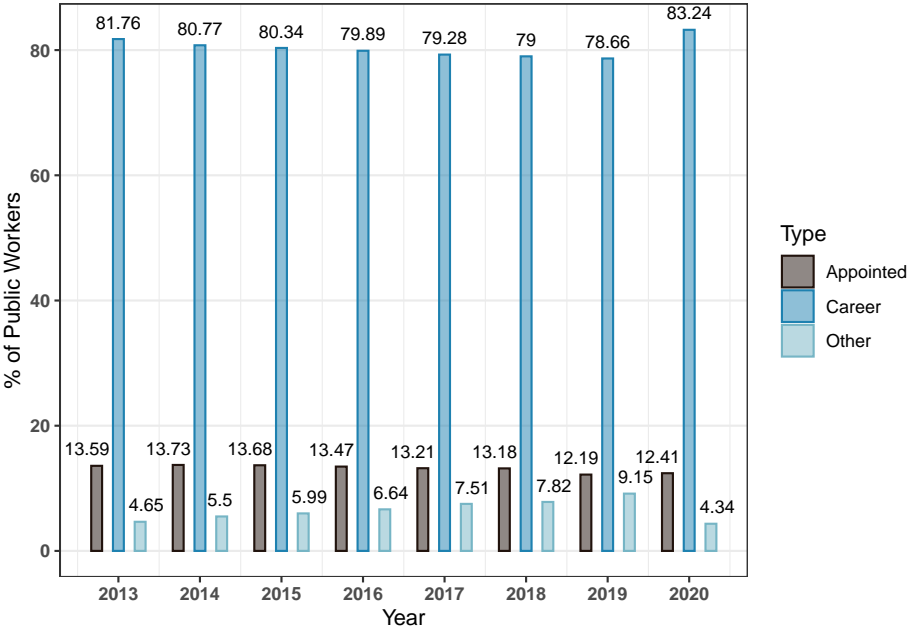Figure 1: Number of Civilian Public Workers

Figure 2: Compostion of Civilian Public Workers

A common feature in public sectors around the world that is also present in Brazil is job sta-

bility. While appointed and other workers do not enjoy this feature, possibly being vulnerable to discretionary dismissals, career workers have job stability granted by the Constitution. However, workers have to pass a 3 years probation period, which is evaluated by a commission 4 months before the end of the period. This feature aims to guarantee the continuity after a government change as well as shield workers against political pressures[6]. Given this stability, there are only three cases in which a career worker can be exonerated/fired: (i) Definitive judicial decision; (ii) Disciplinary administrative process; (iii) Insufficient performance. However, case (iii) is not a *de facto* case, since it has never been regulated.

3.2   The Electoral Cycles and Polarization

Brazilians vote every 2 years, intercalating between federal and state elections (together) and municipal elections. In the federal and state elections voters choose the president, their state governors, senators, congressmen and congresswomen, and state chambers representatives.
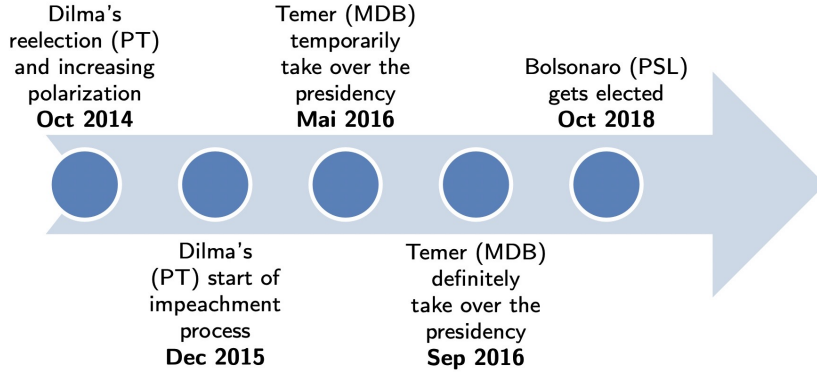
Recently, the presidential post has been subject to a lot of disputes, including an impeachment and the election of an extreme right-wing politician to power. It has generated a lot of tensions and polarization has contaminated the whole society, with cases of political violence increasing, resulting even in murder[7].

Figure **??** presents a timeline of the main events related to the presidential post in Brazil in the period of analysis. It starts with the reelection of the Workers Party president, passing through the impeachment process that increases polarization and ends with the election of the right-wing extremist. It is important to note that in this period there has been two changes of presidents and two elections. However, for the sake of the analysis I will treat the reelection as a government change, since because of the risk of impeachment the former president drastically changed her government model in order to remain in power.

---

[6]E.g. the INPE case.

[7]E.g.   https://congressoemfoco.uol.com.br/area/pais/homem-e-morto-por-bolsonarista-em-aniversario-com-tematica-do-pt/

Figure 3: Presidential Timeline 2013-2020

3.3 Political Affiliation

Every civilian with full political rights can be affiliated to a political party. However, elected politicians, military, judges, Federal Court of Accounts[8] and Attorney General's Office members have different deadlines for affiliation.

Figure 1 presents the number of individuals that were affiliated to a political party in at least one of the years between 2013-2020. Almost 90% of individuals were affiliated to only one party in this period and nearly 97% of affiliates did not join more than two parties. In this period, the mean affiliation rate for the labor force was 8.59%.

Table 1: Number of Individuals 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

---

[8]From the official website: "The Federal Court of Accounts is the external control institution of the federal government that supports the National Congress with the mission of overseeing the budget and the financial execution of the country and contributing to the improvement of Public Administration for the benefit of society." https://portal.tcu.gov.br/english/inside-tcu/external-control/

Figure 4 shows the evolution of affiliates per year, considering only individuals that never changed parties. The number of affiliates has increased slowly, closely following the population growth. In terms of political parties, considering all individuals affiliated to a party in the period – i.e., including possible changes[9] –, Figure **??** shows that the party with most affiliates is MDB, a party known for its lack of ideological adherence. Next is the Workers Party, that has been in power for 14 of the last 20 years and it is known for having a lot of loyal supporters as well as a lot of opposing forces.

