

ABSTRACT

The Economic Efficiency of the Original US Constitution

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Since it was ratified, the United States Constitution has been the supreme law of the land for the nation. The legal importance of the Constitution is obvious. Despite this fact, few attempts have been made to determine the impact of the US Constitution on economic efficiency. This thesis investigates the economic efficiency of the US Constitution in its original form. That is, the body of the Constitution and the first ten amendments – often referred to as the Bill of Rights. The thesis looks at the Constitution's impact civil commerce, private markets, and public activity. A few smaller topics that do not fit well into such labels are also included. Economic efficiency is defined primarily in terms of Pareto Optimality. A few sections also discuss efficiency in terms of Kaldor-Hicks efficiency, but it is a secondary metric.

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THE ECONOMIC EFFICIENCY OF THE ORIGINAL US
CONSTITUTION

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Introduction

Purpose of the Thesis

The purpose of this thesis is to examine the economic efficiency of the Original United States Constitution. Efficiency will be defined shortly. The US Constitution has gone through many changes over the years - both in text and interpretation. It is not my intention to evaluate the economic efficiency of the Constitution across its more than 200 year lifespan. That would be far too great a task to accomplish in any single paper. Similarly, it is not the goal of this thesis to get too deeply into American laws after the time of the ratification. I plan to look primarily at the Constitution itself rather than the body of law that developed later. Also, it is not my goal to evaluate the economic efficiency of our current government. That subject is often covered in modern economic discussion. Finally, I will not hazard to attempt to judge the United States Constitution based on Justice or Fairness. While the question of whether the Constitution is Just is important, it is not one which I am well equipped to answer with tools related to economic efficiency. Instead, I plan to stick to what I know - analyzing the original US Constitution at the time of its ratification based on how it affects economic efficiency.

As I mentioned above, the United States' Constitution has changed significantly from when it was first ratified in 1787. For my purposes, I have taken the original Constitution to be the body of the Constitution as it was ratified by the states, plus the first ten amendments that make up the Bill of Rights. I include the Bill of Rights in my analysis because, given how quickly the first ten amendments were ratified,

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the Constitution existed before them only briefly.

My evaluation of the Constitution will focus on its original interpretation as well as its original text. Any blame or praise directed at later interpretations can not reasonably be leveled at the original Constitution. For instance, to congratulate James Madison for including a right to education is unreasonable, given there is little evidence that he intended to include one. Similarly, to castigate the founding generation for the modern interpretation of the Interstate Commerce Clause is unreasonable. They have no control over how we interpret their words 200 years after they were written. Of course, there arises a question of how far to take this originalist sentiment. Interpretation of the original Constitution was somewhat controversial at the time of ratification. In most cases, such problems will be easily resolved. However, for some issues - such as the original concept of “general Welfare” discussed in Chapter 4 – we will need to get more specific. To address such questions I will use a combination of the writings of the founding generation. In addition to the actual text of the Constitution, I will look to the Federalist Papers and concurrent dictionaries. Among these sources, I should be able to generate a consistent definition of terms. This process will give me a thorough enough understanding of the original Constitution to allow me to judge its economic efficiency.

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Before we discuss the economic efficiency of the US Constitution as it was originally understood, we must begin with an understanding of the body of research pertaining to the Constitution and economic efficiency. Unfortunately, not many papers exist that directly addressed economic efficiency of the US Constitution as it was originally understood and implemented. The source I found that was closest to this topic was a series of articles titled “Economic Liberty and the Constitution” by

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Jacob G. Hornberger.¹ This series of articles elaborates on the economic freedoms that are protected by the US Constitution. All of the economic freedoms that Hornberger specifically identifies - the ability to set prices, engage in trade, and create contracts - fall under the banner of freedom of contract.²

While this series of articles does have some relation to my thesis, the main purpose of Mr. Hornberger's argument is significantly different. For one thing, while his articles talk extensively about economic freedoms,³ they never really make the further move to a serious discussion of economic efficiency. For the most part, economic liberties are taken to be ends in and of themselves. Occasionally the author will discuss how economic freedoms lead to prosperity.⁴ He also asserts that less free economic systems tend to have poor economic growth.⁵ However, Mr. Hornberger never makes an attempt to show how the economic freedoms he identifies lead to economic growth. Although I will discuss many of these same economic liberties, that discussion is not the main point of my thesis. The purpose of my thesis is to describe how the US Constitution promotes economic efficiency. By its very nature, this topic is closely linked to the ways in which the Constitution protects economic freedom.

Another key difference is that Hornberger's articles are as much about the failures of other economic systems as they are about the successes of the original understanding of the US Constitution. For instance, the article talks extensively about the ineffectiveness of mercantilist systems. Mercantilism is an economic system in which

¹This series of articles was later republished as a book under the same name.

²Jacob G. Hornberger, "Economic Liberty and the Constitution," *the Future of Freedom Foundation*, June 1, 2002, under "Part 7: Liberty of contract" <https://www.fff.org/explore-freedom/article/economic-liberty-and-the-constitution/> (accessed April 9, 2021).

³Ibid., under "Part 7: Liberty of contract."

⁴Ibid., under "Part 3: Adam Smith and economic liberty."

⁵Ibid., under "Part 1: Police powers and mercantilism."

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the government has a great deal of control over the economy. It is usually associated with European economies from the 16th century through the 18th century.⁶ Mr. Hornberger speaks extensively about the ineffectiveness of such systems.⁷ Similarly, these articles devote significant space on later interpretations of the Constitution. In particular, interpretations of the Constitution arising from the New Deal are extensively discussed.⁸ While such comparisons are an interesting topic of discussion, they are not the primary focus of my thesis. While I will not be evaluating the US Constitution in a vacuum, at the end of the day my thesis is about the Constitution as it was originally understood. I will not evaluate our current interpretation of the US Constitution or other systems of government.

A final difference between this series of articles and my thesis is the time frame of Hornberger's analysis. While he jumps around in time a fair amount - going as far back as the Declaration of Independence⁹ and as far forward 1937 during the New Deal¹⁰ - most of his analysis begins after the passage of the Fourteenth Amendment.¹¹ For the purpose of my thesis, I will evaluate only the original body of the US Constitution and the first ten amendments. While an analysis of the later amendments to the Constitution is an interesting avenue of research, I limit the scope of my thesis to the Constitution as it existed at the time of ratification.

Despite the lack of research that directly parallels my investigation, there is still a large body of information that this thesis draws upon. Specifically, there are

⁶The Editors of Encyclopaedia Britannica, "Mercantilism," *Encyclopedia Britannica*, May 13, 2020, <https://www.britannica.com/topic/mercantilism> (accessed 5 June 2021).

⁷Hornberger, "Economic Liberty and the Constitution," under "Part 3."

⁸Ibid., under "Part 12: Freedom is slavery."

⁹Ibid., under "Part 2."

¹⁰Ibid., under "Part 12: The 'switch in time that saved nine.'"

¹¹Hornberger, "Economic Liberty and the Constitution," under "Part 4."

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four major categories of research that are related to my thesis topic. First, there is research regarding the economic efficiency of the current US Constitution and laws in the modern day - including their modern interpretations. Second, there are historical primary sources and legal documents that shed light on the original meaning of the US Constitution. Third, there is the modern research into the original meaning of different sections of the US Constitution. Fourth, there is the literature on theories of economic efficiency and welfare economics. I will discuss each of these categories in its own section, below.

Analysis of the Economic Efficiency of the Current US Constitution

Given the significant impact that laws have on the economy, it makes sense that there would be a substantial body of literature on how current laws and regulations aid or hinder economic growth. It is beyond the scope of this paper to describe the entirety of this literature. Instead, I will focus on what I believe are important themes related to this impact.

Much of this literature pertains to the economic efficiency of an individual law or policy. In general it seems that researchers in economics focus their efforts and interest on specific statutes and policies, rather than on Constitutional provisions. However, where an interpretation of the Constitution either enables or inhibits a policy of interest to economists, the discussion can turn to the actual US Constitution. In many cases, these are instances of long-standing policies interpreted in light of a current economic issue or problem. For example, this sort of analysis is in Mormann (2018). I will use this particular paper to illustrate how a modern examination of Constitutional doctrine might be relevant to my thesis topic.

Mormann's paper specifically evaluates the impact of the dormant commerce clause doctrine on attempts by states to incentivize electricity generating firms to

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switch to more green methods of producing energy.¹² The dormant commerce clause doctrine is an interpretation of the commerce clause of the US Constitution.¹³ This doctrine asserts that, even when the federal government declines to make specific laws regarding interstate commerce, the mere fact that the federal government has the power to establish such laws and regulate such commerce means that states are not allowed to make similar regulations.¹⁴ The dormant commerce clause doctrine has essentially been in effect since 1824, when it was first referenced by Chief Justice John Marshall in the case of *Willson v. Black Bird Creek Marsh Co.*¹⁵ The dormant commerce clause is a well established tool to prevent protectionism among the states. As I will discuss in later sections of this paper, preventing such protectionism is an important economic impact of the US Constitution.

Unsurprisingly, there can be unanticipated consequences of a doctrine which was established almost 200 years ago. Mormann's article specifically discusses how, in modern times, the dormant commerce clause doctrine has limited the ability of states to incentivize the production of green energy. Different methods are used to promote green energy production, but many of the programs that state governments use only apply to in-state producers.¹⁶ Unfortunately, such programs can be seen as not just

¹²Felix Mormann, "Market Segmentation vs. Subsidization: Clean Energy Credits and the Commerce Clause's Economic Wisdom," *Washington Law Review*, 93 no. 4, (December 2018): 1854

¹³"[The Congress shall have Power . . .] To regulate Commerce with foreign Nations, and among the several States, and with the Indian Tribes; . . ." Article I, Section 8, Clause 3.

¹⁴Congressional Research Services, "Dormant Commerce Power: Overview," *Constitution Annotated*, [https://constitution.congress.gov/browse/essay/artI-S8-C3-1-4-1/ALDE_00001060/\['Commerce'\]](https://constitution.congress.gov/browse/essay/artI-S8-C3-1-4-1/ALDE_00001060/['Commerce']) (last visited April 19, 2021). "Thus, it has been judicially established that the Commerce Clause is not only a positive grant of power to Congress, but is also a negative constraint upon the states. This aspect of the Commerce Clause, sometimes called the dormant commerce clause, means that the courts may measure state legislation against Commerce Clause values even in the absence of congressional regulation, i.e., when Congress's exercise of its power is dormant."

¹⁵*Willson v. Black Bird Creek Marsh Co.*, 27 U.S. 245, 252 (1829)

¹⁶Felix Mormann, "Market Segmentation vs. Subsidization: Clean Energy Credits and the Com-

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a support of green energy over fossil fuels, but also of local energy production over interstate production. Therefore, many such incentive methods can run afoul of the dormant commerce clause.¹⁷

Additional complications emerge because of confusion over how to legally classify different programs. According to Mormann, the courts are confusing market subsidies and market segmentation programs.¹⁸ This distinction is an important one for our purposes because it directly pertains to the economic effects of the US Constitution. The Supreme Court has determined that market subsidies are not prohibited by the Commerce Clause¹⁹ and are therefore legal under the Constitution. In contrast, market segmentations are subject to the dormant commerce clause – and can therefore be ruled unconstitutional. As such, a significant effect of the modern interpretation of the Constitution is the limitations it places on market segmentation programs, while leaving subsidies more or less unbound. Mormann’s paper seeks to draw a distinction between these two basic methods of supporting green energy.

After having gone through the specifics of the legal challenges to different programs based on the dormant commerce clause doctrine, the article talks about the dormant commerce clause doctrine more generally. The dormant commerce clause has often been taken as an invitation to challenge programs that seek to support renewable energy production. As a result of this tendency, some supporters of renewable energy have responded to these troubles with implementing state supports of green energy production by suggesting that the dormant commerce clause is outdated

merce Clause’s Economic Wisdom,” 1864. “State policymakers and their constituents may feel altruistic enough to give their neighbors and, ultimately, the rest of the world a free ride on the climate benefits created through their state’s commitment to low-carbon renewables. But not all feel equally generous about related opportunities for economic development.”

¹⁷Ibid. 1856

¹⁸Ibid., 1874

¹⁹West Lynn Creamery, Inc. v. Healy, 512 U.S. 186, 199 (1994)

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and unnecessary.²⁰ However, these commentators do not take the recent successes in the courts of such programs as evidence that the dormant commerce clause is not actually preventing the implementation of supports for green energy production. Instead, they take it as evidence that the dormant commerce clause doctrine should be mostly ignored in modern energy markets.²¹ Mormann takes issue with this contention.

The earlier sections of the article show that the legality of the programs mentioned above are not in contradiction with the dormant commerce clause doctrine. Instead, both renewable portfolio standards and zero-emission credit programs are distinct from the kind of protectionist tendencies that the dormant commerce clause doctrine is intended to eliminate. Further, Mormann argues that the dormant commerce clause doctrine - in addition to its general improvement of economic efficiency in the United States - actually has specific benefit in promoting renewable energy. He claims that market segmentation programs - such as “renewable portfolio standards” (RPS) systems - prevent competition altogether. By forcing state RPS programs to support renewable energy produced outside of the state in question, the dormant commerce clause doctrine is making RPS programs more efficient.²² On the other hand, he claims that subsidies - such as “zero-emission credit” (ZEC) programs -

²⁰Danny Englese, “Tilting at Windmills: Finding an Alternative Dormant Commerce Clause Framework to Preserve Renewable Portfolio Standard Generator Location Requirements,” *Arizona State Law Journal* 47 (2015): 1015. “The dormant Commerce Clause is an artifact from a time in our nation’s history when competition between the states threatened the fabric of the union. Today, however, the national economy needs no such protection.”

²¹Sam Kalen & Steven Weissman, “The Electric Grid Confronts the Dormant Commerce Clause,” *Ecology Law Quarterly*, under “Moving Forward with the Dormant Commerce Clause”. <https://www.ecologylawquarterly.org/currents/the-electric-grid-confronts-the-dormant-commerce-clause/> (accessed April 12, 2021). “In the modern era imbued with energy federalism, consisting of an electric grid sharing overlapping regulatory space among federal, regional, and state entities, the dormant Commerce Clause retains little currency.”

²²Felix Mormann, “Market Segmentation vs. Subsidization: Clean Energy Credits and the Commerce Clause’s Economic Wisdom,” 1897

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don't necessarily prevent competition. Instead, they merely help out one party, rather than prevent others from entering the market. Thus the author argues that subsidies are more likely to be the proper government response to externalities than a market segmentation program. For that reason, it is not necessary to limit subsidy programs - such as ZEC's - in the same way that market segmentation programs need to be limited.²³ For all these reasons, the author concludes that the dormant commerce clause doctrine - far from being a burden on renewable energy initiatives - is actually leading state policymakers to make better policies.²⁴

Mormann's paper provides a good example of how interpretations of the US Constitution influence specific economic issues facing us today. The paper begins from the Commerce Clause of the original US Constitution. It proceeds to outline an early Supreme Court doctrine - the dormant commerce clause doctrine. Along the way, it describes additional developments. These various documents, decisions, laws, and policies are examined in the context of an issue the Framers of the Constitution could not have envisioned - our country's transition from fossil fuels to green energy.

I found the analysis in this type of paper to be quite helpful in framing my thesis. Understanding the economic implications of federal law requires a particular sort of legal rigor that Mormann and authors of similar papers perform very effectively. However, the conclusions they draw are not always applicable to my chosen subject. One of the key ways my research differs from previous scholarship is that it focuses on the efficiency of the Constitution as it was originally interpreted and implemented. While much of the text of the US Constitution remains the same as it was in 1788, the interpretation and implementation has undergone significant changes. Every new tenet adds a new layer on top of the original understanding of the Constitution. As

²³Ibid., 1899

²⁴Ibid., 1901

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such, the specifics of these authors' arguments are not necessarily relevant to my topic. Parts of what I read inspired some of my own sections, but in general I was not able to apply specific details from these works into my thesis.

Concurrent Analysis of the Original Meaning of the US Constitution

The next category of research related to my thesis consists of historical primary sources and legal documents that shed light on the original meaning of the US Constitution. In many instances these sources represent court cases and legal opinions, but not all of my sources fell into this category. Two sources of particular note in this category are the Federalist Papers²⁵ and Blackstone's *Commentaries*. I will discuss each of these sources and their applicability to my thesis in more detail below.

The Federalist Papers are a well-known series of documents written by Alexander Hamilton, John Jay, and James Madison. These Federalist Papers span eighty five separate documents and cover a wide array of topics related to the Constitution. Even at the time of their publication, these documents were considered of significant importance. They have been accepted in the legal profession as an important guide to understanding how the US Constitution was originally interpreted.²⁶ In fact, The Federalist Papers are often cited in Supreme Court Cases - both in the early days after the ratification of the US Constitution²⁷ and in later years.²⁸ The reason

²⁵Also referred to as The Federalist

²⁶Antonin Scalia, *A Matter of Interpretation*, New ed. (Princeton, NJ: (Princeton University Press, 2018), 37

²⁷One particularly ringing endorsement comes from *Calder v. Bull* in 1798. "The celebrated and judicious Sir William Blackstone, in his commentaries, considers an ex post facto law precisely in the same light I have done. His opinion is confirmed by his successor, Mr. Wooddeson, and by the author of the Federalist, who I esteem superior to both for his extensive and accurate knowledge of the true principles of government." *Calder v. Bull*, 3 U.S. 386, 391 (1798).

²⁸Some examples include *Printz v. United States*, 521 U.S. 898, 911 (1997) (which is especially interesting, since both the Opinion and Dissent made use of The Federalist Papers in their arguments), *Clinton v. City of New York*, 524 U.S. 417, 450 (1998), (in which the Federalist Papers were quoted in the Concurring Opinion and briefly referenced in the Dissenting Opinion), and *Bush*

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they are often accepted - especially by Justices who care about the original meaning of the Constitution - is not necessarily because The Federalist Papers provide insight into the intention of the Framers in drafting the Constitution. Instead, the theory goes that The Federalist Papers shed light on how the language of the Constitution was understood at the time.²⁹ As such, I will not be considering The Federalist Papers to be definitive in isolation. Instead, I will in supplement them with other supporting documents about the US Constitution written at the time.

The Federalist Papers were written as a political document. Originally published anonymously as a series of articles in New York newspapers, the Federalist Papers were written with the express purpose of convincing voters to ratify the US Constitution – which was under review at the time.³⁰ Unsurprisingly, the issues discussed in the Papers tended to be framed in political terms. However, many of these issues could be reframed in economic terms. For example, the description of how a ratified US Constitution could support a national army can be reframed as a discussion about how the Constitution allows for the provision of public goods. As I will discuss in subsequent chapters, the creation and protection of markets for various types of goods is one of the central economic functions of the US Constitution.

It is important to remember that the Federalist Papers were not all written by a single person with a single agenda. As a result, there are times when The Federalist Papers seem to contradict themselves. For example, in one Supreme Court case it is acknowledged that Madison and Hamilton disagreed within The Federalist Papers on what exactly was the extent of separation of powers between the federal and

v. Gore, 531 U.S. 98, 141 (2000) (where they are referenced a few times in the Dissenting Opinion).

²⁹Antonin Scalia, *A Matter of Interpretation*, 37

³⁰Alexander Hamilton, James Madison, and John Jay, *The Federalist Papers*, ed. Barbara Bavis (Library of Congress, May 3, 2019) under “Full Text of The Federalist Papers” <https://guides.loc.gov/federalist-papers/full-text> (accessed April 11, 2021).

