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Digital Consumption Tax (D-Ct)

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PREFACE

Modern technology is dramatically changing the way consumption taxes are collected, but it is also changing the way policymakers assess the operation and impact of these taxes. Whether the design is a standard credit-invoice value added tax (VAT) of European design, or a retail sales tax (RST) of American design, or the credit subtraction VAT without invoices type of consumption tax (CT) of Japanese design, technology is having a profound impact.

Government certified transaction software is in place in the United States. The Streamlined Sales Tax offers taxpayers in 18 states the option of having their retail sales tax determined in a manner that not only assures accuracy, but which carries with it audit immunity. The software is provided at no cost to the taxpayer in instances where the taxpayer volunteers to collect the tax on out-of-state sales. Similar software certification regimes are under consideration in the Organization for Economic Cooperation and Development (OECD) that would be global in scope and handle the whole range of VAT transaction for a multinational enterprise. Discussions have commenced in various forums with the International Monetary Fund (IMF) and the United States Aid for International Development (USAID) on applications of this technology in developing country contexts.

Certification of transaction tax determinations and audit immunity are attributes of immense interest to multinational enterprises that are increasingly under pressure from securities and corporate governance regulations to assure accurate financial statements and operational cash flow figures. This pressure is global in scope, as indicated by: *Sarbanes-Oxley Act* in the U.S.; the *Loi de Sécurité Financière* in France; the *Companies Act of 2004* in the U.K; the *Corporate Law Economic Reform Program (part 9)* (CLERP 9) in Australia; the *Kouninkaikeishihou no ichibu wo kaisei suru houritsu* 2004-4-1 (An Act to Amend Part of the Certified Public Accounting Law) in Japan; and the recent modifications to the E.U.'s Eighth Corporate Directive (84/253/EEC).

But technology offers more than a linear application of digital processes to formerly paper based and manual systems. When certified transaction tax technology is merged with "smart" card technology in IDs that possess digitized biometric identity information an opportunity opens for hyper transformation of the consumption tax. It is entirely within the grasp of policymakers today to design a broad-based, single rate consumption tax that is truly and independently progressive. In many respects, this is the Holy Grail of consumption tax theory. Technology offers it to us today.

This text begins and ends with a tax reform. It starts with a proposal to the President's (George W. Bush's) Advisory Panel on Federal Tax Reform, and ends with a proposal for the consideration of Prime Minister Junichiro Koizumi's Tax Commission. Neither tax reform commission appears at the moment to be considering technological solutions, although both are critically interested in consumption taxes. In the U.S. case both of the identified structural barriers to a federal level VAT (federal-state coordination and regressivity) can be answered technologically. In the Japanese case a wholesale transformation of the CT is under consideration; one that would move the Japanese CT to an invoice system with multiple rates and a standard rate of 10 percent or higher. The structural departure that this proposal makes from the traditional Japanese CT need not be taken if technological solutions are applied, although the “double digit” rate increase seems to be a given for revenue reasons.

CHAPTER ONE: A PROPOSAL TO THE PRESIDENT'S ADVISORY PANEL ON FEDERAL TAX REFORM.

This Chapter proceeds in three parts. First, it introduces the President's Advisory Panel on Federal Tax Reform, for which the Digital VAT (D-VAT) proposal was first drafted. Secondly, it reproduces the D-VAT proposal. Finally, it presents a brief comparative assessment of the D-VAT and the Partial Replacement VAT (PR-VAT) that was considered by the Panel, but was not recommended in its final report.

1.1 – INTRODUCTION

In January 2005 President George W. Bush created the President's Advisory Panel on Federal Tax Reform.[1] The stated mission was to " … identify major problems and recommend options that would make the code simpler, fairer and more conducive to economic growth."[2] Two constraints on the Panel were that the recommended options had to be "revenue neutral" and at least one of the options "should use the Federal income tax as the base of its recommended reforms."[3]

When the Advisory Panel submitted its report to the Secretary of the Treasury on November 1, 2005 a traditional credit invoice VAT was among the options considered, but it was rejected.[4] The design considered was a Partial Replacement VAT (PR-VAT).[5] The PR-VAT is a credit-invoice VAT that is added-to and replaces portions of both the corporate and personal income tax under the Panel's proposed Simplified Income Tax (SIT) Plan.[6] The PR-VAT under the Panel's analysis would lower rates[7] and reduce the

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[1] 2006 CFR, Title 3, Part 1, Executive Order 13369 (January 7, 2006) as amended *available at* *http://www.taxreformpanel.gov/executive-order.shtml*

[2] SIMPLE, FAIR, AND PRO-GROWTH: PROPOSALS TO FIX AMERICA'S TAX SYSTEM, at 1.

[3] Executive Order 13369 *supra* note 1, at § 3.

[4] SIMPLE, FAIR, AND PRO-GROWTH *supra* note 2, at 191-206.

[5] The father of the partial replacement VAT in the U.S. tax debate is Professor Michael J. Graetz of Yale. MICHAEL J. GRAETZ, THE DECLINE (AND FALL ?) OF THE INCOME TAX (1997) at 262-67 (includes the first proposal of the partial replacement VAT); Michael J. Graetz, *International Aspects of Fundamental Tax Restructuring: Practice or Principles*, 51 U. MIAMI L. Rev. 1093, 1107 (July, 1997) (defending his proposal for a standard credit-invoice VAT, and questioning the tendency for "American exceptionalism" in the adoption of other approaches to taxing consumption); Michael J. Graetz, *100 Million Unnecessary Returns: A Fresh Start for the US Tax System*, 112 YALE L.J. 261, 299 (November, 2002) (indicating that the his partial replacement VAT would provide a standard deduction of $100,000 which would "… eliminate more than 80% of the income tax returns that currently are filed each year and would allow substantial simplification of the limited income tax that would remain."); Michael J. Graetz, *A Fair and Balanced Tax System for the 21st Century*, (powerpoint) President's Advisory Panel on Federal Tax Reform (May 11, 2006) *available at* http://www.taxreformpanel.gov/meetings/docs/graetz_052005.ppt.

[6] The Panel proposed two options: a Growth and Investment (GIT) Plan and the Simplified Income Tax (SIT) Plan. On the personal income tax side, both GIT and SIT simplify the current personal income tax in substantially the same manner. They differ considerably however, with respect to the taxation of savings. On the business income tax side the

[7] *Id.* at 191-92, & Table 8.1 (explaining that under the Partial Replacement VAT the top marginal rate for individuals and corporations would be the same as the single VAT rate of 15%).

number of income tax returns filed.[8] "[T]he Panel could not reach a consensus on whether to recommend a VAT option… [but nevertheless] view[ed] a Partial Replacement VAT as an option worthy of further discussion. … [and decided to set out the] issues that policymakers would need to consider in evaluating such a proposal."[9]

The basic disagreement among the Panel members that prevented the recommendation of a PR-VAT option centered on two issues (1) a perception that significant compliance and administrative burdens would arise if a new (additional) tax were considered, and (2) a perception that the PR-VAT was a "money machine" that would lead to a larger federal government.[10]

The analytical section of the report the Panel discusses four specific aspects of the PR-VAT. First – the regressivity issue – because the PR-VAT is added to the SIT under the option considered by the Panel an explanation is provided of the adjustments that were necessary to retain the required distributional neutrality of the tax system when the regressive PR-VAT is added to the otherwise progressive SIT.[11] Second – the design issues – the Panel explains the fundamental design assumptions of the PR-VAT that it worked with.[12] Third – the political-economic issues – the Panel expands on the concerns that the PR-VAT, like all VATs, is a "money machine."[13] Finally – the tax policy issues – the Panel presents seven tax policy considerations that it believes future planners should consider when evaluating a PR-VAT.

The seven tax policy considerations, captioned the "advantages and disadvantages of adopting a VAT," are very briefly sketched. As a whole, the Panel weighs these tax policy considerations heavily in favor of the PR-VAT. The score is six to one. The only "major challenge" listed is the coordination of a federal VAT with the state sales taxes. Each of the other factors: (1) economic growth,[14] (2) U.S. competitiveness,[15] (3) international administrative experience (best practices),[16] (4) compliance and

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8 *Id.* at 194 & Box 8.1 (explaining that approximately 101.1 million people would not have any income tax liability under the Partial Replacement VAT).

9 *Id.* at 192.

10 *Id.* at 192, 203-05.

11 *Id.* at 193-96 (considering the problem of the regressivity of a VAT, the Panel adjusts the SIT to grant relief to the poor through increasing the Family Credit and the Work Credit.)

12 *Id.* at 197-99 (setting out the design assumptions of a broad base, the use of the credit-invoice method, border adjustability, a single uniform rate, and sufficiency of the rate in terms of revenue yield to justify the administrative burdens imposed by the tax).

13 *Id.* at 203-05 (setting out the perception of some Panel members that a VAT promotes large government, balanced by a recognition that empirical studies do not confirm this perception).

14 *Id*. at 200 (indicating that "economists agree" that a PR-VAT would spur economic growth because it has a "lower excess burden than most other taxes," and because the PR-VAT would "lower the marginal income tax rates on businesses and individuals").

15 *Id*. at 200 (indicating that by lowering the corporate income tax rate the PR-VAT should "improve incentives for investment of capital in the United States," and it would be "compatible with existing bilateral tax agreements")

16 *Id.* at 201 (indicating that global "best practices" should be of considerable assistance to the IRS on enforcement issues, and that U.S. multinationals are already very familiar with the tax, so the learning curve is short).

administrative costs,[17] (5) noncompliance or the tax evasion rate,[18] and (6) macroeconomic effects of transition,[19] all favor adoption of a PR-VAT.

Thus, the Panel's assessment of the barriers to adoption of the PR-VAT in the US can be summarized as of two types: tax design barriers (the state sales tax coordination issue,[20] and the regressivity issue[21]) and a political barrier (the "money machine" perception that VATs always lead to a larger government). Both of the tax design barriers can be solved with modern technology, and are the subject of two of the chapters of this book. The perception that the VAT is an out-of-control money machine is a political judgment, not a tax policy judgment, and is not considered.

A technology-intensive solution to the tax design problems of a PR-VAT was presented for the Panel's consideration – the D-VAT. That solution was posted on the Panel's web site on April 28, 2005 as a response to Request for Comments #2.[22] That proposal is reproduced below:

1.2 – THE DIGITAL VAT (D-VAT): A PROPOSAL FOR THE PRESIDENT'S ADVISORY PANEL ON TAX REFORM[23]

Executive Summary:

This is a proposal for a low rate (5 to 10%) Digital VAT (D-VAT). Revenue neutrality is achieved by linking D-VAT revenues with an adjustable standard deduction on individual income tax returns.

The D-VAT is a technology-intensive version of the ABA Model VAT.[24] It adopts electronic and third-party tax collection provisions from the two EU *Council Directives*[25] and a multi-state harmonization effort of the US States.[26]

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[17] *Id.* at 201 (indicating that although business administrative cost would increase with an additional tax, government enforcement costs per dollar of revenue should fall from the approximate 13 cents in income tax to the roughly 3 to 5 cents per dollar of the E.U. VAT).

[18] *Id.* at 202 (suggesting that noncompliance rates for a VAT (4 to 17.5%) should be "somewhat lower" than the 18 to 20% noncompliance income tax rate under current IRS estimates, because "… compliance rates are highest where there is third-party information reporting or withholding").

[19] *Id.* at 203 (indicating that there may be some macroeconomic disruptions associated with adopting a PR-VAT, it would be less than a either a full replacement VAT or retail sales tax).

[20] *See infra.* Chapter 2.

[21] *See infra.* Chapter 4.

[22] Richard T. Ainsworth, *The Digital Vat: A Proposal For The President's Advisory Panel On Tax Reform*, (Apr. 28, 2005) *available at* http://comments.taxreformpanel.gov/_files/DIGITALVATPresidentsAdvisoryPanelfinal.doc

[23] The author would like to thank his VAT class at the Boston University School of Law's LLM program for helpful contribution to this paper. They were the first to respond to this Digital VAT proposal, question #4 on their final exam. Those student are: Patrick Callihan, Antonio DiBenedetto, Kristofor Erickson, Richard Fonte, Charles Maniace, Mikael Nacim, Chris Potter, Andrew Shact, Roberto Silva, and Keith Woodman.

[24] ALAN SCHENK, VALUE ADDED TAX – A MODEL STATUTE AND COMMENTARY (1989).

[25] *Council Directive* 2001/115/EC of December 20, 2001. At: http://europa.eu.int/eur-lex/pri/en/oj/dat/2002/l_015/l_01520020117en00240028.pdf. *Council Directive* 2002/38/EC of May 7, 2002. At: http://europa.eu.int/eur-lex/pri/en/oj/dat/2002/l_128/l_12820020515en00410044.pdf.

The D-VAT encourages states to piggy-back on a federal database of transaction records. It facilitates fiscal federalism without requiring harmonization of State-Federal tax bases or source rules.[27] State access to this database resolves *Quill v. North Dakota* 504 US 298 (1992) concerning tax collection by non-nexus remote sellers.

The D-VAT will authorize certified service providers (CSPs) to act as third-party collecting agents, at no cost to the taxpayer. Software variations of this theme, certified automated systems (CASs) and certified proprietary systems (CPSs) will further facilitate administration and compliance. A limited small business exception will allow certain small businesses to comply with the D-VAT through traditional paper means.

Through the use of a D-VAT Card, provided to individuals in need, the D-VAT will surgically target point-of-sale tax relief to certain individuals, for the limited category of purchases for which tax relief has been determined to be appropriate.

IV. Description of Proposal.

This is a proposal for a Digital VAT (D-VAT). The D-VAT is a destination based, credit-invoice VAT following the EU pattern as set out in the ABA Model VAT.[28] The D-VAT makes significant changes in the administrative provisions of the ABA Model VAT, but adopts most other provisions.

The D-VAT is a technology-intensive, fully automated VAT. All invoices, statements, reports, returns, and notices are required to be electronic,[29] with limited exceptions for small businesses and other groups that will be permitted to comply through paper processes.[30] The Digital VAT requires uniform digital identification of each good or service transaction in the US economy. Federally defined codes will be similar, if not identical to, the EU's CN8 codes[31] used to identify movements of goods or the UN CPC[32] codes used to identify goods and services.

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[26] STREAMLINED SALES AND USE TAX AGREEMENT, *available at*: http://www.streamlinedsalestax.org/Final%20Agreement%20As%20Amended%2011-16-04.pdf

[27] Harmonization is required under both National Sales Tax and Fair Tax proposals.

[28] A more recent and more complete Model VAT, drafted by the same principal author, called *Vatopia*, is available on the IMF web site at: http://www.imf.org/external/np/leg/tlaw/2003/eng/vvat.pdf

[29] Tax compliance technology is available today to fulfill all requirements. Some aspects are operational and in use in the EU. Other aspects are in the final stages of adoption in the retail sales taxes at the state level in the US. See: www.taxware.com

[30] These rules should be provided by regulation, and can include paper filing exceptions based on religious or other objections or other impediments to technology usage.

[31] The EU CN8 (Combined Nomenclature in 8 digits) can be found at: http://europa.eu.int/comm/eurostat/ramon/nomenclatures/index.cfm?TargetUrl=LST_NOM_DTL&StrNom=CN_2005&StrLanguageCode=EN&IntPcKey

[32] UN CPC (Central Product Classification, Version 1.0) can be found at: http://unstats.un.org/unsd/cr/registry/regcst.asp?Cl=3

The D-VAT will certify service providers (CSPs)[33] whose automated invoicing, tax calculation, collection and return preparation systems conform to the highest standards of accuracy. CSPs will allow outsourcing of VAT compliance obligations to trusted third parties, thereby improving accuracy and efficiency. As under the *SSUTA*, use of a CSP will be at no cost to the taxpayer,[34] and except for fraud, will immunize users from liability for calculation or reporting errors.[35] The D-VAT will also certify third-party software systems (CAS),[36] and proprietary systems (CPS).[37]

D. Workability: Theoretically, Practically, and Politically

Theoretically, this is a truly modern taxing scheme. Recent studies indicate that 93 % of the three billion gigabytes of data generated worldwide (in 1999) was computer generated,[38] and of the 5 exabytes of new information created in 2002, 95% was stored on magnetic media, mostly hard disks.[39] It may be presumed therefore that almost all enterprise source data content for operations, accounting, audit, as well as tax filing, financial reporting, regulatory submissions, and almost all other purposes is digitized both in generation and in storage. If tax data has no paper and ink parentage, why should paper-based tax reporting be require? And why, particularly, should a transaction tax be other than fully automated?

Practically, all the essential elements of the D-VAT are already are, or soon will be in operation. As of May 7, 2002 exclusive use of digital documentation, reporting, and returns technology was used for certain digital sales transactions in the EU under a special scheme.[40] This EU scheme is elective. Under the D-VAT however, electronic filing is mandatory. The CSP/ CAS/ CPS automated calculation, collection, and reporting function is in the process of being implemented this year in 10 of the 45 states that have a retail sales tax under the *SSUTA*,[41] and could easily be extended to a federal transaction tax.

