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Internet Sales and Use Tax Issues in Missouri Ying Huang, John Kosash, and Andrew Wesemann

Abstract

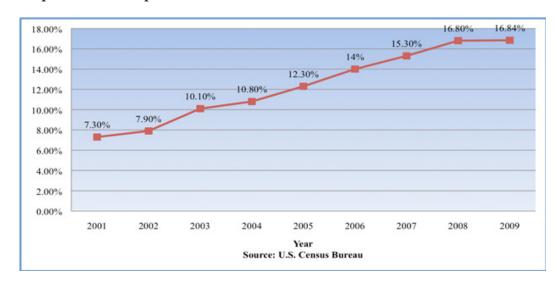
The amount of tax revenue lost due to untaxed interstate e-commerce is a growing concern for states throughout the United States. Research suggests that states, including Missouri, lose millions of dollars each year in e-commerce tax revenue because federal legislation prohibits them from collecting sales and use taxes from entities that do not have a physical presence in their given state. As a result, many states have considered, and some have adopted, policy options that may resolve this issue. Missouri has considered but has not acted upon proposals to permit the taxing of internet sales. This report expands on previous research to develop a

unique formula to predict how much revenue Missouri forgoes due to e-commerce. Lastly, this report discusses alternatives for capturing the revenue if deemed appropriate by the Missouri legislature.

Introduction

Over the past decade, e-commerce¹ has grown at a substantial rate throughout the United States. As shown in Graph 1, the U.S. Census Bureau suggests that sales and use transactions which are classified as e-commerce have increased at a national level by 9.54% from 2001 to

Graph 1: National Proportion of E-commerce Relative to Total U.S. Commerce (2001 to 2009)



¹ The United States Census Bureau defines e-commerce as the value of goods and services sold online with "online" being noted as the use of the Internet, intranet, extranet, as well as other networks that run similar technological systems. E-commerce applies to businesses selling to other businesses and businesses selling retail products and/or services to consumers (U.S. Census Bureau, 2011a).

² The total commerce is comprised of total business-to-business and business-to-consumer transactions.

2009 and e-commerce now stands at almost 17% of total US commerce² (U.S. Census Bureau, n.d.). Additional research indicates that this is also a growing trend in Missouri and numerous other states (Strauss, 2011; Bruce, Fox & Luna, 2009; Chupick & Davila, 2009; Scanlan, 2007; Reddick, 2006). A prominent and highly utilized study conducted by Bruce, Fox, and Luna (2009) estimates that e-commerce has increased substantially in Missouri over the past four years and will continue to do so well into the future.

As e-commerce increases, Missouri lawmakers and citizens have expressed concern primarily due to the potential tax revenue loss and the imbalances that it introduces in the market economy. Currently, Missouri collects sales and use taxes on e-commerce transactions only from businesses that have sufficient nexus, or physical location, within the state, and from a small number of out-of-state filers who willingly choose to remit these taxes.³ The latter is especially important because of a 1992 ruling in Quill v. North Dakota by the U.S. Supreme Court that states cannot levy a sales and use tax on entities unless they have nexus in their state (Duplantier, 2011). As a result, businesses and consumers are able to easily avoid paying sales and use taxes on products; in fact most do not know that these taxes are payable. This provides a competitive advantage for consumers and producers that purchase products and services online, and in turn, carries negative implications for the Missouri tax system, Missouri retailers, and the Missouri economy. For example, when a Missourian purchases a product from an online company that does not have a physical presence in Missouri, the state forgoes sales and use tax revenue on that transaction (such as amazon. com vs. Barnes and Noble). Bruce et al. (2009) estimate that Missouri may have lost up to \$3 billion in tax revenue, due to e-commerce, from 2007 to 2011 because of this exception, and this amount is only expected to increase far into the future, if the state fails to find systematic tools to collect e-commerce tax revenue.

