

2010

The value-added tax: Effects on tax revenue, U.S. corporations, and individual taxpayers

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Recommended Citation

Pudenz, Joseph Raymond, "The value-added tax: Effects on tax revenue, U.S. corporations, and individual taxpayers" (2010). *Honors Program Theses*. 65.

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THE VALUE-ADDED TAX: EFFECTS ON TAX
REVENUE, U.S. CORPORATIONS, AND INDIVIDUAL TAXPAYERS

A Thesis

Submitted

in Partial Fulfillment

of the Requirements for the Designation

University Honors

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May 2010

This Study by: Joseph R. Pudenz

Entitled: The Value-Added Tax: Effects on Tax Revenue, U.S. Corporations, and Individual Taxpayers

has been approved as meeting the thesis or project requirement for the Designation University Honors

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Introduction

Ever since the ancient Egyptians formed the first system of taxation nearly 5000 years ago, governments have searched for an efficient and effective method of tax implementation. Tax systems have changed significantly since these times and are undeniably much more complicated. However, the need for an effective tax system has not changed. In order to evaluate a tax system, the American Institute of Certified Public Accountants has identified these key characteristics that a tax system should possess in order to be effective: *fairness, certainty, convenience, economy of collection, simplicity, neutrality, economic growth and efficiency, transparency, minimum tax gap, and creation of appropriate government revenues* (Tax Division of the American Institute of Certified Public Accountants, 2001).

Given these principles of tax policy, it is important to question if the current system of taxation within the United States fulfills these qualities of an effective tax. In particular, does an income tax possess these qualities, and if not, is there another system of taxation that better fulfills the qualities of a good tax? There are four of these qualities that the federal income tax system may not possess. *Simplicity, neutrality, economic growth and efficiency, and the creation of appropriate government revenues* may be questioned.

The current system of taxation is far from simple. The sheer amount of tax law makes it nearly impossible for the average citizen to effectively understand the system. Add on ever-changing laws enacted by Congress, and even tax professionals may have difficulty in maintaining an understanding of the tax law. This complexity makes compliance with the system expensive. It is estimated that in 2009, over \$300 billion was spent on compliance with the federal income tax system (Hodge, Moody, & Warcholik, 2006).

A tax system is neutral if the tax system does not affect normal transactions and decisions that a taxpayer would make in the absence of the tax (Tax Division of the American Institute of Certified Public Accountants, 2001). The current system is not neutral. For example, if a business is in need of capital, the business may incur debt or issue stock. The current income tax system allows for a tax deduction on the amount of interest expense incurred on the debt but does not allow a deduction for dividends paid on stock. Therefore, the business is more inclined to consider debt financing rather than the issuance of stock. This provision that encourages debt clearly is not neutral with respect to the transactions of the taxpayer.

A good tax system should have minimal effect on the economy. Many have argued that the current income tax system is detrimental to the economy because it taxes successful companies and reduces the amount of capital available for business purposes (Johansson, Heady, Arnold, Brys, & Vartia, 2008). The Organization for Economic Cooperation and Development has suggested that a consumption-based tax, such as a value-added tax, is less detrimental to the economy because of its broad base and taxation of the business process rather than success (Johansson, et al., 2008).

Clearly, the current federal income tax system is not creating adequate revenues to meet the expenditures of the government. While politicians and citizens may argue about appropriate levels of spending and debt incurred by the government, no one can argue that these expenditures and obligations must be paid. The United States has been running a deficit in every year since 2002 (Congressional Budget Office, 2010), and is projected to continue to run a deficit through at least 2040 (United States Government Accountability Office, 2010). This could be due to improper implementation of the income tax system, or a flaw in the basic characteristics of the income tax system.

Problem/Purpose

The purpose of this study is to explore the potential effects a value-added tax system would create if implemented in the United States. In addition, the effects of a corresponding decrease in the income tax will be studied. In particular, the overall effects on governmental revenue generation, domestic corporations' tax burden, and individual taxpayers' tax burden will be addressed.

The importance of understanding how a value-added tax would affect the United States is imperative. Many economists have long stated that a value-added tax system would benefit the United States (Hooper & Smith, 1997), and politicians have periodically brought up the value-added tax since the 1960s as a solution to tax revenue needs (Comptroller General of the United States, 1981). Given these facts, it is likely that the value-added tax will continue to be considered as a possible tax system. An adequate level of understanding regarding how a value-added tax is applied and its effects is essential.

