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## Making EPA Great Again?

A Study of how the Politicization of Climate Change Affected the American Environmental Protection Agency (EPA) under the Obama and Trump administrations

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## Abstract

The politicization of scientific facts, such as climate change, is a highly debated phenomenon in the US. It is well established that climate change is both real, and human-caused. Still, significant parts of the American political community refuse to adhere to this scientific fact. During the Trump administration this resulted in the American Environmental Protection Agency becoming the focal point of this schism between the scientific community, and parts of the political community. To study in which way the agency was affected by the politicization of climate change, the Obama and Trump administrations were compared through a Single-N study with a longitudinal design. The results show that the administrations often adhered to their political narrative in their proposed budgets, but that congress often forced both administrations towards a more neutral compromise, in order to receive bipartisan support. The conclusion is that although the actualized budgets changed marginally during both administrations, the politicization of the agency happened through the day-to-day administrative actions and the political narratives pushed through rhetoric, and that this likely resulted in an inefficient agency, with probable issues concerning the working environment.

*Key words: Politicization, Climate Change, Environmental Protection Agency, Principal-Agent Theory, Presidential Administrations.*

Words: 9985

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## Abbreviations

1. **EPA:** The Environmental Protection Agency is a federal agency in the United States of America tasked with protecting human health and the environment.
2. **FTE:** Full Time Equivalent equals one employee working full time for a full year (52 weeks x 40 hours = 2,080 hours), or the equivalent number of hours worked by several part-time or temporary employees.
3. **FY:** Fiscal Year entails a budgetary year and is used in government accounting. It is common, but not necessary, that this overlaps with the calendar year (1/1-31/12). The United States Government uses Fiscal Years that stretches between October and September (1/10-30/9).

## Glossary

1. **Actualized Budget:** The actualized budget of an agency is the budget which has been agreed upon by the congress after negotiations have taken place. It is often based on the proposed budget, but has been changed after being exposed to the political narrative of the congress.
2. **Alternative Facts:** An alternative fact is an opinion that does not adhere to scientifically proven facts, and is used when trying to give legitimacy to a narrative antagonistic towards the scientific fact. It is often directly opposing the scientific fact.
3. **Congress:** The congress is the bicameral legislature of the federal government of the United States. It consists of the House of Representatives and the Senate.
4. **Employee at the EPA:** No differentiation between the employees at the EPA is done in this paper. They are perceived as of the same background and with similar values, instead of being split up into different categories, such as “scientists” and “bureaucrats”. This is further explained and argued for in 3.5.
5. **Proposed Budget:** The proposed budget of an agency is the budget which the agency and the contemporary presidential administration creates and brings forth to the congress for approval.

# 1. Introduction

When the controversial politician Scott Pruitt was nominated to be the Trump administration's first administrator of the American Environmental Protection Agency (henceforth: the EPA) in 2017, the decision came under a lot of criticism. Pruitt's tenure was characterized by controversial statements questioning scientific research on climate change, as well as proposing significant cutbacks on both his agency's funding, and regulatory reach. After one to many controversies, Pruitt was forced to resign. However, it is hardly controversial to argue that the administrator succeeded in one aspect of his job - clearly aligning his values with the president he served under (Sussman 2017). The politicization of federal agencies is an inherent part of the American democratic system, but how does this work, and what could be said of the consequences?

The aim of this paper is to study in which way the politicization of climate change affected the EPA and the work conducted within the agency during the Obama and Trump administrations. This will be done by performing a Single-N study, with a longitudinal-design, delimiting the study to the timeframe of 2009-2020, this corresponding with the presidential administrations of Obama and Trump. To aid us in understanding the described phenomenon, and to give us a theoretical basis on which to stand, I will be using a Theoretical Framework centered around the *Principal-Agent Theory*, often also called "Agency Dilemma", "Agency Theory", or "Principal-Agent Model".

## 1.1 Background

It is probably not very controversial to state that the contemporary American political landscape is characterized by division and alternative facts, and that the average politician guided by centrism and rationality is a dying breed. In this situation we find an increasing number of established politicians belonging to the absolute edges of the political spectrum (Robinson 2020; Böttcher & Gersbach 2020). In concurrence with this, is the system of political nominations to federal agencies. The contemporary president is tasked with appointing the administrators of agencies, these administrators often being politicians with values aligning well with the current presidential administration. This administrator is tasked with guiding the agency in an appropriate direction, which naturally revolves around the political narrative being pushed by the contemporary presidential administration. This is done

through broad and decisive measures, such as Strategic Plans and Budget Proposals, but also through the day-to-day business being administered (EPA 2021 A).

Regarding the case of climate change, it is widely accepted in the scientific community that climate change is both real, and caused by humans (Cook et al. 2016). However, in the American political arena, this seems to be more controversial. Particularly politicians adhering to the more conservative sphere, seem reluctant to agree with the scientific community on this issue (Walsh & Tsurusaki 2018, p. 10).

Adding to this, is that the employees working within these federal agencies are expected to conduct their work in a certain manner. The values of rationality, neutrality, efficiency, predictability and non-political ideals, have been perceived as central parts of the bureaucratic system since formulated by Max Weber at the beginning of the 20th century (Waters & Waters 2015; Douglas 2009, pp. 46-48).

In summarization we can state that the problem revolves around the politicization of scientific facts such as climate change. This materializes through indicators such as the political handling of the EPA. Furthermore there exists several power spheres, both political and bureaucratic, and these spheres are deeply intertwined, and rely heavily on each other. Simplified, the political sphere is focused on the furtherance of political narratives, and in certain cases this sometimes means disregarding scientifically proven truths. The bureaucratic sphere is struggling to continue adhering to the above mentioned values, whilst still carrying out the actions expected by them. Before moving on to the purpose of the paper, brief summaries of the Obama administration and the Trump administration will take place. This is to provide a clear picture of how the administrations relate to climate change and to the politically nominated administrators.

### 1.1.1 Obama Administration

The Obama administration (2009-2017) was headed by the democratic president Barack Obama. The Democratic Party is one of the two leading parties, and is often perceived as the progressive one. Relevant for this paper is that the Obama administration often is recognized as quite progressive for a democratic administration, and science-friendly. The stance on climate change was that it was real, and human-caused (White House Archives 2013; Walsh & Tsurusaki 2018, p. 10). During the two terms there were two, disregarding the “acting

administrators”, politically nominated administrators of the EPA, Lisa P. Jackson (26/1/2009-14/2/2013), and Gina McCarthy (19/7/2013-20/1/2017) (EPA 2021 B; Fletcher 2011).