As previously mentioned, e-commerce creates large consequences for the Missouri economy for several reasons. First, because Missouri is unable to require non-nexus entities to remit e-commerce sales and use taxes, firms may elect to change their best business practices in order to avoid tax collection responsibilities in the state. For example, firms may choose to physically operate outside of Missouri to avoid establishing nexus and thus avoid

being subject to taxation. Second, local entities which have established a physical presence within Missouri face competitive disadvantages as consumers are induced to make purchases online because they pay cheaper prices. Finally, lower income consumers in Missouri may face economic disadvantages, as they may not have access to the Internet and thus are forced to shop at local stores where sales and use tax is collected (Bruce et al., 2009, p. 2).

Many researchers and scholars assert that most, if not all, states lose a substantial amount of tax revenue due to e-commerce. Furthermore, many states currently face budget shortfalls yet e-commerce tax revenue collections have been less than optimal, because states are limited by federal law—in particular the Commerce Clause, 4—in that they cannot require out-of-state companies to collect and remit sales and use taxes. Additionally, enforcing individual citizens to remit due taxes is impracticable.⁵ While federal law currently prohibits states from imposing sales or use taxes on companies that do not have a physical presence in the state, many states have been able to partially overcome this situation by entering into the Streamlined Sales and Use Tax Agreement (Duplantier, 2011). This Agreement assists participating states in collecting additional tax revenue by encouraging companies that sell over the Internet and by mail order, to collect taxes on sales to customers in streamlined states (Streamlined Sales Tax Governing Board, 2011).

The purpose of this Agreement is to lessen the burden on out-of-state companies without nexus by "simplifying the complex patchwork of state and local sales and use tax laws existing throughout the country" (Haile & Gaylord, 2011, p.117). By adopting this streamlined approach, participating states seek to mitigate the possible strain on out-of-state businesses and also attempt to persuade Congress to pass legislation permitting states to require out-of-state retailers to collect taxes (Haile & Gaylord, 2011). Thus far, 24 states have passed conforming legislation with the aforementioned agreement, and Missouri lawmakers have proposed this legislation in the 2012 session and past sessions (Duplantier, 2011; Streamlined Sales and Use Tax Governing Board, 2011).

Assuredly, e-commerce in Missouri and throughout the nation has grown substantially over the past decade

⁶ Five bills were introduced in The MissouriHouse in 2012 to enter the Streamlined Sales and Use Tax Agreement. See www.house.mo.gov for details.



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³ Revised Statutes of Missouri (RSMO) § 144.665.5 requires Missourians to remit use tax after the first \$2,000 of goods or services purchased online from out-of-state businesses. However, the effectiveness of this statute is hampered by issues of compliance and enforcement.

⁴ Article 1 Section 8 Clause 3 states "[Congress has power]...To regulate Commerce...among the several States..."

⁵ See Amazon .com, LLC v. Lay, 2010; Stanley v. Georgia, 1969.

and will continue to do so over the next several years. Furthermore, it is reasonable to assume that Missouri and other states alike will continue to lose sales and use tax revenue as a result of e-commerce (Strauss, 2011; Bruce, Fox & Luna, 2009; Chupick & Davila, 2009; Scanlan, 2007; Reddick, 2006). Therefore, this study builds upon existing research to estimate sales and use tax revenue losses attributed to e-commerce in Missouri, evaluates potential policy alternatives for resolving the e-commerce sales and use tax issue in Missouri, and provides recommendations for future legislative action.

E-commerce Tax Revenue Loss in Missouri

This study examines two aspects of possible Missouri e-commerce tax revenue losses:

- 1) The tax revenue that may have been collected had Missouri broadened its sales and use tax base to e-commerce from 2001 to 2009; and
- 2) Projections for future e-commerce tax revenue losses if no substantial action is taken in Missouri.