Politically, the D-VAT as a federal consumption tax proposal "fits" with, rather than disrupts state tax regimes. The Digital VAT does not abolish the federal income

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[33] SSUTA *supra*, note 26, at § 501(B).
[34] *Id.* at § 601-3 provides the terms under which the States will compensate the CSPs.
[35] *Id.* at § 306 provides for this relief of liability.
[36] *Id.* at § 501(C).
[37] *Id.* at § 501(D).
[38] School of Information Management and Systems at the University of California at Berkeley study titled "*How Much Information.*" Available at http://www.cni.org/tfms/2000b.fall/handout/How-KSwearingen2000Ftf.pdf (last visited 12 April 2004).
[39] Peter Lyman and Hal R. Varian, *How Much Information? 2003* (School of Information Management and Systems at the University of California at Berkeley, release date October 27, 2003) in the Executive Summary. Available at: http://www.sims.berkeley.edu/research/projects/how-much-info-2003/printable_report.pdf
[40] *Sixth Council Directive* 77/388/EEC of May 17 1977, 1977 O.J. (L 145) 1, at Art. 26c *available at* http://europa.eu.int.
[41] These states must represent 20% of the US population for the *SSUTA* to be effective. SSUTA *supra*, note 26, at § 701.

tax,[42] although a large standard deduction will eliminate the need for many to file. State income taxes can continue to "piggy-back" on the federal system. The D-VAT does not pressure state and local sales tax regimes to adopt the federal VAT. The currently effective retail sales taxes (RSTs) can operate side-by-side with the D-VAT. The RSTs do not need to adopt the federal tax base,[43] nor do they need to adopt federal sourcing conventions.[44]

The D-VAT will nevertheless encourage the 7,588[45] state and local retail sales taxes to "piggy-back" on the D-VAT *database*. States with an origin-based sales tax will be able to access invoice records in the D-VAT database to confirm total sales of goods and services from a particular business location. State auditors will be able to sort data by product codes to identify state or locally taxable items. The same would occur in sates with destination-based systems. In this instance state auditors would access the D-VAT database on the purchasing side to conduct use tax audits.

State access to the federal database can be national in scope, and will allow states to sort for sales to consumers within their state by out-of-state retailers, particularly those with insufficient nexus. Digital invoices would contain names, and address of the ship-to location. The same information would be available for the bill-to location, if different. This would obviate the need to for the US Congress to overturn the US Supreme Court's decision in *Quill v. North Dakota* 504 US 298 (1992) which blocks states from requiring non-nexus retailers from collecting tax sales.

E. Exceptions to Digital Requirements.

The D-VAT has two exemptions to the mandatory digital recordkeeping rules, one for small businesses, and another for invoices issued to final consumers. The small business exemption will allow certain business to submit paper returns, statements and

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[42] This is one of the primary difficulties with each of the hybrid models. The impact from these proposals is felt in both corporate and individual state income tax schemes. *Corporate Tax Impact*: Each of the hybrid, two-tiered consumption taxes derived from the Hall-Rabushka Flat Tax proposal (Armey's Freedom and Fairness Restoration Act; Smith and Shelby's Tax Simplification Act; Spector's Flat Tax Act; Bradford's X-Tax; Nunn and Domenici's USA Tax Act; English's Simplified USA Tax Act) replace the federal corporate income tax with a subtraction VAT. Most states currently base their corporate taxes on the federal. 39 of the 45 states imposing corporate net income taxes directly incorporate federal law, and start their income calculations with federal income determinations. Thus this federal corporate change will require parallel state changes. *Individual Income Tax*: Most states also impose an income tax on individuals. This tax too commonly piggy-backs the federal tax. There are a number of different ways that this piggy-backing occurs: 27 states adopt the federal adjusted gross income as their tax base, 10 states base their tax on federal taxable income, and 2 states impose a tax only on federally defined interest and dividends. Only 5 states do not conform to the federal income tax. As a result, state and local income tax structures will inevitably need to change if the current system of piggy-backing the federal tax were to continue. The alternative, of course, is for the states to "go it alone" at a significant cost in resources.

[43] A comprehensive federal VAT base would reach 84% of GDP, whereas the average state and local base covers 36% of GDP. The most notable differences are in the exclusion of services from the state tax bases.

[44] Of the 7,588 retail sales taxing jurisdictions in the US, also based recent count with the best available information, 46.2% source by origin, and 53.8% source by destination.

[45] This figure is based on a recent count with the best available information, and represents 47 state level jurisdictions (including Washington, D.C.), 1,732 counties, 5,571 cities, and 229 districts.

reports, in lieu of the digital documentation that is generally required.[46] What constitutes a "small business" is left for regulations. Authority to exclude taxpayers from digital filing will also be allowed based on religious[47] or other hardship principles.

The D-VAT also provides an exemption to dispense with digital invoices (sales receipts) issued to final consumers (supermarket receipts, department store sales slips). These invoices are generally permitted in paper. The retailer's records of final sales transactions are still required to be kept digitally for return and reporting purposes. This exception is needed to make the transition to the D-VAT as smooth as possible. Final consumers are not taxpayers in a VAT system. They file no returns, reports or statements with the taxing authority, and would have no need for a digital record of purchases.

F. Regressivity: The D-VAT Card.

The D-VAT has the ability to surgically target tax relief. The digital core of the D-VAT allows use of procurement card technology to selectively remove the tax from specified transaction types, and it will do so on an individual-by-individual basis.

With the D-VAT it will be possible for a low income individual to qualify for exemption from the D-VAT on purchases of necessities (food, clothing and medical services, for example). A D-VAT Card issued to this individual would be scanned at the point of sale to remove the Digital VAT from the appropriate items. In effect, these purchases would be selectively zero-rated. Other individuals purchasing the same items would be subject to tax. Thus, the D-VAT Card would function like a preferred customer cards at most supermarkets. Universal product codes would allow the exemption to be tailored to the specific circumstances of the qualifying individual.

Digital VAT Cards would be valid nationally, and issued monthly. Certified service providers (CSP's) or the software employed in certified automated systems (CAS's) or certified proprietary systems (CPS's) would be required recognize D-VAT Cards, and zero-rate appropriate transactions. Dollar limitations could be included so that an individual in a particular income bracket would qualify for D-VAT exemptions up to, but not exceeding certain limits.

The technology to support D-VAT Cards is readily available commercially.[48] Variations of this technology are used by all international businesses that have VAT reporting obligations, as well as any commercial enterprise in the US that uses automated systems to determine domestic sales and use tax obligations. These software packages

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[46] The ABA Model differs from many VATs by not having a *de minimus* or small business exemption. The Commentary observes that states are successful in collecting retail sales taxes, even from small retailers. Under the D-VAT exempting small businesses would impact state "piggy-backing" on the federal database. Alan Schenk, reporter, *Value Added Tax – A Model Statute and Commentary*, page 90. *Vatopia* provides a small business exception with a gross sales threshold at §11; Schedule V.

[47] See for example difficulties the Ohio is encountering with the Amish community and requirements in the SSUTA. Steven S. Woo, *Ohio Lawmaker Calls for Sourcing Amendment to Streamlined Agreement* STATE TAX NOTES (Nov. 1, 2004) [Doc. 2004-20829; 2004 STT 211-1].

[48] *See, e.g.*, http://www.expandyourbusiness.com/about.htm

are designed to integrate with industry standard ERP systems (SAP, PeopleSoft, Oracle, etc.) to determine multi-jurisdictional tax obligations.

V. Specifically Required Descriptions.

A. Tax Base:

The tax base of the D-VAT is consumption. Tax is imposed on the sale of all goods and services in the US economy. Credit is allowed for all business inputs. An immediate credit is allowed for capital purchases.[49]

B. Exemptions, deductions, credits and exclusions.

The D-VAT is destination-based. Tax is imposed on the importation of goods and service. Exports are exempt.[50] Casual sales are included in the base, but all transactions in intangible property are excluded.[51] Financial services are taxable, but financial intermediation services are not.[52]

C. Tax rate(s).

The rate of tax under the D-VAT is intended to be low (5 to 10%). The D-VAT imposes a single rate of tax.[53] However, because of the tax-neutrality linkage of the D-VAT with the standard deduction on the individual income tax return, adjusting the D-VAT rate becomes a policy level decision whereby the federal tax system can become more consumption-based with a higher D-VAT rate, or more income-based, with a lower D-VAT rate. Policy makers could toggle back and forth annually in response to perceived needs for different relative measures of income or consumption-based revenue.

G. Treatment of charitable giving.

Under the D-VAT gifts and gratuitous transfers are excluded from tax, because they are not sales and do not arise in a business context.[54]

H. Collection methods.

The D-VAT is collected at each stage of production through automated systems (CSP/ CAS/ CPS) in a manner similar to that developed under the *SSUTA.* All invoices,

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[49] ABA *supra* note 24, at §4016(a)(1); VATOPIA *supra* note 28, at §24(4)(a).
[50] ABA *supra* note 24, at §4003; VATOPIA *supra* note 28, at §17 and Schedule I.
[51] ABA *supra* note 24, at §4031(a) defines taxable property as tangible property. Services are taxed, but intangible property is omitted §4001; VATOPIA *supra* note 28, at §9(1).
[52] ABA *supra* note 24, at §§4035(a) and 4011. The taxation of financial intermediation services is an open question under §4035(b). VATOPIA provides for the exemption of financial services under regulatory authority, VATOPIA *supra* note 28, at Schedule II(2).
[53] ABA *supra* note 24, at §4001(b); VATOPIA *supra* note 28, at §9(1).
[54] ABA *supra* note 24, at §4031(b-d); VATOPIA *supra* note 28, at §2 (a gift is not consideration).

records, returns, reports, and statements maintained or filed by taxpayers are required to be automated. All transactions are identified through uniform good and service codes.

I. Treatment of home ownership.

The sale of real estate is subject to tax under the D-VAT.[55]

J. Treatment of businesses.

Under the D-VAT businesses will collect VAT on amounts sold, and take a credit for taxes paid on business inputs. Returns, invoices and all other records will be maintained and reported electronically. Small businesses may, subject to regulation, be allowed to maintain paper recordkeeping and reporting systems.

VI. Impact of Proposal Relative to Current System.

A. Simplicity (including transparency and stability)

The D-VAT's simplicity is in its automation. Tax amounts are determined, assessed, collected and reported through digitized process that removes apparent complexity from the system. The D-VAT's database will be the engine that drives the automation of the state and local retail sales taxes. States will define tax bases in manner that reflects federal definitions, thus further simplify national transaction tax reporting and collection mechanisms.

The D-VAT tax will be fully transparent, on both transactional and aggregate levels. An invoice will accompany each final purchase for consumption. The D-VAT will be separately stated. In addition, because national D-VAT revenues will be used to determine the size of the standard deduction permitted on individual tax returns, aggregate D-VAT revenues will be notable as well as visible tax.

Because the D-VAT is a direct assessment of national consumption it will be a very stable revenue source.

E. Fairness.

The D-VAT enhances both horizontal and vertical equity elements of the federal tax system. Horizontal equity is enhanced because everyone, except those in most need, is subject to the same measure of tax on all consumption, broadly defined to include all goods and services.

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[55] ABA *supra* note 24, at §4003(a) and the ABA Model provides for a deferred input credit for residential real estate §4019; VATOPIA *supra* note 28, at § 86(6)

Vertical equity is enhanced in two ways: (1) through the D-VAT Card, and (2) through the D-VAT/ Standard deduction linkage. Individuals in greatest need are able to get immediate relief from the D-VAT through use of the D-VAT Card. This relief is targeted to individuals in need, and for items where the need is determined to be appropriate.

In addition, horizontal equity is enhanced because D-VAT revenues are directly linked to the size of the standard deduction allowed on individual income tax returns. For example, annual D-VAT revenue could be determined as of November 30th. This amount will then be placed in a formula to directly calculate the standard deduction on the annual income tax return for the same calendar year. The D-VAT tax burden on high consumption will be directly passed to individuals in the lowest income brackets. In times of greatest economic growth and consumption, relief will be greatest. In times of economic difficulty and low consumption, the tax burdens will be more widely shared through the income tax regime. The D-VAT would be a publicly visible representation of how the country was sharing most in the best of times, and collectively pulling together when times were not as good.

F. Economic growth and competitiveness.

Consumption-type VAT's are generally acknowledged to increase growth and competitiveness because they tax consumption, and relieve saved income and investment from the burden of double taxation.

G. Compliance and administrative costs.

A digital VAT that contains provisions for certified software systems (CSP/ CAS/ CPS) will significantly reduce taxpayer compliance costs. This is particularly the case when CSP's provide tax determination and reporting services at no cost to the taxpayer, as under the *SSUTA*. In addition, because software certification means that taxpayers will be relieved of audit liability, then barring fraud, additional taxpayer resources will be freed for income producing activities.

The D-VAT also reduces administrative costs. The appropriate administrative cost comparison is between collecting "X" amount of income through the D-VAT, as opposed to collecting that same "X" amount of income from taxpayers in the lowest income brackets. This cost comparison is an efficiency assessment of the D-VAT/standard deduction linkage. Most low-income individuals file tax returns on paper, whereas all D-VAT returns are automated. It is unlikely that hundreds of thousands of annual paper returns could ever be processed more effectively than harmonized, universally coded, automated returns and reports from retail establishments. In addition, if state auditors, as expected, take advantage of access to the federal database, the administrative costs of verifying state and local returns will also be reduced.

1.3 – COMPARISON
D-VAT (as proposed) v. PR-VAT (as considered)

Although both the D-VAT, as proposed, and the PR-VAT, as considered by the Panel, are both partial replacement VATs there are a number of differences between them aside from the explicit digital requirements of the D-VAT and the implicit paper-permissive context basis of the PR-VAT. These differences are in the tax rate proposed, the details of the tax base considered, the replacement mechanism adopted, and the regressivity counterweight employed.

1.3.1 – *VAT Tax Rate*

The D-VAT proposes a tax rate between 5 and 10%, while the PR-VAT proposes a rate of 15%. Both proposals set a rate well below the 30-40% rate that would be required for a broad based, full replacement VAT.[56] The D-VAT is positioned at the very low end of the range proposed by Professor Graetz for his PR-VAT.[57] The Panel takes the high end of Professor Graetz range, and proposes a 15% rate. The Panel determined that this rate was sufficient to replace the income that would be lost if the corporate and individual rates under the SIT were similarly lowered to 15%.[58]

1.3.2 – *Tax Base*

The D-VAT follows the ABA Model VAT and Vatopia to define the tax base. Detailed rules are set out in both models.[59] The D-VAT tax base is, however, broader than both of these models, because even though the traditional lists of items that are tax-favored (zero-rated or exempt) are carried over to the D-VAT, the D-VAT does not favor them universally. In the D-VAT these goods and services are generally taxed, and are selectively tax-favored when purchased by an individual with an exemption certificate embedded in a valid D-VAT Card.

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[56] JAMES M. BICKLEY, VALUE ADDED TAX AS A NEW REVENUE SOURCE, Congressional Research Service, IB91078 (updated, Mar. 19, 2003) at 1-2 (indicating that for fiscal year 2000 each 1% rate for a VAT in the U.S. would raise net revenues of approximately $37.8 billion on a broad base, and approximately $20.0 billion on a narrow base) *available at*: http://ncseonline.org/nle/crsreports/03May/IB91078.pdf. WILLIAM G. GALE, THE NATIONAL RETAIL SALES TAX, WHAT WOULD THE RATE HAVE TO BE? Urban-Brookings Tax Policy Center (Apr. 27, 2005), at *available at*: http://taxpolicycenter.org/publications/template.cfm?PubID=9251 (considering a national retail sales tax, functionally equivalent to a national replacement VAT, Gale concludes in the opening abstract that, "[e]ven if there were no avoidance and no evasion, however, the required tax rate for this proposal [a full replacement national RST] over the next 10 years would be 31 % tax-inclusive (44% tax-exclusive)."

[57] GRAETZ, THE DECLINE (AND FALL?) *supra 5*, at 262 (indicating that at 12% VAT would cut the individual and corporate income tax in half); Michael J. Graetz, *100 Million Unnecessary Returns*, *supra* note 5, at 282 (indicating that, "[a] VAT imposed at a 10% to 15% rate could finance an exemption from income tax for families with $ 100,000 of income or less and would allow a vastly simpler income tax at a 25% rate to be applied to incomes over $ 100,000."); Graetz, *A Fair and Balanced Tax System, supra 5*, at 7 (indicating in his presentation to the Panel on May 11, 2006 that the rate should be between 10 and 14%). The ABA Model VAT has no recommended rate; Vatopia has a single 10% rate. ABA *supra* note 24, at §4001(b); VATOPIA *supra* note 28, at §9(1).

[58] SIMPLE, FAIR, AND PRO-GROWTH, *supra* note 2, at 191.

[59] ABA *supra* note 24, at §§4012; 4014; 4023; VATOPIA *supra* note 28, at §9; SCH. I, II & III.

The PR-VAT takes a different approach. In the PR-VAT there are very few zero-rated goods and services,[60] very few exempt services,[61] and very few transactions out-of-scope of the tax.[62] However, the tax-favored status of these goods and services are universal not selective. Thus, the PR-VAT is a "… broad based VAT that taxes virtually all goods and services using a single rate …"[63] Nevertheless, for purposes of making a rough comparison of the revenue-yield of the D-VAT and the PR-VAT, the tax bases can be considered the same.