### 1.1.2 Trump Administration

The Trump administration (2017-2021) was headed by the republican president Donald J. Trump. The republican party is the other leading party, and is often perceived as the conservative one. Relevant for this paper is that the Trump administration often is recognized as quite conservative for a republican administration, and had an antagonistic attitude towards science. The stance on climate change revolved around skepticism and doubt, both in regards to whether it was real, and whether it was human-caused (White House Archives 2021; Walsh & Tsurusaki 2018, p. 10). During the single term there were two, disregarding the “acting administrator”, politically nominated administrators of the EPA, Scott Pruitt (17/2/2017-6/7/2018), and Andrew Wheeler (7/7/2018-19/1/2021) (EPA 2021 B; Sussman 2017).

## 1.2 Purpose and Research Question

The purpose of this paper is to establish how the politicization of key issues within the American political system can be applied to federal agencies, and to the work conducted by them. The American system of political nominations to bureaucratic positions, although not unique, is a definite step away from the well established school of thought revolving around the earlier mentioned Weberian bureaucracy. Describing these circumstances, and drawing conclusions based on the circumstances of this system, could therefore be perceived as the broader purpose.

There might also be a possibility to draw some conclusions in regards to whether politicization differentiates depending on which direction the political pressure is coming from. This should not be perceived as a subordinated purpose, but rather a practical consequence of examining the politicization under different presidential administrations. Mentioning the presidential administrations in the research question below is more to specify the timespan of the study, than to put focus on any comparative aspects.

The significance of the study is clear. Politicization of scientific issues and the way in which politicians relate to, and use, science, as well as how the government as a whole functions, arguably falls under one of the most well established fields of study within political science - Democracy. Thereby, this clearly relates to an identifiable scholarly literature, and the paper aims to expand the written knowledge on the subject cumulatively. Furthermore, the paper might be perceived as meaningful regardless of it belonging to a certain type of academia. Firstly, the threat of climate change is paramount and significant for everyone, which means that the way in which the American government deals with the issue is of general relevance. Furthermore, the EPA is funded by taxpayers, and regulates large portions of the population and the established companies in the US. Based on the above we can establish that the paper, and the subject it is dealing with, could be perceived as highly relevant for the general individual as well as to the field of Political Science (Halpertin & Heath 2020, p. 99; Teorell & Svensson 2007, p. 18).

With all of the above in mind, the research question I am posing is the following:

*In which ways did the politicization of climate change affect the work conducted within the American Environmental Protection Agency, during the presidential administrations of Barack Obama and Donald J. Trump?*

### 1.3 Literature Review

The Literature Review has many functions. It points towards potential gaps in conducted research, where I have the opportunity to both be cumulative, and dive into areas where researchers have yet been exhaustive in their work. Furthermore it aids in constructing a theoretical foundation which might not be actively used to analyze the empirical framework, but which might still serve as a point of reference (Teorell & Svensson 2007, p. 35).

#### 1.3.1 Scholarly Literature

The established and conducted scholarly literature which may relate to this paper is both extensive, and derivable from different fields. Political science, organizational theory, sociology, and budgetary research, have all been included to give a clear picture of the scholarly framework this paper associates with.



When discussing politicization, we can note applicability both within political science, and organizational theory. The “*Systems Theory*” by Schnedier et al. (2017), should be mentioned. This theory discusses how organizations relate to complex, and even antagonistic, environments. This is highly relatable to the politicization of scientific facts, and the consequences of the politicization for an organization like the EPA. For example, the politicization of climate change has led to organizations such as the EPA being forced to relate to a political arena partly antagonistic towards the very existence of them.

There is also extensive research on political legitimacy and the role of knowledge, or expertise, in the advisory processes. Both Maasen & Weingart (2005) and Boswell (2012) provides extensive literature on these subjects. In brief the research touches on the notion that expert knowledge is used by politicians in order to provide legitimacy to their political decisions or positions.

This paper also relates to research on mental health issues, working environment and sociology. This in part due to the organizational tendencies of both this paper, and much of the previously conducted research. As stated in 1.2, this paper has a clear focus on how the employees at the EPA are affected by the politicization of climate change. There are primarily three works which I feel inclined to mention based on their applicability and compatibility; The “*Person-Environment Fit Model*” (Conway et al. 1992), the “*Effort-Reward Imbalance Model*” (Siegrist 1996), and the “*Job Strain Model*” (Karasek 1979).

The *Person-Environment Fit Model* mainly revolves around the argument that a person is deeply connected to their environment, and that they can not be separated entirely from their surroundings. This means that if the individual is incapable of adjusting to any issues within their environment, this will lead to higher stress levels. If the individual finds themselves in an environment where the funding is diminishing, or where the certainty of being employed is taken away, the psychological stress will likely increase, and the individual will find it difficult to thrive in this new environment (Conway et al. 1992).

The *Effort-Reward Imbalance Model* views stress as a consequence of the amount of work being put into something, and the amount of reward the work leads to. If this relationship is imbalanced, it is perceived as increasing stress, based on the social construction that hard work is supposed to pay off, and when this does not come true, the environment becomes

problematic for the employee. In other words, if an individual puts a lot of effort into something, and gets minimal reward for this, it will lead to unhappiness in the workplace (Siegrist 1996).

In brief the *Job Strain Model* studies the relationship between the demands on an employee and the amount of autonomy and intellectual discretion the employee has, and argues that if the demands highly outweigh the autonomy and intellectual discretion, the employee could be subject to future mental health issues, such as depression (Karasek 1979).

Finally, this paper revolves around the budgetary measures of the US government, especially the ones related to the EPA. This prompts the mention of the basic features of budgetary processes, presented by Wildavsky, which mainly revolves around rationality, with the actors in charge of determining the budget of the upcoming year using the previous budget as a template. This results in a broad existing budgetary base which will most likely not be touched, and a small portion of the budget being open for negotiations. This further results in solely the issues perceived as the most important being prioritized (Wildavsky 1964; Wehner 2015).

### 1.3.2 The EPA

Since the EPA constitutes the main context of this paper, I find worth in briefly examining the conducted research on this agency, since it provides a clear picture of how this study will relate cumulatively to this field. Presenting this separately from the Scholarly Literature has the function of underlining that this is not connected to a clear academic field.

Much of the available literature on the subject seems to be opinion-pieces, which range from condemning analysis of an agency not doing enough (Singla et al. 2019), to acknowledgments of an agency constituting the forefront of global environmental research (Anastas & Zimmerman 2021). Furthermore, writing can be found on the concrete applicability of the work conducted by the agency, which even goes as far as to question the legality of some of the measures taken by the agency (Wingard 2020, pp. 267-280; Steelman 2016, pp. 188-216). Some literature also touches on the contemporary work conducted by the EPA and puts this in a comparative setting against the historical work conducted by the agency. This writing argues that the way in which the agency tries to affect the environment

has changed significantly since the agency was created, and that the contemporary agency is too cautious when it comes to regulating the emissions of greenhouse gas (Adler 2020).

## 2. Theory

### 2.1 Principal-Agent Theory

Under this heading I will present the *Principal-Agent Theory* and establish the analytical framework which will be used when analyzing the empirical material.