Figure 4: Number of Affiliates
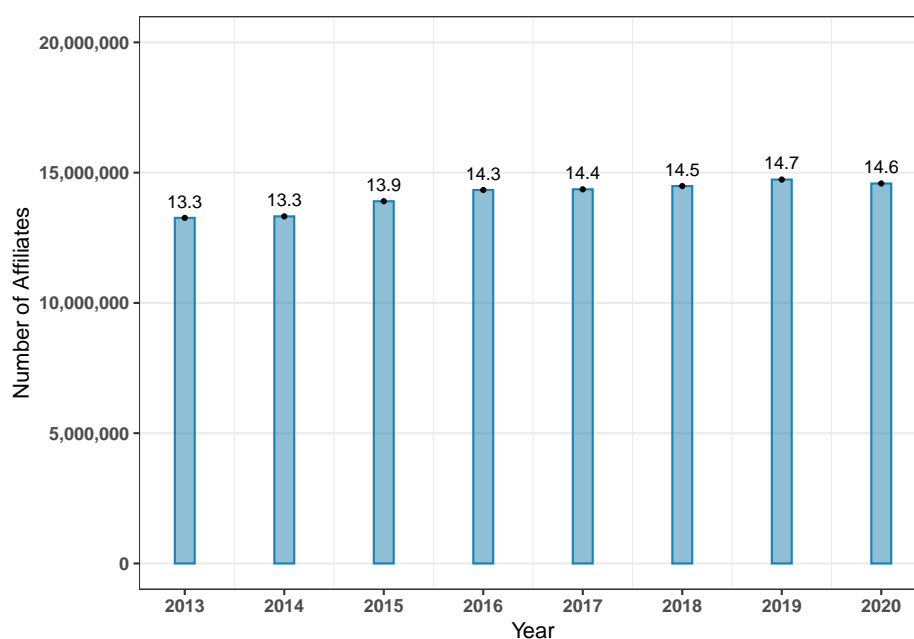
[9]The order does not change when considering only individuals that never changed parties, but PT comes closer to MDB.

Figure 5: Number of Affiliates per Political Party
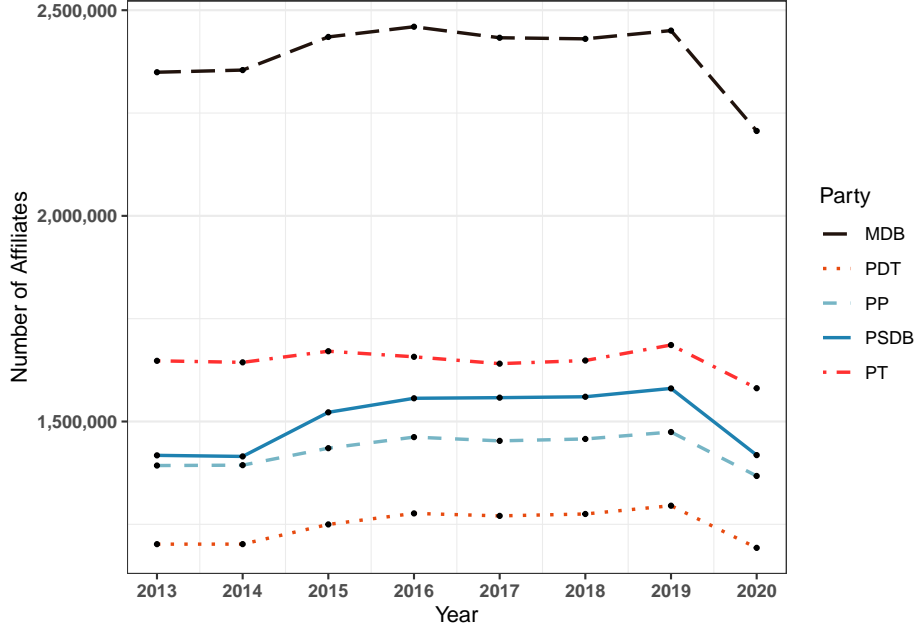
4 Data

I merge two data sets to create a panel from 2013-2020. *Tribunal Superior Eleitoral* (TSE –
Brazil's electoral high court) has information on all political affiliations since 1990. *Contro-
ladoria Geral da União* (CGU – Brazil's Comptroller General) has information on all federal
public sector workers from 2013-2020. In this section I describe both data sources, data
processing and the merge of the data sets.

4.1 TSE Data

TSE has information on all political affiliations of every individual in the country since 1990.
It contains information on the affiliation date, political party's identifier, name and CPF
(national identifier), affiliation's current situation and city identifier.

For both data sets, I consider the year t as the period between November 01 of year $t-1$
until October 31 of year t. The reason is that perhaps there are people that may want to

join a party after the elections results are already known just to reap benefits, which might be a source of contamination in the analysis.

I first gather information on all affiliations that are active between 2013-2020, which leads to an initial database with 24,666,625 observations (a row per affiliation spell). I dropped individuals with more than one party (11.06% as seen in Table 1) for computational reasons, remaining 16,068,006 observations.

4.2 Federal Public Sector Data

The data base on federal public sector is called *Registros de Servidores Públicos do Executivo Federal*, which is maintained by CGU. On the first day of every month, CGU updates the data base including information on every federal public sector worker on the executive branch. It includes workers from autarchies, but not from state-owned firms, outsourcing firms, military or retired workers.

Data is available from 2013 to 2020, which is the reason why this is the period of time that I restrict my analysis to. It contains information on the type of spell – if the employee is a civil servant[10] or was appointed –, the public agency the employee is assigned to, the public agency the employee is actually working on[11], working hours per week, the date in which they have joined the public sector and the current public agency, their post, the state in which they are serving, name and CPF.

I gather information for every year on October 1st to reduce the size of the database to a computationally manageable one (6,177,039 observations)[12]. 7.47% of individuals in the data have no information on 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 hirings and dismissals. Although I call

---

[10]Hired by means of public examinations.

[11]The worker can be reallocated in some cases, although it is out of the scope of this study.

[12]This inevitably leads to some information being lost, because individuals that started working from November to September and ended their spell in September are not included in the data. However, due to the nature of public sector employment, I argue that this is not a relevant amount of people.

the variable dismissal, it is important to stress that it is not exactly a measure of dismissals, since I cannot distinguish if the worker was exonerated/fired or left by their own will.