1.3.3 – *Replacement Mechanism*

Although both the D-VAT and the PR-VAT are partial replacement VATs, the mechanism used to "replace" the income tax with the consumption tax under each is very different. The D-VAT, following the lead of Professor Graetz,[64] replaces the income <u>tax base</u> (although the D-VAT does so only with respect to the personal income tax.)[65] The PR-VAT instead, replaces the <u>tax rate</u> (and does so with respect to the personal and corporate income taxes.)[66]

1.3.4 – *Regressivity Counterweight*

Both the D-VAT and the PR-VAT are concerned with adding an inherently regressive VAT into an otherwise progressive income tax regime. The D-VAT and PR-VAT approach to this problem are significantly different. The D-VAT has a technological solution, the D-VAT Card. The PR-VAT has a traditional solution, an income tax credit.

The D-VAT Card is an ID card embedded with a chip that interacts with automated tax calculation systems to zero-rate specific transactions for individuals in need. This attribute of the D-VAT allows the D-VAT base to be as broad as the PR-VAT, and it allows surgical relief from the tax at the time of purchase for people in need. The PR-VAT on the other hand, taxes the purchases of necessities by the poor, and provides relief through the non-refundable Family Credit, and the refundable Work

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[60] SIMPLE, FAIR, AND PRO-GROWTH, *supra* note 2, at 250 (zero-rated transactions are non-commercial government services and primary and secondary education).
[61] *Id.* at 250 (exempt transactions are charitable and religious services as well as food produced and consumed on farms).
[62] *Id.* at 250 (residential housing and financial services are out-of-scope).
[63] *Id.* at 250.
[64] GRAETZ, THE DECLINE (AND FALL?) *supra 5*, at 265 (considering various standard deductions of $50,000, $75,000 and $100,000); Michael J. Graetz, *100 Million Unnecessary Returns, supra* note 5, at 286 (proposing a $50,000 and $100,000 standard exemption for single and married filers); Graetz, *A Fair and Balanced Tax System, supra 5*, at 4 (reaffirming the $50,000 and $100,000 exemption amounts in his presentation to the Panel on May 11, 2006).
[65] The D-VAT proposes a flexible (adjustable) linkage between the standard deduction on the personal income tax return and revenues generated by the D-VAT. The reason for this approach was to achieve the Panel's goal of revenue neutrality year after year (D-VAT at II. (D)).
[66] SIMPLE, FAIR, AND PRO-GROWTH, *supra* note 2, at 191-92.

Credit. These provisions were used by the Panel to maintain the required "distributional neutrality" with the current income tax when it considered the PR-VAT.[67]

Chapters Two and Three will apply the D-VAT concept first in a U.S. context (where the interaction of a federal VAT with the large number of sub-national retail sales taxes creates the special coordination problems the Panel referenced) and then in a developing country context (where the D-VAT is assumed to selectively modify certain aspects of a traditional VAT currently in use.)

[67] SIMPLE, FAIR, AND PRO-GROWTH, *supra* note 2, at 193-96.

CHAPTER TWO: THE DIGITAL VAT (D-VAT) IN THE U.S.

This chapter applies the D-VAT concept to the U.S. It is a detailed consideration of the proposal made to the President's Advisory Panel on Federal Tax Reform. It tackles one of the two tax design barriers to the adoption of a partial replacement VAT in the U.S. – state tax coordination.[68] The concerns that tax policy has with the regressivity of the VAT are considered in a later chapter.[69]

This chapter proceeds in five parts. An introduction presents the tax policy debate over the adoption of a full replacement or partial replacement consumption tax at the U.S. federal level. The next two parts concern proposals for full replacement consumption taxes – the two-tiered consumption taxes are considered first, followed by the national retail sales tax proposals. The traditional credit-invoice VAT offered by Professor Graetz as a partial replacement for the personal and corporate income tax followed by the D-VAT. A brief conclusion reinforces the D-VAT's capacity to facilitate the digital piggy-backing of sub-national RSTs on the federal level D-VAT.

2.1 – INTRODUCTION

The most sustained U.S. tax policy debate of the past 30 years concerns proposals for full or partial replacement of the Federal Income Tax with a consumption tax.[70] Public finance economists and legal tax policy scholars have challenged[71] and defended[72] the current income tax system on grounds of fairness,[73] efficiency, [74] and simplicity.[75]

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[68] *See supra* text accompanying note 20.
[69] *See infra* Chapter 4.
[70] The role of the U.S. Treasury in initiating this debate has been significant. Many of the central issues gained prominence through the 1977 tax reform study, U.S. DEP'T. OF THE TREASURY, BLUEPRINTS FOR BASIC TAX REFORM (1977). This study called for integration of the corporate and individual income taxes, capital gains taxation at full rates (after adjusting for inflation), and broadening the tax base. In 1984 the Treasury put forward a cash flow or consumption-based income tax in U.S. DEP'T. OF THE TREASURY, TAX REFORM FOR FAIRNESS, SIMPLICITY AND ECONOMIC GROWTRH (1984). The1984 study examined a "pure income tax," one that taxed capitals gains at full, normal rates, had true economic depreciation allowances with inflation adjustments for receipts and inventories, partial integration of corporate and individual income taxes through a deduction for corporate tax of one-half of the dividend paid, a broadened base and lower rates. In 1984 a second, revised edition of the BLUEPRINTS (1977) was published. DAVID F. BRADFORD AND THE U.S. TREASURY TAX POLICY STAFF, BLUEPRINTS FOR BASIC TAX REFORM (2d ed. 1984).
[71] Critics can be classified by their solutions. GRAETZ, THE DECLINE (AND FALL ?) *supra* note 5 (chronicling the failures of the income tax and proposing a VAT); ROBERT E. HALL & ALVIN RABUSHKA, THE FLAT TAX (2nd ed. 1995) (examining flaws in the current system and proposing a hybrid consumption tax with a subtraction VAT on business income and a wage tax on individuals); EDWARD J. MCCAFFERY, FAIR NOT FLAT: HOW TO MAKE THE TAX SYSTEM BETTER AND SIMPLER (2002) (examining present system and proposing a hybrid national retail sales tax).
[72] Richard A. Musgrave, *In Defense of an Income Concept*, 81 HARV. L. REV. 44 (1967) (Presenting the classic theoretical defense of a concept of income. The importance of accretion within this definition is defended as a critical facet of tax base measurement. Musgrave's defense directly responds to the *ad hoc* approach to income definition advanced by the comprehensive tax base advocate Boris Bittker, *A "Comprehensive Tax Base" as a Goal of Income Tax Reform*, 89 HARV. L. REV. 925 (1967); John K. McNulty, *Flat Tax, Consumption Tax, Consumption-Type Income Tax Proposals in the United States: A Tax Policy Discussion of Fundamental Tax Reform*, 88 CAL. L. REV. 2095 (2000) (McNulty provides an

analytical and comparative defense of the current accretion-based income tax. Comparing the present system to each of the contemporary proposals for change, McNulty finds the present system to be superior on equity, fairness, simplicity and administrablity grounds. For McNulty, the case for change has not yet been made); Jerome Kurtz, *Two Cheers for the Income Tax*, 27 OHIO N.U. L. REV. 161, 162 (2001) (A former Commissioner of the IRS, Katz argues "that the income tax is basically the fairest form of taxation, and that change to a new system is extraordinarily risky and administratively unmanageable. Even if some other form of tax, probably some form of consumption tax, might be proven to have economic advantages in the long run, we cannot get there from here.").

[73] In essence the fairness argument favoring a consumption tax is that an accretion model taxes too broadly. It burdens productive activities, specifically the receipt and realization of income or gain. Investments are overtaxed. A cash-flow or consumed income tax on the other hand, does not tax saved income. Thus, it encourages saving, investment and productivity. A consumption tax treats people equally (fairly) when viewed from a lifetime perspective. BLUEPRINTS (1984), *supra* note 70, at 39-45, 48 ("The argument has been made that the choice is *not* between a tax favoring the rich (who save) and the poor (who do not), as some misconceive the consumption tax, and a tax favoring the poor over the rich by the use of progressive rates, as some view the income tax. The choice is between an income tax that, *at each level of endowment*, favors early consumers and late earners over late consumers and early earners and a consumption tax that is *neutral* between these two types of individuals."); William D. Andrews, *A Consumption or Cash Flow Personal Income Tax*, 87 HARV. L. REV. 1113, 1167 (1974) ("The most sophisticated argument in favor of a consumption-type tax is that the lesser burden of a deferred tax is more appropriate because it ultimately imposes more uniform burden on consumption, wherever it may occur, than does an accretion-type tax."); *Contra* Alvin C. Warren, *Fairness and a Consumption-Type or Cash Flow Personal Income Tax*, 88 HARV. L. REV. 947 (1975) (Targeting Andrews' fairness argument alone, Warren assesses the neutrality of the cash-flow tax. His chief concern is that unlike an accretion-type income tax, a cash-flow tax allows income from the wealthy to escape taxation.); Alvin C. Warren, *Would a Consumption Tax Be Fairer Than an Income Tax?* 89 YALE L. J. 1081 (1980) (reaffirming and elaborating on the position taken in opposition to Andrews earlier); Barbara H. Fried, *Fairness and the Consumption Tax*, 44 STAN. L. REV. 961, 967 (1992). (Also targeting the fairness argument alone, Fried considers both cash-flow and yield-exemption types of consumption taxes. Fried isolates what she considers to be the three main fairness argument favoring consumption taxes, and concludes"… the fairness arguments for a consumption tax that have dominated the tax literature do not withstand scrutiny.").

[74] Laurence J. Kotlikoff, *The Case for the Value-Added Tax*, 39 TAX NOTES 239, 241 (April 11, 1988) ("A variety of studies, including *Dynamic Fiscal Policy* written by myself and Alan Auerbach, have shown that taxing consumption is more efficient than taxing wage income by itself, capital income by itself, or both capital and wage income through an income tax … taxing consumption through a VAT is equivalent to taxing current and future labor income plus taxing initial wealth."); *See* Alan J. Auerbach, *Measuring the Impact of Tax Reform*, 49 NAT'L TAX J. 665, 669 (December 1996) (Auerbach notes that these kinds of efficiency measurements are difficult. "To determine the impact of a tax reform, it is necessary not only to develop theories of that tax reform's impact, but to test the theories. The lack of controlled experiments and of the ability to measure economic changes limits the scope for performing such evaluations."); Alan J. Auerbach & Joel Slemrod, *The Economic Effects of the Tax Reform Act of 1986*, 35 J. ECON. LIT. 589, 620 (March, 1997) (Auerbach undertook to measure efficiency improvements due to the TRA86's reform that moved the US closer to a consumption base. He found efficiency gains, and found that "… most analyses concluded that TRA86 improved the efficiency of the tax system, although the magnitude of the improvement was disputed."); Andrews, *Consumption or Cash Flow*, *supra* note 5, at 1165-1177.

[75] HALL & RABUSHKA, THE FLAT TAX, *supra* note 71, at 52-82 (Among the tax reform proposals that would still require a large number of individual returns Hall and Rabushka make the most popularly appealing "simplification" argument. They suggest that a single, flat rate consumption-type tax can be imposed with returns not much bigger than post cards.); Graetz, *100 Million Unnecessary Returns*, *supra* note 5, at 299 (Professor Graetz would simplify income tax filing by financing a standard deduction of $100,000 through the adoption of a credit-invoice VAT. The " … principal advantage [of his proposal] would be its major simplification of the tax lives of the American people. My plan would eliminate more than 80% of the income tax returns that currently are filed each year and would allow substantial simplification of the limited income tax that would remain."); Andrews, *Consumption or Cash Flow, supra* note 73, at 1149 ("A consumption-type tax requires deductions and additions to eliminate savings and dissavings. But

This debate over revamping the national taxing scheme has not been argued purely in the academic forum. Concrete legislative proposals have been advanced for a national retail sales tax,[76] a European-style Value Added Tax,[77] as well as a whole host of what David Bradford calls "the two-tiered consumption taxes." These "two-tiered" taxes commonly join a business level subtraction VAT with either a "yield-exemption" (pre-paid) or a "consumed income" (cash flow/ post-paid) tax at the individual level.[78]

From early on, a characteristic of this debate has been the marginalization of practical questions about the "fit" of these proposals both internationally[79] and sub-

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these, being based solely on money transactions, are incomparably simpler than either making adjustments to include unrealized appreciation under a true accretion-type tax or living with the complexity and distortion that results from the existing hybrid treatment of accumulation. … capital transactions are treated on a simple cash flow basis. Investments are simply deducted when made … All that is required is to separate business and investment activities on the one hand from personal consumption on the other, as under present law, …").

[76] Each of the following proposes a national retail sales tax: National Retail Sales Tax, H.R. 3039, 104th Cong. (1996) (proposed by Congressman Dan Schaefer, CO); H.R. 2001, 105th Cong. (1998) (proposed by Congressman Dan Schaefer, CO); H.R. 1467, 106th Cong. (1999) (proposed by Congressman W.J. "Billy" Tauzin, LA); The Fair Tax Act, H.R. 25, 108th Cong. (2003) (proposed by Congressman John Linder, GA); S. 1493, 108th Cong. (2003) (proposed by Senator Saxby Chambliss, GA).

[77] Each of the following proposes a European-style credit-invoice VAT: The Tax Restructuring Act of 1979 and 1980, H.R. 5665, 96th Cong. (1979) and H.R. 7015, 96th Cong. (1980) (proposed by Congressman Al Ullman); The Revenue Restructuring Act of 1996, H.R. 4050, 104th Cong. (1996) (proposed by Congressman Sam Gibbons, FL); The National Health Insurance Act, H.R. 16, 106th Cong. (1993) and S. 237, 104th Cong. (1993) (proposed by Congressman John D. Dingle, MI and Senator Ernest F. Hollings, SC to finance this health plan); The War Financing Act of 2003, S. 112, 108th Cong. (2003) (proposed by Senator Ernest F. Hollings, SC to finance the Iraq war).

[78] Each of the following proposes a business level subtraction VAT with a yield-exemption (pre-paid) type consumption tax at the individual level: Freedom and Fairness Restoration Act of 1994, H.R. 4585, 103rd Cong. (1994) (proposed by Congressman Richard K. Armey, TX); The Flat Tax, S. 488, 104th Cong. (1995) (proposed by Senator Arlen Spector, PA); The Tax Simplification Act of 2003, H.R. 3060, 108th Cong. (2003) and S. 1040, 108th Cong. (2003) (proposed by Congressman Nick Smith, MI and Senator Richard C. Shelby, AL); The Flat Tax Act of 2003, S. 907, 108th Cong. (2003) (proposed by Senator Arlen Spector, PA).

Each of the following proposals advocates a business level subtraction VAT with a consumed income type ("cash-flow," or post-paid) consumption tax at the individual level: The USA Tax of 1995, S. 722, 104th Cong. (1995) (proposed by Senators Sam Nunn, GA and Pete V. Domenici, NM); the Simplified USA Tax of 2003, H.R. 269, 108th Cong. (2003) (proposed by Congressman Phil English, PA).

[79] "Hybrid" consumption tax advocates, those following Hall-Rabushka's "flat tax" design, are caught in a tax dilemma; GATT/WTO conformity or a doubling of transfer pricing enforcement problems. Stephen E. Shay and Victoria P. Summers, *Selected International Aspects of Fundamental Tax Reform Proposals*, 51 U. MIAMI L. Rev. 1029 (July 1997) (pointing out the first horn of the dilemma, that conformity with GATT/WTO requires adoption of an origin-based hybrid tax); Reuven, S. Avi-Yonah, *Risk, Rents, and Regressivity: Why the United States Needs Both an Income Tax and a VAT*, 37 TAX NOTES INT'L 1651, 1661-62 (Jan. 10, 2005) (identifying the second horn of the dilemma, that it is only a destination-based hybrid tax that will avoid having transfer pricing problems both on inbound and outbound transactions); Reuven S. Avi-Yonah, *From Income to Consumption Tax: Some International Implications*, 33 SAN DIEGO L. REV. 1329, 1339-43 (1996) (initial and most detailed presentation of the double transfer pricing problem).

Aside from the impossibility of making required border adjustments for GATT/WTO conformity in a destination-based hybrid system, there are problems with the taxability of cross-border services, issues with the financial services industry generally, as well as direct investment in the US and overseas nationally.[80] The advocates of change tend to narrow their focus.[81] Although great efforts are devoted to gathering intellectual support from economic theorists and political

investment decisions of US multinationals. Further complications arise from the likelihood that the current tax treaty network may not survive the abolition of the income tax, something that is a problem for many proposals. *Id.* at 1343-53. Graetz, *International Aspects supra* note 5, at 1107 (discussing "American exceptionalism," the Shay-Summers analysis generally and questioning the wisdom of "…adopt[ing] a form of consumption tax untried elsewhere in the world instead of moving toward a standard form of value added tax or retail sales tax. The practical and political international advantages of the standard form should by now be obvious.").