First of all, it should be noted that the *Principal-Agent Theory* is applicable to quite broad and diverse areas of research, and thereby I find some worth arguing in favor of it being applicable to our area of interest, political science and more specifically - politicization. The flexibility of the theory has been clearly demonstrated by several established researchers (Maasen & Weingart 2005; Shapiro 2005; Gailmard 2014), yet I find some worth in reasoning around this in relation to this paper. Maasen & Weingart argues that the *Principal-Agent Theory* deals with the relationship between political goals and the implementation of these goals into reality (2005, p. 8). I adhere to this completely, and argue that this fits well in with the set purpose of this paper. The political goals of the differentiating administrations, and implementing these goals through budget proposals, is precisely what is examined in this paper.

The *Principal-Agent Theory* revolves around the perception that in many relationships where one part (*agent*) takes decisions on behalf of the other part or entity (*principal*) - politician/voter, employee/employer, firm management/shareholder - there are certain recurring issues. The relationship is built on the *principal* giving the *agent* the mandate to work for the *principal* - in exchange for a promise to have the best interest of the *principal* in mind when conducting the work. This contract is supposed to result in dual gains, with both parties leaning on each other expecting to gain something from the other (Eisenhardt 1989; Slyke 2006).

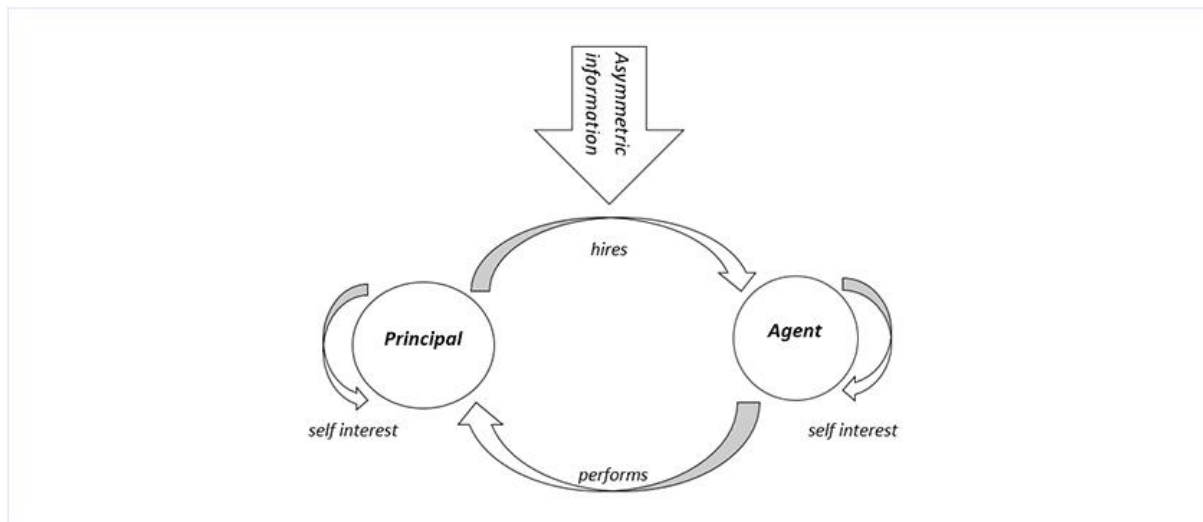
The first and most basic issue occurs when the *agent* is in a position where they can take decisions which may affect the *principal* negatively, without getting affected themselves. This might be the case when the goals of the actors do not align, or conflict all together. This could also be conceptualized as different views on risk taking. Since the *agent* will not be subject to potential risks that they draw upon the *principal*, they might not be as cautious as they might otherwise have been. In the business world, this has been met with an introduction

of partnerships for the management of the firm, this meaning that the *agent* receives part-ownership of the firm, and thereby aligning the goals of the *agent* and the *principal* (Eisenhardt 1989; Slyke 2006).

Authors dealing with the theory often declare that there exists a so-called “information asymmetry” between the actors, where the *agent* generally is perceived to have more information than the *principal*. This reasoning can mainly be retrieved from two aspects of the theory. In the first aspect, there exists an information asymmetry between the actors in the sense that the *agent* has more information than the *principal* when hired, meaning that the *principal* is unable to measure the competence of the *agent*. This could happen more frequently within fields where competence is somewhat subjective. For example, politicians may or may not be the best suitable candidate for the position, but if they convince the voters that they are the most competent option, they will be elected regardless of actual competence. In the second aspect, we can find an information asymmetry in the case of the *agent* breaking the contract they have signed with the *principal* some time after having been employed or elected. The *principal* might not notice that the *agent* is no longer working towards the best interest of the *principal*, since the *principal* is unable, or disinterested, in checking up on the *agent*. This is also applicable to politicians, and the situations where they might be elected for about half a decade, and where the voters are unable, or disinterested, in checking up on the continuous work of the politician. Information asymmetry can also exist in other parts of this relationship, with the *Principal* having information or insight in areas which the *agent* does not (Waterman & Meier 1998; Snippert et al. 2015).

There is also a common declaration from authors dealing with the theory that both the *principal* and the *agent* in some sense perceive any work done as self-serving. According to this reasoning, the main focus for both actors is to further any personal interests, and opportunism is a constant factor in the relationship (Shapiro 2005).

The figure below illustrates how the relationship between *agent* and *principal* works, with the described functions clearly portrayed. Worth mentioning is that the “Asymmetric information” which, based on this figure could be perceived as only existing in the hiring process, also could be found in other parts of the contracted relationship (Waterman & Meier 1998; Snippert et al. 2015).



Source: Chelnicuic 2014

Having established the applicability, as well as the functions and framework of the theory, I would argue that there are two separate relationships, relevant to our case, where the *Principal-Agent Theory* can be applied. The relationship between voter (*principal*) and politician (*agent*), and the relationship between politician (*principal*) and employee at the EPA (*agent*). These relationships contain all of the characteristics described above, and I perceive them as clear examples where the *Principal-Agent Theory* is applicable.

### 3. Research Design

#### 3.1 Methodological Approach

In this paper I will be conducting a Single-N case study, with a Longitudinal Design. These terms means that a case study is being conducted within a single context, and that the paper studies a timespan stretching over several years, in this case 12. The context is the EPA, and the timespan stretches from 2009 to 2020, which will result in 12 units of analysis. The large number of units of analysis will provide a clear comparative focus, as well as a possibility to draw broader conclusions. The methodological approach will however simultaneously ensure the depth and exhaustiveness of a case study (Halperin & Heath 2020, pp. 234-237, 262).

This design lets me study a timespan that reflects the presidential administrations of Obama and Trump. This relates well with my hopes of being able to draw conclusions regarding how politicization differentiates depending on which direction the political pressure is coming from. The methodological approach allows me to examine whether the perceived progressiveness of the democratic party, and the perceived conservativeness of the republican party, is upheld, whilst simultaneously keeping the focus on the actual purpose of this paper.