4.3 Merge

Ideally, I would like to merge the two data sets perfectly using information on some national identifier such as CPF or voter registry. However, each base has information on only one of them, besides the names of the individuals.

As such, my merging variable is the worker's name. I dropped individuals with repeated name from both data sets, in order to refine this process. Individuals that were affiliated to more than one party in the period were also dropped[13].Finally, get a resulting panel of 7,697,248 observations (962,156 individuals x 8 years). Clearly this is not a perfect match and it is vulnerable to mismatches, but it was the best option given the time restriction of this study.

5 Descriptive Analysis

5.1 Hirings and Dismissals

As I will be working with a lot of different datasets within a limited period of time, this research project will have a descriptive approach, i.e. I will not answer any of the research questions causally. For this reason, it is not yet possible to fully define the statistics I will provide, since ideas might (dis)appear during the exploration of the data. However, henceforth I will discuss some possibilities.

As CPFs are not entirely provided in the data sets[14], but I have employees full names, I can merge the databases to get the information I need. I will provide some summary statistics both on political affiliations in Brazil and on the public sector labor market. Next, I will

---

[13]300,864 observations, i.e.,37,608 individuals x 8 years

[14]The first three and last two digits are omitted.

provide some other descriptive statistics by merging all sets of information. For instance, I will be able to indicate how different are affiliations rates between public sector employees and the general population; the number of hirings and dismissals of government workers of all type before and after electoral cycles; and run an heterogeneity analysis in terms of managerial or non-managerial posts.

Figure 6: Number of Public Workers Affiliated to a Political Party
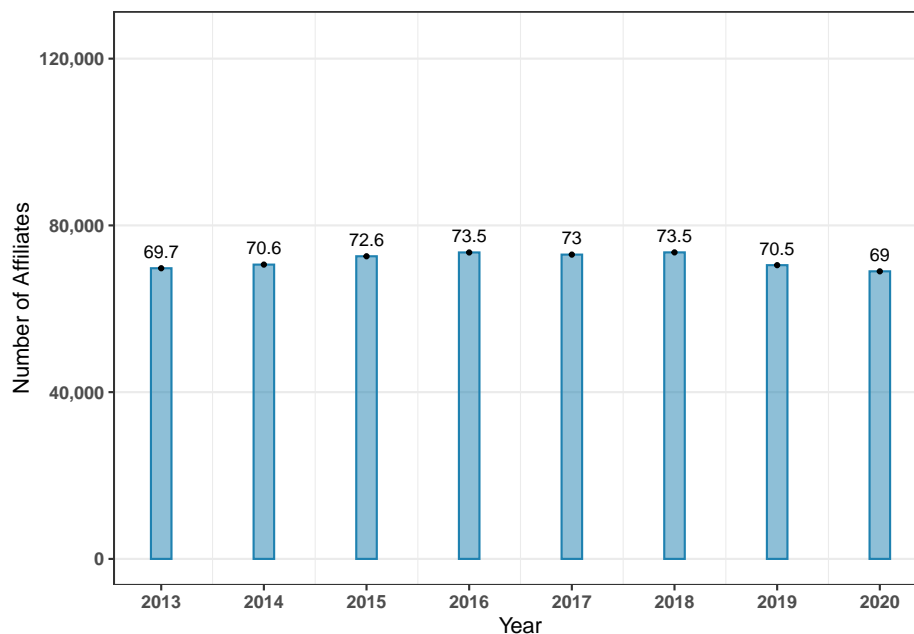