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state governments.³¹ As we will see in later sections, such separation of powers has important economic ramifications. Additionally, these two Founding Fathers disagreed on how the Federal Government is allowed to spend money. This particular disagreement in part plays out in the pages of *The Federalist Papers*. Madison very specifically claims that, when the Constitution says the government can provide for the “general Welfare” of the United States,³² all the term “general Welfare” refers to is the list of enumerated powers listed in the subsequent clauses.³³ On the other hand, in another document Hamilton claims that the phrase “general Welfare” is more than simply a shorthand for the powers later specifically provided for.³⁴ These two disagreements are not the only ones between Madison and Hamilton. Some of these internal disagreements are relevant to my thesis, and I will be dealing with them more fully in the relevant sections.

One of the most important topics discussed in *The Federalist Papers* is the importance of the Constitution to unite the states into a single, relatively strong government. Some of the reasons given for this necessity are to protect the country from foreign invasion³⁵ and inter-state warfare.³⁶ The authors argue that only by maintaining a relatively strong central government could such conflicts be prevented.

³¹*Printz v. United States*, 521 U.S. 898, 915-916n9 (1997)

³²“The Congress shall have Power To lay and collect Taxes, Duties, Imposts and Excises, to pay the Debts and provide for the common Defense and general Welfare of the United States; but all Duties, Imposts and Excises shall be uniform throughout the United States;” U.S. Constitution, art. 1, sec. 8, cl. 1.

³³Alexander Hamilton, James Madison, and John Jay, *The Federalist Papers*, ed. Barbara Bavis (Library of Congress, May 3, 2019) under “Federalist no. 41” <https://guides.loc.gov/federalist-papers/full-text> (accessed April 11, 2021).

³⁴“Alexander Hamilton’s Final Version of the Report on the Subject of Manufactures, [5 December 1791],” *Founders Online*, National Archives, under “Pecuniary bounties,” <https://founders.archives.gov/documents/Hamilton/01-10-02-0001-0007> (accessed April 13, 2021).

³⁵Hamilton, Madison, and Jay, *The Federalist Papers* under “Federalist no. 3”

³⁶*Ibid.*, under “Federalist no. 5”

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In addition to avoiding the material cost of wars due to internal divisions or external opportunism, the authors were worried that constant warfare and strife would allow the military to gain power in the country. If the former colonies failed to unite into a single, relatively strong government, then over time the need for standing armies to protect these weaker American Confederacies would lead to the military becoming the predominant force in society. This rise to power of the military could lead to its oppression of the population.³⁷ In addition, the writers of *The Federalist Papers* make the argument that the US Constitution would create a more stable republic than if the states were entirely independent from each other. Drawing their argument from Montesquieu, they claim that a confederation of republics will be more stable than a series of independent republics because the confederated republics will be able to prop each other up.³⁸ If one republic falls into tyranny it could be restored by its neighbors.³⁹ The potential for a descent into tyranny was a serious subject at the time the Constitution was being ratified.⁴⁰ The authors of the *Federalist Papers* devoted significant effort to its discussion.

Governmental tyranny could be of the style of ancient Greece, where a single man gains too much power.⁴¹ However, the *Papers* spend more time discussing the possibility of a faction taking control of the government. As laid out in *Federalist* no. 10, a faction is a group of citizens with a common interest which is “adverse to the rights of other citizens, or to the permanent and aggregate interests of the community.”⁴² While a confederation of republics is not the only method of protecting

³⁷*Ibid.*, under “*Federalist* no. 8”

³⁸*Ibid.*, under “*Federalist* no. 9”

³⁹*Ibid.*, under “*Federalist* no. 9”

⁴⁰*Ibid.*, under “*Federalist* no. 10”

⁴¹Hamilton, Madison, and Jay, *The Federalist Papers* under “*Federalist* no. 9”

⁴²*Ibid.*, under “*Federalist* no. 10”

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against the interests of factions, according to James Madison it is more effective than the alternatives. As an example, one method of preventing a faction from taking control of the government would be to not allow members of that group to stand for office. However, such a restriction would undermine the very liberties we supposedly set out to protect. Such a method would be “worse than the disease” of tyranny we are trying to prevent.⁴³ The republic proposed in the Constitution can dilute the power of factions without resorting to restrictions that may themselves be tyrannical. Specifically in the case of the United States, there are many different political offices that a faction would need to control in order to enact its agenda. These include Congress, the Presidency, and the Supreme Court, as well as the state governments. According to the authors, even if a faction arose that sought to impose its will on the rest of society, the mere size of the country would make that exceedingly difficult.⁴⁴ This difficulty is made even greater by the explicit creation of a system of checks and balances, that ensure that even a faction in control of a significant part of the government could still have a difficult time pushing through an unpopular agenda.⁴⁵ This political discussion of the US Constitution as a tool to prevent tyranny has economic ramifications as well. As I will discuss in subsequent chapters, protection of the rights of individuals is key to establishing an optimal economy. Governmental tyranny stands in stark opposition to such protection.

Even more obviously relevant to my thesis, the Federalist Papers also discuss how a unified government under the Constitution can protect and increase trade. By eliminating trade barriers within the USA, the Constitution would increase in-

⁴³Ibid., under “Federalist no. 10”

⁴⁴Ibid., under “Federalist no. 10”

⁴⁵Hamilton, Madison, and Jay, The Federalist Papers under “Federalist no. 51”

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ternal trade.⁴⁶ This effect would represent an obvious economic benefit of a constitutional republic. As discussed in the prior section, the Commerce Clause of the US Constitution provides specific protection and support for this type of trade.

Interestingly, the writers of the Federalist Papers are hardly proponents of free trade. Specifically, Alexander Hamilton supported the adoption of the Constitution in part because he thought that it would give the United States bargaining power when negotiating trade deals with foreign countries. By unifying the American market Hamilton hoped to force European nations to compete with each other for negotiated access. The negotiating position of the USA could be made even stronger through the existence of a navy - something that the federal government would be able to create under the proposed Constitution.⁴⁷ The ability of a government to effectively set tariffs and negotiate trade deals is an important topic for this thesis, and will be discussed in more detail in a later section.

The Federalist Papers also devote some attention to the concept of taxation. This concept is another topic with obvious relevance for my thesis. As discussed subsequently, taxes have significant effects on consumer behavior. Given this effect and the resulting impact to the economy as I will talk about below,⁴⁸ the provision of the Constitution for taxation is of particular importance. According to Alexander Hamilton, the Constitution would allow the government to collect taxes much more effectively than the previous system. One of the main arguments in favor of the federal government being better able to collect taxes is that a centralized government would be better able to collect and enforce tariffs.⁴⁹

⁴⁶Ibid., under “Federalist no. 11”

⁴⁷Ibid., under “Federalist no. 11”

⁴⁸Crumbley, “Behavioral Implications of Taxation,” 759.

⁴⁹Hamilton, Madison, and Jay, The Federalist Papers under “Federalist no. 12”

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No single concurrent source devotes as much effort to elucidating the original language and central concepts of the US Constitution as the Federalist Papers. Despite its underlying political purpose, the ideas discussed can be seen as forming the framework of the fledgling US economy as well. As such, the Federalist Papers are one of the most important sources for my thesis.

The second major source from the time of the original US Constitution is Sir William Blackstone's *Commentaries on the Laws of England*. This source is perhaps the most important work of English legal theory from that time. Blackstone's *Commentaries* grew out of a series of lectures he gave at Oxford in 1753. They were the first class taught anywhere on the subject of English law. The lectures were so well received that Blackstone collected them and published them as a free standing guide to the laws of England.⁵⁰ One interesting feature of Blackstone's *Commentaries* is that it was not just an attempt to summarize English Common Law for the legal profession, but it was also an attempt to present said Common Law to the average Englishman. It was Blackstone's belief that, given the broad importance of the law in everyday life, it was a subject that should be available for study to all educated people.⁵¹ It is thus impressive that the *Commentaries* ended up being both "an attractive piece of literature" as well as "remarkably sound law."⁵² This seminal summation of English Common Law was widely read in the colonies that would go on to form the United States.⁵³ This was in part because it was the best way for

⁵⁰Julius S. Waterman, "Thomas Jefferson and Blackstone's Commentaries," in *Essays in the History of Early American Law*, ed. by David H. Flaherty, (Chapel Hill, NC: University of North Carolina Press, 1969) 451

⁵¹Theodore Plucknett, *A Concise History of the Common Law*, (1956; repr., Indianapolis: Liberty Fund, 2010), 328, <https://o11-resources.s3.us-east-2.amazonaws.com/o113/store/titles/2458/Plucknett\1578\EBk\v7.0.pdf>, (accessed April 14, 2021).

⁵²Ibid., 328

⁵³Waterman, "Thomas Jefferson and Blackstone's Commentaries," 452

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American colonists to keep up to date on changes in English Common Law.⁵⁴ The fact that Blackstone intentionally wrote his *Commentaries* in such a way as to be understandable by a layman ensured that it was widely read in the future United States - even by those who did not practice law.⁵⁵ As a result, Blackstone's summary work had a huge influence on American jurisprudence.⁵⁶

This is not to say that Blackstone was universally accepted in the early United States. No less a figure than Thomas Jefferson saw Blackstone's influence on the judicial system of the United States to be a major problem.⁵⁷ One reason that Jefferson may have disliked Blackstone's *Commentaries* is because Blackstone himself was a proponent of many political beliefs that Jefferson greatly disliked. For example, Blackstone was a believer in the divine right of kings.⁵⁸ For this reason, Jefferson - a committed republican⁵⁹ - might have felt ill at ease with Blackstone's influence over the early American legal system.

However, even with such an important figure in the early United States opposing his work, Blackstone remained an influential figure in the American legal system - both then and now. His authority is such that he is cited in Supreme Court cases right up to the present day.⁶⁰ As such I often rely on his work in my analysis of the original meaning of the US Constitution.

⁵⁴Plucknett, *A Concise History of the Common Law*, 329

⁵⁵Ibid., 329

⁵⁶Waterman, "Thomas Jefferson and Blackstone's Commentaries," 455

⁵⁷Ibid., 457-458

⁵⁸John L. Thomas, *The Law of Constructive Contempt*, (St. Louis: The F. H. Thomas Law Book CO., 1904) 22

⁵⁹Waterman, "Thomas Jefferson and Blackstone's Commentaries," 448. For clarification, I mean republican as in that he believed that republics were a better form of government than monarchy.

⁶⁰*Printz v. United States*, 554 U.S. 570, under "Keep and bear Arms.' We move now from the holder of the right—the people—to the substance of the right: 'to keep and bear Arms.' (2008)

Introduction

Modern Analysis of the Original Meaning of the US Constitution

In addition to sources concurrent to the adoption of the US Constitution, there is also a body of modern literature on how the Constitution was originally intended to be understood. Two of the most important of these sources are the *Constitution of the United States of America: Analysis and Interpretation* (also known as the *Constitution Annotated*) and the *Heritage Guide to the Constitution*. I will discuss each of these sources and how they apply to my thesis in more detail below.

The Constitution Annotated is an in depth summary of the meaning and interpretation of the US Constitution. It takes the Constitution clause by clause, breaking down the Constitution in the order that it is written. Each clause of the Constitution has at least one essay on it.⁶¹ Most of the clauses have multiple essays written on them. The structure of the series of essays for each of the clauses of the Constitution follows. First, there is an essay that provides a brief overview of the essays on the clause in question. Next, there is an essay on the historical background of a clause. Then there is an essay on how the clause has been interpreted following its ratification. In the case of clauses whose interpretation has changed greatly over time, the interpretations will each be presented in chronological order. Finally, if applicable, there will be additional essays on how the doctrine laid out in the previous essays applies to related areas of legal theory.⁶² When a particular clause does not merit a longer discussion, these topics of normally separate essays can be combined.⁶³

The Constitution Annotated primarily consists of Supreme Court case law, since

⁶¹Congressional Research Services, “Organization of the Constitution Annotated: Overview,” *Constitution Annotated*.

⁶²Congressional Research Services, “Organization of the Constitution Annotated: Preamble, Articles, and Amendments,” *Constitution Annotated*.

⁶³*Ibid.*, “Organization of the Constitution Annotated: Preamble, Articles, and Amendments,” *Constitution Annotated*, 1n.

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they often have the “final word” on how the Constitution is to be interpreted.⁶⁴ In addition to Supreme Court Decisions *the Constitution Annotated* also makes use of other sources, such as lower court decisions.⁶⁵ Since *the Constitution Annotated* is a comprehensive work on the Constitution, I do not make use of large parts of it. Instead, I focus on topics which have direct or indirect effects on the economic efficiency of the United States. Furthermore, because *the Constitution Annotated* is meant to document changes in Constitutional interpretation from before its ratification right up to the present day,⁶⁶ large segments of its analysis are beyond the scope of my thesis. For my purposes, I rely primarily on the essays on historical background and early doctrine for clauses of the Constitution that are particularly important to establishing economic efficiency. Some good examples of such clauses are the Commerce Clause,⁶⁷ the Coinage Clause,⁶⁸ Article I Section 8 Clause 1,⁶⁹ and Article I Section 9 Clause 4.⁷⁰ In addition to these clauses that are obviously of economic

⁶⁴Ibid., “What Is Included and Sourced in the Constitution Annotated: Supreme Court Cases Overview,” *Constitution Annotated*. “As one of the central actors in interpreting the Constitution, the Supreme Court regularly issues opinions that discuss, and often provide the final word on, how particular provisions of the Constitution are to be understood.”

⁶⁵Ibid., “What Is Included and Sourced in the Constitution Annotated: Lower Court Decisions Overview,” *Constitution Annotated*.

⁶⁶Ibid., “Methodology for the Constitution Annotated: Overview,” *Constitution Annotated*. “In addition, the Constitution Annotated confronts the unique challenge that it is not intended to be a static document; federal law requires that it be updated regularly by attorneys within the Library of Congress’s Congressional Research Service.”

⁶⁷ “[The Congress shall have Power . . .] To regulate Commerce with foreign Nations, and among the several States, and with the Indian Tribes;” U.S. Constitution, art. 1, sec. 8, cl. 3.

⁶⁸ “[The Congress shall have Power . . .] To coin Money, regulate the Value thereof, and of foreign Coin, and fix the Standard of Weights and Measures;” U.S. Constitution, art. 1, sec. 8, cl. 5.

⁶⁹ “The Congress shall have Power To lay and collect Taxes, Duties, Imposts and Excises, to pay the Debts and provide for the common Defense and general Welfare of the United States; but all Duties, Imposts and Excises shall be uniform throughout the United States;” U.S. Constitution, art. 1, sec. 8, cl. 1.

⁷⁰ “No Capitation, or other direct, Tax shall be laid, unless in Proportion to the Census or enumeration herein before directed to be taken.” U.S. Constitution, art. 1, sec. 9, cl. 4.

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importance, there are several other clauses that have secondary importance. For example, while it may not seem directly related to economic efficiency, the prohibition on Ex Post Facto laws also affects the economic efficiency of the US Constitution.⁷¹ On these topics *the Constitution Annotated* provides a very authoritative voice.

The other significant modern work that I used for my thesis was *the Heritage Guide to the Constitution*. Collected by the Heritage Foundation, *the Heritage Guide* is another annotation of the US Constitution. Similar to *the Constitution Annotated*, *the Heritage Guide* evaluates the Constitution clause by clause. For each clause, there is a corresponding essay. Each essay seeks to describe both the “original understanding” of the clause and how it is interpreted today.⁷² While not as comprehensive as *the Constitution Annotated*, *the Heritage Guide to the Constitution* places an especially large emphasis on the original interpretation of the clauses of the Constitution. As such, it is of particular interest for my thesis.

The authors of the *Heritage Guide* often had similar interpretations as *the Constitution Annotated*. But on occasion they seem to diverge slightly. For example, one such minor disagreement arises while discussing the Fourth Amendment.⁷³ Specifically, the two sources differ slightly in their interpretation of “reasonable search.” *the Constitution Annotated* seems to leave open the question of what stipulations are required of a warrant in such a search. The closest they come to taking a specific stance is when they say that “the right to search the person of the arrestee with-

⁷¹“No Bill of Attainder or ex post facto Law shall be passed.” U.S. Constitution, art. 1, sec. 9, cl. 3.

⁷²ed. David F. Forte, Matthew Spalding, and Edwin Meese III, “About This Guide,” in *the Heritage Guide to the Constitution* (Washington, D.C.: The Heritage Foundation) <https://www.heritage.org/constitution> (accessed April 22, 2021)

⁷³“The right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures, shall not be violated, and no Warrants shall issue, but upon probable cause, supported by Oath or affirmation, and particularly describing the place to be searched, and the persons or things to be seized.” U.S. Constitution, amend. 4, sec. 2.

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out a warrant is unquestioned.”⁷⁴ On the other hand, *the Heritage Guide* is much more explicit with their stance. They claim that the pertinent section of the Fourth Amendment is only meant to establish what is required to get a warrant, not that a warrant is always necessary.⁷⁵ What constitutes a reasonable search is important for the establishment of Property Rights. As such, this question has significant economic implications.

In some cases *the Heritage Guide* includes information not mentioned in *the Constitution Annotated*. For example, Article I Section 10 Clause 1 of the Constitution in part prohibits states from creating its own currency.⁷⁶ *The Constitution Annotated* covers this clause only briefly – stating the legal doctrine adopted by the Supreme Court.⁷⁷ By contrast, the authors of *the Heritage Guide* expand on this topic. Their essay on that clause of the Constitution talks about how, despite the fact that the Constitution prohibits states from printing money themselves, they were able to get around this limitation by establishing state banks. These banks were technically private institutions, and thus were able to emit bank notes that functionally acted as a currency. This practice thus avoided violating the Constitutional prohibition.⁷⁸ Although *the Constitution Annotated* mentioned this legal loophole, the authors didn’t highlight the economic implications of the states being able to work around this

⁷⁴In later sections *the Constitution Annotated* does provide a more definitive interpretation. However, that interpretation only is established much later in time - beyond the scope of my thesis. Congressional Research Services, “Exceptions to the Warrant Requirement: Overview,” *Constitution Annotated*.

⁷⁵William J. Stuntz, “Warrant Clause,” in *the Heritage Guide to the Constitution*, edited by David F. Forte, Matthew Spalding, and Edwin Meese III, (Washington, D.C.: The Heritage Foundation) <https://www.heritage.org/constitution/\#!/amendments/4/essays/145/warrant-clause> (accessed April 22, 2021)

⁷⁶“No State shall... coin Money; emit Bills of Credit; make any Thing but gold and silver Coin a Tender in Payment of Debts...” art. 1, sec. 10, cl. 1.

⁷⁷Congressional Research Services, “ArtI.S10.C1.2.1 States and Coining of Money and Issuing Bills of Credit: Overview,” *Constitution Annotated*

⁷⁸Todd Zywicki, “Coinage Clause,” in *the Heritage Guide to the Constitution*

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prohibition.⁷⁹ Interpretation of this clause is of obvious importance for my thesis. What the Constitution has to say about how currency is issued is very important to economic efficiency.