It is quite clear that the United States federal government has a debt problem. Continuing deficits have caused a national debt of nearly \$12.9 trillion (United States Department of the Treasury, 2010). With such a large national debt, many economists believe that tax reform would help alleviate this debt problem and provide for a more stable economic future (Hooper & Smith, 1997). A value-added tax system may be a possible solution. A broad consumption tax, which would exist under the value-added tax, is believed to have less of a detrimental effect on the economy and will allow a greater economic output than an economy with high personal and corporate income taxes (Johansson, et al., 2008).

Insight into how a value-added tax would co-exist with other tax structures that currently exist in the United States has not been extensively researched. While many countries have adopted the value-added tax, which has provided a blueprint for implementation, countless alterations to the current tax system may be made that might be unique to the United States. Special consideration will be made with this research to the effects of a complete elimination of the corporate income tax and a reduction of individual income taxes with the corresponding implementation of a value-added tax.

A significant drawback of the value-added tax is the higher prices of goods and services that result. Since a value-added tax implements a tax each time an item is sold through the production stage, the tax increases the price at each stage. Eventually, this higher price ends up at the retail stage, where the end consumers purchase the good at an inflated price. The extent to which this occurs, however, is very difficult to estimate (Comptroller General of the United States, 1981). The price change depends on how much of current corporate income taxes are passed on to the end consumer through higher prices. If a company is currently able to pass most of the income tax cost to consumers, the price would remain relatively unchanged under a value-added tax. However, if a company is unable to pass the current income tax costs to consumers but is able to under the value-added tax, the price would inflate to the extent of the tax levied.

Legislators have previously explored adoption of the value-added tax in the United States. However, there have been several key issues that have prevented a value-added tax from gaining widespread support by legislators. The inflationary characteristics of a value-added tax, the transitional costs that would be incurred, and the inherent regressive nature of a value-added tax have been these main obstacles (Comptroller General of the United States, 1981). This

research accounts for these obstacles and studies a value-added tax from the perspective of the most likely form of the tax that would be passed through legislation.

Taxation can have a profound effect on an economy, often times in many different ways. The interrelationships of a complex economy make it nearly impossible to specifically address all of the effects that a value-added tax system would cause if implemented in the United States. Therefore, the price inflator effect that is generally considered to be inherent to the value-added tax will not be discussed at length in this research. However, it is important to note that the current income tax system inflates prices for the consumer as well. While the exact amount of this price inflation is less direct than under a value-added tax, businesses surely take into consideration future income tax obligations when establishing prices for their goods and services.

This research is in no way encompassing all of the potential effects of a value-added tax on an economy. Rather, only basic principles of economics are applied on a macroeconomic level to these forms of taxation. If a value-added tax is considered for implementation in the United States, a more in-depth analysis of both macro- and micro-economic effects should be addressed for all taxpayers.

Literature Review

A value-added tax is a consumption tax that is similar to a sales tax. Unlike many state sales taxes in the United States, a value-added tax is levied at every stage in production based on the value added during that stage, instead of being levied only on finished goods like a sales tax (Durner & Bui, 2010). For example, if a manufacturer purchased raw materials for \$100 and sold

the good for \$150, the manufacturer would be taxed on the \$50 increase in value. Furthermore, any subsequent wholesaler, distributor, or retailer would be subject to the value-added tax, to the extent that value is added at each respective stage.

The value-added tax has already been put to use in Canada, Australia, New Zealand, and many European countries, to name a few. If the United States would implement the value-added tax, it is important to investigate some of the issues that these countries encountered upon implementation. The United States Government Accountability Office (2008) has released a report on many of these issues. For example, several of these countries have experienced fraud within the value-added tax system, so a strong agency is needed to enforce the value-added tax. In addition, businesses have experienced a heavier burden due to the additional record-keeping duties (United States Government Accountability Office, 2008).

An implementation of a value-added tax in the United States would have impacts beyond the federal government. Many states currently impose a retail sales tax, and it is yet to be seen how a federal value-added tax and state sales taxes would coincide. However, lessons can be learned from Australia and Canada, both of which have attempted to establish a value-added tax and a state or provincial sales tax. Australia established a value-added tax and discontinued its state taxes, with the states receiving a portion of the revenues generated from the value-added tax. Canada, however, introduced a value-added tax in addition to provincial taxes and is in a continuous attempt to harmonize the multiple tax systems (Durner, Bui, & Sedon, 2009). While these topics are important, the focus of this research is more in line with the tax revenues and the resulting effects and therefore, will not address these issues at length.