I perceive the decision to conduct a Single-N study suitable in relation to the complicated and broad subject. In addition, the methodological approach described above is commonly used, and therefore well established. This can be noted in previously conducted research, notably: Snippert et al. (2015); Slyke (2006); Conway et al. (1992); Eisenhardt (1989); Wingard (2020). This relates well with my cumulative aspirations.

Relevant to the chosen timespan, is that the EPA, the research on climate change, the general awareness of climate change, the public opinion, and the political field, most likely underwent significant progress and change during the 12 years which will be studied in this paper. This ever changing context will be kept in mind when both conducting research on the subject, and when drawing conclusions at a later stage.

Something should also be said about the decision to use a descriptive research question. Generally political scientists prefer to not use a descriptive approach, since there is an established view that other approaches result in more advanced or appropriate conclusions

(Teorell & Svensson 2007, pp. 22-24). However, when doing the research prior to writing this paper, I noticed that although there is extensive research on politicization and the consequences of it, there seems to be a void where I would assume that the descriptive research would be. Thereby, this paper aims to not only relate cumulatively to prior research and to the subject at hand, but also to lay the “descriptive basis” for future research conducted on politicization of climate change and its consequences.

### 3.2 Selection of Case and Delimitation

The decision to focus on the EPA in the US was based on several factors, mainly revolving around the nature of the US and its agencies, as well as the issue of climate change.

What is special about the US? Initially we can note that the US has an extensive influence on the rest of the world. The US is often perceived as the most, or one of the most, powerful nation(s) in the world, and it is reasonable to assume that the way in which the US relates to the increasingly politicized issue of climate change, sets the standards for how other countries should handle the issue. If the US shows negligence and disinterest in dealing with climate change, other countries might adhere, and vice versa. This also holds true when discussing research on the issue of climate change, with the US, or rather institutions and universities in the US, being in the forefront (Sælen et al. 2020). Moreover, the US is probably the closest thing there is to an ideal capitalist state. This holds some relevance, since the issue of combating climate change often is framed as “bad for business” (Shum 2012).

Continuing on the reasoning above, the contemporary American political landscape is highly polarized, meaning that bipartisan agreement is rare. Thereby, we can hopefully identify a clear parallel between political decisions taken affecting the EPA, and the political narratives guiding the contemporary presidential administration and the contemporary congress. Adding to this, is the fact that the US has politically governed agencies, meaning that the political and bureaucratic spheres are deeply intertwined. This is not unique to the US, but it certainly makes the issue of politicization of scientific facts more worthwhile to study since the antagonistic and alienating political narratives being pushed by the political sphere not only results in conflicts within the political sphere, but also results in conflicts between the political and bureaucratic spheres (Robinson 2020; Böttcher & Gersbach 2020).



Moving on to climate change and the EPA. Progressively we can see that the science of climate change is being overshadowed by the discussion of climate change from a political standpoint. This has a clear connection to the “bad for business”-aspect mentioned earlier (Shum 2012), which successfully distracts from the increasingly pressing matter of climate change both in the US, and globally, with increasingly dire consequences looming on the horizon (Lynch & Stretesky 2012, pp. 214-215; Cook et al. 2016). Since the EPA is the American federal agency probable to be the most devoted to combating climate change, and conducting research on the subject, it is only natural to focus on the EPA. The agency has also directly mentioned the issue of the environment within their statement of purpose, which is further established in 4.1.

Furthermore, delimiting this paper to the EPA and to the politicization of climate change lets us go into more depth than if a broader selection of cases would have been favored. However, this does not necessarily limit potential conclusions to just the EPA and climate change. By generalizing we might be able to draw conclusions which could be applicable to other highly politicized issues as well. Unfortunately, since this paper uses the, quite unique, American system as context, generalising conclusions applicable to other countries will not be presented (Teorell & Svensson 2007, p. 238).

### 3.3 Material

My empirical framework will be constructed through primary material gathered from the website and the archive of the EPA. The material mainly consists of budgets and workforces, found in reports and plans. Having primary material from the EPA as my main source of information means that my paper can be original in the sense that no previous author or researcher has touched the basic foundation of this paper, and this increases the meaningfulness of the paper, since any conclusions established are solely my own. However, the untouched material also results in an increased need for caution and critical thinking, since the material has not been processed beforehand (Halperin & Heath 2020, pp. 276-278). This holds especially true in this case, since all the empirical material is provided by the EPA, and since we can assume that they have something to gain by presenting themselves, and their decisions, in a certain light.

The primary material has been found both straightforwardly in already compiled tables, as well as through more complex manners, in extensive reports. I have mainly studied budget reports, called “Budget in Brief xxxx”, where the x:s entails the specific year. These reports are about 100 pages each, and I have gone through reports from 2008 to 2021. The reports have been constructed by the agency in consensus with the contemporary presidential administration (Budget in Briefs 2008-2021).

The timespan studied stretches from 2009 to 2020. Yet, I find it meaningful to also examine the previous and following years, as comparable references to the relevant timespan. If either 2008 or 2021 would differentiate greatly from the other years, that would be noteworthy. This results in the Obama administration being studied more extensively than the Trump administration, with eight compared to four years. To achieve the preferred levels of comparability, two terms per presidential administration would have been needed. However, I perceive it as disadvantageous to disregard one of the Obama terms (making it four years compared to four years), and will instead be mindful of this difference in years when drawing final conclusions.

My theoretical framework, as well as any previous research conducted within relevant fields, will function as the glasses through which I study the empirical framework, and is exclusively constructed through secondary sources such as scholarly literature. Using secondary sources to construct the theoretical framework could be perceived as conventional, and provides cumulative aspects to the paper (Halperin & Heath 2020, pp. 278-279).

I have also used sources in situations not relating to constructing either the empirical framework, or the theoretical framework. In these cases I have used Lund University Libraries, in order to find reasonable and trustworthy sources. I have approached these sources with critical thinking, and disregarded sources which seem to be unscientific or where it was unclear whether it was opinion-pieces or not. I have not disregarded opinion-pieces in all cases since I perceive them as noteworthy, but have made it a rule to disregard any pieces where the objective of the work has been unclear at first glance (Teorell & Svensson 2007, pp. 104-106).

### 3.4 Variables

A clear differentiation between the variables is the separation between the independent variable and the dependent variable. The independent variable is what is perceived as the reason behind any changes in the dependent variable. This is used primarily as a tool to illustrate the relationship between the variables, and in this paper it serves the purpose of aiding in the understanding of my research question, as well as providing some continuity to the paper. My independent variable is “politicization of climate change”, and my dependent variable is “the work conducted within the American Environmental Protection Agency” (Teorell & Svensson 2007, pp. 24-26).