[80] Although the proposals themselves have tended to ignore the issue of how a federal change will "fit" with the currently operating state and local tax systems, this oversight is not a characteristic of the commentary. However, a further characteristic of this commentary is that it is reactive, not proactive in nature. Almost all studies emphasize: (1) the natural dependency of the state and local tax systems on the federal, (2) the complexity that federal change will bring to the state and local systems, and (3) the scope of the adjustments that will be required (at the state and local levels) to make tax systems even appear to work harmoniously. No state and local commentary develops new recommendations for federal reform from within the context of their expertise. The commentary is linear. It takes one or more federal reforms, delves into the difficulties and complexities that will be encountered if a reform is adopted, and then concludes that the *status quo* is preferable. What the commentary never does is circle back on a federal proposal, applying the knowledge and insights derived from the state and local systems to point out a better way. Consequently the application of modern technology to the complexities of adding a federal level consumption tax to the current tax landscape is never considered.

Ronald Alt, Sr. & Harley T. Duncan, *The Impact of Federal Changes on State Tax Systems*, 2 STATE TAX NOTES 308 (March 2, 1992) (strongly underscoring the state-federal piggyback relationship, explaining how a state desire for "simplicity and compliance" makes it difficult for states to "go-it-alone" even when federal changes are minor); Douglas Holtz-Eakin, *Fundamental Tax Reform and State and Local Governments*, 49 NAT'L TAX J. 475 (1996) (considering the four major threads in federal reform -- RST, VAT, hybrid subtraction VATs with either consumed income or yield exemption taxes – and pointing to the negative impact that each of these would have on state revenues and on the quality and extent of state services); Douglas Holtz-Eakin, *Consumption-Based Tax Reform and the State-Local Sector: A Study for the American Tax Policy Institute*, 13 AM. J. TAX POL'Y 115, 132 (1996) (presenting an impact assessment of federal consumption tax proposals on state services, concluding that "[f]undamental tax reform at the federal level is simultaneously fundamental tax reform for all state and local governments."); Matthew N. Murray, *Would Tax Evasion and Tax Avoidance Undermine a National Retail Sales Tax?*" 50 NAT'L TAX J. 167, 177 (March 1997) (looking at only the national retail sales tax proposals, and concluding that the necessarily high tax rates of a federal RST would increase avoidance and evasion incentives and promote an underground economy. No suggestions for facilitating this transition are developed, no preferences among existing proposals is offered, and no firm conclusions are expressed because, "… the lack of experience in administering a high-rate, broad-based indirect tax means that it is impossible to say whether evasion and avoidance would be more or less pronounced under an NRST than under and income tax (or VAT) regime."); John L. Mikesell, *The American Retail Sales Tax: Considerations on their Structure, Operations, and Potential as a Foundation for a Federal Sales Tax*, 50 NAT'L TAX J. 149, 163 (March 1997) (considering in detail the proposals for national retail sales taxes, rejecting a federal RST in favor of a VAT. "Attempting to levy a national tax as a supplement to state sales taxes would be folly. There is simply insufficient uniformity in what states tax and exclude to allow a linked federal tax to be fair and efficient. On the other hand, a separate national sales tax would complicate the work of state collection, increase the problems that businesses face in complying with multiple tax bases, and tax on a base not equal to household consumption. Other countries probably have it right when they select VATs …").

Two significant and detailed studies, one by Charles McLure the other by Robert Strauss take up Mikesell's VAT suggestion. Both vote against a federal VAT because of the state and local impact. They take different routes, but reach similar conclusions: all the federal VAT proposals have such highly complex impacts that the *status quo* is preferable. In their minds the case has not yet been made for a federal VAT. Charles E. McLure, Jr., *State and Local Implications of a Federal Value Added Tax*, 38 TAX NOTES 1517, 1526-30 (March 28, 1988) (focusing on the impact that a federal consumption tax would have philosophers,[82] much less effort is expended to demonstrate system-wide (local-state-federal) tax harmony. As a result, proposals tend to be stand-alone (federal-only)

on state sovereignty, McLure presents a range of conceivable state-federal consumption tax systems. No combination is preferred. Nine permutations are described. An accompanying chart theorizes advantages and disadvantages for each permutation. The options considered are: an uncoordinated dual RST system; a coordinated federal-state RST system; coordinated state-federal collection of RST; a state RSTs combined with a federal credit-invoice VAT; a state RST combined with a federal subtraction VAT; a state surcharge to a federal VAT; state collection of the federal VAT; state-federal tax sharing; state-federal revenue sharing. Technology-intensive solutions to the myriad of compliance problems presented are not considered.); Robert P. Strauss, *Impact of Federal VAT on State and Local Sectors* (pts. 1 & 2), 82 TAX NOTES 1173 (Feb. 22, 1999), 82 TAX NOTES 1343, 1363 (Mar. 1, 1999) (considering much the same ground that McLure does, and with a similar focus: the impact of a federal credit-invoice or a subtraction VAT on state and local revenues and administrations discourages adoption. Path dependencies (cultural and institutional resistance to change) suggest to him that the states might not follow federal changes. "… [T]he difficulties for the states of fundamental federal tax reform loom quite large … the complexity for taxpayers and tax administrators, and fiscal uncertainty for federal and state budget official could substantially increase in our federal system without attaining the goal of a federal consumption tax. Instead, we might find ourselves with the remnants of a federal corporate and individual income tax coupled with a new federal consumption tax, and a patchwork of state systems that also reflect the old and the new." As with McLure, Strauss' insights lead back to the *status quo*, not to new solutions.) *See also* Robert P. Strauss, *Implications of a Federal Consumption Tax for State and Local Tax Administration*, 73 TAX NOTES 605 (November 4, 1996); Robert P. Strauss, *Administrative and Revenue Implications of Alternative Federal Consumption Taxes for the State and Local Sector*, 14 AM. J. TAX POL'Y 361 (1997) (developing the administrative argument in further support of the policy analysis presented by McLure and Mikesell).

Federal studies are different. Rather than engage the federal-state issue, they tend to ignore the harmonization problem altogether. Seen within this context, it sometimes appears that the real aim of the state and local commentary has been to provide a counterweight to these shortsighted federal studies. JOINT COMMITTEE ON TAXATION, IMPACT ON STATE AND LOCAL GOVERNMENTS AND TAX-EXEMPT ORGANIZATIONS OF REPLACING THE FEDERAL INCOME TAX, (JCS 4-96, April 30, 1996) *available at* http://www.house.gov/jct/s-4-96.pdf (considering the impact of a national retail sales tax, a VAT, the Flat Tax, a cash-flow tax, and a pure income tax on (1) state and local bonds, (2) the services provided by state and local governments and (3) the operation of tax exempt entities, expressing not preference and offering no analysis of the administrative issues of state-federal coordination). CONGRESSIONAL RESEARCH SERVICE, THE FLAT TAX, VALUE-ADDED TAX, AND NATIONAL RETAIL SALES TAX: OVERVIEW OF THE ISSUES 9-10 (RL 32603, Sept. 24, 2004) (ignoring the state-federal coordination issues with only five sentences directed at the states, and concluding that, "[s]tates would either face increased enforcement costs and loose revenues if they retained current rules, or they would have to adapt their systems to the federal system.").

[81] Steven A. Bank, *The Progressive Consumption Tax Revisited*, 101 MICH. L. REV. 2238, 2241 and 2254 (Reviewing the three occasions in the last century where significant efforts were made to replace the income tax with a progressive consumption tax: (1) soon after the end of World War I, approximately 1921, (2) at the beginning of World War II, approximately 1942, and (3) during the mid-1990's. "In each instance, despite many contemporary scholars' backing, the proposal was dismissed with little debate. … Each proposal appeared too complex and was considered inequitable either because it used a progressive rate or failed to include some income in the base." In Bank's mind this history leads to a political expediency decision, one that encourages proposals with limited detail and narrow focus. These kinds of proposals provide the narrowest of openings for critics and opponents.)

[82] For example, consider the wide range of theorists marshaled by Andrews and Warren on the relative fairness of the income verses the consumption tax. Andrews and Warren argue about the relevance of Thomas Hobbes' concern that a tax on accumulation is taxing people on their contributions to society, to the common-wealth. Consumers, those people taking from the common-wealth, not those who contribute to the common good should according to the *Leviathan* bear the tax. (Andrews, *Consumption or Cash Flow*, *supra* note 73, at 1166 n.116). Warren agrees, but says that this, "hardly demonstrates that there is

propositions. The theoretical analysis in support of a federal consumption tax therefore tends to consider things from the "top-down," rather than the "bottom-up."

Integrated legislative proposals that work to maximize the "administrative fit" of a federal level consumption tax with existing sub-national consumption taxes are rare.[83] The national retail sales tax proposals go furthest in this direction, in large part because

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no reason to tax accumulation." (Warren, *Fairness and a Consumption-Type or Cash Flow*, *supra* note 73, at 933 n.12). Andrews anticipates this argument and responds with John Stuart Mill's discrimination argument -- an accretion tax is a double tax on savings. (Andrews, *Consumption or Cash Flow*, *supra* note 73, at 1168). Warren accepts the observation, but again provides examples where the he concludes that the impact, "… seems real enough, [but] it is probably overstated …" (Warren, *Fairness and a Consumption-Type or Cash Flow*, *supra* note 73, at 937).

And so it goes in a wide ranging theoretical discussion that references the works of NICHOLAS KALDOR, AN EXPENDITURE TAX (1955) (cited by Andrews, *Consumption or Cash Flow*, *supra* note 73, at 1117 n.7; 1143 n.69; 1160 n. 108; 1145 n. 72; 1165 n.114; 1168 n. 122; and Warren, *Fairness and a Consumption-Type or Cash Flow*, *supra* note 73, at 934 n.15; 935-36 n. 21; 942 n. 41; 943, n.44); IRVING FISHER AND HERBERT FISHER, CONSTRUCTIVE INCOME TAXATION (1942) (cited by Andrews, *Consumption or Cash Flow*, *supra* note 73, at 1117 n.7; 1124 n.18); ARTHUR CECIL PIGOU, A STUDY IN PUBLIC FINANCE (1949) (Andrews, *Consumption or Cash Flow*, *supra* note 73, at 1117 n.7; 1149 n.81); WILLIAM S. VICKREY, AGENDA FOR PROGRESSIVE TAXATION (1947) (cited by Andrews, *Consumption or Cash Flow*, *supra* note 73 at 1117 n.7 and Warren, *Fairness and a Consumption-Type or Cash Flow*, *supra* note 73, at 936 n.21) and Alfred Marshall, *The Equitable Distribution of Taxation*, (1917) in MEMORIALS OF ALFRED MARSHALL, (Alfred Pigou ed., 1925) (cited by Andrews, *Consumption or Cash Flow*, *supra* note 73, at 1117 n.7).

The theoretical centerpieces of the Andrews-Warren debate are Haig-Simons formulation that income equals consumption plus savings and the Cary Brown theorem. Haig-Simons allows both scholars to compare income and consumption taxes. Robert M. Haig, *The Concept of Income – Economic and Legal Aspects*," in ECONOMICS OF TAXATION 54 (1959) (cited by Andrews, *Consumption or Cash Flow*, *supra* note 73, at 1114 n.4); HENRY C. SIMONS, PERSONAL INCOME TAXATION: THE DEFINITION OF INCOME AS A PROBLEM OF FISCAL POLICY (reprint, University of Chicago Press 1965) (1938) (cited by Andrews, *Consumption or Cash Flow*, *supra* note 73, at 1114 n.2; 1114, n.4; 1115, n.5 and 6; 1119, n.9;1123, n.15; 1147 n. 76 and Warren, *Fairness and a Consumption-Type or Cash Flow*, *supra* note 73, at 931, n.3).

The Cary Brown theorem allows cash-flow and consumed income proposals to be contrasted. It holds that a consumption tax is equivalent to an income tax that exempts income from capital (in a world where [1] individuals consume all of their income during their lifetime, and [2] the interest rates and tax rates remain constant.) E. Cary Brown, *Business-Income Taxation and Investment Incentives*, *in* INCOME, EMPLOYMENT AND PUBLIC POLICY: ESSAYS IN HONOR OF ALVIN H. HANSEN 300-316 (Lloyd A. Metzler ed., W.W. Norton, 1948) *reprinted in* AMERICAN ECONOMICS ASSOCIATION, READINGS IN THE ECONOMICS OF TAXATION 525 (Richard A. Musgrave and Carl S. Shoup eds., R.D. Irwin 1959) (cited by Andrews, *Consumption or Cash Flow*, *supra* note 73, at 1127, n.22).

[83] None of the "two-tiered" consumption taxes, and none of the value added tax proposals allow businesses to deduct state and local income, property or sales taxes. Neither do they expressly consider the "piggy-backing" of state consumption taxes on the federal tax. There are academic, but not legislative proposals for dual-VATs. They are modeled on foreign VATs that have federal-level VATs coordinated with sub-national VATs. The Canadian and Brazilian examples are the most commonly cited. Avi-Yonah, *Risk, Rents, and Regressivity*, *supra* note 79, at 1665 & n.55. Alan Schenk, *A Federal Move to a Consumption-Based Tax: Implications for State and Local Taxation and Insights from the Canadian Experience*, 3 STATE & LOCAL TAX LAW 89, 111-117 (1998) (specifically recommending the dual-VAT Canadian model for the US); Richard M. Bird & Pierre-Pascal Gendron, *Dual VATs and Cross-Border Trade: Two Problems, One Solution?* 5 INT'L TAX & PUB. FIN. 429 (1998) (generally discussing VAT in federal systems). The only legislative proposals that consider federal-state integration are in the national RST category, where the states are looked to for administrative assistance with the national RST. *See* discussion *infra* Part III.

they rely on state enforcement expertise. But even here the "fit" is a forced one. Harmonization comes about not by accommodation, but by imposing changes on state and local administrations. The mechanism used is commonly a direct subsidy, or an offer of free federal enforcement if local laws are conforming. Even though the synergistic benefits of federal-state harmonization can be considerable, the emphasis has been on deriving these benefits by imposing uniformity on the states, rather than designing a federal proposal that "fits," or accommodates state and local systems. Why is the "fit" of these proposals not a critical concern at the outset?[84]

The answer may lie, in part, in the size of the problem. There are at least 7,588[85] discrete retail sale tax (RST) jurisdictions in the US. Each jurisdiction's RST tends to balance in a unique way the local revenue needs with a local sense of what is considered a "fair" way to collect it.[86] These taxes reflect a local political sense of what is "fair," not necessarily an abstract, or theoretical sense of what is "fair." Thus, local laws most likely do not implement Thomas Hobbes' idea that a fair tax is imposed on those who *take* from the commonwealth, not those who *contribute* to it. Similarly it is improbable that local taxes are designed to be sensitive to John Stuart Mill's perception of the double taxation of investment income. "Fairness" in the local political consciousness is tied more to what is "workable" in the mind of the voting populace. This may vary somewhat from abstract, or theoretical "fairness." As a result, there are very probably thousands of "fairness formulas" in operation in the US, and because they are "methods tried and true," these formulas tend to be resistant to change.[87]

The reality of the federal-state consumption tax integration problem is amplified when one considers that sub-national consumption taxes in the US are: (a) imposed on

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[84] State tax administrators are asking for consideration from the architects of federal reform. *E.g.*, Michael Mazerov & Dan Bucks, *Federal Tax Restructuring and State and Local Governments: An Introduction to the Issues and the Literature*, 33 SAN DIEGO L. REV. 1459 (Fall, 1996) (Mazerov, Director of Policy Research, and Director of Information for the Multistate Tax Commission, and Bucks, Executive Director of the Multistate Tax Commission, set out the MTC Congressional testimony, and criticize each of the proposals before Congress in the late 1990s for not considering the impact on the states. They offer no alternatives, and strongly defend the *status quo.*)

[85] This figure is based on a recent count with the best available information, and represents 47 state level jurisdictions, including Washington, D.C. The figure is composed of 1,732 counties, 5,571 cities, and 229 districts. At one extreme is Texas with 1,370 taxing jurisdictions (124 counties, 1,141 cities, and 104 districts in addition to the state itself), and at the other extreme are states like Connecticut, Hawaii, and Maine where there is only one taxing jurisdiction at the state level.

[86] Walter Hellerstein, *U.S. Subnational State Sales Tax Reform: The Streamlined Sales Tax Project*, 6-8. (International Tax Dialogue VAT Conference, Rome, Italy, Mar. 14-15, 2005) *at* http://www.itdweb.org/VATConference/Pages/Home.aspx. (There are "… seemingly infinite variations among the individual state sales tax bases [that] … respond to a myriad of different local political and economic concerns … [that turns] a simple levy into a tax of Byzantine complexity with virtually no interstate harmony."); Mikesell, *The American Retail Sales Tax, supra* note 80, at 152 ("Although states tend to copy law from their neighbors, no state sales tax exactly matches any other and the different structures take dramatically different shares of their state economies.").

[87] Strauss, *Impact of Federal VAT, supra* note 80, at 1357-63 (discussing the tendency of government organizations to change slowly, and applying this observation to the changes needed in both state and federal tax administrations when implementing a federal VAT); *Cf.* Lucian A. Bebchuk & Mark. J. Roe, *A Theory of Path Dependence in Corporate Ownership and Governance*, 52 Stan. L. Rev. 127 (1999) (developing the theory of path dependencies in the context of corporate governance).

non-harmonized bases,[88] (b) measured at non-uniform rates,[89] and (c) implemented through a seemingly random collection of destination and origin-based sourcing conventions.[90] Business and government have long wanted to simplify, standardize and harmonize the state and local RSTs, but have not been very successful.