Many economists have proposed that the United States should implement a value-added tax and offset it with a reduction in corporate income taxes. It is important to understand why

this is and to what extent the corporate income tax could be reduced. The Organization for Economic Cooperation and Development recently found income taxes hinder a nation's economy more than a consumption tax, such as a value-added tax (Johansson, et al., 2008). Therefore, it may be in the best interest of the United States to implement a value-added tax and reduce income taxes to the extent that the change does not significantly harm a class of taxpayers. However, in order to achieve its goal of increasing tax revenues, the income from the value-added tax must exceed the reduction in income taxes.

In order to understand why a value-added tax is preferred to an income tax from the view of a corporation, it is important to understand how the current system is not ideal for a U.S. corporation. Michael Keen (2008) of the International Monetary Fund has noticed that a value-added tax can act as a tariff on goods. For example, if a United States corporation that is not registered for the value-added tax sells a \$1000 product overseas that is subject to a 10% value-added tax, the corporation incurs a total value-added tax of \$100. If a registered foreign company sells an equivalent \$1000 product in that country, it is still subject to the value-added tax, but the company is entitled to a "VAT credit" on taxes that have already been paid on the product (Keen, 2008). Therefore, the overseas company is able to have a larger margin or undercut the prices of these imported goods. This creates an uneven playing field for U.S. companies and encourages corporations to establish businesses where that product is ultimately sold. One way to equalize this effect is to establish a value-added tax in the United States. While economists may argue, and are likely correct, that a tariff in response to a tariff is economically harmful, it is no doubt a method that would place United States multinational corporations in an equal position to foreign competitors.

The implementation of a value-added tax in the United States is not a new concept. The United States Congress has convened meetings about some of the issues regarding the value-added tax and its implementation (Comptroller General of the United States, 1981). However, these meetings did not result in the necessary support to further discuss the value-added tax. The Comptroller General of the United States provided a report to Congress following these discussions with background information on the value-added tax.

The report outlines the positions of both proponents and opponents of the value-added tax. Proponents of the value-added tax state that the system is capable of raising large amounts of revenues without causing great detriment to the economy. Opponents state that the value-added tax inflates prices and is regressive, placing a larger tax burden on the lower class. Any implementation of the value-added tax in the United States is contingent on maximizing the positives and minimizing the negative. Therefore, much of this research addresses the implementation of a value-added tax system that is capable of raising substantial tax revenues while minimizing the regressive nature of the tax on lower class citizens.

Research Methods

The first value-added tax issue that needs to be addressed is the establishment of an appropriate tax base. It will be necessary to explore what should be included in the tax base under a value-added tax. Regarding the tax base, exemptions to the value-added tax can be established that will lower the burden on the lower class. For example, certain items, such as food, may be exempt from the value-added tax at all stages, which prevents inflationary prices and allows lower class individuals to avoid paying tax on these items. Estimates for the tax base

will be determined using modified gross domestic product (GDP) and gross national product (GNP) figures in recent years.

The next value-added tax issue that needs to be addressed is determining an appropriate tax rate. In order to accomplish this, it will be necessary to explore tax rates of existing value-added tax systems as well as analyze the revenue needs of the government. Once an appropriate tax rate is determined, it is possible to begin to estimate the tax revenue effects it will create in the United States.

With the possibility of a large increase in tax revenues, it is important to explore possible areas in which other taxes may be lowered. For example, the average state and federal corporate tax rate is over 39%, which is the second highest rate among industrialized countries (Johansson, et al., 2008). It may be prudent to explore whether a reduction in these taxes would be beneficial to the taxpayer while still maintaining an appropriate level of revenues to meet the United States' growing expenditures. The effects of the value-added tax on individual taxpayers will also be explored. Due to the regressive nature of a value-added tax, the effect on individual taxpayers will focus on lower income taxpayers and potential remedies that might help alleviate the burden on those least able to pay.

This research, by its nature, is cyclical. For example, once an appropriate solution is reached regarding an overall target for tax revenues, that particular structure may have an adverse effect on U.S. multinational corporations or individuals. After investigating this adverse effect, it may be necessary to alter the implementation of the value-added tax. This process could be a series of revisions until a practical solution balancing the interests of the federal government and taxpayers is discovered.

Definitions

A value-added tax is a consumption based form of taxation. A value-added tax is similar to a retail sales tax, a prevalent form of income among states in the United States. A value-added tax, however, is applied to all levels of production, rather than just at the retail level. In addition to a retail sales tax that may only tax goods, a value-added tax applies to both goods and services. Another difference between a retail sales tax and a value-added tax is how the tax is incorporated into the price of the good. In general, retail sales taxes apply a percentage to the retail price of a good, whereas a value-added tax includes the tax in the price of the good.