### 3.5 Operationalizations

There are two terms which might need to be clarified and operationalized, both in order to avoid semantic misunderstandings, and with the goal of providing cumulative aspects to this paper by using well established theoretical terms (Teorell & Svensson 2007, pp. 39, 55-63).

“Employee at the EPA” needs to be further explained and reasoned around. The EPA does not differentiate between types of employees in their reports, which means that there is no way for us to separate employees working administratively, from employees working scientifically. Christina Boswell presents an operationalization of the word “expert” in *“The Political uses of Expert Knowledge: Immigration Policy and Social Research”*. Boswell argues that the word “expert” is related to the definition of expertise, and expert knowledge. In other words, Boswell mainly sees an expert as someone with expert knowledge tied to scientific experience (Boswell 2009, pp. 23-25). Although the EPA does not use “experts” in any standardized or established way in their reports, we can note a continuity in the attempts to uphold a scientific atmosphere within all of their operations (EPA Agency Financial Report 2015, p. 10). Furthermore, an individual is non-negotiable affected by their surroundings (Conway et al. 1992). It is therefore feasible to assume that the employees at the EPA, regardless of scientific experience, perceive themselves as tied to the scientific research conducted within the EPA. Based on this, I completely adhere to the operationalization presented by Boswell, and relate cumulatively to it by also adding the employees of the EPA to the folder. This is also applicable to the usage of words such as “bureaucrat”. An argument derived from the scientific background of the EPA employees, is that these employees are probable to accept the scientific findings of the agency as truthful, and reject alternative facts.

This is certainly generalizing, and I doubt this is applicable to all of the employees at the EPA. However, in order to reason around the EPA, a generalization has to be done in terms of the employees.

Furthermore the word “politicization” needs to be operationalized. In the broadest sense, politicization means making things political. What we are referring to when we use the word politicization in this paper however, is the politicization of science. In other words, taking scientific fact, and making it subject to political narratives, political positions, and political decisions. The role of expertise and scientific knowledge has long played vital roles in advisory processes, and the relationship between science and politics is closely knit with both sides relying on the other, with issues such as climate change often pending back and forth between being commonly perceived as scientific fact or something less established and more controversial. This paper revolves around the assumption that politicization of climate change exists, and that the clear political aspects of the proposed budgets of the EPA are clear examples of this (Heinrichs 2005, p. 41; Maasen & Weingart 2005; Boswell 2012; EPA Budget in Briefs 2008-2021).

## 4. Empirical Framework

### 4.1 Purpose of the EPA

The purpose of the EPA is concisely summarized through the following quote obtained on the website of the EPA:

“The mission of EPA is to protect human health and the environment.” (EPA 2021 D).

Although very brief, the quoted purpose paints a striking picture of a federal agency completely devoted to protecting human health, and the environment. This primary purpose can be spotted within all of the subordinated goals and missions presented on the website of EPA, and seems to lie at the very center of everything this agency concerns itself with.

### 4.2 Actualized and Proposed Budgets 2009-2020

Under this heading I will be presenting data gathered from the website of the EPA. This mainly entails proposed and actualized budgets, as well as FTE numbers. In order to avoid presenting both extensive and detailed data under this section, I will be using appendices. The actualized budgets of the EPA between 2008-2020 will be presented in Appendix A, and the proposed budgets of the EPA between 2008-2021 will be presented in Appendix B.

In summary of these tables we can state that in most years there is a somewhat clear relation between the proposed budget and the actualized budget, as well as the proposed FTE, and the actualized FTE. A small differentiation year to year is expected. In some cases however, there are severe discrepancies between what has been proposed by the presidential administration, and what has been actualized after having passed through congress. Specifically in the years 2011, 2018, 2019, and 2020, we can note that the proposed budget greatly differs from the actualized one. In 2011 the proposed budget was noticeably more ambitious than the actualized budget. In 2018, 2019, and 2020, the proposed budgets were noticeably more conservative than the actualized budgets. Furthermore there are years which differ greatly from the previous ones, both in terms of proposed budgets, and in terms of actualized budgets, specifically 2010 and 2018 (Appendices A and B; EPA Budgets in Briefs 2008-2021; EPA 2021 C).

Based on this summary, we can note that the proposed and actualized budgets from the years 2010, 2011, 2018, 2019, and 2020, hold particular relevance for this paper.

#### 4.3 In Depth Study of the Data from 2010, 2011, 2018, 2019, and 2020

In reference to the limitations put on both allotted time and words, as well as to the particular relevance of these years established under the previous heading, I will dedicate this heading to an in depth study of the political narratives being pushed by the presidential administrations during the years of 2010, 2011, 2018, 2019, and 2020. This data is compiled and gathered from the “Budget in Briefs”. In these reports the agency, in consensus with the contemporary presidential administration, argues in favor of the budgetary changes made from the previous year. In the arguments presented concerning the proposed budgets, we can notice clear examples of the political narratives pushed by the contemporary presidential administration.

In 2010 the proposed and actualized budget was greatly increased compared to the previous year. The following quote is taken from the Budget in Brief 2010 and declares the intentions of the proposed budget:

“The Fiscal Year (FY) 2010 Budget request represents the highest level of funding for EPA in its 39-year history. EPA’s Budget supports innovation, investment, and technologies to advance a green economy, and a green environment. The EPA’s FY 2010 Budget requests \$10.5 billion in discretionary budget authority and 17,384.3 Full Time Equivalents (FTE) to accomplish EPA’s efforts to build a greener economy, move into a clean energy future, and protect human health and the environment in communities across the nation. The FY 2010 Budget provides a substantial increase from FY 2009, reflecting an enhanced focus in addressing public health and environmental challenges. Increased funding will be targeted at vital areas including investing in water infrastructure, protecting our freshwater resources, creating a foundation to address climate change and identifying research gaps as well as chemical management.” (Budget in Brief 2010, p. 1).

In 2011 the proposed budget was still quite large, but the actualized budget was significantly smaller. The arguments presented by the agency for a continuation of the ambitious budget were close to identical to the previous year. However, as stated above the actualized budget did not reflect the same eagerness.

In 2018 the proposed budget was significantly lower than previous years. The actualized budget however did not reflect this political stance. The following quote from the Budget in Brief 2018 declares the intentions of the proposed budget:

“The EPA’s FY 2018 Annual Performance Plan and Budget of \$5.655 billion is \$2.6 billion below the FY 2017 Annualized Continuing Resolution funding level for the EPA. This resource level and the agency FTE level of 11,611 supports the agency’s return to a focus on core statutory work and recognizes the appropriate federal role in environmental protection. The budget addresses our highest environmental priorities and refocuses efforts toward streamlining and reducing burden.” (Budget in Brief 2018, pp. 1-2).

The same budget proposal states the following about eliminating previously active EPA programs:

“Programs eliminated in the FY 2018 budget total \$983 million. [...] The Administration is committed to creating a leaner, more accountable, less intrusive, and more effective Government.” (Budget in Brief 2018, p. 5).