2.1.1 – The Streamlined Sales and Use Tax Agreement (SSUTA)

The Streamlined Sales and Use Tax Agreement (SSUTA) is the first real effort to bring about this simplicity, standardization, and harmonization.[91] Some success has been recorded, but resistance to change remains strong in many quarters.[92] Strangely, no federal consumption tax proposal has considered using concepts developed in the SSUTA debates to devise a comprehensive consumption tax that would meet both state and federal needs in a shared fashion.

What explains this lack of inquiry into inter-governmental synergies? Perhaps the national planners have just been too interested in abstract theory, the issue of the conceptual superiority of an income tax over a consumption tax? Then again, perhaps it is the scope of the problem?[93] It is certainly simpler to focus on one large change at

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[88] STREAMLINED SALES TAX PROJECT, CLOTHING AND RELATED ITEMS DISCUSSION PAPER 1-2 (Nov. 22, 2000) *at* http://www.streamlinedsalestax.org (presenting a somewhat famous example of non-harmonized state tax bases, the Discussion Paper considers eight states [Connecticut, Massachusetts, Minnesota, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont], and considers a pair of gloves with fur trim priced at $120, where the fur has a value of 55% of the total, then the gloves would be:
- taxable in New Jersey, based on the fur content;
- exempt in Minnesota and Pennsylvania, because the fur content is below the exclusion threshold;
- taxable in Connecticut, because the price exceeds $50;
- taxable in New York and Vermont, because their price exceeds $110;
- exempt in Massachusetts, because their price falls below the exclusion threshold;
- exempt in Rhode Island which has no exclusion threshold.)

[89] General sales tax rates vary from a high of 7% to a low of 2.9%. The vast majority falls between the 4.5% and 6.5% range. However the widespread adoption of local sales taxes in addition to the state level tax elevates this range to between 5% and 10%. 2005-2 STATE TAX GUIDE (CCH) ¶ 60-100.

[90] The following states have at least one local jurisdiction imposing a retail sales tax on origin principles: Arizona, Arkansas, California, Illinois, Mississippi, Missouri, New Mexico, Ohio, Pennsylvania, Tennessee, Texas, Utah, Virginia and Washington.

[91] Hellerstein, *U.S. Subnational State Sales Tax Reform, supra* note 86, at 8 ("Throughout most of its 70-year history, there has never been a concerted movement to harmonize the US subnational sales tax on a multistate basis.").

[92] *Compare* NEW HAMPSHIRE SENATE JOINT RESOLUTION 2, A RESOLUTION URGING CONGRESS TO REJECT THE STREAMLINED SALES TAX PROJECT (a February 2005 joint resolution (S.J.R. 2) urges the N.H. congressional delegation to oppose federal legislation that would authorize Streamlined Sales Tax states to require remote sellers to collect and remit sales tax) *with* SOUTH DAKOTA SENATE CONCURRENT RESOLUTION 5, A CONCURRENT RESOLUTION, URGING THE MEMBERS OF THE SOUTH DAKOTA CONGRESSIONAL DELEGATION TO SPONSOR AND SUPPORT THE STREAMLINED SALES AND USE TAX ACT (a February 2005 resolution (S.C.R. 5) urging the South Dakota Congressional delegation to do just the opposite).

[93] Avi-Yonah, *Risk, Rents, and Regressivity, supra* note 79, at 1665 (responding that the retail sales tax is an outmoded, useless system that is, "… hopelessly broken and should not be accommodated… [it is] an old tax, adopted in the 1930's by most states to alleviate the cyclicality of the income tax during the Depression…. The rise of e-commerce should prompt most states to abandon their obsolete RSTs in favor

federal level, than to grapple with the challenge of engineering a cooperative system that would accommodate the needs of 7,588 inter-related sub-national tax systems.[94]

The Digital VAT (D-VAT) will solve this problem. If instituted, the D-VAT would be a technology-intensive modern VAT imposed on a comprehensive base, following a European credit-invoice, destination design. The major premise of this proposed D-VAT is that the application of modern technology within a credit-invoice VAT context provides revenue authorities with a uniquely effective and efficient tax handle: the federal transactional database.[95] The transactional database is a universally coded national database of all goods and services transactions.

The D-VAT has significant advantages when compared with other federal level consumption tax proposals in terms of administrative simplicity, remote and real-time audit capabilities. It also provides the opportunity to assist business compliance and efficiency by providing audit immunity capability through the deployment of certified software. An explicit advantage of the D-VAT is that it promotes cooperative multi-level consumption tax systems, allowing existing state and local RSTs to "digitally piggy-back" the comprehensive, federally enforced database.

The D-VAT will allow state and local governments to seamlessly "piggy-back" the federal tax, because the technology and the database are fungible. The D-VAT will facilitate more efficient state and local RST administration, but will not pre-determine the type of local consumption tax (VAT or RST), the scope of the local tax base (the mix of taxable goods or services), the application of single or multiple rates, or the choice of

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of VATs, which could be collected by the federal government as a 'piggyback' on the federal tax [as is done in several other federal countries.]").

[94] Steven A. Bank, *Taxation: The Progressive Consumption Tax Revisited*, 101 MICH. L. REV. 2238, 2255 (May 2003) (reviewing MCCAFFERY, FAIR NOT FLAT, *supra* note 71) (Placing McCaffery's book within the historical context of earlier efforts to enact a national consumption tax, Banks notes that, "In *Fair not Flat,* McCaffrey's most savvy gambit on the complexity issue has been to limit the details of his proposal. Unlike in 1942 and 1995, when the extensive progressive consumption tax proposals were susceptible to opponents' criticisms regarding the proposal's apparent complexity, *Fair not Flat* is more descriptive of the concept than the details. McCaffery writes, '… Complexity can wait. The devil may indeed dwell in the details, but we first need to find an angel or two in the abstractions that govern tax.'").

[95] Adapting tax systems to automation is not a new idea. William Vickrey, *Electronic Data Processing and Tax Policy*, NAT'L TAX J. 271 at 271 and 285 (Sept. 1961) (in the early days of modern computer technology Vickrey asked: "Does EDP open up possibilities for reforming the way in which tax liability is defined?" His answer was: "What is required is a re-thinking of the problems of tax policy in terms of socially desirable goals. Once the problem has been defined and alternative choices explored, then the machines can be adapted to fit the requirements of the solution. As automation increases, the whole social structure of our environment will be subject to revolutionary change; tax administration must keep abreast of this change."). At about the same time, the MIT Center for International Studies made similar observations in the context of a tax advisory mission to Indonesia. Benjamin Higgins, *Self-Enforcing Incentive Tax System for Underdeveloped Countries*, *in* ECONOMIC DEVELOPMENT: PRINCIPLES, PROBLEMS AND POLICIES, 524-44, 531-32 (Benjamin Higgins ed., 1959) ("It became apparent that conceptually simple extensions of existing statistical operations would permit the government to follow the flow of goods through every stage of the economy, providing the base for a completely efficient system of income, sales and excess inventory taxes. … With these materials an appropriate system of coding and [IBM computer] cards, it would be technically possible to compute for any period after the starting date, the average stocks, sales, and incomes of every firm.").

destination or origin sourcing conventions. "Piggy-backing" would not necessarily produce uniformity across consumption tax jurisdictions; it would instead encourage a diversity of finely tuned public finance structures that could be adapted to local understandings of the public good.

2.1.2 – The Haig-Simons and Cary Brown Theorems

The Haig-Simons and Cary Brown theorems form the backdrop of the U.S. tax policy debate on this topic. The Haig-Simons theorem sets out the equivalence between income and consumption taxes. The Cary Brown theorem allows easy comparisons to be made among types of consumption taxes.[96] Together these theorems have provided tax academics with a banquet of theoretical possibilities and analytical positions. This feast has proven somewhat distracting.

These theorems function like toggle switches. The Haig-Simons theorem (income equals consumption plus savings) facilitates the comparison of consumption taxes with accretion-type income taxes. The Cary Brown theorem (expensing the cost of an asset is equivalent to exempting from income the future annual return on that asset) facilitates comparisons among of types of consumption taxes. The Cary Brown theorem has particular value when assessing "two-tiered" consumption taxes.

More than the basic formulation of the Cary Brown theorem, by far the greatest academic interest has arisen over the assumptions that control the Cary Brown outcome. Papers have been written based entirely on the impact that a different assessment of a critical assumption has on a proposal.[97] The two most important assumptions are: (a) that individuals consume all of their income during their lifetime, and (b) that interest rates and tax rates remain constant over time.[98] Thus, depending on how one feels about the validity of these assumptions, whether they reflect or contradict reality, one's impressions of a particular consumption tax proposal can be colored for better or worse.

For example, if one expects that interest rates will rise over time, then a consumption tax that exempted returns on capital (a yield exemption tax) appears "unfair." Such a tax would favor those with large income and large amounts of savings.

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[96] Cary Brown, *Business-Income Taxation*, *supra* note 82, at 532-33 (although the Cary Brown theory is only one-and-a-half pages in the original text (309-10), it is critical to an understanding of the role of interest rates in tax policy discussions: tax deferral, the time value of money, as well as the taxation of financial instruments, including derivatives).

[97] Calvin H. Johnson, *Soft Money Investing Under the Income Tax*, 89 U. ILL. L. REV. 1019 (1990) (an extensive analysis of the Cary Brown theorem applied to expenses).

[98] MICHAEL J. GRAETZ & DEBORAH H. SCHENK, FEDERAL INCOME TAXATION: PRINCIPLES AND POLICIES, 306-07 (1995) (extending the list of assumptions to six: (1) tax rates must remain constant; (2) interest rates must remain constant; (3) the deduction (or exclusion) must produce an immediate tax savings equal to the deduction or the exclusion times the tax rate; (4) taxpayers must be concerned with their after-tax positions and have the ability to invest the savings from the deduction or exclusion at a rate equal to the rate of return on the original investment (not more, not less); (5) if borrowing is involved, then the ratio of borrowing to after-tax investment must be the same under both methods (yield exemption and immediate deduction); (6) the system must be 'closed,' tax is collected at the same rate from earnings from an asset and from amounts received at the close of the transaction).

However, a theoretically equivalent tax, one that would tax consumption when it actually occurred (a consumed income tax) could be constructed. Such a tax would appear to be more “fair,” if the “constant interest rates” assumption of the Cary Brown theorem is replaced with a belief that interest rates are rising.

The standard three-part example applying these theories, an exercise undertaken in almost all introductory law school courses in federal income taxation, is set out below.

[Part 1: Application of the Haig-Simons theorem]. Suppose a taxpayer earns 100, and the tax rate is 50%. Suppose also, that the taxpayer can always invest at a constant 10% return. Under an income tax the 100 is subject to a tax of 50. If the remaining 50 is invested, it will yield 5 after one year. This 5 is also subject to the 50% income tax, leaving the taxpayer with an after-tax amount of 52.50.

The essential difference between an income tax and a consumption tax has to do with a perception of “double taxation” in this example. First there is a tax of 50% on the 100 earned. Then there is a further tax of 50% on the 5 in income that is generated by the further investment of the previously taxed income. This second tax is asserted to be a disincentive to investment. A consumption tax eliminates the second tax.

There are two principal ways to accomplish this result with a consumption tax. The first method is called the “cash flow” method; consumption taxes designed under this method are called “post-paid” consumption taxes or “consumed income taxes.” The other method is called the “yield exemption” method; consumption taxes designed under this method are called “pre-paid” consumption taxes.

[Part 2: First application of the Carey Brown theorem]. Under a “post-paid” or “consumed income” (CIT) type of consumption tax the 100 is not taxed when earned, if (and only if) it is immediately invested, or saved. The 100 will return 10 after investing. Neither the 100 nor the 10 will be taxed unless they are used for consumption. Removing the full 110 from investment after one year and using it for consumption will result in a tax of 55.

The taxpayer’s after-tax consumption of 55 is 2.50 more than the after-tax consumption under the income tax (52.50). Taxes designed in this manner are called “cash flow” taxes, because tax is only imposed when money flows out of investment and into consumption.

[Part 3: Second application of the Carey Brown theorem]. Under a “pre-paid” or “yield exemption” (YET) type of consumption tax the result is the same, but the way we get there is different. Here the 100 is immediately taxed when earned. The remaining 50 is invested, and will return 5 after one year because the rate of return in this economy is 10%. This 5 is not subject to further tax. The yield is exempt from tax. Thus, if the full amount is removed from investment (or savings) after one year and used for consumption, the taxpayer will again enjoy 55 in after-tax consumption. This result under the YET is the same result obtained under as under the CIT.

This example, or variations on it, forms the centerpiece of most consumption tax studies in academic literature. Beginning in the famous Haig-Simons formulation, and extended with the Cary Brown theorem, this theoretical matrix of principles and assumptions allows for so many comparisons among consumption tax proposals and the accretion income tax that very little time is ever left to consider how a proposal "fits" with the pre-existing state and local RSTs. Although academically interesting, these theoretical approaches have become a practical distraction.

2.2 – THE TWO-TIERED CONSUMPTION TAXES: BUSINESS TRANSACTION TAXES TIED TO EITHER CASH FLOW OR CONSUMED INCOME TAXES

William Andrews' 1974 article "A Consumption or Cash Flow Personal Income Tax," in the *Harvard Law Review* set the stage for many of the current consumption tax proposals.[99] Andrews outlines a consumption-type personal income tax, and contrasts it with the prevailing ideal; an accretion-type income tax. Using the personal income tax as a template, Andrews suggests changes in a number of accretion provisions, effectively reconstituting the tax base so that it becomes a tax on cash flow. Business, investment and capital outlays are immediately deductible. Returns from business, investment and capital are fully included in income.[100] Andrews argues that fairness, administrative simplicity, and economic efficiency make this kind of cash-flow consumption tax superior to an accretion-type income tax. Andrews does not consider the corporate tax.[101]

Soon after Andrews' article the US Treasury completed a study of the US tax system, under the guidance of David F. Bradford called *Blueprints for Basic Tax Reform*.[102] The second edition of this study also proposed a model cash flow consumption tax. Under the *Blueprint* model, the income tax on individuals, corporations and trusts would be abolished.[103] In determining the tax base the treatment of savings or investment under the *Blueprint* model permitted taxpayers to choose between a yield exemption and a consumed income methods of reporting.[104] Rates would be progressive.[105]

In 1983 Robert E. Hall and Alvin Rabushka's[106] Flat Tax took two additional steps. First, they designed a comprehensive consumption tax that would be reflected in

[99] KALDOR, AN EXPENDITURE TAX, *supra* note 82 (credited with the original development of the essential concept extended by Andrews).
[100] Andrews, *Consumption or Cash Flow*, *supra* note 73, at 1149.
[101] *Id.* at 1123 (indicating that his "… argument may have implications with respect to the corporate income tax or a general sales or value-added tax, but these are not stated or explored.").
[102] BLUEPRINTS (1977), *supra* note 70.
[103] BLUEPRINTS (1984), *supra* note 70, at 101-28.
[104] *Id.* at 10, 107-17.
[105] *Id.* at 123 (without specifying rates, the study's clear presumption is that the progressive rate structure under the current tax will be retained because, "the progressivity of any individual tax is to a large degree determined by the rate structure.").
[106] HALL & RABUSHKA, THE FLAT TAX (1995) *supra* note 71 (first published as ROBERT E. HALL & ALVIN RABUSHKA, LOW TAX, SIMPLE TAX, FLAT TAX (1983), republished in 1985 and 1995 as THE FLAT TAX).

"two-tiers:" one similar to the present individual income tax, the other similar to the present corporate income tax. Secondly, they imposed a single rate of tax on business and individual income, thus the name Flat Tax. This concept quickly captured public attention.

As time went on, however, two variant versions of the Flat Tax proposal developed. Both versions imposed a subtraction method VAT on business. At the individual level, one group advocated a yield exemption (pre-paid) design [Subtraction VAT + YET], while the other group favored a consumed income (post-paid) design at the individual level [Subtraction VAT + CIT].

If one accepts Cary Brown's assumptions as true reflectors of economic conditions, then in present value terms, these two groups are proposing equivalent taxes [Subtraction VAT + YET = Subtraction VAT + CIT]. The key to appreciating their equivalence as well as their common contrast with the traditional income tax, is to observe that both sets of proposals intend to remove the accretion elements from the current income tax, leaving only a consumption base.

2.2.1 – *Subtraction VAT + YET*

Hall-Rabushka's Flat Tax. The Hall-Rabushka Flat Tax is a true "two-tiered" consumption tax. The business level tax, sometimes called a business transfer tax (BTT),[107] functions as a subtraction method VAT[108] with a full deduction for compensation paid.[109] The compensation deducted from the business tax base is the base for the individual tax.[110] Under the Hall-Rabushka Flat Tax, compensation is taxed under the "pre-paid," or "yield exemption" method (YET).