Table 2: Summary Statistics for Political Affiliation in the Public Sector

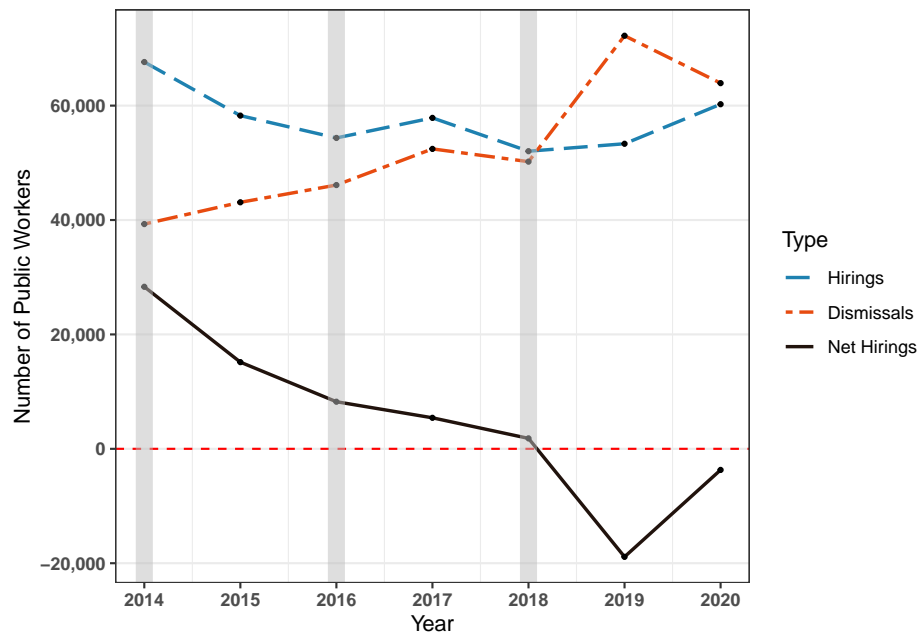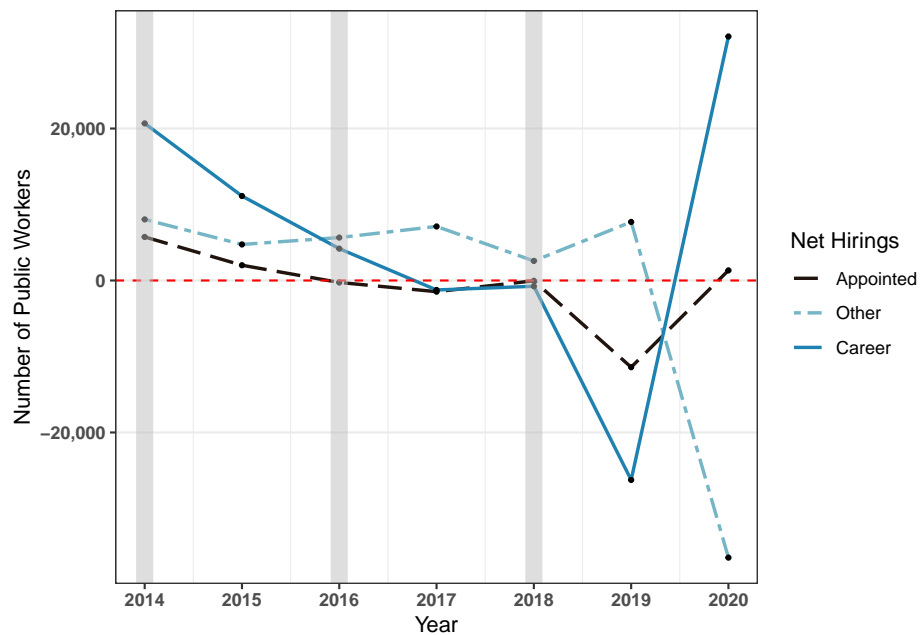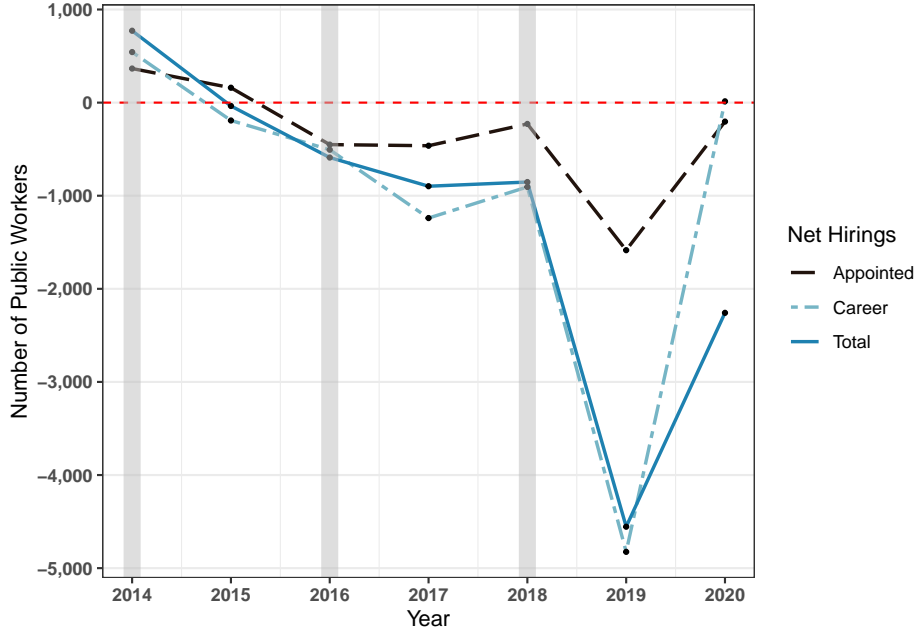| Statistic	Mean	St. Dev.	Min	Max
% Total	10.82	0.22	10.48	11.21
% Career	11.10	0.23	10.59	11.37
% Appointed	10.93	0.31	10.34	11.30
% Other	7.30	0.63	6.92	8.80
% All Labor Force	8.59	0.15	8.34	8.76

Figure 7: Net Hirings of Public Workers

Figure 8: Composition of Net Hirings per Category

FALAR QUE A DECOMPOSICAO ESTA NO APENDICE

Figure 9: Composition of Net Hirings per Category If Affiliated

5.2 Turnover

In terms of job turnover, I will measure whether it has changed between elections by a hazard function. It indicates the probability that the employment spell will be terminated next month, conditional on its current duration in months d.[15] I will use an approach adapted from Barros et al. (1999), where the hazard function for each year will be calculated by:

$$h_t(d) = \frac{T_t(d)}{N_t(d)} \tag{1}$$

Where $h_t(d)$ is the hazard function given duration d for year t; $T_t(d)$ is the number of public sector employments terminated at time t given duration d; and $N_t(d)$ is the total number of active employments in the public sector. I will consider $d \in D$, such that $D = \{12, 24, 48\}$.

If there is enough time, I will also be able to provide some evidence on whether owners of outsourcing firms affiliated to the leading political party are benefited by the ruling of their party.

---

[15]The higher the hazard function, the higher the turnover.