Reviewing these two large reference works made up the bulk of my early research. In addition to providing me with important information, they also served as a way for me to discover other source material. For example, it was through *the Heritage Guide* that I learned about Alexander Hamilton’s “Report on the Subject of Manufactures.”⁸⁰

In addition to leading me to other sources, these two constitutional guides also gave me ideas on how to flesh out my thesis. For example, prior to reading *the Heritage Guide*, I was unaware of the monetary instability in the early United States.⁸¹ The in depth analysis provided by these two modern guides to the original US Constitution were vitally important to the development of my thesis.

Once I had gone through these two general looks at the Constitution, I also looked for more focused articles on the original meanings of particularly important parts of the Constitution. For instance, I looked at Johnson’s paper on the original meaning of the Public Use Clause. This article was primarily written as a reaction to Justice Thomas’ Dissenting Opinion in the *Kelo v. City of New London* case.⁸²

Economic Efficiency and Welfare Economics

The final category of sources related to my thesis are those that deal with economic efficiency and the related topic of welfare economics. To close the gap between

⁷⁹Congressional Research Services, “ArtI.S10.C1.2.1 States and Coining of Money and Issuing Bills of Credit: Overview,” *Constitution Annotated*

⁸⁰John C. Eastman, “Spending Clause,” in *The Heritage Guide to the Constitution*

⁸¹Todd Zywicki, “Coinage Clause,” in *the Heritage Guide to the Constitution*

⁸²Emily A. Johnson, “Reconciling Originalism and the History of the Public Use Clause,” *Fordham Law Review* 79 no. 1 (November 2011): 267

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sources explaining the original meaning of the US Constitution and how that document might establish an efficient economy, I relied on many sources that were introduced to me through my coursework at Baylor. Two of these sources were of particular importance for my analysis. The first of these was the textbook *Microeconomics* by Grinols, which I used during my courses on both microeconomics and welfare economics. The second consisted of selected works by Duncan K. Foley in which he discusses specific concepts around equilibrium and optimality regarding public goods. I will discuss each of these sources in more detail below.

Grinols's textbook, *Microeconomics* introduced many of the economic concepts that I refer to in my thesis. As such, I often cite it when discussing general economic topics. Specific sections of the text that pertain to my subject include the general description of markets,⁸³ as well as more focused topics such as consumer preferences,⁸⁴ how firms make decisions,⁸⁵ and the effects of monopolies on markets.⁸⁶

In addition to laying out basic microeconomic theory, Grinols' book contains a series of chapters on welfare economics. The first of these chapters lays out the requirements for an economy to be considered efficient.⁸⁷ This exact economic definition of efficiency is of critical importance for my thesis. As such, I will be laying out the criteria for efficiency more fully in the next chapter. The next chapter in Grinols's discussion of welfare economics focuses on the relationship between optimality and competitive markets. This chapter makes the foundational assertion that a competitive market for private goods will be economically efficient if no externali-

⁸³Earl Grinols, *Microeconomics*, 1994. Reprint, (San Diego: Cognella, 2018) 32-66

⁸⁴Ibid., 88-119

⁸⁵Ibid., 220-259

⁸⁶Ibid., 300-344

⁸⁷Ibid., 483-509

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ties are present.⁸⁸ This chapter also lays out a few necessary roles for government in the private sector.⁸⁹ This discussion is also obviously central to my thesis topic and I will discuss it extensively in a subsequent chapter.

The final chapter on welfare economics in Grinols's text shifts the focus away from economic efficiency in markets for pure private goods. The chapter focuses instead on public goods and externalities. Public goods are goods which are both non-rival and non-excludable in consumption. That means that multiple people can enjoy the good at the same time without issue and that it is impossible for those who don't pay for the good to be kept from consuming it.⁹⁰ Since public goods can be consumed equally by everyone in society, the amount of public goods produced should be related to the sum of the demand for the public good across all members of society.⁹¹ I will spend more time on how an efficient economy can determine the appropriate amount of public good production and address the "free rider" problem in a subsequent chapter. Externalities arise when the actions of a firm or household impact another firm or household directly, rather than through a market.⁹² Due to their importance in determining if an economy is efficient, I will discuss externalities - and how best to deal with them - in a later chapter.

This textbook provided a very good introduction to welfare economics. It introduced and described many of the economic principles that I make use of in this thesis. While it was rarely the last source on a topic that I consulted, it acted as an important framework and starting point for my research into what constitutes an economically efficient economy. From this baseline source, I branched out into other

⁸⁸Grinols, *Microeconomics*, 520

⁸⁹Ibid., 428-431

⁹⁰Ibid., 563

⁹¹Ibid., 564-567

⁹²Ibid., 545

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sources including Foley (1970).

One of the topics regarding welfare economics that was important for my thesis is the concept of a Lindahl equilibrium. Although this concept was touched on in Grinols's *Microeconomics*, I needed a deeper understanding for my discussion of how the US Constitution provides public goods. For this purpose, I used Foley (1970). The efficient production of public goods is a topic of critical importance to my evaluation of the original US Constitution. I will describe Foley's discussion of these concepts in more detail below.

Foley begins his discussion by defining his terminology and establishing some assumptions about the economy. He describes an economy made up of both public and private goods, where each consumer begins with an endowment of private goods.⁹³ It is assumed that each consumer has a "complete and transitive preference ordering" of consumption bundles. For a consumer to have complete preference ordering means that, for any two consumption bundles, the consumer knows which they prefer. For a consumer to have transitive ordering means that it is impossible for a single consumer to prefer the bundle of consumer goods A to bundle B, prefer the bundle of consumer goods B to the bundle C, but still prefer the bundle of consumer goods C to bundle A. Instead, there must be a perfect, not looping order of preference for all possible bundles of consumption.⁹⁴

Foley also models the productive capacity of society. This model includes a set of all possible mixtures of production. This set of possible amounts of total production is based on the existing endowments of the society and the technology available to produce other goods.⁹⁵ Within this model of an economy, an allocation is a quantity

⁹³Duncan K. Foley, "Lindahl's Solution and the Core of an Economy with Public Goods," *Econometrica*, 38, No. 1. (Jan., 1970) 66

⁹⁴*Ibid.*, 66

⁹⁵Foley, "Lindahl's Solution and the Core of an Economy with Public Goods," 67

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of output for both public and private goods, with the total production of private goods divided up amongst the population. An allocation is feasible if the amount of goods necessary to meet the allocation - minus preexisting goods - is able to be produced, given endowments and technology. An allocation is considered Pareto Optimal if there is no other allocation where each individual could have a bundle that is either better than or as good as their current bundle.⁹⁶ This concept of Pareto Optimality is central to the discussion of the market for public goods.

Foley goes on to define the term “public competitive equilibrium.” He defines this equilibrium as a feasible allocation of goods, a set of prices for all public and private goods, and a set of taxes on all private goods which satisfy several conditions. First, the total amount of taxes collected equals the total amount of spending on public goods. Second, the total size of the economy in dollars is maximized.⁹⁷ Third, each person stays within their budget.⁹⁸ Fourth, for any consumer any bundle of private goods that is preferable to their current bundle must cost more than their current bundle, given the current production of public goods. Fifth and finally, there must not be a different bundle of public goods and taxes such that, for every consumer in society, it would be possible to be better off.⁹⁹ If these conditions are met, a public competitive equilibrium is attained. Furthermore, as long as producers are profit maximizing and consumers are utility maximizing, a public competitive equilibrium will always be Pareto Optimal.¹⁰⁰

⁹⁶Ibid. 67

⁹⁷The size of an economy is usually defined using GDP.

⁹⁸Specifically, they spend the entirety of their wealth - represented here as the goods in their endowment times the prices of those goods - on consumption of private goods, minus the amount they pay in taxes.

⁹⁹Foley, “Lindahl’s Solution and the Core of an Economy with Public Goods,” 67

¹⁰⁰Duncan K. Foley, “Resource Allocation and the Public Sector,” PhD diss., Yale University, 1966. In ProQuest Dissertations and Theses, <https://search-proquest-com.ezproxy>.

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Foley additionally demonstrates that in this public competitive equilibrium there can be a different set of prices for public goods for each consumer. In this case, the price of the public goods comes in the form of taxes paid. This set up is different from private goods, where all consumers pay the same prices. In order to be a public competitive equilibrium, the prices must be set up to maximize the size of the economy, as per condition two. Similarly, the prices must satisfy the fourth condition as well: that any bundle that is preferable to an individual must cost more than the bundle they chose given the prices that individual faces.¹⁰¹ Foley then goes on to prove this statement mathematically.¹⁰²

Now that he has established the public competitive equilibrium, Foley moves to further refine this equilibrium with the concept of Lindahl equilibrium. Under a public competitive equilibrium, it is possible for the tax burden on an individual to be positive or negative, and thus for a person to consume more or less than their endowments would allow them to afford without government redistribution. The difference between what an individual would be able to consume without redistribution and what they consume after redistribution is referred to in the article as a lump-sum transfer.¹⁰³ A Lindahl equilibrium, however, is intended to further restrain a public competitive equilibrium by requiring that there are no lump-sum transfers through the provision of public goods. Instead, the idea is to have each individual pay taxes in relation to the benefit that individual receives from the production of the public good. This concept is referred to as the Benefit Principle of Taxation, and it explicitly

baylor.edu/docview/302230213/fulltextPDF/9C5D12C3B1C74962PQ/1?accountid=7014, (Accessed April 24, 2021) 26-28.

¹⁰¹Foley, "Lindahl's Solution and the Core of an Economy with Public Goods," 68

¹⁰²Ibid., 68-69

¹⁰³Ibid., 69

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forbids wealth redistribution through the provision of public goods.¹⁰⁴ Thus, in a Lindahl equilibrium there isn't any wealth redistribution through the provision of public goods.¹⁰⁵ Having defined a Lindahl Equilibrium, Foley goes on to prove that in any economy there will be a potential Lindahl equilibrium.¹⁰⁶

With the definition and existence of a Lindahl equilibrium established, Foley then introduces another concept - termed "the core." The core is a set of allocations for which it is impossible for any group of individuals to leave the society and be better off. These individuals are assumed to take their endowed resources with them if they leave.¹⁰⁷ In general, it is difficult for an individual or group of individuals to withdraw from society and still be better off. The reason for this is that public goods benefit everyone in the society. As such, the more people in society, the more money is available to spend on public goods, and thus the better off each person is. If a subset of society breaks away with their resources, they will likely be unable to afford as much expenditure on public goods as the society could.¹⁰⁸ One possible exception to this generality would be if a subset of the population is being taxed a disproportionate amount. In such a case, this group might be able to do better for themselves if they withdrew from society. This concept is critical for efficiency of public markets – and thus the core is an important concept for my thesis.

In addition to these two foundational sources on welfare economics, there were other works that I drew from. For example, Crumbley (1973) is about how taxation changes how taxpayers behave, with the argument being that more attention must

¹⁰⁴Foley, "Lindahl's Solution and the Core of an Economy with Public Goods," 69-70

¹⁰⁵Ibid., 70

¹⁰⁶Ibid., 70-71

¹⁰⁷Ibid., 71

¹⁰⁸Ibid., 72

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be paid to how taxes change behavior.¹⁰⁹ To support this argument, Crumbley gave an example of taxation affecting behavior. Specifically, he talks about a speech by President Teddy Roosevelt that proposed an inheritance tax. The result of this speech was that rich individuals moved their assets into forms that could escape the tax.¹¹⁰ In addition to this quick example, the article then goes on to discuss the impact on the economy of the welfare system of the time. Specifically, Crumbley attempts to compare the existing welfare system to proposed plans for a negative income tax.¹¹¹ Crumbley then goes through several studies that had been made on the subject. While the results of the tests on a negative income tax were not definite,¹¹² Crumbley makes it clear that differences in tax structure clearly do have an impact on how people behave.¹¹³ By extension then, it is clear that taxation effects economic efficiency.

It was on the basis of these sorts of sources that I was able to put together all of the requirements for an economy to be efficient. That undertaking will be the purpose of chapter two. From there, I outline a basic theoretical plan for what an efficient economy must look like. That extension will occur in chapter three. From there, I will continue to use these sources on welfare economics to evaluate the efficiency of the US Constitution as it was originally understood through the rest of my thesis.

¹⁰⁹D. Larry Crumbley, "Behavioral Implications of Taxation," *The Accounting Review* 48, no. 4 (October, 1973): 759-760.

¹¹⁰Crumbley, "Behavioral Implications of Taxation," 759.

¹¹¹Ibid., 760-761.

¹¹²Ibid., 761-762.

¹¹³Ibid., 763.

Defining Optimality

A Crash Course on Welfare Economics

Before we can discuss the economic efficiency of the original US Constitution, we must first define what we mean by “efficient.” I believe that most people have a basic idea of what they mean when they say “efficiency,” but they may not have taken the time to rigorously define it. In this paper, I will be defining efficiency in terms of Pareto Optimality. An economic system is Pareto Optimal when it is impossible to make any one person better off without making at least one person worse off.¹ It is a simple concept, but it has very far reaching implications.

These implications are most easy to see in the market for private goods. Imagine that we have two individuals, Joe and Ann, and two goods, apples and oranges. Joe starts with five apples and one orange. Ann starts with one apple and five oranges. Further, let’s imagine that both Joe and Ann would prefer to have the same number of apples and oranges. As we can see, the allocation of our little economy is not Pareto Optimal. If Joe traded one of his apples for one of Ann’s oranges, the result would be that both of them are better off. As such, the state of the market before any trading is not Pareto Optimal. However, if we allow Joe and Ann to trade they will keep trading until both of them have three apples and three oranges. Thus, trading will move us from our original position to a different one preferred by both individuals. In fact, regardless of how we redistribute the starting ownership of these goods, we will always end up in a Pareto Optimal outcome as long as Joe

¹Grinols, *Microeconomics*, 377-378

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and Ann have the opportunity to freely trade with one another. This is the essence of the 1st Fundamental Theorem of Welfare Economics. Any outcome resulting from a competitive equilibrium will result in a Pareto Optimal economic allocation.² A market is in competitive equilibrium when both producers and consumers take prices as given, producers are maximizing profits subject to technological restraints, consumers are maximizing utility subject to budgetary constraints, and the market clears. An economy as a whole experiences competitive equilibrium if every market in the economy is in competitive equilibrium.³

The 2nd Fundamental Theorem of Welfare Economics is a bit more complex. It states that that any Pareto Optimal outcome of the economy can be produced by a competitive equilibrium, given the appropriate prior assigned ownership.⁴ In our examples, that means that we could achieve any feasible Pareto Optimal economic allocations by changing the ownership of apples and oranges before trade began. From the previous example, if Joe started with five apples and one orange, while Ann starts with one apple and five oranges, then we might expect both Joe and Ann to end with three apples and three oranges. Such an allocation would meet the definition of Pareto Optimality. If the initial allocation was changed so that Joe started with five apples and three oranges, while Ann started with one apple and three oranges, the allocation that results from trade will likely be different. We might expect that Joe would end with four apples and four oranges, while Ann would only have one apple and one orange after trading. This allocation would also satisfy the definition of Pareto Optimality.

Depending on how ownership of the different items is set up, we can get very

²Gerard Debreu, *Theory of Value: An Axiomatic Analysis Of Economic Equilibrium* (Hoboken NJ: John Wiley & Sons, Inc., 1959), 93.

³Grinols, *Microeconomics* 519.

⁴Ibid., 412.

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different economic outcomes. However, all of these outcomes would be considered Pareto Optimal as long as they resulted from trade.

The most simple form of the 1st and 2nd Fundamental Theorems of Welfare Economics are designed to work in economies that only include purely private goods. A private good is defined as something that is both excludable and rival in consumption. One example of a purely private good would be a sandwich. If I make a sandwich, I can keep anyone else from consuming my sandwich without my consent. It is excludable in production. Furthermore, if I consume a sandwich, you cannot consume that sandwich. We are rivals in our consumption.⁵ While most goods that we deal with are purely private goods, there are exceptions. For instance, one good that we regularly consume is national defense. In one sense, national defense is very similar to a sandwich. Both cost money and both provide benefit. However, national defense is both non-rival in consumption and non-excludable in production. When I benefit from national defense, you are not prevented from benefitting as well. Similarly, if national defense was produced in the free market, there would be no way to keep those who didn't pay for the good from still enjoying it. As such, our concept of a competitive equilibrium doesn't work as well when confronted with other kinds of goods. Fortunately, we can preserve our original concept of Pareto Optimality in an economy that includes both private and non-private goods. Unfortunately, the examination of this kind of efficiency becomes more complicated. I will discuss an economy with such complications shortly.

Pareto Optimum tells us something about values. If Ann considers apples more valuable relative to other goods (in this case oranges) than Joe does, they can both be made better off through trade. For an economy to be Pareto Optimal, it must

⁵Grinols, *Microeconomics* 455-456.

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be impossible for any one person to be made better off while anyone else is made worse off. As a result, if an economy were truly Pareto Optimal, all opportunities for mutually beneficial trade between Joe and Ann must have been exhausted. If there are no more opportunities for trade, it must be because both Joe and Ann place the same value on apples relative to all other goods in the economy that they would give up for them. We can write this in mathematical terms as

$$(MU_{Apples}^{Ann})/(MU_{oranges}^{Ann}) = (MU_{Apples}^{Joe})/(MU_{oranges}^{Joe})$$

Where MU is defined as Marginal Utility of consuming the good in question. If an allocation satisfies this requirement, we say that it exhibits Distributive Efficiency. In a barter system like Joe and Ann have established, we would measure the value of each good as the exchange rate between that good and any other good in the market. In a modern economy we express the value of that good at its exchange rate with money - aka its price. Specifically, we are looking at the amount of money that an individual would be willing to spend on the good in question rather than on other goods in the market at current price levels. This phenomenon is expressed as all goods have the same money value to Joe and Ann. This implication of Pareto Optimality is called Distributive Efficiency.⁶ If Distributive Efficiency holds it is impossible to re-arrange goods between Joe and Ann to make one better off without harming the other.

In our simple example economy, neither Joe nor Ann is producing any of the goods being consumed. When we introduce the possibility of production, we discover additional requirements to maintain Pareto Optimality. Perhaps the most obvious additional requirement is that all factors of production (i.e. labor and capital) are

⁶Grinols, *Microeconomics*, 503

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being employed. This condition is referred to as Full Employment.⁷ A second, more subtle requirement is that, for each producer in an area, the relative value of labor and capital must be equal to one another. This requirement is very similar to the distributive principle for consumption outlined above. In economics, we call this Input Efficiency.⁸ Distributive Efficiency required that no rearrangement of goods amongst consumers could make anyone better off. Similarly, Input Efficiency says that no re-arrangement of inputs can increase output of one type of good without lowering output of another. Thus, any two inputs must have the same relative usefulness in production to different users. That means that two firms place the same relative value on an additional unit of labor versus an additional unit of capital. This consistency of relative value across firms manifests as a single price for all inputs of production. In mathematical terms we would write this principle as such.

$$(MP_{Labor}^{IndustryA}) / (MP_{Capital}^{IndustryA}) = (MP_{Labor}^{IndustryB}) / (MP_{Capital}^{IndustryB})$$

As mentioned above, Input Efficiency deals with inputs for firms in the same area. Another principle, Sector Allocative Efficiency,⁹ concerns groups of firms. We can group firms into sectors in a number of different ways. Perhaps most obviously, we can group firms by geography - firms being near each other being in the same sector. We can also often define a sector based on what the firms produce. For instance, the electronics sector might be a collection of all the firms that produce electronic devices. Finally, we can also define a sector in terms of the firms inputs. We could define a sector of all the firms that purchase rubber, for example. According to Sector Allocative Efficiency, if two or more sectors are trading with each other, then the

⁷Grinols, *Microeconomics*, 491

⁸Ibid., 494

⁹Ibid., 497

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costs of different goods will equalize across sectors. For instance, if the Georgetown sector has a higher cost of producing apples than the sector Annsburg does, then over time apple production will fall in Georgetown and rise in Annsburg. This will go on until the costs of producing apples in terms of forgone production of oranges in both sectors is equal. In the case of sectors that doing produce the same goods, we can say that the price of common inputs will equalize across sectors. In math we would represent this principle as such.

$$MRT_{Apples,Oranges}^{Sector1} = MRT_{Apples,Oranges}^{Sector2}$$

Combining our principle of Distributive Efficiency with Sector Allocative Efficiency, we find that a Pareto Optimal economy exhibits another rule of efficiency. Specifically, the cost of production of apples in terms of foregone orange production across all sectors will equal the relative benefit that each consumer gets from an additional apple or orange. This principle is called Consumer Sovereignty.¹⁰ In mathematical terms, we can write that priciple as such.

$$MRS_{Apples,Oranges} = MRT_{Apples,Oranges}$$

Thus Distributive Efficiency, Full Employment, Input Efficiency, Sector Allocation Efficiency, Consumer Sovereignty are all specific implications of Pareto Optimality.