Eliminations of ineffective programs can be found in all of the closer examined budgets. However, during the Trump administration, this was proposed at a significantly higher rate compared to the Obama administrations. Following the quote above, we can find a list of 45 Eliminated Programs or Subprograms (Budget in Brief 2018, pp. 61-65). In the following quote from the Budget in Brief 2018 we can study one of these programs, as well as the recommendation for partners to continue the work without federal funding:

**“Pollution Prevention Program** (FY 2016 Enacted: \$13.140 M, 58.1 FTE)  
The program promotes environmentally sound business practices and the development of safer (green) chemicals, technologies, and processes. Partners

can continue the best practices that have been shared through this program and continue efforts aimed at reducing pollution.” (Budget in Brief 2018, p. 64).

In 2019 the discrepancy between the proposed budget being low, and the actualized budget being high, continued. The following quote from the Budget in Brief 2019 declares the intentions of the proposed budget:

“The FY 2019 Budget, along with the FY 2018-2022 Strategic Plan and the Agency Reform Plan, highlight actions that will enable EPA to reduce costs and more effectively utilize limited resources. The Agency will work across all of our programs to unite varied interests and stakeholders to focus attention and leverage federal, state, local, and non-governmental resources in a coordinated effort to address the nation’s greatest environmental challenges.” (Budget in Brief 2019, p. 2).

In 2020, the same discrepancy continues, and large parts of the reasoning is directly copied from the previous year. The following quote from the Budget in Brief 2020 is presented in conjunction with the reasoning around reducing costs and streamlining the EPA, and takes a stance on so called “regulatory burdens”:

“A priority area for EPA is to create consistency and certainty for the regulated community and to remove unnecessary or redundant regulations. Removing unnecessary regulatory burdens allows the EPA to be a catalyst for economic growth while strengthening our focus on protecting human health and the environment.” (Budget in Brief 2020, p. 2).



## 5. Analysis

### 5.1 The Politicized EPA

Before analyzing the empirical framework, something should be said about the relationship between the proposed and actualized budgets, and the relationship between the EPA, and the political sphere. This reasoning will provide a basis on which to draw analyzing parallels between the budgets and the underlying political narratives, and in extension, the politicization of climate change.

We can assume that there are a number of factors in play when it comes to how the proposed budget is constructed, among others the contemporary financial situation. However, the arguably most important factor, and definitely the most noteworthy in this study, is the political narrative lying at the heart of the presidential administration proposing the budget. If a presidential administration is in favour of combating climate change, more funds are probable to be proposed to the EPA, and vice versa (Wildavsky 1964; Wehner 2015). After a proposed budget has been presented to congress, a negotiation takes place where the proposed budget sometimes needs to be altered before receiving bipartisan support. Once the proposed budget has been passed through congress, it can be actualized (US Government 2021). This description of the negotiations leading to an actualized budget are of course a bit simplified, with reference to delimiting circumstances. In summary, we might conclude that the proposed budget reflects the political narrative of the presidential administration, and that if the proposed budget is heavily altered before being actualized, we might draw the conclusion that the political narrative guiding the proposed budget has been in part, or fully, rejected by congress.

Based on these conclusions, we still need to remember that regardless of the success the contemporary presidential administration has on pushing their proposed budget through congress, it will still be leading the agency through a politically nominated administrator. This means that in the cases where congress rejects the proposed budget, the administrator will still guide the agency with their political narrative.

With the above in mind, we can draw the conclusion that determining the budget, which the EPA is dependent on, is a highly politicized process. Furthermore, the agency is also

administered by the political sphere, and we have noted that the presidential administration can push their political narrative regardless of how successfully they have negotiated in congress. In summary, the circumstances regarding the budgetary process, and the system of politically nominated administrators, results in a politicized EPA.

## 5.2 Budget and FTE

Analyzing the empirical framework, we can observe several noteworthy findings. First and foremost, the proposed budget and the actualized budget generally relate to each other in a straightforward manner. In other words, most years the budget proposed by the presidential administration is revised slightly before being actualized, but the general political narrative guiding the proposed budget seems to be accepted by congress (Appendices A and B).

Certain years however, this is not the case. These years the proposed and actualized budgets differentiates greatly, with the political narrative guiding the proposed budget being seemingly rejected by congress (Appendices A and B). The years where notable change has occurred, either by the presidential administration and the proposed budget, or by congress and the actualized budget, have been subject to particular focus in this paper. These years have been presented in the empirical framework, and will now be analyzed.

The year of 2010 can be distinguished from the rest since the Obama administration decided to put increased focus on the EPA, with a significant increase in their budget and FTE. This was approved by congress and the actualized budget reflected the political narrative of the Obama administration (Appendices A and B). Since this resulted in an increase of budget and workforce, we can assume that the employees of the EPA and the work conducted by them, was furthered by this.

The year of 2011 stood out because of the significant discrepancy between the proposed and actualized budget. The Obama administration presented a continuation of the previous budget, with a significant focus on the EPA, but the actualized budget reflected a more conservative political narrative (Appendices A and B). Since this resulted in a significant decrease compared to the previous year, we can assume that the work conducted by the EPA was equally significantly impacted.

The years 2018, 2019, and 2020, also stood out because of the significant discrepancy between the proposed and actualized budgets, however, in the opposite direction compared to in 2011. With the Trump administration taking office, we can see a clear change in the political narrative guiding the proposed budget. The proposed budgets, reflecting the political narrative of the Trump administration, were considerably more conservative. This materialized in significant decreases both in terms of funding and in terms of FTE. However, congress seemingly rejected this political narrative, and instead of a decreased budget, the actualized budgets increased every year compared to the previous under the Trump administration (Appendices A and B). These circumstances probably resulted in a very odd situation, where the political actors leading the EPA were forced to use more funding and employ more people than they would have wanted initially.

As mentioned earlier, the years where new presidential administrations are inaugurated are also interesting, notably 2009, 2017, 2021. By studying the proposed budgets of these years, we can note that there is much in common between these years and the prior years, and that the proposed budget for these years have probably been constructed by the previous presidential administration. This is interesting from several perspectives. First of all, it is presumable that this leads to some frustration within the political sphere. Having to use a budget not reflecting the contemporary political narrative of the agency must be as odd as the previously mentioned situations occurring during the Trump administration, where the political actors leading the EPA had to use more funding and employ more people than they initially wanted.

In conclusion, the discrepancies and discontinuous circumstances characterizing the budget and workforce of the EPA is probable to result in: a less efficient agency when it comes to fulfilling the purpose of the agency, an uncomfortable working environment for the employees, and an agency trying to align with the contemporary political narrative, but being sorely unable to.