The methodology employed to estimate the first aspect is based primarily on the 2009 research of Bruce et al., but designed specifically for Missouri as shown in Appendix A. This study then utilized a three year moving average⁷ in order to project future revenue losses due to e-commerce. It must be noted that the estimations provided throughout this study are referred to as e-commerce tax revenue losses; however, these figures include both taxable and nontaxable e-commerce. That is, they include tax revenue that has been collected and will be collected in addition to tax revenue that cannot be collected due to nexus limitations(Quill v. North Dakota, 1992). Yet, because it is nearly impossible to estimate the proportion of nexus entities and non-nexus entities selling in Missouri, a percentage of this study's final loss estimations, in fact, includes some sales and use tax revenue(Marr, 2012).

• Missouri Estimated Tax Revenue Losses from 2001 to 2009

Over the course of nine years, the national e-commerce rate has risen by 9.54%(U.S. Census Bureau, n.d.). The figures shown in Graph 1 represent e-commerce at a

national level, yet, the U.S. Census Bureau (2011) reports that the national Internet usage rate closely mirrors that of Missouri: 80.23% versus 78.21%. Therefore, these estimates have been applied to calculate e-commerce in Missouri as well.

Table 1: Actual and Potential E-commerce Tax Revenue in Missouri (2001 to 2009)

	Actual and Potential Ecommerce Tax Revenue in Missouri	Actual and Potential Ecommerce Tax Revenue in Missouri Less Noncompliance	
Year			
2001	\$201,079,166.92	\$138,530,260.69	
2002	\$216,582,832.06	\$149,000,582.01	
2003	\$282,457,104.60	\$194,274,084.05	
2004	\$317,642,396.04	\$218,897,166.18	
2005	\$377,096,884.30	\$259,855,654.15	
2006	\$450,370,193.05	\$310,328,318.56	
2007	\$499,423,118.94	\$343,796,929.92	
2008	\$543,484,345.21	\$372,796,184.92	
2009	\$515,788,603.75	\$352,508,595.08	

Graph 2: Actual and Potential E-commerce Tax Revenue in Missouri (2001 to 2009)

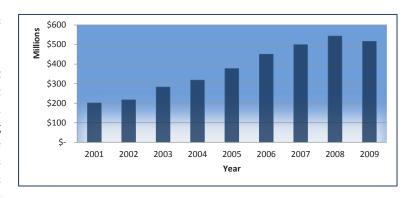


Table 2: Future Projections for Actual and Potential E-commerce Tax Revenue in Missouri (2010 to 2014)

Year	Moving Average –	Percentage Change	Moving Average –	Percentage Change	
	Actual and Potential	(%)	Actual and Potential	(%)	
	Ecommerce Tax		Ecommerce Tax		
	Revenue in Missouri	Revenue In Missouri			
			Less Noncompliance		
2010	\$ 519,565,355.96	0.73	\$ 356,367,236.64	1.09	
2011	\$ 526,279,434.97	1.29	\$ 360,557,338.88	1.18	
2012	\$ 520,544,464.89	-1.09	\$ 356,477,723.53	-1.13	
2013	\$ 522,129,751.94	0.30	\$ 357,800,766.35	0.37	
2014	\$ 522,984,550.60	0.16	\$ 358,278,609.59	0.13	

By applying the national proportion of e-commerce to Missouri's total sales and use transactions, this study concludes that Missouri fails to collect a substantial portion of e-commerce sales and use tax revenue (U.S.Census Bureau, n.d.). As shown in Table 1 and

3

⁸ It is important to note that our calculations include taxable and nontaxable e-commerce (i.e. entities that hold a physical presence in the state vs. those that do not). However, given data limitations and e-commerce growth trends we assume that while this factor may inflate our calculations, it is not a significant enough discrepancy to compromise our final estimations.