DISCUTIR PQ ROTATIVIDADE EH IMPORTANTE

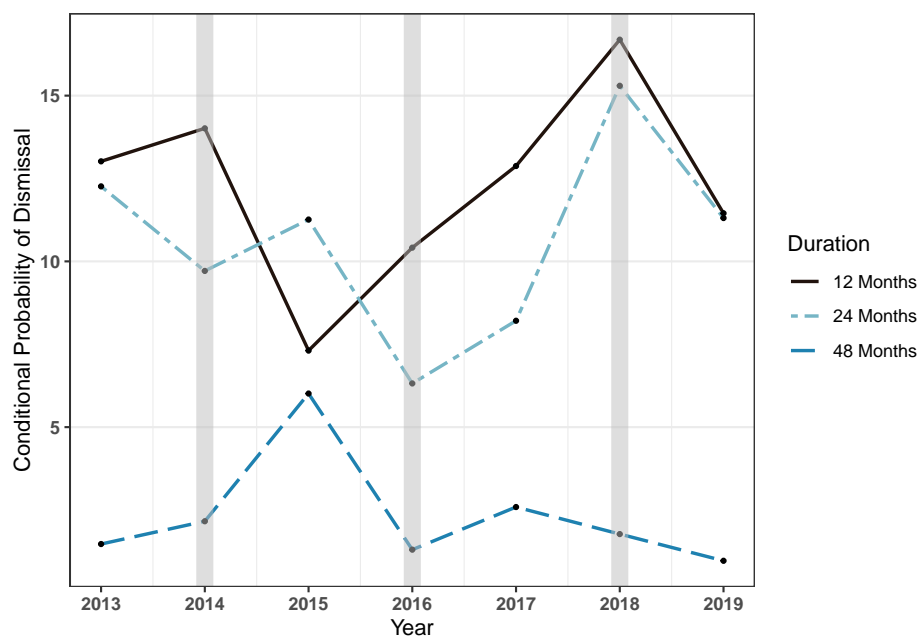Figure 10: Turnover of Public Workers

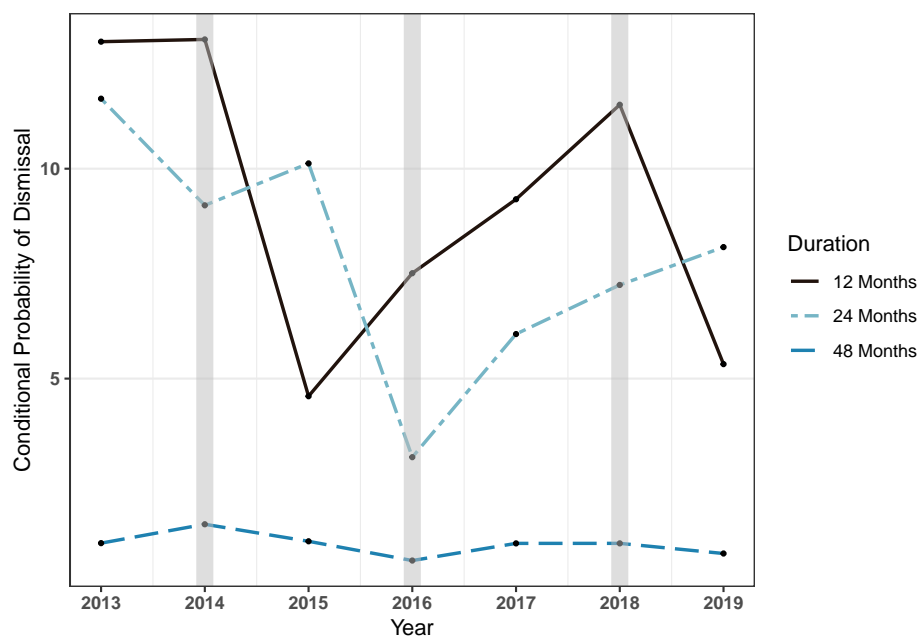Figure 11: Turnover of Career Workers
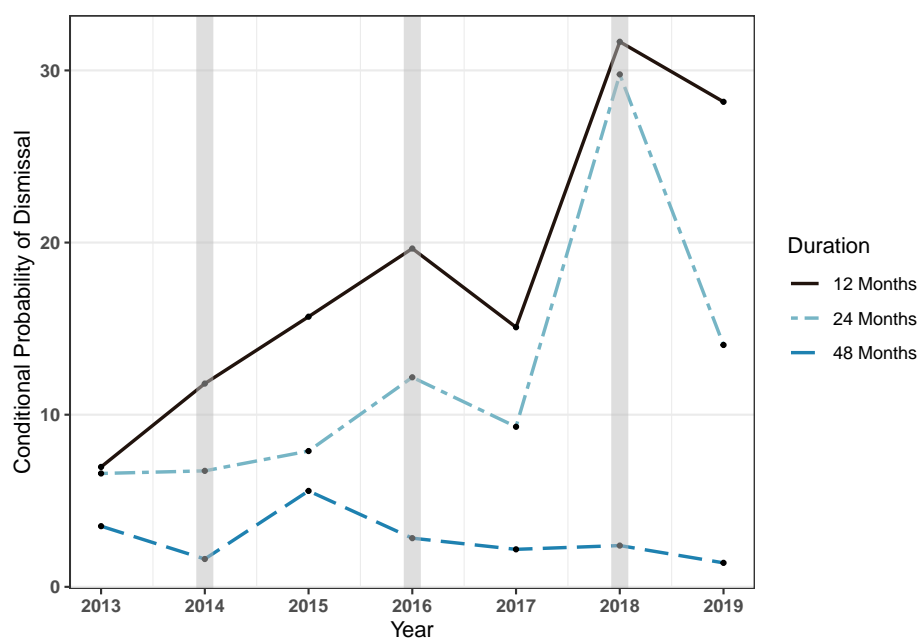
Figure 12: Turnover of Appointed Workers