Pareto Optimality with Externalities and Public Goods

Up until now we have been discussing Pareto Optimality in an economy of only private goods. However, not all goods can be considered private goods. The two main kinds of goods that don't fit our description of optimality are goods with externalities and public goods.

¹⁰Grinols, *Microeconomics*, 505

Defining Optimality

An externality occurs when the production, sale, or consumption of a good affects someone other than the producer and consumer of said good and the effect does not occur through a market. This affect can be in the form of a benefit provided or a cost incurred.¹¹ Regardless of which is the case, externalities cause problems for private markets. The reason that externalities cause efficiency problems is that, in a free market, a rational producer will continue to produce more of their product until the cost of producing another unit is greater than the amount that a consumer would be willing to pay for the good. In mathematical terms we would write this as such.

$$MB_{private} = MC_{private}$$

This behavior is fine in the case of a private good with no externality because the only two people who are involved in the production and consumption of the product are both represented. As such, the market naturally accounts for the entire cost and entire benefit of the production and consumption of this good. However, for goods that have an externality, a private market will not naturally produce the efficient outcome. The problem occurs because the market only really takes into account the benefits and costs of the two individuals engaged in the trade. If those outside the trade have their own benefits and costs, these will not be taken into account by the free market.

Given the existence of this problem, government intervention is reasonable. There are three basic methods a government can use to deal with an externality. The first of these is for the government to create a new property right attached to the action causing the externality. By creating this property right, a new market can be formed that will ensure that the externality will be internalized. The issue with externalities

¹¹Earl Grinols, *Microeconomics* 545.

is that the market can not effectively account for the costs and benefits of those not engaging in the market transaction. By creating a new market that does include these third parties and their interests, the externality can be eliminated.¹² The second method is for the government to apply corrective taxes or subsidies to achieve the optimal output. This tax or subsidy is designed to insure that the creators of the externality - positive or negative - will take that externality into account. As long as the tax is set equal to the marginal social cost or benefit at the societal equilibrium point, the requirements for efficiency will hold.¹³ The final of the main methods for dealing with externalities is for the government to directly regulate the industry producing the externality. Rather than apply a tax or subsidy, the government will directly intervene to prevent too much or too little of the good in question from being produced.¹⁴

In the case of public goods Distributive Efficiency doesn't work very well. If Ann values national defense more than Joe does, she can't really trade some apples for his share of the military. However, with some small modifications, our condition of Consumer Sovereignty will work for public goods. Previously, we understood Consumer Sovereignty to mean that the relative value of a good to each individual consumer is equal to the relative cost of producing that good. It made sense to just look at the values of the good to a single consumer in our earlier case, because a private good can only be consumed by a single person. On the other hand, since a pure public good is consumed by the entire society, we calculate its total benefit to society as the sum of its benefits to each member of society. We then say that the

¹²Grinols, *Microeconomics*, 553-554

¹³Ibid., 555-557

¹⁴Ibid., 557-558. While all three methods can theoretically be used to deal with externalities efficiently, in practice certain methods may be more or less effective than others. The question of how best to deal with externalities in an economy is discussed in more depth in chapter 3.

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total value of the public good relative to other goods should equal the relative cost of producing the public good.¹⁵

Once we have determined the total amount that should be spent on a public good, we need to determine how much each consumer should pay for it. Using our previous example, this becomes a question of how much each taxpayer should contribute to fund the national defense. Discussions of where to place the burden of taxation frequently focus on achieving non-economic goals. For instance, progressive taxation has been proposed as a method to reduce income inequality. While such a method of taxation can make sense when looking at non-economic goals, this thesis is focused only on maximizing economic efficiency. In order to accomplish that goal, I shall revisit the concept of a Lindahl Equilibrium introduced in the literature review. As discussed before, a Lindahl Equilibrium occurs where each taxpayer pays taxes on each individual government program in proportion to the amount of benefit they receive from said program. This method of divvying up tax burden is referred to as the Benefit Principle of Taxation. In the end, we will have a set up that includes public goods “purchases” by taxpayers that mimics a competitive equilibrium. In a competitive equilibrium, different consumers buy different quantities of goods, but each pays the same price for each good. In this equilibrium, which we call a Lindahl equilibrium, each taxpayer willingly consumes the same quantity of the public good because they pay different prices that reflect the benefits they get from their effective purchase of the public good.¹⁶ In this way, the Lindahl equilibrium mirrors the Competitive equilibrium.¹⁷

¹⁵Paul A. Samuelson, “The Pure Theory of Public Expenditures,” *Review of Economics and Statistics* 36, no. 4 (November 1954): 387.

¹⁶Duncan K. Foley, “Lindahl’s Solution and the Core of an Economy with Public Goods,” *Econometrica* 38, no. 1 (January, 1970): 69-70.

¹⁷Leif Johansen, “Some Notes on the Lindahl Theory of Determination of Public Expenditures,”

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As discussed in the literature review, this method of taxation would lead to a Pareto Optimal outcome. However, in that same paper Foley also introduced the idea of a Public Competitive Equilibrium. The requirement for this equilibrium is very similar to a Lindahl Equilibrium. The only difference is that a Lindahl equilibrium requires that each person pay taxes in proportion to the benefit they receive from the government. On the other hand, a Public Competitive Equilibrium does not require the Benefit Principle of Taxation be followed. As such, redistribution of wealth is allowed through taxation and public provision of goods.¹⁸ A Public Competitive Equilibrium will still be Pareto Optimal, but it will not necessarily be in the core. Suppose a society existed in which one group of people - perhaps those with red hair - were responsible for pay all the taxes. Technically speaking, this society could be Pareto Optimal as long as it held to the other requirements of a Public Competitive Equilibrium. It would be impossible make those with red hair better off without hurting other members of the society.

Why then do we prefer a Lindahl Equilibrium to a Public Competitive Equilibrium for the purpose of this thesis? The first reason is that the redistribution that can occur in a Public Competitive Equilibrium is done for non-economic reasons. Thus, discussing the desire for such redistribution is beyond the scope of this thesis. Second, while a Public Competitive Equilibrium will be Pareto Optimal, it will not necessarily be in the core of an economy. The idea of the core is that, to be efficient, it must be impossible for any group of individuals to withdraw from the society along with all their resources and do better on their own.¹⁹ In the example above, red-heads could withdraw to form their own society, lower spending on the public

International Economic Review 4, no. 3 (September, 1963): 349-350

¹⁸Foley, "Lindahl's Solution and the Core of an Economy with Public Goods," 69.

¹⁹*Ibid.*, 71-72

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good, and end up doing better for themselves. As such, the example above – while Pareto Optimal – would not be in the core.

The core is taken to be an important concept since, if a society is not in the core, we would expect in equilibrium that any over-taxed minority would leave. Thus a society not in the core is arguably not an equilibrium. A government might want to disallow people with red hair from taking their property and leaving the society. However, this would violate one of our primary guarantees of efficiency. The reason that we can rely on a competitive free market to produce a Pareto Efficient outcome is because no one will willingly agree to a trade that will make them worse off. That guarantee evaporates when coercion is involved. When individuals are allowed to use force to get what they want, Pareto Optimality is no longer likely. The same holds true when public goods are present. When coercion is used to prevent an individual or minority from leaving society, who could do better for themselves by leaving, something similar occurs. As such, requiring that our economy be in the core is important to avoid these sorts of abuses. For this reason, the thesis will be making use of Lindahl Equilibrium rather than a Public Competitive Equilibrium.

Weaknesses of Pareto Optimality

Pareto Optimality is our definition for economic efficiency. Unfortunately, Pareto Optimality is not without its weaknesses. Referring back to the 2nd Fundamental Theorem of Welfare Economics, we know that changing the initial ownership of the different endowments in the economy can yield different Pareto Optimal outcomes. But what if we assigned the rights to all property to one individual – including ownership of the product of the labor of other participants in the economy? In our previous examples, that would be if Joe owned all the apples and oranges, as well as anything else Ann produced. Technically speaking, such an allocation would be

Weaknesses of Pareto Optimality

Pareto Optimal.²⁰ It would be impossible to improve the wellbeing of Ann without making Joe worse off. For similar reasons, slavery - such as practiced in the United States - can be considered Pareto Optimal. However, such an economic system is clearly unacceptable for non-economic reasons. Is there any economic methodology we can use to rule out such systems?

One possible method to rule out such obviously unacceptable economic distributions is to make use of a different definition of economic efficiency. One alternative to Pareto Optimality would be Kaldor-Hicks Efficiency. Functionally, Kaldor-Hicks Efficiency is very similar to Pareto Optimality. However, while Pareto Optimality requires that everyone in society is made better off or left the same, Kaldor-Hicks Efficiency is not so stringent. It only requires that those that benefit from a change have benefits that are larger than the costs to others caused by the change.²¹ Using this definition of efficiency, it seems easy to rule out slavery. After all, it seems likely that someone who is enslaved would value their freedom more than a slave owner would value their inexpensive labor.

This raises the question of why not use Kaldor-Hicks Efficiency everywhere in the thesis. Why not make greater use of this definition of efficiency? The problem is that it is impossible to actually compare utility across individuals. After all, utility is entirely subjective. As such, it is impossible to rule out any shift in the economy based on Kaldor-Hicks Efficiency. After all, regardless of the situation, it is never possible to objectively know that those that suffer lose less than those that gain. Because of this, Kaldor-Hicks Efficiency is often not helpful in describing an efficient economy. As such, in general, I shall be relying on Pareto Optimality rather than

²⁰Ted Bergstrom, "On the Existence and Optimality of Competitive Equilibrium for a Slave Economy," *The Review of Economic Studies* 38, no. 1 (Jan. 1971): 32

²¹Jules L. Coleman, "Efficiency, Utility, and Wealth Maximization," *Hofstra Law Review* 8, no. 3 (Spring 1980): 513

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Kaldor-Hicks Efficiency.

From our definition of economic efficiency, drawn primarily from Pareto Optimality, we can now begin to discuss the actual functions that any government needs to accomplish. Once we have what a government should be doing in theory, we can begin to analyze whether the original US Constitution allows for economic efficiencies in their practice.

Describing the Optimal Government

The second chapter defined Pareto Optimality and discussed several of its implications. It also briefly introduced the similar concept of Kaldor-Hicks efficiency as a potential supplement to Pareto Optimality. These principles will be used as our criteria to evaluate the economy created by the US Constitution. Next, we need to outline the tasks a government must accomplish in order to create such an economy.

Civil Commerce

At its core, an economy is simply a bunch of people willingly producing and trading goods and services amongst themselves. Therefore, in order for an economy to exist, two fundamental elements are very helpful. The first is property rights - rules governing who owns what, how someone can use their property, and how that ownership can be transferred. The second is law and order - enforcement of the rules established as a part of property rights. In addition to these two foundational requirements, we also have a third item: money - a unified medium of exchange. Theoretically, we could have a fully efficient economy run entirely on the barter system. However, in practice it is of vital importance to an economy to have a single, universal currency. Among these three elements, we can establish the basis of commerce within a society.

Property Rights

Before we discuss how governments should establish property rights, we need to define what we mean by property rights. While this definition may seem straight-

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forward, it is actually quite complex. On the surface level there is legally recognized ownership of property. For instance, if a person owns a plot of land, his or her name will appear on the deed, thus asserting his or her ownership of the area. If an individual does own a piece of property, that means - according to the renowned legal scholar Blackstone - that they have the right of “free use, enjoyment, and disposal” of that property “without any control or diminution, save only by the laws of the land.”¹ Later legal theorists have expanded on these three basic pieces, but the basic elements - the ability to use, profit from, and transfer property - were already acknowledged at the time of the founding.

In any society some property rights will be forfeited. For instance, using a firearm to murder another person is universally prohibited across societies. Similarly, governments may restrict the production of certain goods - such as illegal drugs. These sorts of restrictions grow naturally out of the passage of different laws by society. Some are clearly for the best, others are more controversial. An attempt to determine all restrictions on property rights that should be enacted by the government would be both futile and beyond the scope of this paper. What can be done is to establish some basic rules. In general, restricting property rights through new laws can seriously harm an economy. If the law is passed for non-economic purposes - such as the reduction of drug use - then its legitimacy is beyond the scope of this paper. If it was passed in pursuit of an economic goal, the law should be evaluated based on the proper roles of government laid out in this chapter. In all cases, property rights should be infringed upon as little as possible in the pursuit of the goal at hand.

¹William Blackstone, *Commentaries on the Laws of England*, (Philadelphia: J.B. Lippincott Co., 1893), 1:138

Civil Commerce

Law and Order

As discussed above, property rights deals with what individuals within society are allowed to do with their property. In contrast, law and order refers - in the economic sense - to the enforcement of said rights. Perhaps the most obvious application of law and order is protection of an individual from physical harm by another. This protection covers threats, attacks, and coercion by others. Law and order also includes protection of property from destruction or theft by those others in society. However, such protections of property do not encompass the full extent of law and order. For the purpose of this paper, law and order will refer to any government policy or action that protects the ability of property owners to enjoy any of the aspects of property rights. Thus, law and order would refer to police protecting a business from being robbed. Similarly, it would also cover contract enforcement, which may be necessary for an individual to dispose of or sell property.

One of the key elements of law and order is that the government's enforcement of property rights needs to be consistent. It is easy to imagine a totalitarian state which maintains stability through ruthless suppression of dissidents. Such a state might appear to have "law and order" in abundance. However, political stability is not enough to ensure that the economy is able to function. There must also be a degree of stability in property rights as well and they must be predictably enforced.² For example, if a restaurant is required to comply with a certain set of health codes today, a different set of codes tomorrow, and a completely new set the day after that, pretty soon all restaurants would be forced to close. Similarly, any commercial activity whose regulation changes too frequently would be functionally eliminated

²Susan E. Dudley and Jerry Brito, *Regulation: A Primer* (Arlington, VA: Mercatus Center, 2012), 2nd ed. 1, https://www.mercatus.org/system/files/RegulatoryPrimer_DudleyBrito_0.pdf (accessed March 1, 2021).

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from the legal economy. As such, it is important not merely that laws exist, but also that they are enforced consistently to allow commerce to occur without undue or unintentional hindrance.

The distinction between property rights and law and order can at times be subtle. For instance, in some countries small businesses are consistently harassed by police and organized crime at the behest of their larger competitors. The Russian economy is notorious for this sort of corruption.³ Although consistent, such harassment could make starting a business functionally impossible in certain sectors. Preventing establishment of new businesses is obviously not efficient for an economy. Depending on the circumstances, we might say that this inefficiency in the economy is a failure of property rights or of law and order. If it is literally illegal to start a new business in a certain sector, we would call that a failure of property rights. Someone has a good or service they are unable to sell. This situation violates one of the basic aspects of property rights - disposal of property. On the other hand, if it is theoretically legal for an individual to start a business, but they are prevented from doing so through extra-legal or illegal means, we would refer to this as a failure of law and order. In this second case, the government has established a property right, but is failing to enforce it correctly.

Money

As discussed in chapter two, it is theoretically unnecessary for an economy to have a currency. However, in practice it is significantly easier to achieve optimality if an economy has a currency to act as a universal medium of exchange, unit of

³Yulia Krylova, *Corruption and the Russian Economy: How Administrative Corruption Undermines Entrepreneurship and Economic Opportunities* (Abingdon, UK: Routledge, 2018), Kindle e-book, 26-27.

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account, and store of value.⁴ For instance, with a currency it becomes possible to effectively compare the relative value of many different goods and services. Rather than having to compare every good to every other good, we can instead merely compare each good to money (which, after all, is just another kind of good). This is important, since Pareto Optimality requires that the relative marginal value of goods is equalized across all consumers.

Another important aspect of a currency is that it have a relatively consistent value. Like we saw under law and order, a certain level of stability is required for commerce to occur. If the future value of money is difficult for consumers to predict due to significant or volatile inflation, then the result is an economy which will have a difficult time actually being able to exchange goods effectively.⁵ While devaluing a currency may have appealing benefits, such as getting out of debt, it comes at a high cost. As such, it is very important for the government to keep the value of its currency relatively stable.

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The three tasks under Civil Commerce are necessary in order for any sort of economy to exist at all, but they are especially important for the formation of private markets. By defining property rights, creating and enforcing a consistent legal structure, and establishing a universal medium of exchange, the government has created all of the prerequisites necessary for a private sector to emerge.⁶ True, certain assignments of property rights might preclude the creation of a private sector - for instance, if the ownership of all property (including people) was assigned to a single

⁴John Sloman, Alison Wride, and Dean Garratt, *Economics*, 8th ed. (Harlow, UK: Pearson Education, 2012) 525-526.

⁵Ibid., 448-449.

⁶Grinols, *Microeconomics*, 537.

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individual or group. However, barring those edge cases, a private sector can be expected to emerge given the conditions already discussed are met. The private sector has its own set of requirements for Pareto Optimality.

Private Markets

Our newly arisen private sector can be expected to effectively provide private goods, as discussed in the second chapter. As long as the prerequisites for civil commerce are present, the private sector should naturally conform fairly well to the five aspects of Pareto Optimality. Similarly, we would expect that the private market would efficiently provide club goods.⁷ Club goods are like private goods in that they are excludable in consumption but are distinct from private goods in that they are non-rival in consumption.⁸ Club goods are fundamentally distinct from private goods, and much research has gone into how they are provided for in the economy. However, as long as club goods are excludable in production, they can be provided by the private market effectively. The reason that club goods are excludable in consumption is because the property rights for these goods are set up such that there is a clear owner and that owner is able to keep other people from consuming the good without paying for it. Thus, as long as their property rights are sufficiently well defined and enforced, club goods do not need to be specifically dealt with in a general analysis of economic efficiency.

While private markets can generally be expected to handle the production of private goods fairly efficiently, there are a few problems that can arise. The first of these relates to competition. In general, private markets are most efficient when

⁷James M. Buchanan, "An Economic Theory of Clubs," *Economica* 32, no. 125 (February 1965): 7.

⁸Despite being non-rival, club goods often suffer from congestion, which means that more people sharing the club good decreases each person's personal enjoyment of it.

