

## **Taxation of Virtual World Economies: an empirical review**

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### **Abstract**

Experts are divided as to the feasibility of taxation of virtual economies. We argue that virtual transactions are already subject to taxation under current U.S. law as well as possibly the tax laws of other countries, whether taking place in game worlds or unscripted worlds. This would include virtual-to-virtual transactions as well as virtual-to-real transactions, at any point in time that the U.S. Internal Revenue Service (IRS) should decide to enforce the current law. There is no need for new legislation amending the current U.S. tax code in order for the IRS to begin enforcement; in fact, given the strategic approach employed in the current U.S. tax code, amendments relating specifically to virtual transactions might actually weaken the application of the law as now written. This is because the strategic approach within the tax code is that taxation of income is an 'all inclusive net' unless that type of income is specifically exempted. This strategy eliminates the difficulty inherent in trying to identify all methods of commerce capable of generating income, now or in the future. As more and more people buy and sell virtual goods and services in exchange for real currency, the issue of income earned in virtual worlds will only become more critical. One possible consequence of taxation would be for virtual worlds to move to a peer-to-peer network or another country to avoid detection and identification by a government. Another, more likely, scenario would be that the tremendous growth of virtual worlds would be severely impeded, depriving Internet scholars of a rich and vast 'database' for studying how people communicate and interact in such an environment.

### **Keywords**

real money trading; tax code; virtual world transactions; virtual worlds

The taxation of virtual world economies is uncharted terrain, one that both researchers and government officials are just beginning to scrutinize. As the old saying goes, taxes are inevitable in the 'real world', but what about the increasingly lucrative virtual world economies? With a 2009 estimated annual market for virtual goods and services of \$2.2 billion USD (Worthen, 2010), it is no wonder that governments are beginning to take notice. It is critical for Internet scholars to be aware of this emerging issue, because the way people communicate and interact in virtual worlds could be seriously impacted if there is the possibility they may be taxed. Virtual worlds may even cease to exist if forced to comply with burdensome tax laws.

This empirical review examines the issue using a multidisciplinary perspective, from both Internet studies and taxation research. First a critical analysis of the current state of virtual economies is presented. Next, a thorough examination of existing legal opinions regarding the taxation of income and assets generated by virtual world transactions is discussed. Lastly, the authors offer their own analysis of the topic specific to the tax laws of the United States.

## Introduction

The growth of virtual worlds has exploded. The number of people that participated in and were members of virtual worlds was estimated to be 671 million in 2009 (Barnes, 2010). As these virtual worlds have grown and become increasingly more sophisticated, to the extent they now mirror the offline world, a whole new 'virtual economy' has emerged, blurring the line between the real and virtual. Participants in and members of gaming and social networking sites such as *Facebook*, *EverQuest*, *World of Warcraft*, and *Second Life* are now buying and selling virtual goods and services offline (not in-world) in exchange for real currency, a practice referred to as "real money trading" or RMT (Nardi & Kow, 2010). Because of RMT, virtual transactions have real economic value (Camp, 2007).

An unknown number of people in virtual worlds are exchanging real currency and earning a living delivering virtual goods and services, making it possible to "work in a fantasy world to pay rent in reality" (Lastowka & Hunter, 2004, p. 11). A recent study found that 13% of Americans with internet access bought virtual goods online in the previous 12 months, spending \$92 USD on average (Rosenberg, 2010). More than 50 percent of those buyers bought digital goods in a gaming environment; 48 percent purchased digital goods through various social networking sites. One study on the virtual currency in *EverQuest* found that the virtual gross national product (GNP) of the world of *Norrath* was \$135 million USD, placing it (at the time) at 77<sup>th</sup> on the list of world economies, approximately equal to the GNP of Russia (Castronova, 2004).