Exported goods are generally an exception to the nearly all-inclusive value-added tax base. Exports are generally exempted from the value-added tax (Comptroller General of the United States, 1981). This allows domestic businesses to export goods without inflating the price in order to better compete in foreign markets. This is a distinct advantage over an income tax system for businesses because many international trade agreements prohibit the refund of direct income taxes on exports that would give an unfair advantage to the exporter (Comptroller General of the United States, 1981). In addition, many of these goods may be subject to another country's value-added tax on imported goods. This ensures the exported item will only be subject to one value-added tax.

In contrast, imported goods are subject to a value-added tax. This ensures that all items sold within the country are subject to the value-added tax, which is true to the characteristics of a consumption based tax. Furthermore, a value-added tax on imported goods ensures that imports are subject to the same price inflating characteristics that domestic businesses are subject to.

The inclusion of all goods, services, and imports ensures a broad tax base. Such a broad base allows a value-added tax to still raise large amounts of revenue at low rates (Comptroller General of the United States, 1981).

The value-added tax is assessed and collected at each stage of the production cycle. The tax is assessed as a percentage of the selling price of the good or service. The taxpayer is allowed a credit for the amount of tax that has been paid on the good or service in previous stages of production. This system is illustrated in the following table, assuming a value-added tax rate of 10%.

Table 1 – Value-Added Tax Liabilities

Entity	Purchase Price	Sales Price	VAT Levied	VAT Credit	VAT Liability
Business A	\$0	\$50	\$5	\$0	\$5
Business B	\$50	\$100	\$10	\$5	\$5
Business C	\$100	\$120	\$12	\$10	\$2
Business D	\$120	\$190	\$19	\$12	\$7
Customer	\$190	---	---	---	---
		\$190	\$46	\$27	\$19

Notice that the value-added tax assessed on the sales price less prior value-added tax credits results in an ending liability based solely on the “value-added” in that stage of production. For example, Business C added \$20 (\$120 - \$100) of value, resulting in a tax liability of \$2 (\$20 x 10%). In essence, the value-added tax may be viewed as the following:

$$VAT\ Liability = (Selling\ Price \times VAT\ Rate) - VAT\ Credit$$

The value-added tax is also said to be “self-policing” (Comptroller General of the United States, 1981). In order for a business to take a tax credit for a good or service, the tax must have been paid by the business in the previous production phase. For example, if Business A from Table 1 did not pay its \$5 tax liability to the government, Business B would not be able to take a tax credit and would ultimately bear the entire liability of both Business A and Business B (\$10). Given this scenario, Business B would be unlikely to purchase from Business A, which would force Business A to begin paying its tax liability.

The end customer does not have a tax liability because the tax has already been built-in to the good or service throughout the production phase. The customer, however, still bears the tax indirectly. The customer pays \$190 for the product, of which \$19 (10%) represents the tax that was paid by those in the production cycle. In theory, the customer would be able to purchase the same product for \$171 (\$190-\$19) in a tax-free system. For this reason, many opponents of the value-added tax state that prices are greatly inflated due to the tax. Under a direct tax such as a value-added tax, it is much easier to identify the price inflation that results than under an indirect tax, such as the income tax.

Significance to Stakeholders

Understanding the different forms of taxation is important to all taxpayers. Taxation can affect businesses and individuals and have a significant influence on their behavior within an economy. In addition to the effects on taxpayers, the underlying objective of taxation must be accomplished by providing adequate tax revenues to governmental entities to enable them to continue providing services. Each of these stakeholders has a slightly different view on what

constitutes a good tax. In order for the best system of taxation to be formed, the viewpoints of all stakeholders must be considered.

Corporations

The introduction of a value-added tax system and corresponding offset of corporate income taxes would have a significant influence on corporations. A value-added tax system would make it easier for corporations to comply with tax law. Currently, the complexity of income taxes requires corporations to spend a large amount of time and money ensuring compliance. Under a value-added tax, much of the tax information could be derived directly from the entity's accounting system. The basic calculation of the "value-added" can be easily calculated by a business by the following:

$$\text{VAT Base} = \text{Selling Price} - \text{Purchased Cost}$$

Given the relative simplicity of the calculation of the value-added tax base, it is much simpler for a business to forecast future tax obligations. A forecast under a value-added tax would consist of production forecasts, but would omit many non-production planning techniques currently utilized under the income tax system. This reduces the need for extensive (and expensive) tax planning.