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they are competitive. If competition is allowed to wane, monopolistic behavior can set in. Without competition to keep prices down, producers can raise prices above the marginal cost of production.⁹ This effect distorts the market and violates the Consumer Sovereignty requirement of Pareto Optimality. In order to prevent this sort of behavior, the government needs to be ready to intervene where monopolies form. Similarly, the government must be on the lookout for groups of firms that form cartels. These groups of firms can try to collude to collectively raise prices, thus forming a pseudo-monopoly.

In most markets, the government should take steps to maintain competition. This requirement usually entails steps such as breaking up monopolies and cartels and making it easy for new businesses to enter the market.¹⁰ However, certain industries exhibit traits that make a competitive equilibrium impossible to maintain. For example, some industries exhibit large economies of scale. That means that the larger the business gets, the lower its costs of production become. In such an industry it would actually be more efficient for a single large company to exist rather than a bunch of smaller competing firms.¹¹ However, while costs of production may be kept down by the presence of a monopoly, those savings may not be passed on to the consumer due to a lack of competition. Thus, to keep cost of production down while also maintaining low prices, it might be necessary for the government to step in. This government intervention can take the form of direct ownership of the monopoly or of regulations on how much a monopoly should produce and charge. Regardless of the method used, theoretically this intervention can be made to be efficient.¹²

⁹Sloman, Wride, and Garratt, *Economics*, 183.

¹⁰Grinols, *Microeconomics*, 537-538

¹¹Kenneth Train, *Optimal Regulation: The Economic Theory of Natural Monopoly* (Cambridge, Mass: The MIT Press, 1991), 1

¹²Grinols, *Microeconomics*, 538

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However, in practice government run and regulated monopolies tend to not be entirely efficient. The way in which these public monopolies manifest inefficiency is sometimes different from purely private monopolies. In a well governed country with proper means of overseeing the managers, a publicly owned or regulated monopoly typically won't be as aggressive about raising its prices as a private monopoly. Unfortunately, a public monopoly will still likely violate the principle of Consumer Sovereignty by failing to keep costs down. This failure is referred to as "X-inefficiency" and occurs when a company has no incentive to keep costs down.¹³ Since costs are not kept down, the price of the good will inevitably rise. Whether these costs are paid by the consumers of that good or by taxpayers, this system will violate Consumer Sovereignty. It can be difficult to know just how much inefficiency is created in a public monopoly. However, even at its best it is unlikely to be as efficient as a competitive market. While certain circumstances - such as the presence of a public good or large economies of scale - may necessitate public monopolies, they are usually a suboptimal solution.

Two other sources of inefficiency that can occur in private markets are a lack of complete information¹⁴ and high transaction costs.¹⁵ Both of these causes of inefficiency would be described as violations of the assumptions of our model of a competitive market. Of course, it is impossible for consumers and producers in any market to have perfect information and zero transaction costs. However, in certain markets these imperfections can be a significant barrier to an efficient private market. As a result, the government may need to take steps to mitigate these sources of inefficiency. For example, it might create truth-in-advertising laws to ensure that

¹³Harvey Leibenstein, "X-Efficiency: From Concept to Theory," *Challenge* 22, no. 4 (September/October 1979): 10.

¹⁴Grinols, *Microeconomics*, 266

¹⁵Ronald H. Coase, "The Nature of the Firm," *Economica* 4, no. 16 (November, 1937): 390-392

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customers have better information about what they are purchasing. Similarly, it can make it easy to create and enforce contracts to keep transaction costs low.

Despite government intervention to ensure that private markets run smoothly, creation of fully competitive markets can be a challenge. Although unfortunate, this situation is not overly problematic. Even a relatively competitive market will be significantly more efficient than a public or private monopoly.¹⁶ As such, while perfect competition is usually unattainable, it is still an ideal to strive for when setting up an economy.

Externalities

The second threat to the efficiency of private markets relates to externalities. An externality is any effect of economic decision that affects other members of society directly, rather than through market forces.¹⁷ A classic example of a negative externality is pollution. If Ann drives a car that pollutes the air, Joe may incur part of the cost of that pollution without receiving the benefit of transportation. Not all externalities are negative. If Ann raises bees in order to produce honey, Joe's apple orchard may benefit from improved pollination.¹⁸

For an economy to function efficiently, it needs to handle both negative and positive externalities. Unfortunately, a competitive equilibrium is only Pareto Optimal as long as there are no externalities present in the marketplace.¹⁹ A competitive market will eventually arrive at the point where the price of producing one more unit of output would exceed any consumer's willingness to pay for that additional

¹⁶Wolfe, *Markets or Governments: Choosing Between Imperfect Alternatives*, (Santa Monica: Rand, 1986) viii.

¹⁷Grinols, *Microeconomics*, 545.

¹⁸Grinols, *Microeconomics*, 549-550.

¹⁹Slooman, Wride, and Garratt, *Economics*, 320-321.

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unit. Once externalities enter the economy, we have a problem. Consider the market for the gasoline Ann uses in her car. As before we would expect our competitive market to continue to sell Ann gasoline until the competitive equilibrium is reached. But now we have a new cost to consider. When Ann buys a gallon of gasoline, there is an additional cost not captured in the supplier's marginal cost function. Ann's driving might be lowering the air quality, creating noise pollution, and contributing to global climate change. These unintended effects can be described as costs to other people in society. We will group these costs together under the term marginal external cost. As a result of this external cost, we would expect the private market to keep selling gasoline even after the sum of the supplier's marginal cost and the external marginal cost exceeded the marginal benefit. As a result, we would see an inefficiency in this marketplace. A similar result would be seen with a positive externality, such as Ann's bees. In this case, fewer bees will be purchased than would be optimal for society as a whole. We will reach a market equilibrium where the sum of the marginal benefit to Ann and her neighbors exceeds marginal cost. Again, there is inefficiency in the market. These market inefficiencies provide an opportunity for utility-improving government intervention.²⁰

If the government identifies what it believes to be an externality, it is first faced with the question of whether or not to intervene. Thus far in our analysis we have acted as though the government has perfect information. In practice this is seldom true. It is possible the government has identified an externality when none actually exists. Alternatively, if the externality is small or difficult to quantify, the best course of action may be to do nothing.²¹ Once the government has established that intervention is warranted though, it is faced with three basic options. The first

²⁰Grinols, *Microeconomics*, 538.

²¹Charles Wolf, Jr., *Markets or Governments: Choosing Between Imperfect Alternatives* 84-85.

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option available is to establish the property rights pertaining to the externality, as well as the ability to make legally binding contracts related to those property rights. All externalities arise from a lack of appropriate property rights. For instance, the negative externality from the emissions of Ann's car only exists because there is no market for Joe - and everyone else affected by the pollution - to pay Ann to not pollute. If such a market did exist, Ann would consider the external costs when she decides whether or not to drive her car. Similarly, if Ann had to pay everyone affected each time she polluted, the externality would also be eliminated. In the case of many externalities, the reason that no market exists is because the property right hasn't been established. Often such property rights are difficult to establish. For instance, establishing a property right for clean air would be a challenge. However, where it is possible to establish a property right, that method is generally an efficient solution.²²

The second option is to apply corrective taxation to the production of the externality. By taxing the production of the externality equal to the marginal external cost, we can internalize its cost into the market. In the case of a positive externality, the government would instead subsidize production of the good in question equal to its marginal external benefit. Issues can arise from this solution in cases where it is difficult to estimate the marginal cost or benefit of the externality. A tax or subsidy set too high might cause unnecessary damage to the private sector, but if set too low it could fail to fully internalize the externality. However, this option can be useful when it is infeasible to establish a property right, such as when transaction costs would make it difficult for bargaining to occur between those creating the externality and those affected by it.²³

²²Grinols, *Microeconomics*, 553.

²³Grinols, *Microeconomics*, 555-557.

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The third method is for the government to directly regulate the firms creating the externality. One way the government could intervene is by applying price and quantity controls to the firms creating the externality. As before, without perfect information it can be difficult for the government to correctly set these controls. As a result, the corporations involved may be left with neither opportunity nor incentive to innovate in reducing the cost of the externality.²⁴ A more extreme form of direct regulation might be for the government to own and operate the industry producing the externality. This method has all the same potential for inefficiency of direct regulation, combined with the weaknesses of any government owned industry discussed above.

Public Activity

To this point, our discussion has focused on optimality in private markets. However, the function of government extends beyond establishing and supporting a market for private and club goods. As we move into the public arena, the role of government becomes more central and its intervention becomes more direct.

Public Goods

As described in the first chapter, public goods are those that are non-rival and non-excludable in consumption. Since it is impossible to prevent a citizen from consuming a public good, a common issue that arises is the free rider problem.²⁵ The free rider problem comes about because by definition it is impossible to keep people from consuming a public good even if they do not pay for it. As such, any business that tried to sell a public good in the free market would have a difficult time convincing anyone to pay for said good. A common solution to this problem is to

²⁴Ibid., 557-561.

²⁵Grinols, *Microeconomics*, 569.

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have the government either directly provide the good or purchase it from a private supplier. The government pays for this provision through tax revenue. Taxes allow the cost of a good to be spread across the population, presumably including all the consumers of the good.²⁶

While this system seems straightforward, there is still some room for individual variation. For instance, public goods may be provided directly by the government. In this case the government would not only collect the payment for the good provided but would also manage production of that good. One classic example is the military. In this case, we have the government directly providing national defense, which we describe as a public good. While such a method is elegant in its simplicity, it can also result in waste due to governmental inefficiency.²⁷ Another method is for the government to collect taxes to pay for a public good but outsource the actual production of the good itself. An example might be the government contracting with a private corporation to provide road construction. Depending on the good in question, one or the other of these two methods of production might be the better choice.

Ideal Taxation

In order for the government to provide public goods, two things need to occur. First, the government needs to decide on the quantity of the public good to produce. Second, the government needs to collect taxes in order to pay for it. As discussed in the first and second chapters, in order to achieve Pareto Optimality, the production of goods should adhere to the conditions of Lindahl Equilibrium. Taxpayers should contribute in proportion to the benefit they receive from a public good. Adhering

²⁶Ibid., 570.

²⁷Leibenstein, "X-Efficiency: From Concept to Theory," 10.

Describing the Optimal Government

to this principle will ensure the market for public goods will mirror the market for private goods. Thus optimality will be achieved.²⁸ Of course, in practice it is very difficult to calculate the marginal value each individual taxpayer accrues from a public good. Even if we could know how much value each individual places on the public good, it could be administratively challenging to charge each individual exactly that amount in taxes. However, to the extent that it is possible to tell how much an individual benefits from a public good, that person should be taxed directly in proportion to that amount.

Gifts, Grants, and Transfers

In addition to public goods, there are many other goods and services that citizens often want or expect the government to provide. Perhaps the most common examples are education and charity, but many more examples exist - from health-care to daycare. Some of these examples, such as education and certain kinds of medical care, may have a large enough externality present in their consumption that significant government intervention is warranted. In some cases, the direct provision of services by the government may be the best option. However, many existing or proposed government programs are designed to provide private goods that do not have any externalities. Such programs run afowl of the Benefit Principle of Taxation and Pareto Optimality, and are thus economically inefficient.

Inducement to Innovate

If a government follows the above recommendations, economic growth should happen almost as a matter of course. Once property rights are established and enforced, a medium of exchanged is created, and competition is enabled, the private

²⁸Foley, "Lindahl's Solution and the Core of an Economy with Public Goods," 68.

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market will begin to grow. However, there are still some actions a government can take to encourage economic growth. Of these actions, the most important is the inducement to innovate.

One of the primary methods of growing the economy is through the development of new technologies or methods of production. For instance, the development of the assembly line reduced the cost of producing many different goods. This innovation reduced prices, improved the lives of consumers, and expanded the economy. In a similar way, the invention of new products also expands the economy. If a new product makes consumers better off - either by improving on prior products or by fulfilling a previously unmet demand - its development will also grow the economy.

However, without government intervention, it can be difficult to properly reward an inventor for their creation. The laws created to protect physical property may not be sufficient to protect intellectual property as well. Without safeguards to protect intellectual property, research and development slow considerably. As an example, consider the pharmaceutical industry. Every year pharmaceutical corporations spend billions of dollars on drug development.²⁹ Under our current patent laws these companies are willing to spend this massive amount of money on research and development because they know that, if they can develop a new drug, they will be able to sell it with little to no competition until their patent runs out. Because other companies are not allowed to sell the same drug at first, the company that developed the drug will be able to sell it above marginal cost for a few years. Because the drug is being sold above marginal cost, the market will be inefficient and the company that developed the drug will be making unusually high profits until the patent expires.³⁰

²⁹John-Arne Rottingen et al., "Mapping of available health research and development data: what's there, what's missing, and what role is there for a global observatory?" *The Lancet* 382 no. 9900 (October 2013): 1299

³⁰Earl L. Grinols and Hwan C. Lin, "Patent replacement and welfare gains," 1586

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Normally, this result would be considered inefficient, but when it comes to research and development a traditional competitive market can have negative consequences. For example, say that there were no protections for intellectual property. In that case, once one company developed a new drug, all of them will be able to produce it. This competition will drive the price of the drug down to marginal cost, which is good for consumers in the short run. However, because the company that developed the drug was not able to make a significant profit, it has no incentive to continue to invest in research and development. Similarly, other pharmaceutical companies will likely avoid making similar investments into research and development. Thus, if an economy fails to create an incentive to research, it will likely have slower economic growth in the long run.

Patents are one method of incentivizing research and development, but they are not the only option. A time-limited patent creates a temporary monopoly. This monopoly creates a deadweight loss in the short term. While this temporary loss is likely outweighed by long term growth, there are other methods that may produce better results. Perhaps the most obvious alternative to patents is to have the government directly fund research itself. Since the benefits to the economy of research are just a specific kind of positive externality, this would be the equivalent of the third method of dealing with externalities. However, as I discussed above, this method is open to a significant loss of efficiency.³¹

Another way to incentivize research is an intertemporal bounty system. The basic goal of the intertemporal bounty system is to eliminate the temporary monopolies created by the patent system while still rewarding the individual or institution that came up with the invention. In this new system, when a company or individual files

³¹Grinols and Lin, “Patent replacement and welfare gains,” n4

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for a patent they would be required to release to the public exactly how to create their product. In exchange, the inventor would receive a bounty for the development of the new product. This bounty would be paid for through tax revenue, which would lead to some distortion of the economy. Despite this distortion, a change would likely be a significant welfare gain when compared to our current system.³²

³²Ibid., 1602

The Efficiency of the Constitution - Civil Commerce and Private Markets

Now that we have discussed Pareto Optimality and established the features of an economy that support it, we can begin to evaluate the economic efficiency of the original US Constitution. In this chapter, I will examine how the Constitution establishes civil commerce. Additionally, I will discuss how the proscriptions of the Constitution conform to the optimal configuration of the private sector.

Civil Commerce

As in chapter three, before discussing how the original US Constitution sets up the private sector, we must first discuss its effects on a few features common to almost all economies. These features are property rights, law and order, and currency.

Property Rights

The body of the Constitution is primarily focused on establishing the political structure of the United States of America. As such, it does relatively little in the way of protecting Property Rights. Furthermore, since the Constitution was basically being grafted onto a pre-existing political structure, there was little need to specify property rights. However, the Fourth and Fifth amendments of the Bill of Rights do add a little in terms of property rights to the Constitution itself. Built on English Common Law and the colonial experience,¹ the 4th amendment protects those living in the United States not just from having their property unreasonably searched, but

¹Congressional Research Service, *Fourth Amendment: Historical Background*, in the Constitution of the United States: Analysis and Interpretation, https://constitution.congress.gov/browse/essay/amdt4_1/\#ALDF\00007422 (last visited March 3, 2021).

also from having it seized by law enforcement. The Fifth Amendment expands that protection and adds an economic element. Specifically, the Fifth Amendment states that “No person shall... be deprived of life, liberty, or property, without due process of law; nor shall private property be taken for public use, without just compensation.” These two amendments create a solid foundation for protection of individual property rights. As previously discussed, the establishment and protection of property rights is necessary for the function of any economy. As such, these basic protections are incredibly important for the economic efficiency of the US Constitution.

Additionally, since the 5th amendment uses the general term “person,” this safeguard is extended to corporations.² and non-citizens.³ Although perhaps not obvious, the protection of corporate property is very important. Private corporations - and their investors - are a critical component of the ideal economy outlined in chapter three. If the property of a corporation were denied these constitutional protections, the constant risk of government seizure could prevent corporations from developing. Corporations typically exist as a result of investor activity. In their absence, the business community would be dominated by the wealthy classes who personally own their own assets. This limitation would reduce participation in the economy by poor and middle-class households. The result would be an overall decrease in the number of firms. Fewer firms results in less competition. Less competition means less efficiency in the economy as a whole. In addition, by making investment more difficult for low- and middle-income individuals, many profitable investment opportunities would be reserved for those who are already wealthy. The economy as whole would suffer.

Importantly, the 5th amendment applies to non-citizen residents and foreign in-

²Sinking Fund Cases, 99 U.S. 700, 719 (1879)

³Wong Wing v. United States, 163 U.S. 228, 238 (1896)

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vestors. As such, all of the same property rights are guaranteed to foreigners considering moving to or investing in the USA. Foreign investors actually receive an additional protection in the body of the Constitution. Article I, Section 8, Clause 11 of the Constitution establishes the right of Congress to make laws governing the seizure of enemy property during wartime. In an early Supreme Court case Chief Justice Marshall made clear certain specifics regarding this power. Congress has the legal right to confiscate any enemy property within the United States during a war. However, it does not automatically do so upon declaration of war. In theory, this reassurance should further entice foreign investors to invest in the United States. Between its universal protections of property rights and the additional protections given to foreign investors, the United States is seen as safe choice for investment.⁴

Another provision of the Constitution is to protect the obligation of contracts. This provision offers additional protection of property rights. In fact, in economic terms protection of property rights and contract enforcement are almost indistinguishable. Theoretically, a contract just describes property that an individual is trading in the future or on an ongoing basis. As such, when the Constitution says that “No State shall... pass any... Law impairing the Obligation of Contracts,” it was in effect protecting the property rights of those within the United States from interference by state governments. While this protection is important, it does not apply to the Federal Government itself. As such this protection of property rights is incomplete.

⁴Fred L. Morrison, “The Protection of Foreign Investment In The United States of America,” *The American Journal of Comparative Law* 58 (2010): 453.

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Eminent Domain

Although the Constitution establishes several protections for property rights, it also allows for one major exception. This exception is the concept of eminent domain - the right of a government to seize private property for public use. While the founders did not explicitly mention eminent domain in the body of the Constitution, it was seen at the time as an implicit power of any sovereign government.⁵ However, in the Bill of Rights the framers took steps to limit its use by the federal government. Specifically, the Fifth Amendment states that private property shall not “be taken for public use, without just compensation.” There are two parts to this provision. First, private property should only be seized for public use. Second, the owner of that property should be adequately compensated.

To address the latter limitation first, we must establish what should be considered “just compensation.” In general, the standard today for “just compensation” is based on the market value of the property taken. It could be argued that the owner should be given more than the market value for their property, since they were apparently unwilling to part with it at that price (otherwise they would already be trying to sell).⁶ Theoretically this argument carries a lot of weight. However, in practice it is often very difficult to determine the value that a person places on their property. Even in an ideal situation this amount would be difficult to determine, given the fact that the value of property is inherently subjective. For example, two individuals are likely to value a house differently based on its location, how it is painted, and

⁵Kohl et al. vs United States, 91 U.S. 367, 372 (1875).