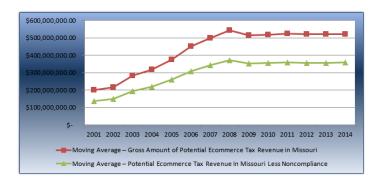
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When there is a clear trend, the variations within a series can be ironed out by what is known as the method of moving average. A moving average is calculated by averaging two or more consecutive values in the series and accepting the computed value to be the forecast for the next period" (Gupta, 2010, p.263). "Using this method, we would predict for Xt+1 as follows: X t+1=(Xt+Xt-1+Xt-2)/3 (Gupta, 2010, p.263)." Further, this method employs a smoothing technique which reduces the effects of random variation in the data and more clearly reveals underlying trends across years. It is important to note that this ensures more conservative predictions in which revenue forecasts are not overestimated or underestimated (Information Technology Laboratory, n.d.)

Graph 2, Missouri lost approximately \$2.3 billion in e-commerce tax revenue over a nine-year time span.⁸

Graph 3: Future Projections for Actual and Potential E-commerce Tax Revenue in Missouri (2010 to 2014)



Furthermore, on average, this represents an approximate revenue loss of \$259 million each year.

 Projections for Future E-commerce Tax Revenue Losses (2011 to 2014)

Given the growing trends of e-commerce depicted in Graph 1, it is important to make projections for potential e-commerce tax revenue losses in the future. Using a three year moving average and factoring in estimated noncompliance rates, this study made future estimations for uncollected e-commerce tax revenue in Missouri (shown in Table 2 and Graph 3). Missouri is predicted to lose \$1.4 billion from 2011 to 2014. This equates to \$358.2 million in annual average losses.

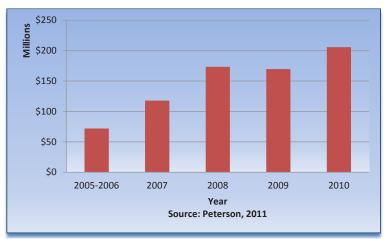
These findings clearly suggest that Missouri loses a significant amount of tax revenue and will continue to forgo an increasing amount with its current law and enforcement efforts.

E-commerce Policy Options

If Missouri shares the same concern as other states about tax revenue losses attributed to e-commerce, it might be of interest for the state to seek policy alternatives to mitigate this issue. Therefore, it is the recommendation of this study that the State of Missouri consider the following policy options:

•Short-Term: Enter into the Streamlined Sales and Use Tax Agreement

Graph 4: Total Amount of Additional E-commerce Tax Revenue Collected by Streamlined States (2005 to 2010)



The Streamlined Sales and Use Tax Agreement encourages entities that sell over the Internet or by mail order to collect taxes on sales to consumers who live in streamlined states. One option that Missouri can consider is to pass legislation which permits the State to enter into the Streamlined Sales and Use Tax Agreement in order to partially collect e-commerce sales and use tax revenue. The Streamlined Sales Tax Governing Board (2010) suggests that this Agreement has proven to be beneficial to many states and this is why so many others have passed conforming legislation allowing them to enter into the Agreement. Furthermore, all streamlined states have confirmed significant revenue gains that have resulted from entering into the Streamlined Sales and Use Tax Agreement. As shown in Graph 4, from 2005 to 2010, these streamlined states' departments of revenue reported that they were able to collect an added \$738.2 million in e-commerce tax revenue. Of this total, each state collected an average of \$30.7 million in e-commerce tax revenue over this time span (Peterson, 2011).

However, these benefits do not fully compensate for the tax revenue losses that result from e-commerce. Reddick (2006) notes states that enter this Agreement cannot bypass federal law because it is purely voluntary and does not allow the state to penalize businesses or consumers for not remitting e-commerce taxes. Therefore, many entities have elected not to collect and remit these sales and use taxes and, as a result, the amount of revenue gains attributed to the Agreement is minimal when compared to the calculated e-commerce tax revenue lost in this study and other research (Bruce et al., 2009; Streamlined Sales Tax Governing Board, 2011). Consequently, the Streamlined Sales and Use Tax Agreement does not fully resolve the revenue loss issue attributed to e-commerce. It is for this reason that this study suggests

The e-commerce estimates provided by the U.S. Census Bureau is only available from 2001 to 2009. Therefore, the moving average is used starting in 2007.