The adoption of a value-added tax system could potentially reduce the significance of the idea of supply-side economics. The value-added tax is applied to a broad base at a constant rate, as opposed to the income tax, which is applied at progressively higher rates. Under the constant

rate of a value-added tax, business decisions would not be determined by the marginal tax rate of the corporation.

Some corporations will likely resist the adoption of a value-added tax system. Many corporations make extensive use of the current non-production related tax policies built into the income tax code to reduce their tax obligations. For example, the third largest deduction taken by Form 1120 filers (C-Corporations) for the tax years of 2000-2006 was the interest expense deduction (Internal Revenue Service, n.d.). Only the cost of goods sold deduction and the salaries deduction were larger. If the value-added tax were adopted, these corporations would lose this tax shield and the cost of debt would increase. Given the current deduction for interest expense, the threshold for acquiring debt financing can be illustrated by the following formula:

$$\textit{Marginal Profit} > [\textit{Interest Rate} \times (1 - \textit{Marginal Tax Rate})] \times \textit{Debt Acquired}$$

Under a value-added tax, this deduction is eliminated and the new threshold for debt acquisition becomes the following:

$$\textit{Marginal Profit} > \textit{Interest Rate} \times \textit{Debt Acquired}$$

Raising the cost of debt through the elimination of the interest expense deduction would have many likely results. In economic terms, the increased cost of debt may lead to reduced investment, which would slow economic development. However, the increased cost of debt would also place a larger emphasis on equity financing. The production-related focus of a value-added tax may encourage businesses to acquire more reasonable amounts of debt. Debt is

believed to have played a large role in recent economic instability, and a tax structure that does not encourage excessive amounts of debt may reduce the risk of future economic instability.

Low-Income Individuals

One of the largest negative effects of a value-added tax is its inherently regressive nature. That is, it subjects a larger percentage of lower income taxpayers' income to the tax than is the case with higher income taxpayers. For example, if a taxpayer earning \$20,000 annually purchases \$15,000 of goods and services, \$15,000, or 75% of the taxpayer's income is subject to tax. If a taxpayer earns \$100,000 annually and purchases the same \$15,000 of goods and services, \$15,000 is subject to tax, which is only 15% of the taxpayer's income.

Given the political landscape and the likely public outcry of passing a largely regressive tax onto lower class taxpayers, any value-added tax system implemented in the United States would have to contain provisions to minimize the regressive aspects of the tax. To combat this obstacle, this research assumes that the basic necessities of food and beverages purchased as groceries (non-dining), housing, utilities, and health care are exempt from the value-added tax at all levels of production.

Given that such goods and services would be exempt from the value-added tax at all levels of production, a value-added tax could actually make these goods less expensive. For example, if a value-added tax replaces a corporate income tax, a business would no longer have income tax expense and would be exempt from the value-added tax. In a competitive market, this business would conceivably pass these savings onto the consumer. In this example, a value-added tax could actually *help* lower-income taxpayers.

Exemptions from the value-added tax should be strictly limited to the necessities previously mentioned. If the list of exempt goods and services were to expand, the application of the value-added tax would become exceptionally difficult, thereby negating the advantage of simplicity that the value-added tax has over the income tax. This difficulty arises due to the place in the production cycle that a good or service becomes tax-exempt. A taxable or tax-exempt transaction does not occur until the consumer purchases the good or service from the final retailer.

This would pose a problem for a producer of goods that could be used in both taxable and tax-exempt functions. For example, if Company A prepares lumber and sells it to Company B, it is not clear if the lumber is to be used for residential construction (tax-exempt) or for the production of furniture (taxable). Company A has no way of knowing whether Company B sold the lumber in a tax-exempt transaction. Therefore, excessive exemptions would require the retailer to track tax-exempt sales and to relay this information back up the supply chain. In more complex situations, this information would be directed to numerous producers, wholesalers, and distributors. This would subject companies to extensive record-keeping responsibilities. With one of the advantages of the value-added tax being its simplicity, it is clear that exemptions should be minimized to prevent unnecessary complexities.

Government

There are a few key advantages for a government that implements a value-added tax system instead of an income tax system. Perhaps the largest benefit for a government is the relative simplicity of a value-added tax system when compared to the income tax. A simpler tax structure makes compliance less burdensome. The enforcement of a value-added tax would also

be less burdensome on the Internal Revenue Service because there are fewer tax avoidance methods inherent to the value-added tax than the income tax system.