### 5.3 Principal-Agent Theory

We have established that the EPA is dependent on a benign political sphere, and that the discrepancies between the proposed and actualized budgets are severe during the years with particular relevance for this paper. Under this heading the *Principal-Agent Theory* will further

this analysis. As stated in 2.1, the theory is applicable to two separate relationships with relevance for this paper.

In the case of politician (*agent*) and voter (*principal*) - relationship, we might assume that the circumstances characterizing the *Principal-Agent Theory* could transpire if the politician would be voting in favour of proposals which would affect their voters negatively, or against proposals which would affect their voters positively. The politician would not suffer any direct consequences of breaking the contract with the voter. Even if the voter would notice that this has happened, they might not be able to punish the politician in a concrete way. We can also note that the information asymmetry is very applicable to the situations concerning politicization of for example climate change (Waterman & Meier 1998; Snippert et al. 2015). Simplified, the politician states that climate change is false, the voter believes the politician and the issue which previously was perceived as scientifically proven and true, is now politicized and subject to political decisions overshadowing the scientific community. More concretely, the EPA is of clear benefit for the average American voter. Arguably, when the politicians vote against funding the EPA, they vote against the best interests of the voters.

This results in several democratic implications. If we assume that the politicians work for the voters, the goal would be that the politicians would, to the largest extent possible, further the interests of the voters. Remembering that the goals of the actors are misaligned, and combining this with the information asymmetry, the voters give the mandate of decision to the politicians, and the politicians have to decide whether they want to further the interests of the voters, or the interests of themselves. Due to the primary focus being self-furtherance, they will further their own interests (Waterman & Meier 1998; Snippert et al. 2015). The democratic implications is however not the focus of this study and will not be discussed further. Still, the reasoning above might provide us with a clear picture of the power structure in the relationship between voter and politician, and thereby also a clear picture of the relationship between politician and EPA employee. It also establishes the initial steps of the politicization process of the EPA, and can therefore give us some basis on which to analyze the consequences of the politicization of climate change.

In the relationship between the EPA employee (*agent*) and politician (*principal*) the politicization of scientific facts is highly relevant. Continuing on the established reasoning that the EPA becomes politicized by the political sphere, and the context in which the EPA

exists, we can note that a discrepancy occurs when the EPA employee adheres to a scientific fact, and when the politician supports and pushes an alternative fact. The EPA employee is accountable to the politician, and therefore may find themselves working towards a goal directly antagonistic to their beliefs, values and the purpose of the EPA. Adhering to the *Principal-Agent Theory*, the politician gives the mandate to the EPA employee, and directs the EPA employee towards a certain direction. The EPA employee is then contracted to follow these directions without fail. However, the information asymmetry is immense here. This is due to the scientific background of most of the EPA employees, which we can assume that the politicians do not have. Adding to this is the clearly misaligned goals of the actors (Eisenhardt 1989; Slyke 2006).

According to the *Principal-Agent Theory*, both actors in this contracted relationship have the primary motive of self-furtherance (Shapiro 2005). In the case of the politician this is quite straightforward, this being the furtherance and pushing of their political narrative, as well as re-election. However, in the case of the EPA employee this is a bit more intricate. In the situation occurring during the Trump administration, where the political narrative was deeply antagonistic towards scientific facts, the EPA employee might be self-serving in the manner of upholding some sort of scientific-friendly approach in their conducted work, regardless of the political narrative looming over the agency. On the other hand, being self-serving could also be realizing that being employed is better than being unemployed. Due to the information asymmetry it is feasible that the politician would not notice the disregard of their directions by the EPA employee, but this is certainly not guaranteed. As we can note here the EPA employee could be forced to make a difficult decision, either staying true to their fundamental beliefs and values, or having a more secure working environment (Waterman & Meier 1998; Snippert et al. 2015).

There also existed an information asymmetry in the sense that the politician had more information and influence over the macro-circumstances of the agency than the EPA employee. The elimination of active EPA programs can be assumed to be characterized by a substantial information asymmetry (Waterman & Meier 1998; Snippert et al. 2015). This may have resulted in a very inefficient and discontinuous system where the agency as a whole was working towards different directions, purposes and goals. Moreover, we can assume that the employees within the EPA experienced these circumstances with some confusion. Especially in the situations where an employee was assigned to work on a program which was going to

be eliminated the next year, according to the proposed budget. This is probable to further the inefficiency, since the funding for every program within the EPA, may disappear during the next budget negotiation. The amount of work being put into these programs by employees, just to see them being defunded, was probably substantial.

Continuing on the reasoning established in 5.2, we can argue that there is a major unclarity budget wise, on a yearly basis, for the agency. There seems to exist a conflict of interest between the political sphere and the bureaucratic sphere, where the bureaucratic sphere might be assumed to want as much funding as possible to be able to achieve the set purpose to the furthest extent possible, and where the political sphere in certain cases agree with the stated purpose, and in certain cases oppose it. There is also a conflict of interest within the political sphere, which explains why there is no continuity when it comes to the relationship between the political and bureaucratic spheres. This is clear examples of both information asymmetry, and misaligned goals (Waterman & Meier 1998; Snippert et al. 2015).

In summary we can note that the *Principal-Agent Theory* is applicable to both of the relationships dealt with in this study. The relationship between the voter and politician could materialize in a simplified and increased politicization process. The relationship between the politician and the EPA employee could materialize in a less efficient agency, with misaligned interests, discontinuous and dis coherent work conducted, and a potentially problematic working environment for the employees at the EPA.

#### 5.4 Contrasts Between Administrations

As can be noted in Appendix A, the congressional negotiations often resulted in an actualized budget not varying much from year to year. The only occasion where this is not applicable, happened during the Obama administration, with a significant increase in 2010, and a significant decrease in 2011. The budgetary functions of the democratic systems should be applauded in terms of consistency and coherence. Relevant to our research question, the real and actual implications of the different stances on climate change seems to be quite small in terms of funding.

However, it is also clear when studying the rhetoric presented in 4.3, that an analysis stopping at the conclusion above is missing the point. Yes, the actualized budgets during the timespan

studied are similar. In terms of proposed budgets however, we have a high point in 2010 with a proposed budget of \$10,486,000, and a low point in 2018 with a proposed budget of \$5,655,000. The only reason why the Trump administration was unsuccessful in completely slashing the budget in 2018, 2019, and 2020, was due to congress not adhering to the same political narrative as the administration. The administration was still the responsible entity when it came to which active programs to eliminate, which employees to terminate, which regulatory measures to uphold, and so on. In short, all the continuous and active measures of the agency were guided by a political narrative with clear aspirations to decrease the regulatory burdens which EPA apparently exercised. The proposed budgets serve as clear indicators of how the politicization of climate change affected the work conducted by the EPA negatively, regardless of the actualized funding.