With virtual worlds rivaling the GNP of other countries, it is no wonder that governments are beginning to take notice of virtual economies and RMT. The estimated annual market for virtual goods and services expected to grow to \$6 billion USD by 2013 (Worthen, 2010). The question, then, is whether the trade in virtual goods and services is taxable, because it has real-world monetary value. The Joint Economic Committee of the U.S. Congress (JEC), the Australian Tax Office, the United Kingdom's HM Revenue and Customs Office, and Swedish and South Korean tax authorities are all investigating the possibility of taxing income and assets from virtual economies (Mennecke, Terando, Janvrin, & Dilla, 2007; Nuttall, 2007; Tennant, 2010). China already taxes certain categories of RMTs (Salomon and Soudoplatoff, 2010).

Technological advances have far outpaced current tax laws in the United States. As famed economist Milton Friedman predicted in 2000, "cyberspace is going to make it...much more difficult for government to collect taxes" (in Schlimgen, 2010, p. 882). The JEC announced it would undertake a study of tax issues in virtual worlds in 2006, but no study was ever delivered (JEC, 2006). The National Taxpayer Advocate's annual report to Congress in 2008 included a section on the need for established guidelines on issues related to taxation in virtual worlds, but no guidance was ever issued. As senior economist for the JEC Dan Miller stated, "It will get to the point where the dollar value becomes so sizeable that the IRS would be almost negligent if it didn't at least look into the potential of taxing these worlds" (Thompson, 2006). Or, as Castrova puts it, "governments will probably notice...tax revenue, the state's very lifeblood, will drain away as more economic activity occurs in the ephemeral jurisdictions of cyberspace" (2005, p. 244).

Researchers and scholars are also beginning to examine the issue of taxation of virtual worlds. At a recent State of Play symposium (held in December 2009 at New York Law School) entire panels were devoted issues pertaining to virtual worlds, including their economy, legal systems, governmental systems, and policy. Emory University hosted a conference on *Virtual Worlds and New Realities in Commerce, Politics, and Society* early in 2008 where participants discussed emerging economies of virtual worlds. In early 2011 the University of California Irvine School of Law hosted a conference titled *Governing the Magic Circle: Regulation of Virtual Worlds*. These are just a few examples of the burgeoning number of conferences held worldwide that address issues related to virtual worlds.

## Current State of Virtual Economies

The JEC defines virtual economies as “the universe of transactions that occur within an online community, such as *Second Life* or *World of Warcraft*...(that) include the sale of goods and services and take place entirely within virtual economies; there is no real-world or physical exchange” (JEC, 2006). In *Second Life* alone there were user-to-user transactions totaling over \$567 million USD (one USD equals approximately 250 ‘Linden dollars’, the in-world *Second Life* currency, which is a floating currency) in 2009, a 65 percent increase over the previous year (Rosenwald, 2010). One study found that more than 50 businesses in *Second Life* made more than \$100,000 USD each in 2009, with the top 25 *Second Life* earners making approximately \$12 million combined. Another virtual world, *Entropia Universe*, also operates a “real cash economy” (Entropia Universe, 2011) with a fixed rate of 10 ‘Project Entropia Dollar’ (PED) to one USD (Sivan, 2009). *Facebook* recently launched ‘Facebook Credits’, a virtual currency used to buy virtual goods on the *Facebook* platform (Facebook, 2011). *Facebook* users can purchase ‘Facebook Credits’ with 15 different real-world currencies, including Euros, Hong Kong Dollars, Turkish Lira, and Venezuelan Bolivars. However, *Facebook* takes a significant cut (30%) with each Credit purchase (Gannes, 2011). The US-based chain store *Target* is even offering ‘Facebook Credit’ gift cards for people to purchase to use on the *Facebook* platform, marking the first time *Facebook* has had a presence in a brick-and-mortar retail store (Swartz, 2010).

RMT is a big business, particularly in the sale of in-world currency and high-powered user accounts (Duranske, 2008). Yet not all virtual worlds permit RMT. *Second Life* allows the exchange of currency, goods, services, and equipment. *Second Life* even has an internal system where users can exchange Linden dollars for real currency. However, the MMOGs (Massively Multiplayer Online Games) *World of Warcraft*, *EverQuest*, and *Ultima Online* specifically forbid the buying and selling of “gold” (their in-world currency) or items for real money (Duranske, 2008); such activity is against the terms of service or end-use licensing agreements. *eBay* banned auctions for property from virtual worlds such as characters, currency, weapons, and clothing in early 2007.