In addition to tax compliance issues, a value-added tax would allow the federal government to more accurately predict future tax revenues. A value-added tax system is viewed as a much more stable source of tax revenues than that of an income tax system (Durner, Bui, & Sedon, 2009). While corporate incomes may be unpredictable and vary greatly from year to year, the value-added tax base is much more predictable. While consumption may decrease in economic downturns, it will not decrease to the extent of corporate incomes.

There are also disadvantages from the federal government's perspective that are associated with the adoption of a value-added tax system and corresponding elimination of the corporate income tax. The current income tax system allows for the government to influence actions it deems as beneficial to society. For example, from 2000-2006, corporations deducted over \$81.3 billion for contributions to charitable organizations (Internal Revenue Service, n.d.). With an average tax rate of 35%, these corporations realized nearly \$28.5 billion in tax savings. With the elimination of the corporate income tax and introduction of a value-added tax, these corporations will be less inclined, at least from a financial position, to continue to make these contributions. It would be probable that charitable organizations would attempt to stop the elimination of the corporate income tax.

Findings

In order to understand the effects of a value-added tax on tax revenues, corporate tax burdens, and individual tax burdens, several characteristics of the tax implementation must be

identified. Once an appropriate base is established, a value-added tax rate must be set and the resulting tax revenues must be evaluated. Considering the tax revenues generated by a value-added tax, the next step includes identifying areas within the current tax structure that may be reduced or eliminated and the resulting effect on tax revenues. Once these issues are resolved, it is possible to begin evaluating the effect the proposed tax structure would have on the tax burdens of corporations and individuals.

Tax Base

The first step in understanding the effects of a value-added tax is establishing a well-defined tax base. As previously noted, the tax base should include all goods and services, including imports, less exemptions for goods and services such as groceries, rent and utility payments, health care, and residential investments. In order to understand the base, it is important to quantify the base.

The value-added tax base for future years may be best estimated by evaluating what the tax base would have been for previous years. The most recent four year span (2006-2009) provides an effective starting point. These years may also be used to evaluate the stability of the tax base, as the recent economic downturn may or may not have significantly influenced the tax base. Using figures released by the Bureau of Economic Analysis (2010), a base for the previous four tax years may be calculated as follows:

**Table 2 – Estimated Value-Added Tax Base
(In Billions of Dollars)**

	2009	2008	2007	2006	Avg.
Personal Consumption Expenditures	10,089.1	10,129.9	9,826.4	9,322.7	9,842.0
Gross Private Domestic Investment	1,628.8	2,136.1	2,288.5	2,327.2	2,095.2
Add:					
Imports	1,956.6	2,538.9	2,369.7	2,240.3	2,276.4
Less:					
Non-Dining Food (Groceries)	(790.2)	(784.3)	(740.1)	(698.0)	(753.2)
Rent/Utilities	(1,877.2)	(1,843.7)	(1,763.1)	(1,686.0)	(1,792.5)
Health Care	(1,627.0)	(1,554.2)	(1,469.6)	(1,380.7)	(1,507.9)
Residential Investment	(361.0)	(477.2)	(629.0)	(761.9)	(557.3)
Tax Base	9,019.1	10,145.5	9,882.8	9,363.6	9,602.8

As Table 2 displays, the value-added tax base for the previous four years varied between \$9.36 trillion and \$10.15 trillion. This change exhibits a base that is relatively stable despite the major economic downturn experienced in the United States.

Tax Rate

Now that an appropriate tax base has been established, rates at which the base is taxed are the next issue. Countries that implement a value-added tax generally have rates ranging from 5% to 25% (Duncan & Sedon, 2009). For purposes of this research, tax rates will be assessed with the presumption that the corporate income tax will be eliminated and individual income taxes will be reduced. Furthermore, FICA taxes, which accounted for over 44% of the federal government's revenues in 2009, will not be altered (Internal Revenue Service, 2010). Given the large revenues from FICA taxes, a rate that is lower than the average for other countries is possible. If a value-added tax had been implemented at 10% from 2006-2009, the following tax revenues would have resulted, assuming the tax base calculated in Table 2:

**Table 3 – Estimated Value-Added Tax Revenues (10% Rate)
(In Billions of Dollars)**

	2009	2008	2007	2006	Avg.
Tax Base	9,019.1	10,145.5	9,882.8	9,363.6	9,602.8
Tax Rate	10%	10%	10%	10%	10%
Tax Revenues	901.9	1,014.6	988.3	936.4	960.3

A benefit of a value-added tax on revenues collected is the predictability at which revenues can be forecasted. Note that from 2006-2009, the greatest deviation from the average in revenues collected was roughly 6% in 2009. This is a much more stable revenue source than the current income tax system. When considering the corporate income tax and the individual income tax together, 2009 collections were nearly 24% lower than the four year average from 2006-2009 (Internal Revenue Service, 2010).