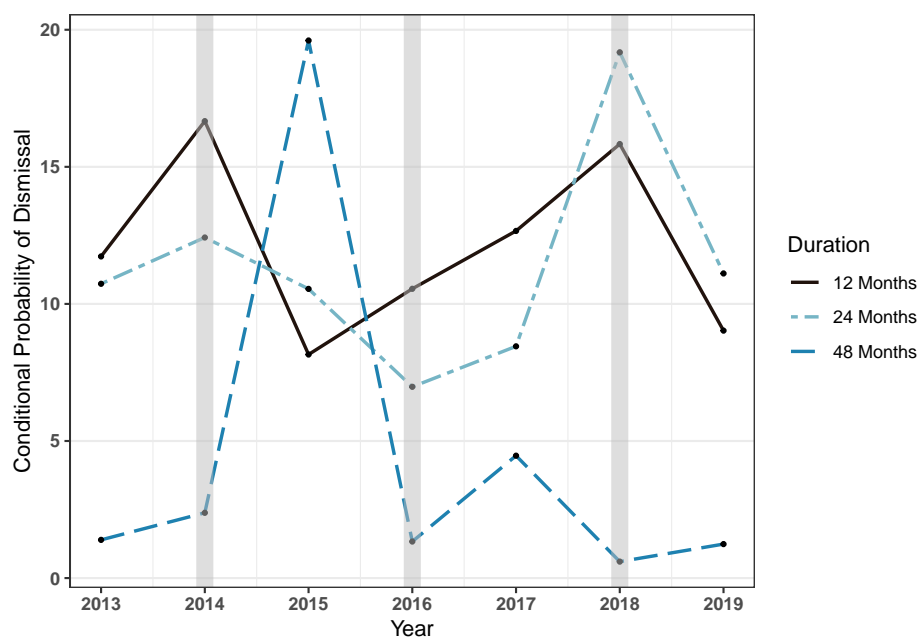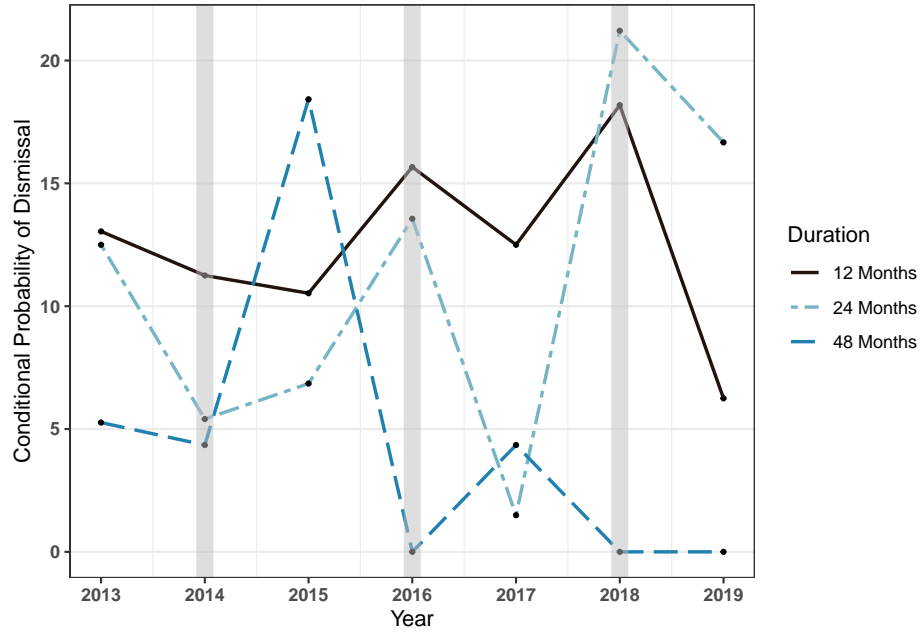Figure 13: Turnover of Affiliated Public Workers

Figure 14: Turnover of Public Workers Affiliated to Political Party in Power

FALAR DO APENDICE

5.3 Job Type, Affiliation, Dismissals and Hirings

Table 3: Affiliation and Dismissals Correlation

	Dismissals						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Power	−0.006***	−0.012***	−0.014***	−0.014***	−0.003	0.002	−0.007***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)
Affiliation	−0.003***	0.004***	−0.005***	−0.005***	−0.005***	−0.010***	−0.005***
	(0.000)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Lag(Duration)	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)	(0.000)
Lag(Out of Gov)			−0.255***	−0.379***	−0.379***	−0.377***	−0.379***
			(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

	Dismissals						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Lag(Career)				-0.201^{***}	-0.201^{***}	-0.200^{***}	-0.201^{***}
				(0.001)	(0.001)	(0.001)	(0.001)
Lag(Appointed)				-0.025^{***}	-0.025^{***}	-0.024^{***}	-0.025^{***}
				(0.000)	(0.000)	(0.000)	(0.000)
Lag(Career)*Power					-0.014^{***}	-0.013^{***}	-0.014^{***}
					(0.002)	(0.002)	(0.002)
Lag(Appointed)*Power					-0.017^{***}	-0.017^{***}	-0.017^{***}
					(0.003)	(0.003)	(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

$^{***}p < 0.001$; $^{**}p < 0.01$; $^{*}p < 0.05$

Table 4: Affiliation and Hirings Correlation

	Hirings						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Power	0.004^{***}	0.010^{***}	0.013^{***}	0.005^{***}	0.023^{***}	0.026^{***}	0.017^{***}
	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)
Affiliation	-0.017^{***}	0.006^{***}	0.016^{***}	0.006^{***}	0.006^{***}	0.003^{**}	0.006^{***}

	Hirings						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	(0.000)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Lag(In the Gov)			−0.226***	−0.414***	−0.414***	−0.415***	−0.414***
			(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Career				0.458***	0.458***	0.460***	0.459***
				(0.000)	(0.000)	(0.000)	(0.000)
Appointed				0.008***	0.007***	0.008***	0.007***
				(0.000)	(0.000)	(0.000)	(0.000)
Career*Power					−0.036***	−0.035***	−0.036***
					(0.002)	(0.002)	(0.002)
Appointed*Power					0.048***	0.048***	0.048***
					(0.002)	(0.002)	(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

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

5.4 Limitations and Possible Identification Strategy

AUSENCIA DE INFERENCIA CAUSAL

MERGE DAS BASES FEITO SO COM NOMES

INCLUIR MILITARES E TERCEIRIZADOS NA ANALISE

DADOS DA RAIS PARA SEGUIR AS PESSOAS DPS

OLHAR PARA REALOCACOES

DISCUTIR MATCH PARA IDENTIFICACAO

Finally, if there is enough time, I will try to extend my analysis to the private sector to understand the dynamics of workers that migrate between the private and the public sector, especially those with appointed public jobs. To do this, I will need access to RAIS[16], a employer-employee database covering all formal labor supply in Brazil. It includes information on the start and end of contract, the occupation, sector and demographic characteristics of workers.

6   Conclusion

Although not causal, evidence was provided that political affiliation is important in the selection of public workers on the federal level in Brazil. Affiliation does seem to matter in terms of hirings and dismissals as well as in terms of job turnover.

This suggests that political discrimination might be present in the federal public sector, which can compromise the quality of the public sector personnel and, consequently, the provision of public services and goods to the general population. This, in turn, can have deep consequences to both the well-being of this population and to the development of the country.

However, due to the time restriction, there are a lot of limitations in the analysis. Therefore, more effort is necessary to infer a causal relation and to measure possible inefficiencies created by the possible patronage in the federal executive branch of the Brazilian Public Sector.

---

[16]I would need access to RAIS with name and CPF.

References

Akhtari, Mitra, Diana Moreira, and Laura Trucco. 2022. "Political Turnover, Bureaucratic Turnover, and the Quality of Public Services." *American Economic Review* 112: 442–93.