In addition, under the Hall-Rabushka Flat Tax compensation is taxed progressively, but with a flat rate.[111] A substantial standard deduction removes earned

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[107] The Business Transfer Tax, S. 1102, 99th Cong. (1985), *available at* http://thomas.loc.gov/bss/d099/d099laws.html (proposed by Senator William V. Roth and credited with originating the expression "business transfer tax" or BTT, a subtraction method VAT that was to replace the corporate income tax). *See also* The Uniform Business Tax (UBT), H.R. 3170, 102d Cong. (1991), *available a* http://thomas.loc.gov/bss/d102/d102laws.html (proposed by Congressman Richard T. Schultz a few years later, and similarly proposing to replace the corporate income tax with a subtraction VAT).
[108] Alan Schenk, *Japanese Consumption Tax: The Japanese Brand of VAT*, 42 TAX NOTES 1625 (March 27, 1989) (Explaining that Japan is the only country that has adopted a credit-subtraction VAT, one that closely resembles the business portion of the Hall-Rabushka Flat Tax. It uses a single rate. This VAT is not transactional, rather it is imposed at the business level on a tax period basis. The Japanese Consumption Tax is not separately stated on invoices.)
[109] HALL-RABUSHKA, THE FLAT TAX (1995), *supra* note 71, at 142 (§101 of the proposed statute defines compensation broadly. It includes "… all cash amounts paid by an employer or received by an employee, including wages, pensions, bonuses, prizes and awards.").
[110] Lawrence Zelenak, *The Selling of the Flat Tax: The Dubious Link Between Rate and Base*, 2 CHAP. L. REV. 197, 202-03 (1999) (observing that this essentially makes the individual portion of the Flat Tax into a wage tax).
[111] Hall-Rabushka describe the Flat Tax as a "progressive consumption tax." This is not an entirely accurate. The "consumption" attribution is based on an assumption that all wage, salary and other compensation is actually consumed. To the extent this is not the case, the Hall-Rabushka tax is imposed on non-consumption (savings, or investment). In addition, the Hall-Rabushka tax is not imposed on

income from the individual tax base.[112] Because standard deductions have relatively more value to low than high-income earners, the deduction effectively produces a graduated tax. In other words, even though the rate of tax imposed on all income (business and personal) is the same (flat)[113] rate, the tax burden is graduated. The tax rests more heavily on the wealthy than the poor. In this manner the Flat Tax blunts one of the main arguments against all consumption taxes; its perceived regressivity.

Two streams of legislative proposals have developed out of this type of two-tiered yield exemption consumption tax. One branch closely follows Hall-Rabushka's Flat Tax.[114] The other branch varies from the Hall-Rabushka model by allowing additional deductions for individuals,[115] notably for charitable contributions[116] and home mortgage interest.[117]

A final variant of the Hall-Rabushka Flat Tax is the late Professor David Bradford's X-tax.[118] The X-tax remained a continual "work-in-progress" throughout Bradford's life. It developed conceptually out of the *Blueprints* study, but accommodated many of the Hall-Rabushka ideas as it was taken forward. The X-Tax accepts a subtraction VAT at the business level. At the individual level, the most recent version of the X-tax: (a) uses the yield exemption method for taxing savings or investment, (b) would allow deductions for charitable contributions and home mortgages as well as permits an earned income tax credit,[119] and (c) employs graduated rates. Under Bradford's scheme, tax rates would rise along with income, eventually leveling off (becoming "flat") at a point where the highest individual rate would equal the "flat"

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consumption derived from borrowed funds, a measure of consumption easily included in VAT and RST bases. If borrowed funds are included in the base, then adjustments for negative consumption need to be allowed when loans are repaid.

[112] HALL-RABUSHKA, THE FLAT TAX (1995), *supra* note 71, at 59, 144 (§ 201(a) of the proposed act provides for a $25,500 allowance for a family of four. This amount reflects an allowance of $16,500 for married taxpayers filing jointly, $14,000 for head of households, $9,500 for single taxpayers, and $4,500 per dependent.)

[113] HALL-RABUSHKA, THE FLAT TAX (1995), *supra* note 71, at 59, 64, 144 (§§ 202 and 203(b) impose a rate at 19% on both business and personal returns).

[114] The Flat Tax, H.R. 4585, 103rd Cong. (1994), *available at* http://thomas.loc.gov/bss/d103/d103laws.html (proposed by Representative Dick Army (TX)) reintroduced as S. 488, 104th Cong. (1995), *available at* http://thomas.loc.gov/bss/d104/d104laws.html (sponsored by Senator Arlen Spector (PA)); The Tax Simplification Act of 2003, H.R. 3060, 108th Cong. (2003); S 1040, 108th Cong. (2003), *available at* http://thomas.loc.gov/bss/d108/d108laws.html.

[115] The Flat Tax Act of 2003, S. 907, 108th Cong. (2003), *available at* http://thomas.loc.gov/bss/d108/d108laws.html (proposed by Senator Arlen Spector (PA)) (§ 2 of the proposed law would allow a basic standard deduction at amounts between $17,500 for joint return filers, and $10,000 for individuals. An additional standard deduction is provided at $5,000 for each dependent, with inflation adjustments and adjustments for the cost-of-living).

[116] *Id.* at § 3 (charitable deductions are limited to $2,500; $1,250 for a married individual filing separately).

[117] *Id.* at § 4 (mortgage interest deductions are limited to the interest on debt of up to $100,000).

[118] DAVID F. BRADFORD, UNTANGLING THE INCOME TAX, (1986) (presents the earliest version of the X Tax); DAVID F. BRADFORD, FUNDAMENTAL ISSUES IN CONSUMPTION TAXATION (1996) and David Bradford, *Consumption Taxes: Some Fundamental Issues*, *in* FRONTIERS OF TAX REFORM, 123-150 (ed. Michael J. Boskin 1996) (presenting the most developed versions of the X Tax).

[119] David Bradford, *The X Tax in the World Economy*, 3, 5 CSPS Working Paper No. 93 (August 2003) *available at* http://www.princeton.edu/~ceps/workingpapers/93bradford.pdf.

business rate.[120] Although this tax is no longer "flat" in the same sense that Hall and Rabushka use the term "flat tax," Bradford's progressive rate structure provides a traditional answer to the regressivity problem.[121]

2.2.2 – *Subtraction VAT + CIT*

An alternate design for the "two-tiered" consumption tax involves defining the individual tax base in a "cash flow" manner, as advocated by William Andrews in his 1974 article. Under this approach all money received by an individual would be treated as taxable when received. An exception is provided. Taxpayers can exclude an unlimited amount of income, provided the funds are saved or invested. Thus, only income used for consumption is taxed. This is a "post-paid" or "consumed income tax."

Two legislative versions of this hybrid consumption tax have been proposed, the USA Tax Act of 1995[122] proposed by Senators Sam Nunn and Pete Domenici, and the Simplified USA Tax Act of 2003[123] proposed by Congressman Phil English. The central feature of these proposals is the unlimited savings allowance (USA) deduction from which both proposals take their name.

The unlimited savings allowance under Nunn-Domenici's USA Tax departs from theoretical purity most notably in its treatment of borrowing. Under a consumed income tax borrowing needs to be included in income while loan repayment is deducted from income. Alvin Warren pointed this out very convincingly.[124] The treatment under the USA Tax essentially allows individuals to avoid the tax completely by saving (deducting) all new income and funding all consumption through borrowings.[125]

A similar problem arises in transition when individuals are allowed to consume from pre-USA Tax income, while saving all current income. Again, the individual would pay no tax. Called the "old savings" problem, Nunn-Domenici's solution was a complex series of transition rules.[126] This is the most notable problem that Congressman English

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120 *Id.* at 3.
121 *Id.* at 2-7.
122 USA Tax Act of 1995, S. 722, 104th Cong. (1995), *available at* http://thomas.loc.gov/bss/d104/d104laws.html (proposed by Senator Sam Nunn (GA) and Pete Domenici (NM)).
123 Simplified USA Tax Act of 2003, H.R. 269, 108th Cong. (2003), *available at* http://thomas.loc.gov/bss/d108/d108laws.html (proposed by Congressman Phil English (PA)). Similar earlier proposals include Simplified USA Tax Act of 2001, H.R. 86, 107th Cong. (2001) and Simplified USA Tax Act of 1999, H.R. 134, 106th Cong. (1999) (both proposed by Congressman English).
124 Alvin C. Warren, *The Proposal for an Unlimited Savings Allowance*, 68 TAX NOTES 1103 (Aug. 28, 1995).
125 This is what happens under a traditional RST or VAT. Tax is due on consumption regardless of the source of funds. The omission of this treatment under the USA Tax makes it significantly different from a true consumption tax. The USA Tax deals with this problem through an extremely complicated "Schedule S." This schedule tries to prevent households from using borrowing to finance tax-free consumption. More than anything else it was "Schedule S" that gave the USA Tax its reputation for complexity, and led to the rejection of this tax reform.
126 Nunn & Domenici, USA Tax Act of 1995, S. 722 *supra* note 122, at §§ 290-293.

addresses in the Simplified USA Tax proposal. In this instance, unlimited Roth IRA's[127] funded only with current income replace the unlimited savings allowance. The Simplified USA Tax, unlike the USA Tax, also repeals the estate and gift tax. Many observers note that taxing estates and gifts, as was continued under the USA Tax, was inconsistent with imposing a tax based on consumption.[128]

Also inconsistent with theoretical purity are the deductions for mortgage interest,[129] charitable contributions,[130] and tuition paid for college, post-secondary, and vocational education[131] under the Simplified USA Tax. Each of these deductions represents a form of consumed income that should be subject to tax. The annual limit on these deductions range from $ 4,000 per person to $ 12,000 for a family.[132]

The treatment of loans in a cash flow tax is also a problem for Professor Andrews. He departs from true cash flow treatment when considering consumer loans and credit purchases and repayments. Professor Andrews proposes:

> Business and investment loans would be treated, just like ordinary investments, on a simple cash flow basis. Loan proceeds would be reported as income in the year received, and repayments of interest and principal would be deducted when paid. This treatment is unfamiliar, but would represent a clear net simplification for reasons similar to those favoring cash flow accounting for ordinary investments. … A strict computation of current consumption would seem to require that consumer loans and credit, like business and investment loans, be treated as income when incurred and deductible when repaid. But it is much simpler and quite acceptable just to leave ordinary consumer loans and credit arrangements out of account. The effect of that is to treat payments on account of consumer loans, rather than the use of loan proceeds, as taxable consumption expenditures.[133]

Alternately, Edward McCaffery has proposed a two-tier consumption tax that does treat loans properly from a theoretical standpoint.[134] McCaffery's two-tiered proposal differs in the types of consumption taxes he mixes. Where each of the earlier proposals derived from Hall-Rabushka's Flat Tax were based in annual account

[127] English, Simplified USA Tax Act of 2003, H.R. 269 *supra* note 123, at § 30 (contributions are limited only by the adjusted gross income for the current year).
[128] LAURENCE A. SEIDMAN, THE USA TAX: A PROGRESSIVE CONSUMPTION TAX 11 (1997); Bank, *Progressive Consumption Tax*, supra note 81, at 2252; J. Clifton Fleming, Jr., *Scoping Out the Uncertain Simplification (Complication?) Effects of VATs, BATs, and Consumed Income Taxes*, 2 FLA. TAX REV. 390, 428-429 (1995).
[129] English, Simplified USA Tax Act of 2003, H.R. 269 *supra* note 123, at § 9.
[130] *Id.* at § 11.
[131] *Id.* at § 10.
[132] *Id.* at § 8.
[133] Andrews, *Consumption or Cash Flow*, *supra* note 73, at 1153-54.
[134] MCCAFFERY, FAIR NOT FLAT, *supra* note 71, at 132-34.

consumption taxes (a business level subtraction VAT tied to either a yield exemption or consumed income individual tax), McCaffery suggests imposing a broad-based, flat rate national transaction tax (RST or VAT) together with a progressive rate consumed income tax.

The consumed income tax in McCaffery's proposal: (1) would be net of a deduction for savings placed in a "Trust Account"[135] similar in design to the Roth IRA mechanism of the Simplified USA Tax, which built upon the unlimited savings allowance of the USA Tax, and (2) would include in income all loan proceeds, deducting debt repayment, including interest. McCaffery breaks with theory however by allowing deductions for consumption in the form of medical expenses and charitable contributions.[136]

McCaffery's proposal is progressive in two respects: (1) like Hall-Rabushka's Flat Tax there would be a sizable standard deduction (a family of four would exclude the first $20,000),[137] and (2) like David Bradford's X-tax, the USA and Simplified USA Tax rates would be graduated[138] on consumption over $80,000.[139] In this respect McCaffery's proposal resembles Michael Graetz's VAT proposal that retains the current income tax for income in excess of $100,000.

2.2.3 – *Impact of the Adoption of a Hybrid, Two-Tiered Consumption Taxes on Existing State and Local Revenue Systems*

Adopting a hybrid, two-tiered consumption tax at the federal level would significantly impact the structure of state revenue systems. It is very likely that most states would need to abandon their current income taxes and design new taxes mirroring the federal tax scheme. The primary reason for this is the fiscal "piggy-back" relationship that has developed between federal and state governments.[140] For better or worse American fiscal federalism exhibits strong strains of both independence and dependence. State level tax experimentation[141] co-exists with extensive state piggy-backing on the federal system of taxation.

[135] *Id.* at 98.
[136] *Id.* at 98.
[137] *Id.* at 101.
[138] *Id* .at 101 (under McCaffery's proposal these rates would range from 10 to 50%).
[139] *Id.* at 100-101.
[140] JOINT COMMITTEE ON TAXATION, IMPACT ON STATE AND LOCAL GOVERNMENTS, *supra* note 80, at 70. ("Because most of the states that collect individual and corporate income taxes model their state income tax systems on the Federal income tax system, any significant restructuring of the Federal income tax system could have considerable corollary implications for such states … the elimination of a Federal income tax and replacement with a consumption-based tax would entail a considerable increase in the complexity and expense of administering a state income tax system.").
[141] Supreme Court Justice Louis Brandeis stated, "It is one of the happy incidents of the federal system that a single courageous State may, if its citizens choose, serve as a laboratory; and try novel social and economic experiments without risk to the rest of the country." *New State Ice Company v. Liebman,* 285 US 262, 311 (1932) (Brandeis, J., dissenting).

2.2.3.1 – *Corporate income tax piggy-back*

Each of the hybrid, two-tiered consumption taxes derived from the Hall-Rabushka Flat Tax proposal (Armey's Freedom and Fairness Restoration Act; Smith and Shelby's Tax Simplification Act; Spector's Flat Tax Act; Bradford's X-Tax; Nunn and Domenici's USA Tax Act; and English's Simplified USA Tax Act) replace the corporate income tax with a subtraction VAT. Most states currently base their corporate taxes on the federal corporate tax. 39 of the 45 states imposing corporate net income taxes directly incorporate federal law, and start their income calculations with federal income determinations.[142] This piggy-back relationship has not been without its problems, but benefits have clearly outweighed burdens.[143]

If the federal corporate tax were to be replaced with a sales-subtraction VAT, commentators[144] believe that most states would migrate to similar sub-national subtraction VATs.[145] Some state level VAT issues have already been resolved. For example, rather than getting involved in complex sourcing issues, the tax base would probably be divided among the states through an apportionment formula. In 1991, the US Supreme Court approved the use of a three-factor formula (property, payroll and sales) to apportion a state level addition VAT, Michigan's single business tax (SBT).[146]

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[142] STATE TAX GUIDE (CCH) Para. 10-050, 10-108 (2004)

[143] JEROME AND WALTER HELLERSTEIN, STATE TAXATION, I CORPORATE INCOME AND FRANCHISE TAXES, par. 7.02. (3rd ed. 1998 & Cumulative Supplement 2004) (compares state decisions to adopt a "moving federal tax base" or a "static federal tax base" as well as issues about conformity to the related federal regulations); Frank Shafroth, *The Tax Doctor: To Conform or not to Conform – That is the Question*, 2003 STATE TAX NOTES 711, 713 (Sept. 8, 2003) ("[S]tate corporation income taxes exhibit a high degree of conformity to the federal tax code. For the large part, state corporate income taxes begin with federal taxable income; a series of adjustments is then made to account for constitutionally exempt income, deductions for various state and federal taxes, and other state-defined deductions. As a consequence, changes to the federal tax base commonly flow through to the state level.").

[144] David A. Weisbach, *Ironing Out The Flat Tax*, 52 STAN. L. REV. 599, 659 (2000) ("The most significant issue facing the state and local governments would be the elimination of their ability to base their tax systems on the federal income tax. … Unless states switched to a base similar to the Flat Tax, few of the implementation benefits of the Flat Tax would be achieved."); Robert P. Strauss, *Administrative and Revenue Implications of Alternative Federal Consumption Taxes for the State and Local Sector*, 14 AM. J. TAX POL'Y 361, 423-426 (Fall, 1997); Michael Mazerov and Dan Bucks, *Federal Restructuring and State and Local Governments: An Introduction to the Issues and the Literature*, 33 SAN DIEGO L. REV. 1459, 1470 (1996) ("Without this [federal] infrastructure, it is unlikely that states would be able to administer an income tax without substantial additional capacity and without additional complexity to taxpayers. … the proposed federal tax changes will narrow the diversity of tax policies available to the states, and the entire federal/state fiscal system will shift to various forms of consumption taxes."); Schenk, *A Federal Move to a Consumption-Based Tax, supra* note 83, at 107 (analyzing the increase in complexity, and in compliance costs if the states decide to retain their income tax structures when the federal income tax is withdrawn); Julie Roin, *The Consequences of Undoing the Federal Income Tax*, 70 U. CHI. L. REV. 319, 333-34 (2003) ("The only way to avoid the administrative complications [caused by the adoption a federal consumption tax] would be for the states to eliminate their income tax systems and piggyback on whatever the federal tax rules happen to be.").