There is ample evidence, however, that people are making a living buying and selling virtual goods. Or, as one IRS agent stated, “selling intangibles in an intangible world. For an intangible world” (Dibble, 2006, p. 304). There are a number of occupations that members of *Second Life* make their livings from in-world, including jewelry maker, tour guide, musician, landscaper, nightclub owner, and attorney (Duranske, 2008). There are also third-party auction sites that broker in-world currency, virtual items and even entire in-world accounts. One person

allegedly earned more than \$1 million USD from profits earned in virtual worlds, primarily through real estate transactions and content creation in *Second Life* (in Duranske, 2008).

On a more sinister note, unsavory types may also be using virtual world transactions to launder money because the transactions are virtually untraceable and can be converted into real currency. One rumor concerns a drug dealer in *Second Life* who only accepts Linden dollars as payment and then realizes a profit after converting the Linden dollars to USD (Burns, 2010). Other criminal activity occurring in virtual worlds includes identity theft, hacking, and credit card fraud (Chung, 2009). Gold farming, where companies (usually in low wage economies) employ people to do nothing but play MMOGs in deplorable conditions to acquire in-world currency or property which is then resold for a profit, is also driving RMT (Kennedy, 2009).

Julian Dibbell famously wrote about his attempt to make a living selling “make-believe commodities” in his book *Play Money, or How I Quit My Day Job and Made Millions Trading Virtual Loot*; in one year he made \$11,000 USD (Dibbell, 2006). But he was stymied when he called the IRS about the status of his online assets. After putting him on 'hold' for 15 minutes, they were ultimately unable to provide him with any guidance as how to report the income (Thompson, 2006).

## Taxation of Virtual Worlds

The Internal Revenue Service (IRS) does not have a specific policy that addresses taxation of income earned within virtual world economies; the growth of those economies has clearly outpaced current tax law. While it is possible that some people do report the amount earned in RMT it is more likely that virtual worlds are a tax haven for those who make their living buying and selling virtual goods and services. A virtual good or service can be marketed, distributed, paid for, and delivered electronically without the need for any face-to-face contact (Schlimgen, 2010). While most tax scholars believe it is a matter of 'when' and not 'if', researchers differ in defining exactly how the IRS would implement and enforce a law designed to tax transactions that occur in virtual worlds (Beekman, 2010).

Mennecke, Terando, Janvrin and Dilla (2007) argue for a system that only taxes income generated when the seller converts virtual profits into real-world currency. In order to ensure that virtual economies continue to thrive, even though they would be taxed, they recommend the IRS maintain a 'hands-off' policy but clearly communicate the guidelines and require the companies that maintain virtual worlds (for example, Linden Labs owns *Second Life*; *World of Warcraft* is owned by Blizzard Entertainment) convey to buyers and sellers information regarding both the law and the consequences of breaking it. In a follow-up article, the authors

concluded that "...virtual asset exchanges constitute income realization events for (Federal income tax) purposes because they involve arms-length exchanges of virtual properties that possess distinct legal and economic entitlements that are capable of being objectively valued" (Terrando, Mennecke, Dilla & Janvrin, 2008, p. 99).

Lederman (2007) believes that not all virtual worlds should be treated equally when it comes to RMT. She makes a distinction between "game worlds" such as *World of Warcraft* and "unscripted worlds" such as *Second Life*, arguing that transactions in game worlds should not be taxed until the seller engages in RMT but that in unscripted virtual worlds, in-world sale of virtual goods and services using virtual currency be taxed even if the transaction stays in-world and the seller does not "cash out" (engage in RMT). Her rationale for distinguishing between different virtual worlds is that "game worlds typically focus on conquering challenges, not on commerce" whereas an unscripted world such as *Second Life* "encourages its participants to make creations and sell copies of them and facilitates those activities" (p. 1670-1671).