Barbosa, Klenio, and Fernando V Ferreira. 2019. "Occupy Government: Democracy and the Dynamics of Personnel Decisions and Public Sector Performance." *NBER Working Paper* 25501. http://www.nber.org/papers/w25501.

Barros, Ricardo Paes de, Barros Carlos, Henrique Corseuil, and Mônica Bahia. 1999. "Labor Market Regulations and the Duration of Employment in Brazil." *IPEA - Texto Para Discussão*.

Bertrand, Marianne, Robin Burgess, Arunish Chawla, and Guo Xu. 2020. "The Glittering Prizes: Career Incentives and Bureaucrat Performance." *The Review of Economics Studies* 87: 626–55.

Bertrand, Marianne, Robin Burgess, Guo Xu, and Arunish Chawla. 2020. "Organization of the State: Home Assignment and Bureaucrat Performance." *Working Paper*.

Besley, Timothy, Robin Burgess, Adnan Khan, and Guo Xu. 2022. "Bureaucracy and Development." *Annual Reviews* 14: 397–424.

Brollo, Fernanda, Pedro Forquesato, and Juan Carlos Gozzi. 2017. "To the Victor Belongs the Spoils? Party Membership and Public Sector Employment in Brazil." *SSRN Working Paper*. https://ssrn.com/abstract=3028937http://www.econ.puc-rio.br/biblioteca.php/trabalhos/show/2132.

Colonnelli, Emanuele, Valdemar Pinho Neto, and Edoardo Teso. 2022. "Politics at Work." *NBER Working Paper*. http://www.nber.org/papers/w30182.

Colonnelli, Emanuele, Mounu Prem, and Edoardo Teso. 2020. "Patronage and Selection in Public Sector Organizations." *American Economic Review* 110 (October): 3071–99. https://doi.org/10.1257/aer.20181491.

Finan, Frederico, Benjamim A. Olken, and Rohini Pande. 2017. "The Personnel Economics of Developing States." *Handbook of Economic Field Experiments* 2: 467–514.

Spenkuch, Jörg L, Edoardo Teso, and Guo Xu. 2021. "Ideology and Performance in Public Organizations." *NBER Working Paper*.

Xu, Guo. 2018. "The Costs of Patronage: Evidence from the British Empire." *American Economic Review* 108: 3170–98.

———. 2021. "Bureaucratic Representation and State Responsiveness During Times of Crisis: The 1918 Pandemic in India." *The Review of Economics and Statistics*, 1–29.

A   Appendix

A.1   Hirings and Dismissals
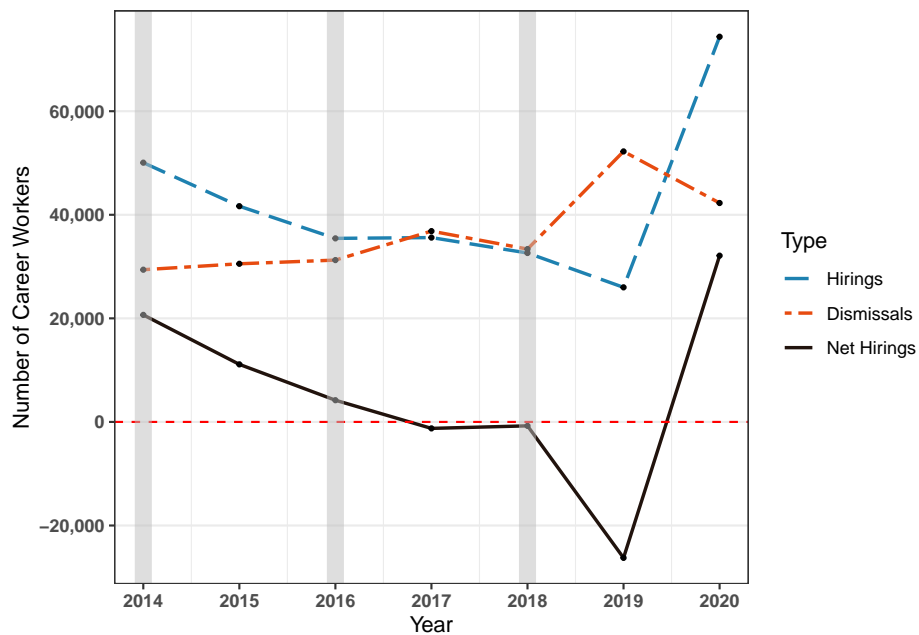
Figure 15: Career Net Hirings
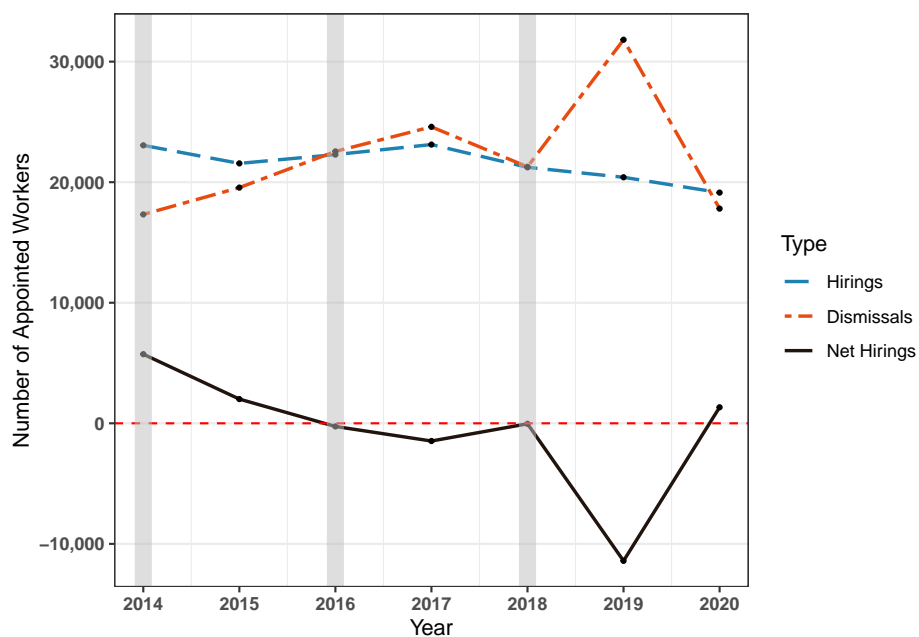
Figure 16: Appointed Net Hirings