[145] *But see* Strauss, *Impact of Federal VAT, supra* note 80, at 1357 (contending that "path dependencies" make this transition not an assured outcome, although agreeing that there will be considerable complexity added to the system, along with compliance and enforcement problems).

[146] *Trinova Corp. v. Michigan Department of Treasury*, 498 U.S. 358, 111 S.Ct. 818 (1991).

However, if the states followed federal adoption of a subtraction VAT then revisions would be needed in PL 86-272.[147] This law sets the minimum standards that must be met before a state can tax the out-of-state operations of a foreign (out-of-state) business. P.L. 86-272 is specific to net income taxes, and once again Michigan's SBT provides guidance in this regard. The SBT has been determined to be outside the scope of PL 86-272.[148] Statutory change would be needed here.

2.2.3.2 – *Individual income tax piggy-back*:

Most states[149] also impose an income tax on individuals. This tax too commonly piggy-backs the federal tax.[150] There are a number of different ways that this piggy-backing occurs: 27 states[151] adopt the federal adjusted gross income as their tax base, 10 states[152] base their tax on federal taxable income, and 2 states[153] impose a tax only on federally defined interest and dividends. The remaining 5 states[154] do not conform to the federal income tax. At one time, 3 states[155] had a complete federal piggy-back arrangement, and simply took a percentage of the federal tax as their state tax. Each of these three states moved away from this arrangement after Congress approved the Economic Growth and Tax Relief Reconciliation Act of 2001 (EGTRRA) with its large, multiyear revenue reductions.

Although 10 states do not begin their income determination with a direct reference to the federal return, even these states widely adopt federal rules, definitions, and interpretations. No state imposes a completely freestanding individual income tax.

If the federal government replaces the personal income tax with either a yield exemption (pre-paid) or consumed income (post-paid) tax, state piggy-backing on the

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[147] 15 U.S.C. § 381.

[148] *Gillette Co. v. Department of Treasury*, 497 N.W.2d 595 (Mich. App. 1993) (determining that PL 86-272 does not apply to the SBT because it is a consumption tax, and PL 86-272 is applicable only to net income taxes); *Guardian Industries Corp. v. Department of Treasury*, 499 N.W.2d 349 (Mich. App. 1993) (reaffirming the *Gillette* decision).

[149] Seven states do not impose an income tax on individuals: Alaska, Florida, Nevada, South Dakota, Texas, Washington, and Wyoming.

[150] FEDERATION OF TAX ADMINISTRATORS, STATE PERSONAL INCOME TAXES: FEDERAL STARTING POINTS (January 1, 2005), *at* http://www.taxadmin.org/fta/rate/stg_pts.pdf (last visited Aug. 29, 2005); U.S. ADVISORY COMMISSION ON INTERGOVERNMENTAL RELATIONS TO THE JOINT COMMITTEE ON TAXATION, SELECTED MATERIALS RELATED TO THE FEDERAL TAX SYSTEM UNDER PRESENT LAW AND VARIOUS ALTERNATIVE TAX SYSTEMS, 82 (JCS-1-96: Joint Committee Print, Mar. 14, 1996), *available at* http://www.house.gov/jct/s-1-96.pdf.

[151] Arizona, California, Connecticut, Delaware, District of Columbia, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Missouri, Montana, Nebraska, New Mexico, New York, Ohio, Oklahoma, Rhode Island, Virginia, West Virginia, and Wisconsin.

[152] Colorado, Hawaii, Idaho, Minnesota, North Carolina, North Dakota, Oregon, South Carolina, Utah, and Vermont.

[153] New Hampshire and Tennessee.

[154] Alabama, Arkansas, Mississippi, New Jersey, and Pennsylvania.

[155] North Dakota (changed to a federal taxable income base), Rhode Island (changed to a federal adjusted gross income base), and Vermont (changed to a federal taxable income base).

federal system would still be possible. However, in doing so the state individual tax would change from an income-based to a wage-based tax.

Each time there has been serious federal consideration of a national consumption tax states have made preparations to follow suit by piggy-backing on the federal system. State legislative commissions produce studies for state tax changes based on federal proposals. See, for example, recent studies from the states of Arizona,[156] California,[157] Hawaii,[158] Virginia,[159] Washington[160] and Wyoming[161] on this matter.

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[156] STEPHEN SLIVINSKI, POLICY REPORT: THE RIGHT CURE FOR WHAT AILS US: A PRESCRIPTION FOR COMPREHENSIVE TAX REFORM IN ARIZONA 14-24 Goldwater Institute, No. 182 (June 9, 2003), *available at* http://www.goldwaterinstitute.org/pdf/materials/292.pdf (last visited Aug. 29, 2005). CITIZENS FINANCE REVIEW COMMISSION, WORKING PRINCIPLES, *available at* http://www.azcfrc.az.gov/documents/CFRC_WORKING_PRINCIPLES.html (last visited Aug. 29, 2005) (Proposals to replace the state personal and corporate income taxes, as well as the the state sales tax. The options considered were (1) a 3% Hall-Rabushka-style Flat Tax [Subtraction VAT + YET], (2) a 3% consumed income tax [Subtraction VAT + CIT], and (3) a comprehensive 3% retail sales tax on all goods and services.)

[157] FINAL REPORT OF THE CALIFORNIA COMMISSION ON TAX POLICY IN THE NEW ECONOMY PRESENTED TO GOVERNOR SCHWARZENEGGER, 38-43 (Dec. 2003), *available at* http://www.library.ca.gov/CaTax/index.cfm (last visited Aug. 29, 2005) (Looking in detail at various Flat Tax proposals [VAT + YET and VAT + CIT] which had been proposed at the federal level and working with Dr. Arthur Laffer in April and July of 2003 to determine the rates needed to generate equivalent revenue yields (determined to be approximately 5.81 to 6%), California determined that the rates would have to be uniform across the state and pre-empt local taxing authority. The Michigan SBT was examined, and Dr. Laffer rejected adoption of a similar origin-based VAT in California, proposing instead a dual destination-type consumption taxes at business and personal levels.)

[158] TAX REVIEW COMMISSION, REPORT OF 2001-2003, 14-16, 18, *available at* http://www.state.hi.us/tax/pubs/trc_rpt_2003intro.htm (last visited Aug. 29, 2005) (Experiencing revenue shortfalls in 2000-2001Hawaii took a serious look at the current tax structure with particular attention to minimizing business-to-business sales tax collections under the GET, and in significantly increasing the conformity of the Hawaiian tax structures with the federal system. The first of these issues recognized the vitality of a VAT structure, and the second indicated that Hawaii would be more than ready to "piggy-back" federal changes if they were to be initiated.)

[159] REPORT OF THE JOINT SUBCOMMITTEE TO STUDY AND REVISE VIRGINIA'S STATE TAX CODE, 17-18, 25, and 43 (Dec. 2002), *available at* http://dls.state.va.us/groups/taxcode/report02.pdf (last visited Aug. 29, 2005) (Virginian revenue shortfalls contributed to a movement to increase conformity of the state tax system with the federal, seeking increased revenue and reduced compliance burdens for taxpayers through federal piggy-backing.)

[160] THE WASHINGTON STATE TAX STRUCTURE STUDY COMMITTEE, TAX ALTERNATIVES FOR WASHINGTON STATE: A REPORT TO THE LEGISLATURE, (Nov. 2002) Vol. 1 of 2, at 35-47 and 48-70, *available at* http://dor.wa.gov/content/statistics/WAtaxstudy/Final_Report.htm (last visited Aug. 29, 2005) (Considering three versions of VAT to replace the Business and Occupation Tax: (1) a subtraction VAT; (2) a GST of the credit-invoice type, and (3) a progressive VAT similar to that proposed under the "cash flow" alternatives to the Flat Tax, and proposing strong consideration of the subtraction VAT model in contrast to various flat rate corporate and personal income tax suggestions.)

[161] TAX REFORM 2000 COMMITTEE, BUILDING WYOMING'S TAX STRUCTURE FOR THE 21ST CENTURY, 22-25 and 29 (June 1999), *available at* http://legisweb.state.wy.us/1999inte/t2000/final1.htm (last visited Aug. 29, 2005) (concerned with the state's dependency on mineral severance taxes and the absence of an income tax at the corporate and individual levels, proposals are advanced for a balanced consumption tax in tandem with an income tax where significant advantages were attributed to following federal consumption tax rules, if they were to be enacted.)

2.3 – RETAIL SALES TAX PROPOSALS

A retail sales tax has been proposed as a full replacement to the federal corporate and individual income taxes since at least the 1990's. There are two very similar lines of retail sales tax proposals, (a) The National Retail Sales Tax proposal of Representatives Dan Schaefer, Billy Tauzin, and Dick Chrysler[162] and (b) the Fair Tax proposal of Representatives Linder and Peterson.[163]

The primary differences between these proposals are in the rates they impose, the pre-existing taxes they eliminate, and the administrative provisions they envision. The National Retail Sales Tax is imposed at a 15% tax inclusive rate,[164] which corresponds to a 18% tax-exclusive rate. The Fair Tax rate is stated in tax-exclusive terms at 30%.[165] This in turn corresponds to a tax-inclusive rate of 23%.[166] Thus depending on how one looks at these taxes, the rates are either 15% and 23%, or 18% and 30%. To be revenue neutral, the Fair Tax needs a higher rate. Unlike the National Sales Tax, the Fair Tax eliminates the payroll tax in addition to federal income taxes.[167]

The tax base under both the National Retail Sales Tax and the Fair Tax is broadly defined to include both goods and services. Both taxes are normatively pure consumption taxes, imposing tax on final consumption. Under the National Retail Sales

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[162] The National Retail Sales Tax, H.R. 4168, 108th Cong. (2004), *available at* http://thomas.loc.gov/bss/d108/d108laws.html (proposed by Congressmen Billy Tauzin (LA) and Dan Schaefer (CO)) (earlier versions of this legislation include: H.R. 3039, 104th Cong. (1996) *available at* http://thomas.loc.gov/bss/d104/d104laws.html; H.R. 2001, 105th Cong. (1998) *available at* http://thomas.loc.gov/bss/d105/d105laws.html; H.R. 1467, 106th Cong. (1999) *available at* http://thomas.loc.gov/bss/d106/d106laws.html).

[163] The Fair Tax, H.R. 25/ S. 25, 109th Cong., (2005), *available at* http://thomas.loc.gov/bss/d109/d109laws.html (proposed by Congressman John Linder (GA) and Senator Saxby Chambliss (GA)) (earlier versions of this legislation were HR 2525, 106th Cong., (1999) *available at* http://thomas.loc.gov/bss/d106/d106laws.html; HR 2525 107th Cong., (2001) *available at* http://thomas.loc.gov/bss/d107/d107laws.html; HR 25, 108th Cong., (2003) *available at* http://thomas.loc.gov/bss/d108/d108laws.html).

[164] Tauzin & Schaefer, The National Retail Sales Tax, H.R. 4168, *supra* note 162, at § 1.

[165] The 30% rate is the tax exclusive rate. For example, if an item costing $100 is purchased and an additional $30 is due because of a sales tax, the tax exclusive rate is 30%. However, if the price for the item is stated to be $130, with $30 of that amount set aside for sales taxes, then the rate of tax is 23% of the tax inclusive price. Most retail sales taxes state their rates in tax exclusive terms.

[166] Linder & Chambliss, The Fair Tax, H.R. 25/ S. 25, *supra* note 163, at § 1(b)(1).

[167] GALE *supra* note 56 (questioning the adequacy of these rates, Gale concludes in the opening abstract that, "[e]ven if there were no avoidance and no evasion, however, the required tax rate for this proposal [H.R. 25, The Fair Tax] over the next 10 years would be 31 % tax-inclusive (44% tax-exclusive). If the rate were set at 23% (tax-inclusive) the revenue shortfall would exceed $7 trillion over the next decade relative to current law…. [T]he commonly-cited 23% tax-inclusive rate in HR 25 was derived using a set of assumptions about changes in the price level that are not consistent with each other and that lead to an estimated tax rate that is systematically and substantially too low." Gale estimates a sales tax rate of 65% (tax-exclusive) to replace current federal taxes with a national retail sales tax. To get his 65% number, Gale assumes only 20% base erosion (from loopholes, incentives, and fraud). That 20% figure may strike political realists as absurdly low. Nevertheless, the rate is estimated at over 50% with an estimate of only 10% base erosion.)

Tax taxable property includes all property (including rents and leasehold),[168] and services (including financial intermediation services).[169] Taxable property does not include intangible property.[170] For all practical purposes the Fair Tax base is identical.[171]

Exemptions under both proposals are provided for business purchases for resale,[172] purchases to produce taxable property or services,[173] and exports.[174] Expenditure on education is exempt as an investment.[175] Expenditure abroad by U.S. residents and half of foreign travel is exempt, but domestic expenditure by non-residents is taxed. Both proposals tax all federal, state, and local government consumption, as well as government investment in equipment and structures.[176]

Although mechanisms differ, both proposals respond directly to concerns about the regressivity of a consumption tax by making direct refunds to families with income levels at or below the poverty level. The National Retail Sales Tax provides a Family Consumption Refund,[177] the Fair Tax provides a Family Consumption Allowance.[178]

2.3.1 – *Impact of Adopting a National-level Retail Sales Tax On Existing State and Local Revenue Systems*

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[168] Tauzin & Schaefer, The National Retail Sales Tax, H.R. 4168, *supra* note 162, at § 21(n)(1)(A).
[169] *Id.* at § 21(n)(1)(B).
[170] *Id.* at § 21(n)(1)(A).
[171] Linder & Chambliss, The Fair Tax, H.R. 25/ S. 25, *supra* note 163, at § 2(a)(14)(A) (defines taxable property or service to include, "any property [including leasehold of any term or rents with respect to such property] …"); §§ 2(a)(14)(A)(i)(I) and (II) (excluding intangible property and used property); § 2(a)(14)(B)(including financial intermediation services as taxable services).
[172] Linder & Chambliss, The Fair Tax, H.R. 25/ S. 25, *supra* note 163, at §§ 201 (a) and 202; Tauzin & Schaefer, The National Retail Sales Tax, H.R. 4168, *supra* note 162, at § 2(b)(1).
[173] Linder & Chambliss, The Fair Tax, H.R. 25/ S. 25, *supra* note 163, at §§ 201(a) and 202; Tauzin & Schaefer, The National Retail Sales Tax, H.R. 4168, *supra* note 162, at §§ 2(a)(1) and (b)(2)-(3).
[174] Linder & Chambliss, The Fair Tax, H.R. 25/ S. 25, *supra* note 163, at § 102(a)(1); Tauzin & Schaefer, The National Retail Sales Tax, H.R. 4168, *supra* note 162, at § 2(a)(2).
[175] Linder & Chambliss, The Fair Tax, H.R. 25/ S. 25, *supra* note 163, at § 2(a)(4); Tauzin & Schaefer, The National Retail Sales Tax, H.R. 4168, *supra* note 162, at § 21(e)(4).
[176] Linder & Chambliss, The Fair Tax, H.R. 25/ S. 25, *supra* note 163, at §§ 2(a)(7) and 101(d)(1); Tauzin & Schaefer, The National Retail Sales Tax, H.R. 4168, *supra* note 162, at § 3(a)(1).
[177] Linder & Chambliss, The Fair Tax, H.R. 25/ S. 25, *supra* note 163, at §§ 13 and 15(c). (Under the National Retail Sales Tax proposal's family consumption refund, wage-earners are entitled to a rebate equal to the sales tax rate times the lower of their wages or the poverty level. The poverty level will be determined by Department of Health and Human Services. The rebate would be provided in each worker's paycheck by making adjustment to the payroll tax at the employer level sufficient to fund the rebate. The Treasury would reimburse the Social Security Administration for the rebate amounts to ensure that the balance of the trust fund remained unchanged.)
[178] *Id.* at § 301. (The refund mechanism under the Fair Tax is different because this proposal eliminates the payroll tax. The payroll tax is the mechanism for rebates under the National Sales Tax. Under the Fair Tax the government would mail to each household checks sufficient to offset the burden of sales taxes on consumption up to the poverty level. This rebate mechanism has been open to criticism. Under the Earned Income Tax Credit similar rebate checks are mailed to approximately 22 million American. The GAO estimates that fraud and error problems are found in about 25% of the refunds.); GAO, FEDERAL BUDGET: OPPORTUNITIES FOR OVERSIGHT AND IMPROVED USE OF TAXPAYER FUNDS, 13 GAO-03-922T (June 18, 2003).

2.3.1.1 – *State Individual and Corporate Income Tax Extinction*.

As discussed above,[179] the state income tax is highly dependent on the federal system. Both national retail sales tax proposals eliminate the federal income tax. Without the opportunity to piggy-back the federal income tax, most commentators expect that state income tax systems either will not survive,[180] or will survive in a more costly to administer, less efficient form.[181] Others simply believe that the retail sales tax is just a bad choice for a national tax, without predicting the future.[182] There is a consensus that the States will eventually be forced to recover lost revenue by broadening their retail sales tax base, typically by taxing a wider range of services. To do so it is expected that the states will piggy-back the broader federal base. Both proposals anticipate, and encourage this movement.[183]

2.3.1.2 – *State and Local Sales Tax Expansion.*

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[179] *See infra* text at note 140.