⁶Roger Pilon, “Cato Handbook For Policymakers, 8th Edition (2017): Property Rights and the Constitution,” under “Follow the Traditional Common Law in Defining ‘Private Property,’ ‘Public Use,’ and ‘Just Compensation,’” <https://www.cato.org/cato-handbook-policymakers/cato-handbook-policy-makers-8th-edition-2017/property-rights-constitution\#what-congress-should-do> (accessed March 9th, 2021).

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other considerations. It is even possible for an individual to place value on a piece of property - for example, a childhood home - greatly in excess of the market value of that property.

Furthermore, in real life the situation can be muddied still further by the holdout problem. The holdout problem is a situation where a buyer wishes to acquire a piece of property that they value more than the seller. However, for whatever reason, the buyer can only buy from this specific seller or group of sellers. As such, the seller has the ability and incentive to demand a price well in excess of the value they actually place on their property. The holdout problem is often associated with land purchases similar to those done with eminent domain.⁷ When the government makes use of eminent domain a similar problem occurs. Each individual property owner has an incentive to overstate the value of their property. Without a relatively objective method of determining just compensation, eminent domain would be very difficult to make use of. As such, using market values is likely a sufficiently good proxy for the owner's loss when the property is taken. This protection has been applied many times since ratification with relatively little legal controversy. The other protection is the one that has been somewhat troublesome.

The concept of "public use" has been a major focus of judicial interpretation throughout the years since ratification. The specific issue regards what limitations, if any, should be applied to public use. This is a key question for our purposes. Constitutional limitations on the government's ability to seize private property are important to establishing an optimal economy. Unfortunately, there just isn't very much evidence of what they meant from the time. The power of eminent domain was rarely used by the Federal Government prior to the late 18th century. In fact,

⁷Lloyd Cohen, "Holdouts and Free Riders," *The Journal of Legal Studies* 20, no. 2, (June 1991): 358

there was no specific discussion of the takings clause when the Bill of Rights was ratified.⁸ Some have hypothesized the reason such a seemingly important clause went undiscussed was because the British never abused that particular government power in the colonies. As such, it was simply not on people's minds.⁹ For example, the early American Common Law writer James Kent was not specific about if the term "public use" was meant as a limitation on the power of eminent domain.¹⁰

In general, most scholars who discuss the Public Use clause fall into one of two camps - the narrow view or the broad view.¹¹ The narrow view holds that the government is only allowed to use eminent domain to take property on the condition that it will be available for use by the public.¹² The broad view states that the federal government is afforded wide discretion on where it decides to make use of eminent domain. As such, the government is allowed to take property from one group and give it to another as long as it is for the public benefit.¹³

Legal scholars have devoted significant attention to this debate. In recent years, Justice Clarence Thomas has argued in favor of the "narrow view" of the Public Use clause. The argument he makes in *Kelo v. New London* is of particular relevance because it attempts to interpret the original US Constitution as the Framers intended it. To support his "natural reading" of public use,¹⁴ Justice Thomas relies on a variety of historical sources to support his understanding of the original meaning of

⁸William Michael Treanor, "The Original Understanding of the Takings Clause and the Political Process," *Columbia Law Review* 95, (1995): 791

⁹Matthew P. Harrington, "Regulatory Takings and the Original Understanding of the Takings Clause," *William & Mary Law Review* 45, (2004): 2079-2080

¹⁰Emily A. Johnson, "Reconciling Originalism and the History of the Public Use Clause," *Fordham Law Review* 79, no. 1, (November 2011) 299-300

¹¹*Ibid.*, 4n.

¹²*Kelo v. New London*, 545 U.S. 469, 509 (2005).

¹³Johnson, "Reconciling Originalism and the History of the Public Use Clause," 4n.

¹⁴*Kelo v. New London*, 545 U.S. 469, 509 (2005).

the Public Use Clause. For example, he makes use of a well-regarded concurrent dictionary, other instances of the same or similar terms being used in the Constitution, the Common Law roots of American law, and legal precedent from the first century following ratification.¹⁵ Due to its importance to my topic, I will evaluate both sides of this issue in some detail.

In his 2005 Dissenting opinion from the Supreme Court case *Kelo v. New London*, Justice Thomas states that the phrase “for public use” was originally understood as “a meaningful limit on the government’s eminent domain power.”¹⁶ Specifically, he says that the Public Use Clause doesn’t allow the government to take property “for any public purpose or necessity whatsoever.” Instead, it allows the government to seize the property - after providing compensation - “only if the government owns, or the public has a legal right to use, the property” after it has been acquired.¹⁷ As further support, Justice Thomas references Blackstone’s *Commentaries*¹⁸ to support his claim that English Common Law at the time prevented the Government from taking property except for literal use by the public. Since the passage refers to “[t]he public now considered as an individual,” Justice Thomas claims the public took the property “as an individual buying property from another typically would: for one’s own use.”¹⁹ This understanding of the Framers’ wording would limit governmental

¹⁵Ibid., 509-511.

¹⁶Ibid., 507.

¹⁷Ibid., 512.

¹⁸Blackstone, *Commentaries on the Laws of England*, 140. “So great moreover is the regard of the law for private property, that it will not authorize the least violation of it; no, not even for the general good of the whole community.... But how does [legislature] interpose and compel? Not by absolutely stripping the subject of his property in an arbitrary manner; but by giving him a full indemnification and equivalent for the injury thereby sustained. The public is now considered as an individual, treating with an individual for an exchange. All that the legislature does is to oblige the owner to alienate his possessions for a reasonable price; and even this is an exertion of power, which the legislature indulges with caution, and which nothing but the legislature can perform.”

¹⁹*Kelo v. New London*, 545 U.S. 469, 511 (2005).

seizure of property to cases in which the public has a legal right to direct use of that property.

Justice Thomas also draws on early American usage of Eminent Domain to establish his position. He refers to the Mill Acts, which were a series of laws that allowed the owners of mills to flood neighboring land in order to create the buildup of water needed to run their mills. These acts stipulated that the owners of the flooded land were to be compensated for their loss.²⁰ As such, the Mill Acts functioned as the government delegating the power of eminent domain to private individuals. At first glance, it would appear that these acts violate the narrow interpretation of public use that Justice Thomas has put forward. However, according to Justice Thomas, these mills were required to provide their service to the public at a fixed cost, and thus acted as “quasi-public entities.”²¹ As such, while the land was not owned by the public directly, the public was still able to make direct use of it.

As we can see, Justice Thomas believes concurrent sources, legal tradition, and early case law in the United States bears out a relatively uniform picture in support of the “narrow” interpretation of the Public Use clause.²² However, some scholars disagree. For example, proponents of the “broad” interpretation of public use dispute the stipulation on the public use of seized property. As these scholars have pointed out,²³ Blackstone doesn’t specifically lay out any limitations on for what purpose property may be taken. He only specifies that the taking be done by the legislature, the owner be fairly compensated, and that the legislature “indulges with caution” whenever taking private property.²⁴ As such, it is not clear what concrete limitations

²⁰Head v. Amoskeag Mfg. Co., 113 U.S. 9, 17 (1885).

²¹Kelo v. New London, 545 U.S. 469, 513 (2005).

²²Ibid., 512.

²³Johnson, “Reconciling Originalism and the History of the Public Use Clause,” 292-293

²⁴Blackstone, *Commentaries on the Laws of England*, 140.

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English Common law places on the use of eminent domain. Additionally, Thomas's opponents take issue with his reference to the Mill Acts as an original source. These scholars claim the public use requirement that Justice Thomas advocates is only present in later Mill Acts. They claim earlier laws, did not require such stipulations.²⁵

Aside from the question of how much the federal government is limited in its use of eminent domain, there is also the topic of the states. Perhaps the most obvious weakness of the original US Constitution's protections is that there was originally no federal restraint on a State's ability to utilize Eminent Domain. Although individual States still could have their own protections against the abuse of Eminent Domain, the Constitution itself failed to provide that protection. It would not be until much later that the restrictions laid out in the Fifth Amendment would be incorporated to the states under the Fourteenth Amendment.²⁶

There appear to be good legal arguments for both the "narrow" and the "broad" view of the General Use clause from the original US Constitution. Therefore it seems reasonable to compare the strengths and weaknesses of both perspectives in terms of economic efficiency. At its core, this comparison is a question of when it is economically efficient to use eminent domain.

In general, there is one factor that will lead to eminent domain being economically efficient, and that is the reduction of transaction costs such as those caused by the holdout problem. There are always such costs associated with any transaction, but they are especially significant when a single buyer needs to deal with many sellers or vice versa. For example, if a railroad company wished to build a new rail line, the construction might require a small amount of land to be purchased from a

²⁵Shaun A. Goho, "Process-Oriented Review and the Original Understanding of the Public Use Requirement," *Southwestern Law Review* 38, (2008): 54-57

²⁶*Green v. Frazier*, 253 U.S. 233, 238 (1920).

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large number of current owners. For our purposes, the sellers would be the current owners of the land. It might be very expensive in terms of transaction costs for the railroad company to bargain with each individual owner. In this case, it might be less expensive overall if the railroad company was allowed to force the owners to accept a fair price for their land. As a result, transaction costs could be reduced and society as a whole would be better off due to eminent domain. Importantly, it doesn't matter if the buyer is acting in the public interest or not. Even if the only person who is made better off by the use of eminent domain is the eventual recipient of the property, as long as the current owners are compensated fairly and the government doesn't foot the bill, the result will be a Pareto Improvement. Thus, if the only factor we considered was the reduction of transaction costs, the broad view would be more economically efficient, since it allows the transfer of property from one group to another.²⁷

However, the reduction of transaction costs is only part of the story. In order for eminent domain to be Pareto Optimal, two conditions had to be met. First, the current owners needed to be compensated at least as much as they lost. As I discussed before, while market value is a decent estimate for the value an owner places on their property, it is by no means perfect. As such, it is quite possible that - in the real world - the current owners will be made worse off by the use of eminent domain. In cases in which the current owner values their property only slightly above market value, the use of eminent domain might not hurt the owners very much. In such a circumstance it is possible that, while not a Pareto Improvement, the use of eminent domain might satisfy Kaldor-Hicks Efficiency. However, in the case of individuals who value their property well above the market value, the problem is

²⁷Conversely, in situations where transaction costs are insignificant, there is no reason to make use of eminent domain at all.

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more serious. For one thing, the loss to the owner is obviously larger. Additionally, if the owner values the property enough, the use of eminent domain may not even be Kaldor-Hicks Efficient. Critically, because the current owner is not allowed to refuse when eminent domain is used, there is no safeguard to ensure that the transfer of ownership is a Pareto Improvement or Kaldor-Hicks Efficient.

Second, it is important that the rest of society - other than the beneficiaries and victims of eminent domain - are not made worse off. The easiest way that the rest of society can be made worse off through eminent domain is if the government pays for the transfer of property. After all, the payment to the current owners has to come from somewhere. If it doesn't come from the group that receives the property, then it is presumably coming from the taxpayers. As such, it is likely that a transfer of property from one set of private owners to another will make the rest of society worse off.²⁸ As a result, the use of eminent domain to transfer property to a private individual is likely to not be a Pareto Improvement. That having been said, it is possible that the transfer could still satisfy Kaldor-Hicks Efficiency.

As a result of these two drawbacks to the use of eminent domain, it is likely that using eminent domain to transfer property from one private owner to another would not lead to a Pareto Improvement. Because this prohibition is the defining difference between the narrow and broad views of the public use clause, it is likely that a narrow interpretation of eminent domain would be more efficient than a broad one by that standard of efficiency.

As touched on above, the situation is differently if Kaldor-Hicks Efficiency is used rather than Pareto Optimality. Under Kaldor-Hicks Efficiency, it is easier to justify

²⁸In the case of eminent domain being used to transfer property to a public owner - either in the form of a state-run institution or a heavily regulated quasi-public company - the burden on the taxpayer is akin to any other tax burden. As such, the tax used to pay for the property would need to conform to a Lindahl Equilibrium to be efficient.

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the use of eminent domain. Kaldor-Hicks Efficiency does not require that all three parties in an eminent domain transaction - the beneficiaries, the current owners, and the taxpayers - must end up at least as well off as before. As a result, the fact that market compensation is likely an underestimate of the property's true value to the owner is not inherently a problem. The only issue arises when eminent domain is used in a situation where the current owner places a unusually high value on their property. Similarly, the fact that the taxpayers are left worse off after paying for the transfer of property does not necessarily lead to a violation of Kaldor-Hicks Efficiency. Because there are more situations in which eminent domain satisfies Kaldor-Hicks Efficiency, the broad view of the Public Use clause is more likely to lead to efficient outcomes according to the Kaldor-Hicks definition.

Law and Order

For the most part, the Constitution does not outline specifics as to how property rights are to be protected by the federal government. This is largely due to the fact that the Constitution was created to sit atop a large, preexisting system of state laws. As such, many of the tasks that fall under law and order are delegated to the states. That having been said, a few protections are specified. For one, it established a court system with the power to resolve contract disputes. As discussed previously, contracts are closely tied to property rights. As such, enforcement of contracts is also enforcement of a property right. Due to the relatively limited jurisdiction of federal courts, this protection is not very large, but it is helpful.

Another way the Constitution protects property rights is by preventing the passage of ex post facto laws. These are laws in which the government retroactively makes certain actions illegal. By preventing states from passing retroactive laws, the Constitution helps to promote the kind of consistency that is necessary for Civil

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Commerce. If States are allowed to pass ex post facto laws, it would be theoretically impossible for the economy to have any level of consistency at all. Any industry could suddenly be rendered retroactively illegal. Those involved in that industry would be incapable of complying with the law, since they can't change their past actions. Now, in practice the effect would likely be less severe than these doomsday predictions. As long as they are properly checked, lawmakers are unlikely to make common professions and industries illegal on a whim. However, some businesses - such as casinos - are controversial, yet legal. For such businesses, there would be a significant risk of being retroactively declared illegal. Furthermore, the existence of ex post facto laws might be a source of temptation for unethical politicians. In 2008, it might have been tempting to declare investment banking illegal, due to how unpopular it was at that time. Such action would have allowed government seizure of massive amounts of property. There would have been no need to work within the constraints of eminent domain. This possibility would be very destabilizing to the US economy.

Money

The Constitution makes two major references to monetary power. The first comes in Article 1 Section 8 – “The Congress shall have Power... To coin Money, regulate the Value thereof, and of foreign Coin....” Further, in Article 1 Section 10, the Constitution states that “No State shall... coin Money; emit Bills of Credit; make any Thing but gold and silver Coin a Tender in Payment of Debts....” Between these two statements - one granting monetary power to the Federal Government and the other in some sense prohibiting it to the States - the Constitution seems to satisfy our requirement for a stable currency.

Unfortunately, in practice the situation is not so straight forward. States were not

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allowed to issue paper money as they had during the Revolutionary War and under the Articles of Confederation. However, in *Briscoe v. Bank of Kentucky* (1837) the Supreme Court decided that state-chartered banks could issue bank notes. In practice, these bank notes acted like currency, often passing through many hands before returning to the bank that issued them.²⁹ After the dissolution of the Second Bank of the United States, there was no oversight by the federal government. This period, which lasted from 1837 to 1865, also saw the rise of “free banking” systems in states. Under such systems state governments did not need to provide discretionary approval for new banks. Due to this lack of federal regulation and oversight, as well as a lack of control by the states, this era has been associated with so called “wildcat” banks.³⁰

At first glance it might appear that, by allowing these state banks to functionally produce their own currency, the result might be monetary instability. For a long time, such a view was very common of this period. However, some recent scholarship has disputed this claim. First off, it is important to recognize that, even though state governments did not have discretion to approve or disapprove banks in a free banking system, the banking industry in free banking states often did have specific regulation.³¹ All that this provision meant is that the government had to approve any bank that met the legal requirements spelled out in law. Furthermore, the value of most bank notes produced during this period was relatively stable. It is true that many banks were started and went out of business during this period.³² However, for the most part when a bank went out of business it was able to pay the owners of

²⁹Gerald P Dwyer Jr., “Wildcat banking, banking panics, and free banking in the United States,” *Economic Review - Federal Reserve Bank of Atlanta* 81, no. 3-6, (Dec 1996) 1.

³⁰*Ibid.*, 1.

³¹Dwyer, “Wildcat banking, banking panics, and free banking in the United States,” 1n1.

³²*Ibid.*, 9.

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its bank notes enough hard currency to satisfy what was owed.³³ As such, it seems that this notoriously volatile period was generally fairly stable.

This period was eventually brought to an end when the federal government took control over the production of paper money while taxing bank notes out of existence. Its right to levy such taxes on bank notes would later be upheld in *Veazie Bank v. Fenno* (1869). This decision appears to have been made for reasons other than the unpopularity of the free banking system.³⁴ As such, even when the federal government declined to produce its own paper currency, it seems that the monetary system did remain relatively stable. As such, the original US Constitution seems to have succeeded at producing a stable and universal medium of exchange.

Private Markets

Due to their importance, the effect that the original US Constitution has on private markets greatly affects economic efficiency. In the Civil Commerce section above I already discussed the basis of all markets. Now I will continue with a more specific look at private markets in particular.

The Constitution never mentions the term private good. This is no surprise given the fact that these terms were not even invented at the time. However, while the Framers of the Constitution may not have had the modern terminology that we have, they were undoubtedly aware of the existence of private goods. Given how common such goods are, it would be nearly unthinkable that the Framers would have not been aware of them. As such, the fact that the Constitution makes no mention of the provision of private goods - except one - it seems reasonable to conclude that the Framers believed that the private market could be relied upon to produce such

³³Ibid., 7-9.

³⁴Ibid., 16.

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goods and that the states could be relied upon to provide any necessary regulation of such markets.

The singular exception to this rule comes in Article I, Section 8, Clause 7: “The Congress shall have Power... To establish Post Offices and post Roads;...” This clause is the basis for the United States Postal Service - a public owned business that provides a private good. It is true that occasionally the Post Office provides a service more in line with that of other government agencies, such as when it distributes the Census or is used for mail-in-voting. Similarly, it could be said that the establishment of post roads should be considered a public good, even if the actual transportation of the letters is a private good. However, the primary function of the post office is to deliver mail. Additionally, in most areas the USPS is the only provider of that service. As such, the US Post Office is a public monopoly providing a private good.

Although the USPS is a public monopoly, it is important to note that it theoretically pays for itself through a usage fee. This usage fee is the cost of postage - in most cases, stamps. A key reason competitive markets are efficient is that each consumer is charged the same price for the same good. Since the cost of stamps is the same for all people, we can say that this publicly provided private good fulfils the criterion of Distributive Efficiency. Perhaps a better argument for the nationalization of the United States Postal Service is that the good that they provide was a natural monopoly at the time. Given that delivery services seem likely to have significant returns to scale and that the total amount of deliveries at the time was likely low, this claim seems plausible. If the USPS really is a natural monopoly, then its nationalization is one of the efficient methods of dealing with the industry, as discussed previously.