## 6. Conclusion

### 6.1 Summary

In this paper I have conducted a Single-N case study with comparative aspirations and examined the way in which politicization of climate change has affected the employees at the EPA, and the work conducted by them. The *Principal-Agent Theory* has been used to provide a theoretical basis on which to stand whilst analyzing the empirical framework, and clear benefits of using this theory has been initially argued for, and finally noted. My empirical framework has mainly revolved around primary material from the EPA, and proposed and actualized budgets have been studied and analyzed. I have established that the circumstances surrounding the EPA, and the work conducted within the agency, is highly affected by a political sphere at war with itself. The politicization of climate change, as well as the polarized political arena results in a situation where the continued funding of the EPA is a constant struggle between progressive and conservative powers. This is likely to result in a complex, stressful and uncertain working environment, which in turn is likely to affect the employees at the EPA negatively. I have also noted that the discontinuity that characterizes the proposed and actualized budgets is probable to result in inefficient and inaccurate work conducted by the EPA.

### 6.2 Discussion and Concluding Remarks

To give a summarized, generalized, and concise answer to our research question, the study suggests that the way in which politicization of climate change affected the work conducted by the EPA was threefold. Firstly, the politicization of climate change resulted in discontinuous and incoherent proposed and actualized budgets during several years, resulting in the elimination of active programs, and inefficiency. Secondly, the politically nominated administrators decided the direction taken by the agency, and thereby pushed their political agendas regardless of the funding, and the rhetoric in the proposed budgets suggests that this was done brazenly and effectively. Thirdly, the politicization of climate change led to differentiating priorities depending on the administrations studied, with human health and the environment being the highest priorities of the EPA under the Obama administration, and a decrease of federal spending and regulatory reach, as well as streamlining the agency and lifting the regulatory burdens, being the highest priorities under the Trump administration.



Still, it should be noted that regardless of the contemporary presidential administration declaring clear intentions with the proposed budgets, it also becomes clear that the status quo seems to be preferred by many in congress. The actualized budget differs marginally each year, and when the proposed budget is either too ambitious, or not ambitious enough, congress puts the budget back in line, with the deeply polarized political arena balancing out potential counterparts on the other side.

We have also established that this situation is a product of a political sphere at war with itself over deeply politicized issues, such as climate change. The consequences of this situation have not been the primary focus of the paper, yet could still be reasoned around. It is very likely that this system, with politicized issues and agencies, leads to inefficiency, and an agency pulling in different or opposing directions. It is also likely that this results in a difficult and uncertain working environment for the employees at the EPA, but this can not be proven with the chosen methodological approach. What can be stated is that there exists well established research on the effects an uncertain and stressful working environment has on employees, as seen in 1.3.1, and that the organizational tendencies of the EPA fits well into the description provided by these authors.

Touching on the generalizing capabilities of this study, much could be said. Given that the circumstances of the EPA are relatively normal in the American context, I would draw the conclusion that the EPA is not the sole bureaucratic organization where the described events could take place. The study suggests that other similar agencies would be equally susceptible, and therefore the generalizing capabilities could be perceived as promising. Still, the extreme politicization of climate change should be underlined and perceived as rare, with few other equally polarizing issues in the contemporary political field. This is certain to play a part in how the politicization of the agency worked during the studied timespan.

As a final concluding remark, I would argue that the EPA would be a more efficient agency in terms of continuation and coherence, with employees having more secure and stable working environments, if the EPA would be a non-politicized agency, meaning that the administrator of the EPA would be selected not on a basis of political narratives, but rather on experience and competence.

### 6.3 Research Limitations and Recommendations for Future Research

Continuing on the argument in 3.1, regarding the descriptive approach of my research question, I would argue that this methodological approach is valid. There exists a vacuum when it comes to conducted descriptive research on politicization of bureaucratic organizations, and I perceive this as an important addition to this field of scholarly literature. However, this has also resulted in my study falling short of my initial ambition to exhaustively examine politicization and its consequences. Another limitation revolves around the material used in this paper, and more importantly, the methodological decision to use primary material provided by the EPA. Although strikingly transparent and easily collected, interpreted, and analyzed, the material is insufficient if further conclusions regarding consequences would be the aim of the paper. This is very clear when thinking of the lack of existing material on how the employees at the EPA feel about their working environment. Concisely, the material falls short of what could be done with other types of approaches, but is perceived as appropriate for this study.

With the research limitations presented, I would argue for another methodological approach when conducting potential future research on this area. To exhaustively answer the research question posed in this paper, and to relate cumulatively to this paper, a future research project could be to conduct interviews with employees at the EPA in order to get their perspective on how politicization affects them, and the work conducted by them. One could also conduct a study with a comparative approach to examine the politicized EPA, and a non-politicized equivalent with similar prerequisites. This in order to draw conclusions regarding the consequences of politicized agencies.

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## 8. Appendix

### 8.1 Appendix A

The actualized budget of the EPA between 2008-2020 can be found in the table below.

2008, although not one of the units of analysis, is included in this table as reference.

This table, as well as its content, was collected from the website of the EPA on the 21th of April 2021.

<b>Fiscal Year (FY)</b>	<b>Budget in American Dollars (\$)</b>	<b>FTE (Workforce)</b>
FY 2020	\$9,057,401,000	14,172
FY 2019	\$8,849,488,000	14,172
FY 2018	\$8,824,488,000	14,172
FY 2017	\$8,058,488,000	15,408
FY 2016	\$8,139,887,000	14,779
FY 2015	\$8,139,887,000	14,725
FY 2014	\$8,200,000,000	15,408
FY 2013	\$7,901,104,000	15,913
FY 2012	\$8,449,385,000	17,106
FY 2011	\$8,682,117,000	17,359

FY 2010	\$10,297,864,000	17,278
FY 2009	\$7,643,674,000	17,049
FY 2008	\$7,472,324,000	16,916

Source: EPA 2021 C

## 8.2 Appendix B

The proposed budget of the EPA between 2008-2021 can be found in the table below.

2008 and 2021, although not units of analysis, are included in this table as reference.

The content of this table was collected from the website of the EPA on the 21st of April 2021.

The table in itself however was constructed by the author of this paper, with the goal of being comparable with the table in Appendix A which was collected from the website of the EPA.

<b>Fiscal Year (FY)</b>	<b>Budget in American Dollars (\$)</b>	<b>FTE (Workforce)</b>
FY 2021	\$6,658,071	12,610
FY 2020	\$6,068,490	12,415
FY 2019	\$6,145,887	12,250
FY 2018	\$5,655,000	11,611
FY 2017	\$8,267,199	15,416
FY 2016	\$8,591,718	15,373
FY 2015	\$7,890,020	15,325
FY 2014	\$8,153,000	16,870

FY 2013	\$8,344,480	17,109
FY 2012	\$8,973,000	17,202
FY 2011	\$10,020,000	17,571
FY 2010	\$10,486,000	17,384
FY 2009	\$7,142,520	17,217
FY 2008	\$7,199,400	17,324

Source: EPA Budget in Briefs 2008-2021