Elimination of Corporate Income Taxes

The tax revenues generated from a 10% value-added tax are in excess of the revenues generated from the corporate income tax. With the value-added tax, it is possible to explore the complete elimination of the corporate income tax. However, one of the reasons a value-added tax would likely be implemented in the United States is for revenue growth. Considering this, it is important that revenues from the value-added tax always are in excess of any taxes that are eliminated or reduced. The following table exhibits the excess tax revenues that would be created under the value-added tax (from Table 3) after the complete elimination of the corporate income tax:

**Table 4 – Excess VAT Revenues After
Elimination of Corporate Income Tax
(In Billions of Dollars)**

	<u>2009</u>	<u>2008</u>	<u>2007</u>	<u>2006</u>	<u>Avg.</u>
VAT Revenues	901.9	1,014.6	988.3	936.4	960.3
Corporate Income Tax Revenues	(130.3)	(300.7)	(368.5)	(351.1)	(287.7)
Excess VAT Revenues	771.6	713.9	619.8	585.3	672.6

After subtracting corporate income tax revenues from value-added tax revenues, there is still a surplus of value-added tax revenues. With this surplus, it is possible to investigate the opportunity to reduce the income tax that is placed on individuals. From 2006-2009, the United States government collected an average of \$1,006 billion per year (Internal Revenue Service, 2010). If these revenues from individual income taxes were cut by 50%, there would still be surplus of tax revenues when considering the value-added tax as follows:

**Table 5 – Excess VAT Revenues After Elimination
of Corporate Tax & 50% Reduction of Individual Tax
(In Billions of Dollars)**

	<u>2009</u>	<u>2008</u>	<u>2007</u>	<u>2006</u>	<u>Avg.</u>
VAT Revenues	901.9	1,014.6	988.3	936.4	960.3
Corporate Income Tax Revenues	(130.3)	(300.7)	(368.5)	(351.1)	(287.7)
50% of Ind. Income Tax Revenues	(427.0)	(529.9)	(558.8)	(496.8)	(503.1)
Excess VAT Revenues	344.6	184.0	61.0	88.5	169.5

Table 5 clearly indicates that there would still be excess tax revenues if a value-added tax were implemented in conjunction with a complete elimination of the corporate income tax and a 50% reduction in the individual income tax system. However, if the individual income tax is to be cut in half, the question of which taxpayers would benefit from this reduction arises. There is

certainly an infinite number of ways in which individual income taxes may be reduced, but only two basic methods will be evaluated in this research. The two options presented represent two extremes to the reduction of the individual income tax, and in all likelihood the government would implement a reduction between these two extremes. These options may be altered significantly to create what the government sees to be a good tax.

Reduction of Individual Income Taxes – Option A

The first method that will be discussed deals with a reduction in the rate that the income tax is applied. This is the simplest alternative to reducing individual income taxes by 50%. If the tax rates are cut in half for all taxpayers, the benefit of the reduction will be shared by all taxpayers based on their respective tax rates. This change could be fairly easily incorporated into the current tax system, with one of the few changes being amounts for exemptions and deductions that are written into the current tax code.

Reduction of Individual Income Taxes – Option B

An alternative way of a reduction to individual income tax revenue is to alter who must pay the tax. This option would impose an income tax on only a small fraction of high income individuals. In order to understand how this would work in the United States, it is important to understand who pays the most income tax. According to the Department of Treasury, the top 5% of income earners pay over 50% of individual income taxes (United States Department of the Treasury, 2005). Given this information, the individual income tax structure could be modified to only tax the top 5% of income earners. In order to maintain the appropriate 50% revenues, the tax rates would have to remain unchanged.

However, it is impossible to know which taxpayers are in the top 5% of income earners, so it would be necessary for the federal government to quantify a threshold of adjusted gross income for filers. If a taxpayer's adjusted gross income exceeds this threshold, the taxpayer must file an income tax return, and if the taxpayer's income does not exceed this threshold, no return would be necessary. This adjusted gross income threshold would have to be modified annually in order to adjust for incomes of the top 5% of earners.