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⁹ Research has shown the current compliance rates for Business-to-Business and Business-to-Consumer is 94% and 66.1%, respectively (Bruce, et. al, 2009; Strong-Goeke, 2011). This study asserts that noncompliance does exist within the state and therefore, all estimations in the study have factored this component into the final calculations.

entering into the Agreement should only be considered as a short-term solution for the State of Missouri. If Missouri is to fully collect its projected e-commerce tax revenue, federal legislation is needed.

•Long-Term: Lobbying Congress to Pass New Federal Legislation that Readdresses the Commerce Clause

As previously mentioned, the U.S. Supreme Court ruled that states cannot require non-nexus businesses to collect and remit sales and use taxes to the consumer state. However, the justices inferred that Congress has the ability to readdress states' inability to tax inter-state commerce (Quill v. North Dakota, 1992). Therefore, Missouri has the option to join other states in lobbying Congress to pass new federal legislation, to permit them to collect sales and use taxes on e-commerce transactions across state lines. Interestingly, Congress is attempting to revisit inter-state commerce through proposed legislation called The Marketplace Fairness Act (S. 1832, 2011). This act simply allows states wishing to collect sales and use tax on out-of-state e-commerce transactions to either enter the Streamlined Sales and Use Tax Agreement or create a similar program of their own. The National Governors Association (2011) supports this piece of legislation as it finds that this act would allow states to collect \$22 billion in taxes. In addition, it could protect states from possible litigation and give them additional enforcement power to possibly lower noncompliance rates. Furthermore, it would level the playing field between brick-and-mortar entities and online retailers (National Governors Association, 2011).

Although this act faces many political hurdles in the policy process, it has garnered bipartisan support in the Senate (where Sen. Blunt (R-MO) and Sen. Durbin (D-IL) cosponsor), from major online companies (such as Amazon), and from lobbyist groups (such as the National Retail Federation which support the proposed legislation) (Hachman, 2011). Using Stallmann and Johnson's (2011) criteria for evaluating tax systems", The Marketplace Fairness Act would increase economic efficiency by altering the incentives for businesses and/or consumers to make economic and purchasing decisions based on the respective tax consequences (for example, it eliminates the incentive to purchase a product from a entity without sufficient nexus because it, too, is now subject to a sales and use tax). Furthermore, The Marketplace Fairness Act would provide simplicity for Missouri as it allows the state to join a system that is already established. Therefore, any incurred costs would be minimal for the state. It also gives Missouri

additional jurisdictional power to join states to enforce collection and remittance mandates as well as allows the state to re-interpret the nexus statute, if deemed necessary. The act would bring equity to sellers and consumers in the sense that it would be harder for individuals to evade paying sales and use taxes, and curtail market disadvantages for producers, thereby leveling the playing field for nexus sellers. Lastly, it would allow the state to collect additional revenue.

Conclusion

The findings of this study clearly indicate that Missouri has lost and will continue to lose a significant amount of sales and use tax revenue due to e-commerce. These findings have large implications for the state's tax system and economy. While historical tax revenue losses are foregone and unrecoverable, the state may certainly stand to benefit from establishing policy options and legislation which is capable of collecting future e-commerce tax revenue.

Missouri has two legislative options that it may pursue in order to collect e-commerce tax revenue that would otherwise be lost. First, Missouri has the option to pass legislation which allows the state to enter into the Streamlined Sales and Use Tax Agreement. Thus far, 24 states have entered into the agreement and have reported financial gains; however, this does not fully compensate for their total e-commerce revenue losses because it is limited by federal legislation (Peterson, 2011). Therefore, further legislative action is necessary if Missouri is to fully collect total e-commerce tax revenue in the state. Without conforming federal legislation that allows states to collect tax revenue from entities that do not have a physical presence in their respective state, substantial tax revenue losses will continue to

Acknowledgements

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¹¹ Stallmann and Johnson (2011, p.1) state, "Taxes may be evaluated according to their economic efficiency, the extent to which they keep the state competitive, as well as their administrative simplicity, revenue adequacy and fairness."