The USPS aside, the Founding Generation were well aware of the danger monopolies posed to economic efficiency. For instance, Thomas Jefferson openly worried

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about the lack of constitutional protection against federal monopolies.³⁵ Similarly, in the early years of our country the States of New Hampshire, Massachusetts, New York, North Carolina, Virginia, and Rhode Island proposed amendments to the Constitution that would either outright ban or severely limit the ability of the Federal Government to create monopolies other than for patents and copyrights.³⁶ While none of these amendments would end up being added to the Constitution, it seems clear that many in the Founding Generation were concerned over the danger of governmental monopolies.

Their worries were well founded. As discussed in chapter three, state-sanctioned Monopolies can be very disruptive to the private market. They have a tendency to reduce the overall efficiency of the economy. However, what the Founders didn't seem to realize is that state-sanctioned monopolies were not the only danger to competition. While the Framers considered limiting the ability of the government to create monopolies, they neglected to impose similar restrictions on the formation of privately owned monopolies.

It may seem an obvious oversight by the Founders to ignore the possibility of a private monopoly forming. However, the omission is less surprising when put in historical context. In 1776 Adam Smith published *The Wealth of Nations*. In this landmark text, he wrote at length about how merchants and manufacturers wished to reduce competition in order to promote their own interests. However, Smith seemed to believe this collusion would take the form of changes in laws, rather than purely private collusion.³⁷ This assumption makes a fair amount of sense - it is generally

³⁵Steven G. Calabresi and Larissa Price, "Monopolies and the Constitution: A History of Crony Capitalism," *Northwestern University School of Law Scholarly Commons: Faculty Working Paper*, (2012): 29 <https://scholarlycommons.law.northwestern.edu/cgi/viewcontent.cgi?article=1213&context=facultyworkingpapers> (accessed July 12, 2021).

³⁶Ibid., 34.

³⁷Adam Smith, *The Wealth of Nations*, (Lexington, KY: Shine Classics, 2014) 140. "To widen the

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very difficult to maintain a monopoly without government sanction.³⁸ As it turns out, private monopolies can be created and maintain themselves. However, as *The Wealth of Nations* shows, this fact was mostly unknown at the time. Thus, the failure of the Framers to account for this possibility is very understandable.

However, while the Founding Fathers didn't make any specific provisions to maintain competition in the marketplace, many other parts of the original Constitution indirectly help to keep markets competitive. The most obvious example is the Interstate Commerce Clause preventing states from shielding their corporations from external competition. Perhaps less obviously, by creating a strong foundation of property rights in the USA, the original Constitution does much to mitigate the sort of corruption that can easily lead to a reduction of competition. By setting up a strong Bill of Rights and an independent Judiciary, the Framers of the Constitution made it much more difficult for large corporations to suppress competition through bribery and corruption.

Examples of what happens when such legal safeguards against corruption do not exist are easy to find. One of the most striking examples is the modern Russian economy. Due to a lack of separation of powers and an independent judiciary, there is little to no accountability of government agencies.³⁹ These agencies often make overly intrusive regulations in order to collect bribes.⁴⁰ They also will go so far as

market and to narrow the competition, is always the interest of the dealers. To widen the market may frequently be agreeable enough to the interest of the public; but to narrow the competition must always be against it, and can serve only to enable the dealers, by raising their profits above what they naturally would be, to levy, for their own benefit, an absurd tax upon the rest of their fellow-citizens. The proposal of any new law or regulation of commerce which comes from this order, ought always to be listened to with great precaution, and ought never to be adopted till after having been long and carefully examined, not only with the most scrupulous, but with the most suspicious attention.”

³⁸Grinols, *Microeconomics*, 267

³⁹Krylova, *Corruption and the Russian Economy*, 100-102

⁴⁰Ibid., 18

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to seize property outright.⁴¹ These anti-competitive actions sometimes are done at the behest of private interests - usually individuals or corporations with close ties to the state⁴² - but are also done by the agencies themselves.⁴³ Either way, a lack of separation of powers, an independent judiciary, and accountability allow these anti-competitive practices to occur.

Externalities

There are no references in the Original Constitution to externalities. While this fact is unfortunate, it is hardly surprising. It was not until the late 19th and early 20th centuries that externalities were recognized and studied by the economic community.⁴⁴ As such, it would be unreasonable to expect the Framers of the Constitution to be that far ahead of their time.

⁴¹Ibid., 4

⁴²Ibid., 25

⁴³Ibid., 4

⁴⁴Charles R. McConnell, Stanley Brue, and Ian Flynn, *Economics*, 18th ed. (Homewood, IL: Richard D. Irwin, Inc. 2009), under “16.1 Externalities.” http://glencoe.mheducation.com/sites/0025694212/student_view0/chapter16/origin_of_the_idea.html (accessed July 12th, 2021).

The Efficiency of the Constitution - Public Activity

The previous chapter described how the original United States Constitution worked to establish private markets and ensure they operated efficiently. Now I will discuss the role the Constitution outlined for the government to not simply regulate the market, but to provide certain goods directly. There are two major aspects to the public provision of goods. The first is to establish how taxes will be levied to pay for these goods. The second is to determine which goods should be provided by the government.

Taxation

The original US Constitution refers to two different kinds of taxation “direct” and “indirect.” Article 1, Section 9, Clause 4 requires that all direct taxes must be set up so that the tax burden falls on each state in proportion to its population. At the same time, Article 1, Section 8, Clause 1 requires that all indirect taxes must be uniform throughout the United States. Unfortunately, the definitions of “direct” and “indirect” were initially unclear. However, from early on, the Supreme Court determined that direct taxes only referred to capitations and taxes on property.¹ A capitation, also referred to as a head tax, is “levied by the government upon a person at a fixed rate regardless of income or worth.”² All other forms of taxation are considered “indirect.”

¹Hylton v. United States, 3 U.S 171, 176-177 (1796).

²Law Library - American Law and Legal Information. Capitation Tax. <https://law.jrank.org/pages/5014/Capitation-Tax.html> (accessed July 12, 2021).

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Direct Taxation

While they are imperfect, capitations come relatively close to conforming with the Benefit Principle of Taxation. Theoretically, if we assume that all taxpayers benefit equally from government spending, then they are entirely efficient. This is a significant assumption and is likely inaccurate, but given the difficulty in ascertaining an individual's true preference it may be the best option. On the other hand, the efficiency of taxes on property is more difficult to determine. It seems reasonable that those with more property stand to gain more from a government which protects private property. However, the stipulation that these taxes be proportional to state population is problematic. It seems unlikely that a large landowner in a less populous state would benefit less from the federal government than a similar landowner in a more populous state. Unfortunately, the former is likely to pay proportionately less in taxes than the latter. Thus, it seems likely that any system of property tax that conformed to the original Constitution would not satisfy the Benefit Principle of Taxation.

Indirect Taxation

That leaves us with indirect taxes. The Constitution stipulates such a tax be levied uniformly across the states. Little else is specified. In theory, there is nothing preventing indirect taxes from satisfying the Benefit Principle of Taxation. For instance, a consumption tax laid on a wide variety of purchases could be expected to be relatively efficient. The amount of money spent by an individual or household presumably corresponds to the amount of benefit they get from society. This amount could be seen as a measure of their willingness to pay for government services. However, in practice many of the consumption taxes levied at the time did not function in this way. Instead, taxes were levied on specific products - such as alcohol,

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tobacco, and carriages.³ This method violates the Benefit Principle and introduces inefficiency. As an example, consider a consumption tax on whiskey. There is no logical reason to believe people who consume alcohol benefit more from the federal government than teetotalers. The Constitutional stipulation that such a tax be uniform does not help. No single state will bear an unreasonable burden of taxation. However, alcohol consumers as a group are not afforded similar protection.

Given the conditions under which the Constitution was drafted, it is unsurprising that it failed to better promote a Lindahl Equilibrium. After all, one of the main purposes of the Constitution was to ensure that the federal government wouldn't specifically single out any state or group of states to bear a larger share of the burden. As such, the fact that they worked to ensure that any one state was not overtaxed, but failed to do the same for other identifiable groups, is not surprising.

A similar situation exists with tariffs - another indirect tax allowed for under the Constitution. A tariff is a tax levied on goods imported from another country. There is a case to be made for imposing tariffs on countries that do the same to us. The argument goes that, if you can use the threat of tariffs to discourage other countries from creating their own tariffs, the result will be a reduction of tariffs on both sides.⁴ As such, it is helpful that the federal government is allowed to impose tariffs on other nations. This usage of tariffs to negotiate better trade deals is even discussed in the pages of the *Federalist Papers*, so it is not a significant stretch to say it was an intended benefit.⁵ Unfortunately, in the early days of our country this

³Congressional Research Service, *Federal Excise Taxes: An Introduction and General Analysis*, (August 26, 2013) 2.

⁴Smith, *The Wealth of Nations*, 249.

⁵Hamilton, Madison, and Jay, *The Federalist Papers* under "Federalist no. 11." "By prohibitory regulations, extending at the same time throughout the states, we may oblige foreign countries to bid against each other, for the privileges of our markets."

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power was often used unilaterally for protectionist purposes.⁶ This practice violates sector allocative efficiency and thus Pareto Optimality. Again, we see the original Constitution allowing for violations of the Benefit Principle of Taxation.

Eminent Domain

As discussed above, eminent domain is economically very similar to taxation. The only difference is that taxes are usually paid in the form of currency, whereas eminent domain involves the government taking property itself. Due to the nature of eminent domain, the burden is usually applied to a small group of taxpayers. If private land is seized by the government, the landowners are affected. For instance, when a road is widened the whole town will benefit. However, the households who sacrifice land to the project bear more of the cost than those a few blocks away. On the surface, this situation appears to cause a clear violation of the Benefit Principle of Taxation.

Fortunately, the US Constitution limits this sort of violation with the Fifth Amendment. “Nor shall private property be taken for public use, without just compensation.” By compensating those who have their property seized through eminent domain, the Constitution helps to ensure that no single group of taxpayers can be unfairly burdened by the use of eminent domain.

Spending

It is generally accepted today⁷ that the federal government gets its authority to spend at least in part from Article I, Section 8, Clause 1 of the Constitution.⁸ The

⁶Paul Moreno, “Taxation,” in *The Heritage Guide to the Constitution*

⁷John C. Eastman, “Spending Clause,” in *The Heritage Guide to the Constitution*.

⁸“The Congress shall have Power To lay and collect Taxes, Duties, Imposts and Excises, to pay the Debts and provide for the common Defense and general Welfare of the United States;....”

Spending

next question becomes, what limitations - if any - does the Constitution place on federal spending.

The term “common Defense” is fairly straightforward and can be understood in its common meaning. Since national defense is one of the classic examples of a public good, it makes perfect sense for it to be provided for by federal spending. The real question is how we are supposed to interpret the term “general Welfare.”

According to James Madison, the purpose of the phrase “general Welfare” was not to expand Congress’s authority to spend federal money. Instead, he claims the federal government is only allowed to spend money in accordance with the enumerated powers granted later in the Constitution.⁹ This view is in stark contrast to others of the Founding Generation, such as Alexander Hamilton. Hamilton claimed that the clause was intended to cover much more than just the powers specified later in the Constitution. He even went so far as to claim that general welfare “necessarily embraces a vast variety of particulars, which are susceptible neither of specification nor of definition.”¹⁰ While it is clear that today we follow Hamilton, even in the early years Congress seemed to reject Madison’s view.¹¹

However, even though the Founding Generation did not follow Madison’s interpretation, the term “general Welfare” still provided some limits on the federal government’s ability to spend. Early in his term, President Monroe vetoed a bill to restore the Cumberland Road. He objected on the grounds that the spending was too regional to be considered general welfare. Monroe later changed his position and signed several bills to spend money on other regional infrastructure projects. However, other presidents such as Jackson, Polk, and Buchanan followed his earlier

⁹Hamilton, Madison, and Jay, *The Federalist Papers* under “Federalist no. 41.”

¹⁰“Alexander Hamilton’s Final Version of the Report on the Subject of Manufactures, [5 December 1791],” under “Pecuniary bounties.”

¹¹Congressional Research Services, “ArtI.S8.C1.2 Spending Power,” *Constitution Annotated*.

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example of austerity.¹²

If we take general welfare in the broad sense laid out by Hamilton, the result will be difficult to evaluate. If this term encompasses all possible spending the federal government can imagine, then the likely result will be violations of the Benefit Principle of Taxation. Whenever tax revenue is drawn from the entire country to be spent on a project with only local benefits, Pareto Optimality will be violated. For example, imagine that the federal government decided to spend money to build and maintain a road in a particular state. If the road is often used by those from outside the state - as is often the case with interstate highways - then it makes sense that the local population would not bear all of the cost. However, if the road is used entirely or almost entirely by locals, then many of the federal taxpayers paying for the road will not benefit from it.¹³ As such, we can see that federal spending on projects with only local benefit violates the Benefit Principle of Taxation. On the other hand, if we restrict the federal government to spending on general welfare in a narrow sense, these inefficiencies can be avoided.

Of course, if all government spending was limited to general welfare, problems could quickly arise. Local roads might not be built, local bridges might break down, and the local economy might suffer. However, the federal government is not the only institution capable of providing public goods under the Constitution.

The Federal System

So far I have been focused on what the Constitution says about federal taxation and spending. However, the Constitution left the states with great discretion on

¹²Eastman, "Spending Clause," in *The Heritage Guide to the Constitution*

¹³Another method of conforming to a Lindahl Equilibrium would be to require that the road pays for itself, perhaps through the use of tolls. This method is very effective, but can not be applied for all goods provided by the government.

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how to tax their populations and how to spend their revenue. This decentralized system of shared power between central and regional governments is the essence of federalism. The ability of states to tax and spend was not entirely unrestricted. For instance, the Interstate Commerce Clause prevents taxing goods imported from other states and Article 1, Section 10, Clause 3 doesn't allow states to "keep Troops, or Ships of War in time of Peace." However, in general the individual states have leeway.

The primary implication of this federal system is that goods that act as public goods or have large positive externalities for a small area or group of people can be provided on a more local level. For example, while a local road would likely not provide any benefit for those living in another state, it might act as a public good within a single state. In this way, the taxpayers who benefit are the ones who foot the bill. This prevents individuals from a different state from having to pay for a project which will provide them no meaningful benefit. By decentralizing the power to tax and spend, the Constitution helps to satisfy the Benefit Principle of Taxation.

As I have discussed above, one of the issues created by this decentralization is a lack of protection. Many of the safeguards included in the Constitution do not apply to the individual states.¹⁴ It was not until the passage of the 14th Amendment that this weakness began to be rectified.¹⁵

¹⁴Baron v. the Mayor and City Council of Baltimore, 32 U.S. 243, 243 (1833).

¹⁵Congressional Research Services, "Amdt14.S1.3.1.1.2 Due Process Clause and Incorporation: Early Doctrine," *Constitution Annotated*.

The Efficiency of the Constitution - Additional Elements

In addition to the topics discussed in the previous two chapters, there are many topics that don't fit well into the above sections. For the most part these topics require less attention, and they shall be dealt with here.

Transfer Programs

Up until now I have been discussing government spending on goods and services. However, much of what modern governments spend their tax revenue on doesn't fall neatly into either of those categories. Perhaps a better term to describe much of the spending by the modern USA would be "charity." Usually this charity is directed at those of lower income and can be in the form of direct payment, vouchers, or direct provision of goods and services. This is not a category of government spending mentioned in the Constitution. Given how important such spending is today, this topic will be addressed in its own section. Similarly, public education is a major expenditure of modern governments that was not clearly enumerated by the Constitution. This topic will also be addressed below.

As has been previously defined, government spending is efficient if it conforms to the Benefit Principle of Taxation. However, many of the programs that modern governments support fail to adhere to this principle by their very nature. Perhaps the clearest examples are transfer programs such as food stamps. If taxpayers who didn't benefit from the program didn't contribute, there would be no revenue to support it. Similarly, if recipients of food stamps had to pay an amount in taxes equal to the benefit they received, the program would have no purpose. Transfer

Transfer Programs

programs are inherently inefficient according to Benefit Principle of Taxation.

While many of the programs that are considered part of the social safety net will fail the Benefit Principle, some will pass. Such programs are usually called social insurance programs. For instance, an unemployment insurance program could be structured to tax each worker based on the benefits they would receive if ever they lost their job. Such a program would conform to the Benefit Principle since utility is proportional to cost. To ensure that the Benefit Principle is being followed, such a program might allow for individuals to withdraw from the program altogether. However, any program designed with the goal of wealth redistribution will fail the Benefit Principle of Taxation by definition.

This is likely too harsh a judgement of such transfer programs. Yes, they violate the Benefit Principle of Taxation. However, they could not accomplish their non-economic goals any other way. As such, it may be helpful to relax our requirements for such programs. After all, even though two welfare programs may both fail to be Pareto Efficient, there are definitely more and less efficient ways of setting up a transfer program. In general, for a transfer program to disrupt the economy the least, it should change incentives to be productive as little as possible. To a certain extent, the mere existence of most welfare programs will change the incentives to produce. However, certain ways of setting up a welfare program are less distortionary than others. Some systems designed to avoid distorting the labor market include the Negative Income Tax¹ and the Universal Basic Income. Of course, these systems have their own weaknesses - usually related to an increase in the number of people who receive welfare.² It is beyond the scope of this thesis to determine the best way

¹Robert A. Moffitt, "The Negative Income Tax and the Evolution of U.S. Welfare Policy," *The Journal of Economic Perspectives* 17, no. 3 (Summer 2003): 120-121.

²Ibid., 122-123.

Additional Elements

of setting up a welfare state.

In the Constitution there is no mention given of any sort of welfare program. As discussed in chapter five, the question arises as to whether or not the federal government was even given the power to establish a welfare system. Alexander Hamilton's definition of "general Welfare" would have allowed for such a system. However, the answer is less clear if we use a more restrictive interpretation. Perhaps it could be argued that, since poverty is hardly bound to any one geographic region, that a federal welfare program would have followed even a more restricted definition of "general Welfare." However, such discussion is moot. The Founding Generation didn't implement any sort of federal welfare system once they actually began to govern. Unlike with other omissions, such as concerning externalities, the Founding Generation would have obviously been aware of the existence of charity. Furthermore, government run transfer programs - known as the Poor Laws - were in the process of being reformed and centralized in England around the time the Constitution was being drafted.³ As such, the Founding Generation's decision to not implement a similar system on the federal level must be taken to be deliberate, rather than unintentional. That having been said, the Constitution does leave the states with the ability to create their own transfer programs. As such, it is less that the Constitution prevents such programs, and more that it leaves the individual states to decide how far they wish to go. Today, such a delegation of power would likely be considered unacceptable by many. Of course, as discussed above, the aim of transfer programs has little to do with the question of economic efficiency. They have as their goal a non-economic aim. The question of whether they should be

³UK Parliament, "Poor Law reform," <https://www.parliament.uk/about/living-heritage/transformingsociety/livinglearning/19thcentury/overview/poorlaw/> (Accessed July 20, 2021).

Education

implemented is beyond the scope of this thesis.

Education

Another very common role of modern government is that of providing education. Similar to the Post Office in chapter 3, government-provided education could be described as public provision of a private good. However, it also appears very similar to charitable transfer programs. In this case, the charity being given is that of an endowment of human capital. Just as with the example of charity described above, any publicly funded school system will violate the Benefit Principle of Taxation if it is paid for using tax revenue. Interestingly, if described as a charity program, the public school system is relatively non-disruptive. After all, lump sum payments generally distort the incentive to produce less than other kinds of charity. Another difference between public education and most transfer programs is that public education is usually seen to have a positive externality. As such, there is at least some built-in cause for government intervention.