There would be several advantages to implementing the reduction of income taxes in this fashion. The Internal Revenue Service would be required to process 95% fewer individual income tax returns annually. This would allow the Internal Revenue Service to devote much more time ensuring tax compliance of the 5% of taxpayers who are required to file. This would also save lower and middle income earners the time and costs of income tax preparation. Furthermore, this results in a very progressive tax structure, which may satisfy citizens and legislators who worry about the regressive nature of a value-added tax.

The fairness of such a tax policy may be questioned by high income earners. Such a policy may actually result in less productivity from these high income earners. If a taxpayer is approaching the known threshold for adjusted gross income, the taxpayer could conceivably plan income and deduction opportunities accordingly. If a taxpayer can earn an extra "X" amount of dollars and as a result, be subject to the income tax, the taxpayer would be likely to forgo that opportunity, resulting in a decrease in economic output. The following table shows how a taxpayer with a higher pre-tax income could actually end up with a much lower after-tax income when compared to an individual who is not subject to the tax, assuming a \$1,000,000 threshold:

Table 6 – After-Tax Income Example

	Individual A	Individual B
Income	\$900,000	\$1,000,000
Avg. Tax Rate	0%	33%
Income Tax	0	(330,000)
After-Tax Income	\$900,000	\$670,000

Since both Option A and Option B have some advantages and disadvantages, it may be most appropriate to implement a hybrid between the two systems. In such a system, there would be a “phase-in” to the income threshold, which would not cause Individual B in the above example to end up with a lower after-tax income than Individual A. This would complicate this issue slightly and subject more individuals to the income tax.

Both Option A and Option B would undoubtedly have a complex economic effect. These effects are not studied in this research. This research merely presents the tax revenue effects of such tax policies. Should either of these scenarios be considered further, a more in-depth analysis of the economic consequences should be evaluated.

Recommendations and Conclusion

The value-added tax should be considered in-depth by lawmakers in the United States. This research shows that a value-added tax, along with a complete elimination of the corporate income tax and a reduction of personal income taxes by 50%, would still increase tax revenues and allow the United States to better deal with its high national debt. The extensive revenue generating abilities of a value-added tax should promote further investigation into the overall

effects a value-added tax would have on an economy. While this research suggests adequate tax revenue generation to support the value-added tax, the effects on the economy should not be overlooked and should be addressed in further research.

Investigation into the revenue and economic effects of a value-added tax for the United States should continue. While the value-added tax has been discussed for nearly 40 years, it may once again be picking up steam. Prominent lawmakers are once again identifying the value-added tax as a potential future source of tax revenues (Cheney, 2009). Understanding the effects of tax reform that includes a value-added tax is essential to ensure that appropriate revenues are generated while understanding the economic effects of such a tax.

Under the proposed tax structure, compliance would be much less of an issue for the majority of Americans. Corporations would no longer need to file a corporate income tax and the majority of individuals may not need to file an individual income tax. This would allow the Internal Revenue Service to focus time on value-added tax compliance and the small majority of Americans who would be required to file an individual income tax return. Due to the self-policing characteristics of a value-added tax, the overall challenges faced by the Internal Revenue Service may be reduced.

A true value-added tax is regressive in nature. However, with the exemptions that could be placed within the structure of the value-added tax, the negative regressive characteristics could be minimized. It has even been suggested that the right combination of exempted goods and a reduction in income taxes may make such a system nearly as progressive as the current income tax system (Comptroller General of the United States, 1981). The regressive nature of the value-added tax would undoubtedly be determined by how legislators would implement the tax and corresponding exemptions.

The value-added tax has existed internationally for over 50 years, yet it has not found its way into the tax structure of the United States. As the United States struggles to find revenue sources to alleviate its growing national debt, a value-added tax may become a reality. A value-added tax provides the benefit of raising a large amount of revenue over a large tax base relatively easily. However, the value-added tax may make the United States' tax structure more regressive, placing an unfair burden on those least able to pay. If the value-added tax is to ever be implemented, legislators will need to evaluate not only these issues, but all the other advantages and disadvantages of the tax.

The introduction of a value-added tax would be a monumental event in the history of United States tax policy. As the world's largest, most complex economy, the implementation of the value-added tax would undoubtedly create side effects that have never been experienced in other economies that implemented a value-added tax. The United States may be able to estimate the effects of such a tax on the economy, but until a value-added tax is actually implemented, these estimates may just remain theory. Undoubtedly, the greatest test for a value-added tax would be its effects on tax revenues and the economy should it be implemented.

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