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Appendix A

Methodological Calculations for Estimating E-commerce in Missouri

In order to estimate historical and future tax revenue losses attributed to e-commerce, the following calculations and methods were employed.

Historical Estimations (2001 to 2009)

In order to estimate the amount of tax revenue lost due to e-commerce in Missouri from 2001 to 2009, the following calculations were made.

Step 1: Total Taxable Missouri Sales and Use Transactions * National E-commerce Percentage¹² =

Missouri's Total Taxable and Nontaxable E-commerce Transactions

These percentages were calculated by using e-commerce estimations provided by the U.S. Census Bureau in their E-Stats annual reports which estimate the amount of e-commerce throughout the U.S. for a given year. This was used because there are no current reliable e-commerce estimates for Missouri. See http://www.census.gov/econ/estats/archives.html



Step 2: Missouri's Total Taxable and Nontaxable E-commerce TransactionsMissouri Sales and Use Tax Rate =

Actual and Potential E-commerce Tax Revenue in Missouri

Step 3: Actual and Potential E-commerce Tax Revenue in Missouri – Total E-commerce Sales and Use Tax Noncompliance $^{\rm B}$ =

Actual and Potential E-commerce Tax Revenue in Missouri less Noncompliance

Future Estimations by Utilizing a 3 Year Moving Average (2010 to 2014)

Additionally, in order to project the amount of tax revenue that may be lost due to e-commerce in Missouri from 2010 to 2014, the following moving averages were calculated.

Sum(Actual and Potential E-commerce Tax Revenue in Missouri in 2007, Actual and Potential E-commerce Tax Revenue in Missouri in 2008, Actual and Potential E-commerce Tax Revenue in Missouri in 2009) / 3 =

Projected Actual and Potential E-commerce Tax Revenue in Missouri in 2010

Sum(Actual and Potential E-commerce Tax Revenue in Missouri in 2008,

Actual and Potential E-commerce Tax Revenue in Missouri in 2009, Actual and Potential E-commerce Tax Revenue in Missouri in 2010) / 3 = Projected Actual and Potential E-commerce Tax Revenue in Missouri in 2011

Sum(Actual and Potential E-commerce Tax Revenue in Missouri in 2009, Actual and Potential E-commerce Tax Revenue in Missouri in 2010, Actual and Potential E-commerce Tax Revenue in Missouri in 2011)

Projected Actual and Potential E-commerce Tax Revenue in Missouri in 2012.

Sum(Actual and Potential E-commerce Tax Revenue in Missouri in 2010, Actual and Potential E-commerce Tax Revenue in Missouri in 2011, Actual and Potential E-commerce Tax Revenue in Missouri in 2012) / 3 =

Projected Actual and Potential E-commerce Tax Revenue in Missouri in 2013

Sum(Actual and Potential E-commerce Tax Revenue in Missouri in 2011, Actual and Potential E-commerce Tax Revenue in Missouri in 2012, Actual and Potential E-commerce Tax Revenue in Missouri in 2013) / 3 =

Projected Actual and Potential E-commerce Tax Revenue in Missouri in 2014

Appendix B

Estimated E-commerce Non Compliance in Missouri (2001 to 2009)

Business-to-Business (6%) (Strong-Goeke, 2011) and Business-to-Consumer (33.9%) (Bruce et al., 2009) noncompliance rates for sales and use taxes in Missouri were obtained in order to calculate the total amount of e-commerce tax revenue that may go uncollected because businesses and consumers may fail to comply with tax laws. The total estimated amount of e-commerce noncompliance is provided below.

Year	2001	2002	2003	2004	2005	2006	2007	2008	2009
Noncompliance	\$ 62,548,906	\$ 67,582,250	\$ 88,183,020	\$ 98,745,229	\$ 117,241,230	\$ 140,041,874	\$ 155,626,189	\$ 170,688,160	\$ 163,280,008

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¹³See Appendix B.