Seto (2008) also distinguishes between two different types of virtual worlds: platforms with non-redeemable, non-convertible currencies such as *World of Warcraft*, and platforms with redeemable or convertible currencies such as *Second Life*. He argues that virtual world transactions in the first type of platform should not be taxed; however, if RMT occurs (even though it is against the terms of service), that transaction generates taxable income. In the second type of platform, Seto believes all transactions should be taxed; RMTs trigger a change in net worth and are therefore taxable.

Camp (2007) says that while virtual economies have not considered current tax laws, there are some existing laws that do apply. For example, section 61 of the U.S. *Internal Revenue Code* (IRC) clearly states that all income from whatever source derived is taxable. He argues that activities and/or transactions solely in-world (which he calls "units of play") should not be taxed unless those units are converted into cash. When people whose in-world assets become more like a medium of exchange producing income and less like units of play, those transactions should be taxed. He also warns that the IRS could more easily make the case for taxing the income of people in virtual worlds who have more control over their virtual assets (versus the company that maintains the virtual world owning the virtual assets).

However, Castronova (2004) puts the burden on the operator of the virtual world platform. He argues that if a virtual world operator allows virtual transactions to occur, the terms of service should reflect that the platform is intended for economic exchange and the

transactions will be taxed. If the virtual world operator does not want transactions to be taxable, the terms of service must forbid RMT and the rule strictly enforced.

Mack (2008) puts the entire burden of tax collection on the operator of the virtual world platform. He argues for a “sales-and-use” tax. In this scenario, a system would be in place within the virtual world to automatically deduct a percentage of each transaction. The operator of the virtual world platform would then hold that deduction and forward it on for governmental collection.

Beekman argues that there is “no good conceptual justification for treating virtual world activity differently from real world activity for tax purposes” (2010, p. 154). However, she also contends that it would be impossible for the IRS to administrate and enforce taxation in a virtual world. For one thing, the agency would have to rely on self-reporting by the taxpayer, which is problematic. Another issue is the huge administrative burden that would be placed on the IRS. While the administrative concerns should not be the deciding factor in the debate on taxation in virtual worlds, the IRS regularly makes “decision based on administrability alone, even when the result is conceptually incorrect” (p. 173).

Chung (2009) suggests since virtual currencies act in many ways like ‘real money’ and are increasingly used in the real world, they “represent cash equivalents and should be treated and taxed like foreign currency” (p. 140) at the time the currency is converted (cashed out) and an economic gain is achieved. He uses the example of the ‘QQ coin’, a virtual currency created by the Chinese company Tencent that allow users to shop in the company’s virtual world and instant messaging service. (The use of credit cards is not yet commonplace in China.) The use of QQ coins quickly grew beyond the Tencent services, with shoppers using them to purchase real-world goods and services. QQ coins are so popular that the Chinese government is pressuring Tencent to limit the trade of QQ coins because of the potential for money laundering and the inflation of the real Chinese currency, the Yuan (p. 144-5).

Chodorow (2008) approaches the issue of taxation of virtual income within the context of the existing U.S. tax laws. The ‘ability to pay’ is a core tax concept. Under that standard he argues that the taxation of virtual income should be based on a taxpayer’s ability to cash out; if a virtual world allows participants to cash out then that income should be taxed. Likewise, virtual income earned in worlds that prohibit cashing out should not be taxed; the ability to pay real-world taxes is not a function of virtual income. Chodorow maintains that once it has been established that the virtual income has value and the participants can cash out, “the virtual

nature of the income does not warrant tax treatment different from that which would apply to real-world transactions” (p. 698).