Table 5: 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

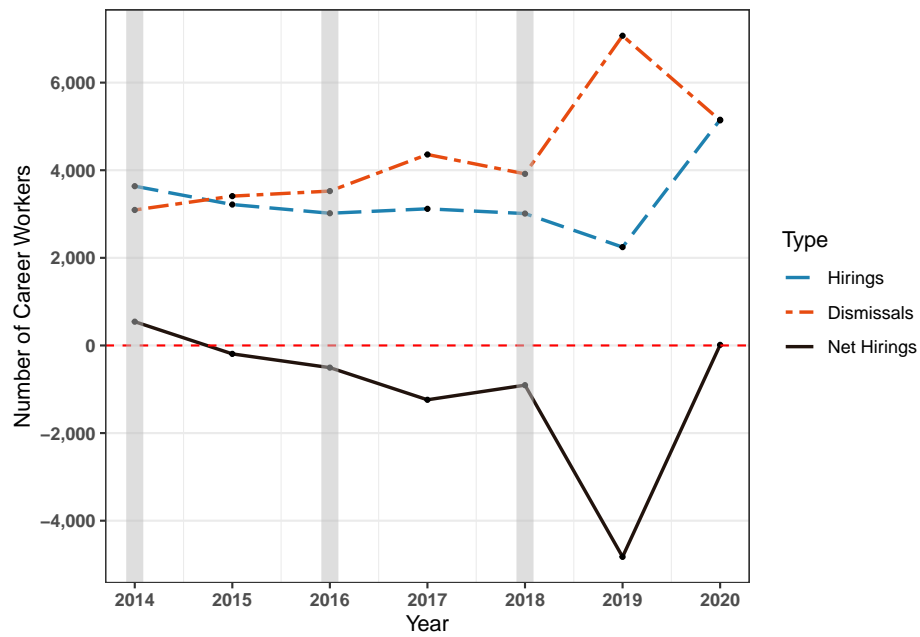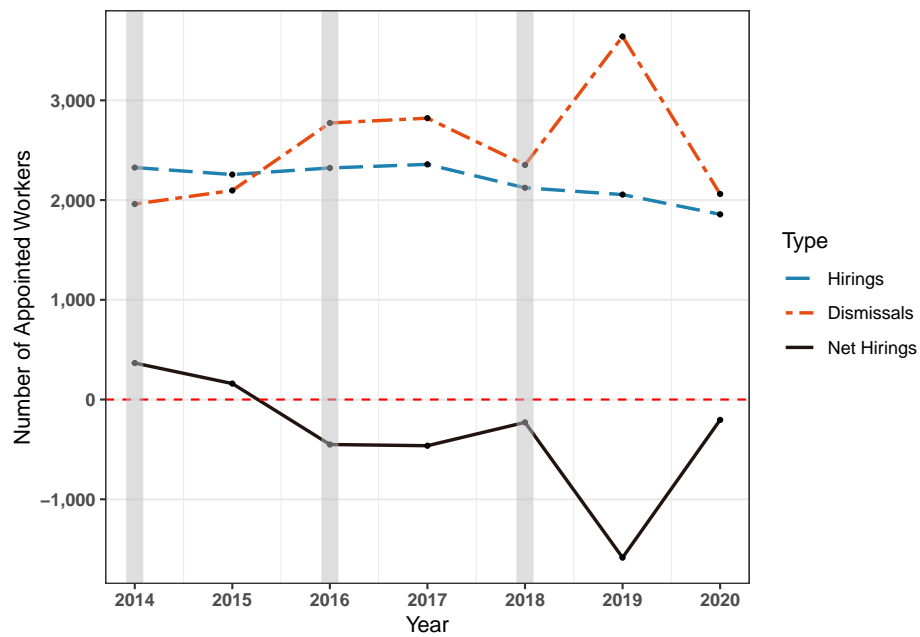Figure 17: Career Net Hirings If Affiliated

Figure 18: Appointed Net Hirings If Affiliated

A.2 Turnover

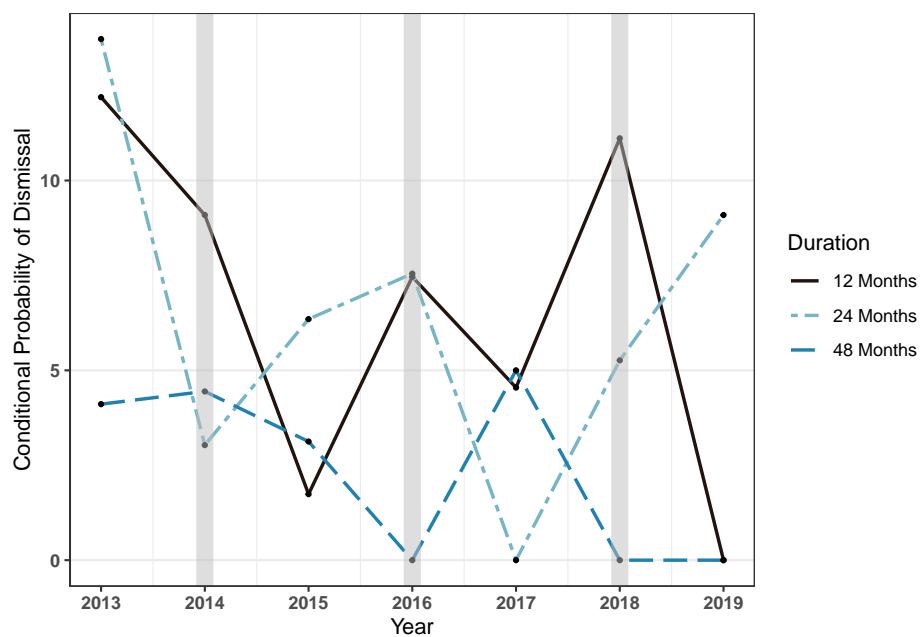Figure 19: Turnover of Career Workers Affiliated to Political Party in Power

Figure 20: Turnover of Appointed Workers Affiliated to Political Party in Power