No mention of education shows up in the Original US Constitution. Similarly, no attempts were made by the early federal government to support education. It wasn't until 1867 that the original incarnation of the Department of Education was even established.⁴ However, while the federal government initially did not do anything to support education, the same was not true at the local level. Several examples of public education systems show up subsequent to the ratification of the Constitution. One of the better known of these systems originated in Massachusetts.⁵ Similar

⁴U.S. Department of Education, "The Federal Role in Education," <https://www2.ed.gov/about/overview/fed/role.html> (Accessed July 19, 2021).

⁵Center on Education Policy, "History and Evolution of Public Education in the US," under "The Establishment of 'Common Schools'" <https://files.eric.ed.gov/fulltext/ED606970.pdf> (Accessed July 19, 2021)

Additional Elements

efforts were championed in the south by Thomas Jefferson.⁶ It seems clear that the Founding Generation were relying on the federal system in this case. Individual states were allowed to set up their own public education systems, without involving the federal government. As with transfer programs, this approach of avoiding the issue on a federal level follows our definition of economic efficiency.

The Question of Slavery

It is perhaps impossible to discuss the Original US Constitution without dealing with the elephant in the room - slavery. Technically, slavery does not violate the tenets of Pareto Optimality, as I discussed in chapter 1. No theoretical issue arises from arbitrarily assigning ownership of one person's labor to another, and so the mere existence of slavery does not violate Pareto Optimality. Similarly, while racial discrimination leads to inefficient use of human capital, the elimination of such discrimination is also not Pareto Optimal. By preventing highly capable African Americans from becoming educated and displacing the least qualified white doctors, lawyers, etc., systemic discrimination did hurt the economy of the United States. However, to eliminate this clearly unreasonable discrimination would clearly leave some members of society worse off, and thus this shift would not be Pareto Optimal. Perhaps such a shift away from systematically keeping capable African Americans out of skilled jobs could be made Pareto Optimal by compensating the white workers who are being displaced, but such a system would be difficult to set up and would amount to rewarding people for being incompetent.

As such, this denunciation of the enslavement and repression of African Americans is a rather weak one. It is made even weaker since, while slavery itself was permitted in the Original US Constitution, the institutional discrimination that clearly

⁶Ibid., under "Democracy and the Origins of Public School."

The Question of Slavery

lowers productivity was neither established nor codified by the Constitution. A better argument can be made through the use of Kaldor-Hicks efficiency.

It seems highly likely that freeing slaves satisfies Kaldor-Hicks efficiency. Presumably, a slave owner values his or her slaves in accordance with the amount of profit they produce. If we assume that the market for slaves clears, then each slave owner will purchase more slaves until the marginal cost of a new slave is equal to the marginal benefit that the slave would produce. Without a loss of generality, we can convert these values into per hour marginal cost and benefit. On the other hand, a slave can be expected to value his or her freedom in accordance with the value that he or she places on their time. If we free the slave and assume that the market for labor clears, that means that the now former slave would value their time at least as much as the marginal per hour value of their time in the labor market. Each hour must be valued at least that much by a representative former slave, because if they valued their time less than that they could presumably increase the amount they work. As such, we can safely say that an hour of a slave's time must be at least as valuable to the slave as it is to the slave owner. The same can be said of any time value, be it a day, a month, or a lifetime. Because the slave values their time more than the owner does, to take the rights to the slave's time away from the owner and to give it to the slave would satisfy Kaldor-Hicks efficiency. In addition to the math based argument above, it also seems likely that most people place a value on freedom. As such, the gains to efficiency are likely to be even greater than expected. Thus, while slavery can be set up to be Pareto Optimal, it will fail to be Kaldor-Hicks efficient.

Additional Elements

Inducement to Innovate

As mentioned in chapter three, it is not enough for government policy to merely maximize efficiency in the short run. It must also take steps to incentivize the increases in productivity that drive economic growth. The original US Constitution contains a section that seeks to do just that. Article 1, Section 8, Clause 8 gives Congress the authority “To promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries.” In this way, the Constitution explicitly gives Congress the ability to incentivize private individuals and firms to innovate.

However, as discussed in chapter three, this method of inducement that the Constitution specifies - the creation of temporary monopolies on certain products - has some issues. By granting inventors exclusive rights to their invention, the Constitution creates monopolies. As with all monopolies, the result will be a loss of economic efficiency while the patent is in effect. Due to their fear of government backed monopolies, the Founding Generation was presumably aware of this loss of efficiency.⁷ Since this monopoly serves a purpose and is temporary, the short-term cost is presumably worth the long-term benefit. However, as I discussed in chapter three, there are alternative methods of promoting innovation without relying on temporary monopolies. For example, it is likely that an Intertemporal Bounty System could serve the same purpose with less distortive effects.

Because better alternatives to the patent system exist, the use of the patent system should be considered a weakness of the Original US Constitution. However, it is important to note that, despite its negative short-term effects, the patent system does perform an important function in the economy. Similarly, while today we know

⁷Calabresi and Price, “Monopolies and the Constitution: A History of Crony Capitalism,” 29.

The Political System

of better ways to incentivize innovation, at the time such methods were unknown. As such, it is not surprising that the Founders did not implement a more advanced system.

The Political System

To this point, I have been evaluating the Original US Constitution as it was understood at the time. However, at the end of the day the Constitution is just another piece of paper. It is not sufficient to discuss the exact protections that - for instance - the Fifth Amendment claims to provide. Such a discussion is meaningless if the government is not bound by those restrictions in practice. ‘

The Founding Generation was very aware that merely writing down their rights would not be sufficient to ensure them. They specifically designed the Constitution to limit government power through checks and balances. The federal system of shared central and local governance was an additional control. Between these two safeguards, the Framers intended that the government would never be united enough to abuse its power.

For our purposes, protection against governmental abuse is very important. Without this protection none of the efficient policies built into the US Constitution can be taken for granted.

Checks and Balances

Perhaps the best known of the Framers' methods of preventing government abuse of power was their system of checks and balances. This system was applied across the Legislative, Judicial, and Executive branches. By giving each branch the ability to counteract the others' policies, the government would not be unified enough to abuse its power. Furthermore, if any one branch tried to acquire enough power to

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abuse the people, the other branches would find it in their own best interests to stop them. After all, a power grab by the Executive would presumably leave those in the Legislature in a much weaker position.

In general, the system of checks and balances appear to have worked relatively well. By granting the three different branches of government limited authority in each other's sphere of power,⁸ the three branches of government are able to hold each other accountable. Unfortunately, this practice of blurring the lines between Executive, Legislative, and Judiciary has led to confusion on the exact bounds of each branch's authority. This confusion is unfortunate, but does not seem to have compromised the ability of the branches to check each other.⁹ However, some scholars have suggested that a larger threat to the system of checks and balances is the rise of political parties. The system of checks and balances was built on the assumption that each of the three branches of government would come to have their own political agenda; different - and perhaps directly counter to - the other branches of government. Thus, political competition would primarily occur between branches of government. However, in reality much of the political competition that occurs in the United States happens between political parties instead.¹⁰ Some scholars even go so far as to claim that separation of powers as was intended by the Constitution never really existed.¹¹ While this extreme position would seem to suggest that American democracy does not have any checks, the authors take the opposite viewpoint. It

⁸For example, the Senate has a judicial role when it comes to impeachment trials.

⁹Saikrishna B. Prakash, "A Note on the Separation of Powers," in *The Heritage Guide to the Constitution*

¹⁰Daryl J. Levinson and Richard H. Pildes, "Separation of Parties, Not Powers," *Harvard Law Review* 119, no. 8 (June 2006): 2312-2313

¹¹Levinson and Pildes, "Separation of Parties, Not Powers," 2385-2386. "From nearly the start of the American republic, the separation of powers as the Framers understood it, and as contemporary constitutional law continues to understand it, had ceased to exist."

The Political System

is not that the American system of government lacks checks and balances. That system is just made up by competing parties, rather than branches.¹²

Regardless of the exact mechanics of American checks and balances, these controls seem to have prevented abuses of power. However, there are some obvious exceptions. Perhaps the single largest failure of checks and balances in the early years of the USA occurred with the Trail of Tears. In the case of *Worcester v. Georgia*, the Supreme Court declared that the state of Georgia had no right to disregard the sovereignty of the Cherokee. On the surface, this seems to be an appropriate judicial check on the actions of a state legislature. Unfortunately, Andrew Jackson – who was president at the time – did not enforce the court’s decision. The result was that Georgia was able to ignore the court’s ruling. Here we have two branches of the federal government checking and balancing one another. But at the end of the day, property rights were not protected.

The Federal System

Another method that the Founding Fathers used to check the potential for government abuse of power was the Federal System. Previously I have discussed federalism in the context of Lindahl Equilibrium. Another effect of this system is that it limits the ability of the government - either state or federal - to abuse its power. The existence of state governments provides citizens of the United States with powerful advocates should the federal government ever seek to abuse its power. Similarly, the federal government could limit the ability of the states to abuse their own residents.

However, as my above example of the Trail of Tears shows, this was not a perfect system. Sufficiently powerful state interests could overcome federal protections, thus leading to a breakdown of law and order and property rights.

¹²*Ibid.*, 2329.

Conclusion

On balance, the US Constitution as originally understood did a fairly good job of promoting economic efficiency, given what was known at the time. To start with, the Founding Generation did a remarkably good job in the realm of Civil Commerce. The Constitution has very significant safeguards to private property and effectively established a system of law and order that executed laws consistently. This enforcement was by no means perfect, but barring some notable exceptions it performed fairly well. By guaranteeing protection of property and rule of law, the Constitution created a fertile environment for the private sector to prosper in. For the federal government, the power of eminent domain was limited by the requirement that those whose property was confiscated must be justly compensated. In this way, an important tool for helping economic growth was assured, but the ability for it to be abused was curtailed.

The Constitution's handling of the money supply is a more ambiguous. While a basic reading of the Constitution might appear to centralize control of the money supply, these limitations were quickly rendered toothless by the Supreme Court's decisions on state banks. While this lack of federal control may have been risky, it appears that state-chartered banks did not seriously destabilize the monetary supply. As such, even before Congress decided to centralize control over the money supply, the economy was not seriously harmed by federal inaction.

Unfortunately, in the realm of private markets the original Constitution was relatively unsuccessful. Merely by establishing the system of rights and laws the

US Constitution already has created the garden in which private firms can grow. However, just like a garden, the private sector can't entirely be left to its own devices. The failure of the Constitution and the early Congresses of the United States to effectively curtail the market power of firms left the way open for monopolies and monopsonies to form unhindered in the US economy. In addition, the Founding Generation failed to account for the distortive effects that externalities have on the economy. Nothing in the Constitution helps to ensure that externalities are internalized - other than patents, which I shall deal with below. These omissions are significant and had serious implications on the US economy. However, while these errors are large, they are also understandable. What little economic theory existed at the time suggested that private monopolies were not a major issue to worry about. While the Constitution did establish a publicly owned monopoly in the form of the United States Postal Service, it is funded largely through usage fee, thus limiting its distortive effects. Similarly, the concept of externalities was completely unknown at the time. As such, it could hardly be expected that the US Constitution would account for these factors in economic efficiency.

On the topic of Public Activity, the US Constitution had better luck. While it is possible that James Madison's view of the meaning of "general Welfare" would have prevented the federal government from providing many kinds of public goods, this view was not put into practice. While Alexander Hamilton's interpretation would have ensured that the federal government was able to provide public goods, it would have also allowed for any kind of spending - even spending that does not result in Pareto Optimality. However, the path that Federal Government ended up following in its early years seems to have in some sense split the difference. On the one hand, there was federal spending on projects of value to the nation as a whole. On the other hand, many projects that would have been of only local interest were not

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funded using federal tax dollars. As such, federal spending under the Original US Constitution does a decent job of conforming to the proper role of government.

However, while spending by the early federal government was relatively efficient, its taxation methods often were not. The rules that the Constitution placed on direct taxation have mixed results on efficiency. On the one hand, the rules put in place seem intended to prevent wealth redistribution. Such redistribution would be a violation of the Benefit Principle of Taxation, and thus Pareto Optimality. On the other hand, the specific complexities of any direct tax - such as a tax on property values - led to strangely uneven tax burden across residents of different states. Such differences were not the result of different values placed on government services, and thus were themselves a violation of Lindahl Equilibrium.

On the subject of indirect taxation, the early USA also had its failings. While it is entirely possible for a consumption tax to come close to following the Benefit Principle of Taxation, that only occurs when the tax is across a wide variety of goods. However, many of the consumption taxes levied by the early US Government were on specific products, such as alcohol. In addition, the United States often made use of significant tariffs in order to gain revenue and limit foreign imports. These sorts of indirect taxes fail to produce Pareto Optimality.

In the realm of public activity the US Constitution also includes a major benefit to economic efficiency - the Federal System. Admittedly, the fact that most of the protections that the Constitution lays out do not apply to the states is a problem. Many of those protections are key parts of economic efficiency. However, some limitations on the states still exist. Balanced against that is the great benefit of being able to effectively delegate provision of goods to a lower level of government. For goods that can be considered public goods for people in a small area, local provision is more likely to conform to Pareto Optimality. On the other hand, attempting to

provide locally public goods using the Federal Government tends to lead to economic inefficiency.

In the case of gifts, grants, and transfers the Constitution is silent. There are no references to transfer programs or publicly funded education. While the states retained the ability to provide such programs themselves, it is a significant omission for the Federal Government to not have any role in redistribution of wealth. However, any such program would by necessity fail to conform to the Benefit Principle of Taxation. As such, this omission can be taken as a credit to the Constitution.

Then we come to the issue of slavery. As discussed above, slavery itself does not necessarily violate Pareto Optimality. However, slavery likely fails to conform to Kaldor-Hick efficiency - as well as basic morality. As such, the US Constitution's acceptance of slavery is a serious failing of the document.

Another important aspect of the Constitution is its efforts to promote economic growth. These efforts are most obviously seen in the section establishing a patent system in the USA. As I have discussed, the patent system has serious flaws and its job could be better accomplished through other means. However, the protection of intellectual property is a key part of promoting economic growth. Furthermore, while better systems have been designed to accomplish this goal, they were developed long after the writing of the US Constitution. As such, it seems reasonable to give the Founding Generation a great deal of credit for their efforts to protect intellectual property, even if it could have been done better.

All of these policies - both good and bad - mean nothing if they are not put into practice. In order to ensure that the federal government would remain bound by the restrictions laid out in the Constitution, the Founders set up a system of checks and balances. In addition, the nature of the Federalist System ensured that the United States central government as a whole would not wield unchecked power. It

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is, of course, impossible to know what would have happened without these protective measures in place. Even with these systems, there were still serious violations of these Constitutional protections. However, it seems that the presence of these safeguards helped at least a certain extent to maintain the Constitutional protections necessary for economic efficiency.

So where does that leave the Original US Constitution? Do its economic successes outweigh its failing? This matter is obviously up for debate, but in general the Constitution did a good job of promoting economic efficiency. With some very important exceptions, the United States Constitution did provide very resilient protections to private property. In addition, the consistent body of laws and rights that the Constitution enshrines produced the kind of stability that is required for economic efficiency. Equally importantly, the Founding Generation set up a system of government that would actually enforce these protections - something that was not a guarantee. Though the methods for collecting tax revenue were not very efficient, the actual spending of the federal government conformed fairly well to our definition of efficiency.

While there are many omissions in the Constitution, many of these are understandable. Failure to account for private monopolies and externalities can be chalked up to a limited understanding of economic theory at the time. Although the Constitution's silence on these topics would lead to serious problems down the road, it would be unreasonable to expect the Founding Generation to have understood these concepts.

Against the positives and understandable errors, we have the truly great failings of the Constitution. The original US Constitution's failure to prevent abuses by the states and acceptance of slavery are serious flaws. However, in large part these flaws are humanitarian in nature rather than economic. This is not to say that

humanitarian goals are unimportant or outside the scope of government. As briefly mentioned above, they may be more important than economic efficiency. However, discussing humanitarian issues is beyond the scope of this thesis. Within the bounds of economic efficiency, the original US Constitution does quite well.

Glossary

- *1st Fundamental Theorem of Welfare Economics*: any outcome from a competitive equilibrium will result in a Pareto Optimal economic allocation.
- *2nd Fundamental Theorem of Welfare Economics*: any Pareto Optimal outcome of the economy can be produced by a competitive equilibrium, given the appropriate prior assigned ownership.
- *Benefit Principle of Taxation*: The Principle that an individual should pay taxes in support of a government program in proportion to the benefit that individual receives from said program
- *Competitive Equilibrium*: An equilibrium resulting from perfect competition where trade among members is unencumbered. This will result in an established price for the traded good at which the amount of the good sought by buyers is equal to the amount of this good produced by sellers.
- *Consumer Sovereignty*: the idea that the value consumers place on individual goods should influence how much of each good is produced.
- *The Core*: any allocation in which it is impossible for any group of individuals to withdraw their resources from society and be better off on their own. Any Lindahl equilibrium will satisfy this definition.
- *Distributive Efficiency*: occurs when goods and services are received by those who will derive the greatest utility from them.

- *Dormant Commerce Clause Doctrine*: The doctrine which asserts that, even when the federal government declines to make specific laws regarding interstate commerce, the mere fact that the federal government has the power to establish such laws and regulate such commerce means that states are not allowed to make similar regulations.
- *Eminent Domain*: The right of a government to seize private property for public use.
- *Ex Post Facto Laws*: Laws in which the government retroactively makes certain actions illegal.
- *Excludable*: a good is excludable if its owner can prevent others who have not paid for it from consuming it.
- *Externality*: Costs or benefits from an economic decision - such as a market transaction - that are felt by non-decision makers.
- *Federal System/Federalism*: A system by which power is shared between different levels of government with overlapping spheres of authority.
- *Full Employment*: all available factors of production are being utilized.
- *Input Efficiency*: input efficiency is said to have occurred when the relative value of labor and capital are equal to each another. This condition must be true for each producer in a given area.
- *Lindahl Equilibrium*: an equilibrium in the market for public goods in which each individual taxpayer pays for public goods in proportion to the benefit they derive from those goods.

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- *Marginal Rate of Substitution*: the rate at which a consumer can give up one good for another without affecting overall utility.
- *Marginal Rate of Transformation*: the rate at which a producer can substitute production of one good for another without affecting overall utility.
- *Marginal Utility*: the change in benefit an individual receives from consuming a single unit of a particular good or service.
- *Pareto Optimality*: an economic system is considered to be Pareto Optimal when it is impossible to make any one person better off without making at least one person worse off.
- *Private Good*: a good is considered private if it is both rival and excludable in consumption. In other words, if one person consumes the good it is unavailable to be consumed by another, and a person who owns this good can prevent another person from using it.
- *Public Good*: a good is considered public when it is neither rivalrous nor excludable. In other words, consumption by one person does not prevent consumption by another person and it is not possible for one person to prevent another person from using it.
- *Rival*: a good is rivalrous if its consumption by one individual prevents it being consumed by another.
- *Sector Allocative Efficiency*: Relates to sectors trading with each other. Every good produced across all sectors is produced up to the point where the last unit provides a marginal benefit to consumers equal to the marginal cost of producing it.

- *X-Inefficiency*: Inefficiency found when a firm fails to keep costs low. Often a result of a lack of competition.

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