### **Authors’ Opinion**

Experts are divided as to the feasibility of taxation of virtual economies. The three main positions reviewed above fall into three different broad categories: not taxing in-world or gaming, taxing RMTs, or revamping the U.S. IRC to specifically cite virtual worlds. Most agree however that there is significant ambiguity in the current U.S. IRC with respect to virtual worlds (Beekman, 2010; Schlimgen, 2010). In a divergent view, we argue that virtual transactions are already subject to taxation under current U.S. law, at any point in time that the U.S. Internal Revenue Service (IRS) should decide to enforce the current law, whether taking place in game worlds or unscripted worlds. This would include virtual-to-virtual transactions as well as virtual-to-real transactions, as the issue at hand is whether or not virtual activity is taxable, regardless of realization, because all goods and services have a fair market value.

There is no need for new legislation amending the current U.S. IRC in order for the IRS to begin enforcement; in fact, given the strategic approach employed in the current U.S. IRC, amendments relating specifically to virtual transactions might actually weaken the application of the law as now written. This is because the strategic approach within the U.S. IRC is that taxation of income is an ‘all inclusive net’ unless that type of income is specifically exempted. Specifically, income is “any undeniable accession to wealth, which is clearly realized by the taxpayer, over which the taxpayer has complete dominion” (Comm’r v. Glenshaw Glass, 1955). This strategy eliminates the difficulty inherent in trying to identify all methods of commerce capable of generating income, tangible or intangible, now or in the future.

To escape taxation under the U.S. IRC, virtual transactions and economies would need to be identified, defined, and specifically exempted from taxation by the U.S. Congress or the courts; something that has yet to happen and is unlikely to occur. Virtual transactions, obscure offshore tax shelters, exotic financial derivative instruments, and the like are examples of creative methods to generate income that will be caught eventually in the ‘all inclusive net’.

If the IRS chose to enforce current U.S. tax laws, the revenue from virtual worlds would be tremendous. However, overregulation of tax laws might also “result in the immediate decline of the virtual economy, lowering its total economic value, and therefore lowering the total federal revenue expected for the regulations” (Mack, 2008, p. 761). Virtual worlds may also move to a peer-to-peer network or a country outside of the U.S. to avoid detection and identification by the government. Another, more likely, scenario would be that the tremendous



growth of virtual worlds would be severely impeded, depriving CMC scholars of a rich and vast 'database' for studying how people communicate and interact in such an environment.

## Conclusion

Studies have found that virtual economic behavior follows real-world patterns (Castronova, Williams, Shen, Rata, Xiong, Huang, & Keegan, 2009). The amount of economic activity occurring in virtual worlds, and the huge revenues being generated, “are sure to make a real impact on real-world economies” (Huffaker, Simmons, Bakshy, & Adamic, 2010). In an era where many of those real-world economies are struggling financially, imposing a tax on virtual worlds may be an opportunity for governments to expand their tax base (Schlimgen, 2010). Conversely, the virtual worlds provide people the opportunity to evade real-world taxation with relative ease.

Researchers are divided as to the feasibility of taxation of virtual economies. Some tax experts say that it would be easy to argue in-game profits have real-world value even within the confines of the virtual world. Additionally, virtual world trades of virtual goods and services, as well as RMT, could also qualify as barter, which is already taxable.

Others believe the logistics of taxing virtual economies would be too complex, and systems would need to be set up to provide an annual valuation for a resident's assets in a virtual world. Still other experts believe governments would not tax a 'game'. Complicating that argument, however, is the fact that members of *Second Life* insist their virtual activity is not a game (Thompson, 2006). And if *Second Life* is not a game and therefore not entertainment, then one could make the argument that the virtual world is used to conduct business, particularly when they participate in RMT markets.

Real-world corporations as diverse as Nike, Time Warner, Sony, Mercedes Benz, Reuters and Sears initially created a presence in *Second Life*, but the majority of them have pulled out because consumers did not connect with the brands in a virtual world setting (Barnes, 2010). However, as more and more people join virtual worlds and individuals (as opposed to multinational corporations) create locations to sell their wares, the issue of taxing income and capital gains in virtual economies will only become more critical. When people begin to use Linden dollars to purchase goods or services from real-world, brick-and-mortar entities, the issue of taxation will become extremely complicated and paramount in terms of today's current tax laws.

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