[180] Peter L. Faber, *Effect of Federal Tax Reform on State and Local Government,* 79 TAX NOTES 109, 113 (Apr. 1998) (citing Harley Duncan in HARLEY DUNCAN, FUNDAMENTAL TAX REFORM: WHAT ARE THE RAMIFICATIONS FOR THE STATES? (1995) and the testimony of Harley T. Duncan, *Impact on State and Local Governments and Tax-Exempt Entities of Replacing the Federal Income Tax: Hearings Before the House Comm. On Ways and Means,* 104th Cong. 262 (1996)] (as the Executive Director of the Federation of Tax Administrators Harley Duncan takes an extreme position, on that Peter Faber agrees with, noting that Duncan, "… assumes, not unreasonably that the imposition of a national sales tax at the level contemplated by Sen. Lugar would in effect require the states to abandon their current income tax structures as well as their current sales tax structures."); Schenk, *A Federal Move to a Consumption-Based Tax, supra* note 83, at 89, 106-7 (takes a more moderate view, and indicates that, "[i]f federal tax reform repeals existing individual and corporate income taxes, individuals and businesses will not be calculating tax liability for federal purposes in the same fashion. This kind of radical federal reform may limit state tax options. In fact, one commentator suggested that states will not be able to maintain their income taxes if Congress repeals the federal income taxes.").

[181] McLure, *State and Local Implications, supra* note 80, at 1528 ("In short, uncoordinated imposition of both state and Federal retail sales taxes appears to be quite unmanageable. … Coordinated imposition of retail sales taxes by the two levels of government would be a far superior option. … The primary problem seems to be the risk of excessive evasion resulting from the high combined rate of Federal, state, and local taxes."); Julie Roin, *The Consequences of Undoing the Federal Income Tax,* 70 U. CHI. L. R.EV. 319, 333 (2003) ("There is also the matter of the states' administrative capacity to maintain their own income taxes in the absence of a federal income tax. … State systems will become more expensive to run; the additional expense may cause states to move to another revenue-raising mechanism, a decision that may itself have collateral consequences.").

[182] Mikesell, *The American Retail Sales Tax, supra* note 80, at 162 ("Structural problems, however, suggest that [retail sales taxes] would not be the best sort of general consumption tax if the federal government were to replace its income tax.").

[183] *Contra* Oliver Oldman & Alan Schenk, *The Business Activities Tax: Have Senators Danforth & Boren Created A Better Value Added Tax?* 10 TAX NOTES INT'L 1547, 1564, n.166 (1994) (observing that states are not anxious to piggy-pack federal tax law if along with the piggy-backing comes a significant loss of tax sovereignty, Oldman and Schenk observe, "[i]n the United States, no state accepted the federal government's offer to collect a qualified (harmonized) state individual income tax without charge. [See: IRC, subchapter E (§§ 6361-6365), repealed by P.L. 101-508, § 11801(a)(45).] This experience suggests that the states would strongly resist any pressure on them to harmonize their RST with a federal VAT or piggyback on a federal VAT. State opposition based directly or indirectly on anticipated loss of jobs of state sales tax officials might be significantly reduced if the federal government offered to train and absorb state employees to administer a federal VAT.").

Under both the National Sales Tax and Fair Tax proposals the states would be the primary administrators of the federal tax. The federal government would be an administrator of last resort for those states unwilling or unable[184] to assist.[185] Three inducements are offered: (a) a fee is paid out of federal revenues,[186] (b) information sharing arrangements are enhanced, and (c) the broader federal base will facilitate state base expansion.

The clear expectation of both the National Sales Tax and the Fair Tax is that fiscal federalism, the inclination of the states to piggy-back federal income tax schemes will carry over to the national sales tax. Both proposals rely on piggy-backing states to volunteer to collect and remit the federal tax. These states are called the "administering states"[187] in both proposals.

Differences in the definition of an "administering state" critically define and distinguish these proposals. These differences reflect degrees of skepticism over how anxious the states will be to adopt and "administer" the federal sales tax.[188] Under the National Sales Tax "administering states" *must adopt* the federal sales tax "in all significant respects"[189] in order to enter into a "cooperative agreement" to collect and remit the federal tax.[190] Under the Fair Tax "administering states" *need not adopt* the federal tax, but only "maintain a sales tax,"[191] in order to enter into a cooperative agreement to collect and remit the federal tax.[192] If adopted and successfully operational, the National Sales Tax would usher in two significant changes in state sales tax regimes, one in the tax base, another in sourcing conventions.

2.3.1.2.1 – *The National Sales Tax and Harmonized Tax Bases*

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[184] Five states have no retail sales tax at the state level, and presumably could not be relied upon to assist the federal government in this effort. Those states, called the NOMAD states from an acronym derived from the first letters of their respective names, are: New Hampshire, Oregon, Montana, Alaska and Delaware. Alaska is different from the other NOMAD states in that it has local retail sales taxes. The other four have no retail sales taxes at any level of government.

[185] Tauzin & Schaefer, The National Retail Sales Tax, H.R. 4168, *supra* note 162, at §31-34; Linder & Chambliss, The Fair Tax, H.R. 25/ S. 25, *supra* note 163, at §§ 401-407 (both proposals rely on state administration for success with appropriations for the Internal Revenue Service terminated under the National Retail Sales Tax at §3, and the 16th Amendment repealed under The Fair Tax at §2(f)).

[186] Tauzin & Schaefer, The National Retail Sales Tax, H.R. 4168, *supra* note 162, at § 31(e)(1); Linder & Chambliss, The Fair Tax, H.R. 25/ S. 25, *supra* note 163, at § 401(d)(2) (both would pay states a 1% fee for tax administration services).

[187] Tauzin & Schaefer, The National Retail Sales Tax, H.R. 4168, *supra* note 162, at § 31; Linder & Chambliss, The Fair Tax, H.R. 25/ S. 25, *supra* note 163, at § 401(b).

[188] Mikesell, *The American Retail Sales Tax, supra* note 80, at 152 *and infra* text at n.81 (examining this well founded skepticism and concluding that if state income tax piggy-backing of the federal income tax is used as a measure then it is appropriate to assume that the states may well not cooperate, because no state has even adopted (fully) the federal definition of income, at least after the passage of the Economic Growth and Tax Relief Reconciliation Act of 2001).

[189] Tauzin & Schaefer, The National Retail Sales Tax, H.R. 4168, *supra* note 162, at § 31(b)(1).

[190] *Id.* at § 31(b)(2).

[191] Linder & Chambliss, The Fair Tax, H.R. 25/ S. 25, *supra* note 163, at § 401(b)(1).

[192] *Id.* at § 401(b)(2).

Bringing all states retail sale tax base into harmony would be a major undertaking. Under federal proposals the sales tax base covers about 84% of GDP, whereas the average state base covers about 36% of GDP. Thus, if the National Sales Tax became fully operational the state sales tax bases would expand by about 50%.[193]

Conformity would also narrow the tax base of "administering states." Business purchases are included in most state bases, and account for up to 40% of state sales tax revenues.[194] Taxing business inputs causes a "pyramiding" effect of tax-upon-tax and pulls the current system significantly out of conformity with normative consumption tax theory. This aspect of the current system is badly in need of repair, and the National Sales Tax would contribute significantly to improvement in this regard.

2.3.1.2.2 – *The National Sales Tax and Harmonized Sourcing Rules*

An equally significant change would be the adoption of destination-based sourcing conventions by "administering states." This is the international norm, and the majority position in US jurisdictions. Destination sourcing means that US exports would be exempt from tax, while tax would be imposed on imports. Under the National Sale Tax "administering states" are required to apply destination rules to allocate revenue within and among the states.[195] A Federal Office of Revenue Allocation is established to resolve disputes among the "administering states."[196]

2.3.1.3 – *The Fair Tax -- A Non-Harmonized Approach: Reliance on State-level Only Systems and One-Stop-Shops*

Proponents of the Fair Tax demand far less tax harmony among state and federal systems than do the proponents of the National Sales Tax. "Administering states" under the Fair Tax are free to adopt or reject both the federal tax base and the federal destination-based sourcing rules. The only requirement is that they have a sales tax.

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[193] *Compare* William Fox, *Should the Hawaii General Excise Tax Look Like Other State's Sales Taxes?* in STATE OF HAWAII, TAX REVIEW COMMISSION 12 (Oct. 15, 2002) *available at* http://www.hawaii.gov/tax/pubs/trc_app_a2003.pdf (charts setting out current sales tax base of U.S. States as a percentage of personal income) *with* Chris Edwards, *Options for Tax Reform*, 106 TAX NOTES 1529, 1548 (Mar. 28, 2005) (indicating the European VATs cover about 41% of GDP).

[194] Raymond J. Ring, *Consumers' Share and Producers' Share of the General Sales Tax*, 52 NAT'L TAX J. 79, 85 (1999) (estimating that on an aggregate level final consumption represents 59% of the national RST base with 41% of the tax born by business inputs, based on underlying data that shows a range of tax burdens with a low consumer burden of 28% in Hawaii to a high consumer burden of 89% in West Virginia.); Raymond J. Ring, *The Proportion of Consumers' and Producers' Goods in the General Sales Tax*, 42 NAT'L TAX J. 167, 171(1989) (presenting the results of a similar study performed ten years earlier showing the same aggregate national results [a 59% burden on final consumption and a 41% burden on business inputs], even though the underlying data was different, and demonstrating that Wyoming had the lowest consumer burden at 35%, and Massachusetts with the highest at 82%.)

Collectively, the Ring studies indicate that moving to a comprehensive national tax base, imposed on final consumption, not business inputs would present states like Hawaii and Wyoming with a significant adjustment. States like West Virginia and Massachusetts, which already depend primarily on final consumption in their retail sales tax would find this adjustment easier.

[195] Tauzin & Schaefer, The National Retail Sales Tax, H.R. 4168, *supra* note 162, at § 53(a).

[196] *Id.* at § 53(b).

This approach is more cautious about state acceptance, but is it any more realistic? The vast majority of sales tax systems are local, and change comes slowly to local revenue systems, particularly when those systems have been reliable sources of revenue over many years. There are 7,588 discrete retail sale tax jurisdictions in the US. Of this number 7,451 are local jurisdictions, and forty-seven (47), including the District of Columbia, are state level systems. The Fair Tax, like the National Sales Tax, relies on these forty-seven states to implement the bulk of the federal tax.

Thirteen (13) states have a state level tax without local taxes. These thirteen states should encounter the least amount of local resistance to state administration of the federal tax. The other thirty-four (34) states is where many of the problems will be encountered. In these jurisdictions the state tax overlaps with further overlapping county, district, and city levies.[197] Fortunately for the Fair Tax and National Sales Tax proponents twenty-five (25) of these have "one-stop-shop" mechanisms where the state government acts as the tax collector for the locals.[198] Single state-level returns, uniform in-state sourcing rules, harmonized definitions of what could be included in a local tax base, single state-level audits, and simplified automated filing opportunities are reasonably common in these states.

The Fair Tax appeals directly to these thirty-eight (38) states (the thirteen states with only a state-level tax, and the twenty-five "one-stop-shop" states). Unlike the National Sales Tax proposal, it offers these states immediate status as "administering states" in the federal system without any state or local level law changes in the tax base or sourcing conventions. These states need only to agree to administer another level of tax, admittedly one with a different, broader base, and frequently one with different sourcing rules, but the perception is that the state tax administrative structure is already in place to collect such a federal tax.

Greatest administrative difficulties for the federal tax will be encountered the three remaining groups of states. In five (5) states[199] there is a mixed administrative system, where the state collects taxes for some locals, but not for others. In four (4)

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[197] The 13 states that have only a state level retail sales tax are: Connecticut, Hawaii, Indiana, Kentucky, Maine, Maryland, Massachusetts, Michigan, Mississippi, New Jersey, Rhode Island, and West Virginia, as well as the District of Columbia. There are some limited exceptions to this rule. Some counties in Indiana are authorized to levy miscellaneous local taxes on specified transactions. IND. CODE ANN. § 6-9-34-1 (2003). In Mississippi even though general sale taxes at the local level are not permitted, some counties and cities are authorized to impose hotel-motel occupancy and taxes on restaurant sales. MISS. CODE ANN. § 27-65-73 (1984). In New Jersey only Atlantic City is permitted to impose a local levy, and only on specific types of retail sales. N.J. REV. STAT. § 40:48-8.15 (1947). In Rhode Island an additional 1% levy is added to meals and beverage sales for local use. R.I. GEN LAWS § 44-18-36.1 (2004). Effective on July 1, 2005 a general sales and use tax may be imposed by municipalities in West Virginia. W.VA. CODE ANN. § 8-13C-4 (2004).

[198] The 25 states are: Arkansas, California, Florida, Georgia, Illinois, Iowa, Kansas, Missouri, Nebraska, Nevada, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Pennsylvania, South Carolina, South Dakota, Tennessee, Texas, Utah, Virginia, Washington, and Wyoming.

[199] The 5 states are: Alabama, Arizona, Colorado, Minnesota, and Wisconsin.

states[200] all local jurisdictions are fully autonomous. In one of these, Alaska, there is no state level retail sales tax, making state coordination of local sales taxes in this state as remote as state administration of the federal tax in the final group of four (4) states where there is neither state nor local retail sales tax systems.

Summary: 50 States and District of Columbia

Only State-level RST	State & Local RST's			Only Local RST	No RST at any level of government
	Full One-Stop-Shop	Partial One-Stop-Shop	No One-Stop-Shop		
13	25	5	3	1	4

Recognizing that implementation of a national sales tax through the states would be easiest if state and local tax bases were permitted to remain the same, and if local sourcing conventions were not changed, the Fair Tax hopes to entice at least the first thirty-eight states in the above chart to become "administering states."

2.3.1.4 – *The Double-Edged Sword of Harmonization*

The National Sales Tax proposal requires tax base and sourcing harmonization at state and local levels before allowing a state to administer the federal sales tax. At the present time no state meets both of these requirements. Each "administering state" will be required to change state and sometimes local tax laws before becoming an "administering state."

The importance of harmonizing tax bases and sourcing rules, and the difficulty of accomplishing this task is the double-edged sword that cuts deeply into the viability both the Fair Tax and the National Sale Tax proposals.[201] Not harmonizing the combined federal-state-local sales tax bases and sourcing rules seriously wounds the Flat Tax. Considerable complexity is brought into the system as fundamentally different federal rules are laid atop pre-existing state and local systems. However, imposing harmonized tax base and source rules on state and local jurisdictions that have a history of resisting change seriously cripples the National Sales Tax.

2.3.1.4.1 – *Sourcing Conventions:*
Why Must Source Rules Be Harmonized? Why Will Harmonization Be Resisted?

The Supreme Court has imposed uniform sourcing rules on all state and local sales tax regimes in one instance; where tangible property is sold across state lines.[202]

[200] The 4 states are Alaska, Idaho, Louisiana, and Vermont.
[201] GALE, WHAT WOULD THE RATE HAVE TO BE? *supra* note 56, at abstract & 4-5 (indicating that this is apart from a consideration of the federal tax rate, which, under his analysis, seems unlikely to be less than 50% regardless of the tax adopted, either the National Sales Tax or the Fair Tax).
[202] Evco v. Jones, 409 U.S. 91 (1972). Evco entered into contracts outside of New Mexico to produce camera-ready text that were delivered to an out-of-state location. All work necessary to produce the texts was performed within New Mexico. The procedural history of this case is important.

The Commissioner's assessment was upheld at the New Mexico Court of Appeals as properly imposed on the sale of tangible personal property (473 P.2d 911). At the Supreme Court the New Mexico

These rules do not apply to services.[203] Nor do these rules apply to intra-state sales; sales of tangible personal property or services entirely within a single state. Under the interstate commerce clause, sales of tangible personal property between states must be taxed on a destination basis. Other than this one situation, states are free to source sales under either origin or destination principles. Left to their own means, the states are split nearly evenly on the adoption of origin and destination sourcing conventions. Of the 7,588 US jurisdictions imposing retail sales taxes, 53.8% use destination rules, and 46.2% have adopted origin conventions.[204]

The difference between these methodologies can be demonstrated in the following example. If a business in city X sells to a customer in city Y: (a) under origin principles tax will be imposed in city X, using city X's tax rate, if the sale is included in X's tax base, however (b) under destination principles tax will be imposed in city Y, using city Y's tax rate, if the sale is included in Y's tax base.

Both proposals for a national sales tax impose tax on a destination basis. It is apparent that it will be far easier for an "administering state" to collect a destination-based federal sales tax if the underlying state system also determines liability on destination principles, and if the state's tax is imposed on the same tax base as the federal tax. However, in at least half of the US jurisdictions "administering states" will be determining taxability for state and local purposes based on the seller's obligations at one location and determining taxability for federal purposes based on the purchaser's characteristics at a different location.

Is harmonization likely? The answer might be found in the effort that has been underway for half a decade to harmonize state sourcing rules around the destination principle through the Streamlined Sales Tax Initiative (SSTI). The *Streamlined Sales and Use Tax Agreement* (SSUTA), which is the product of the SSTI, is a voluntary agreement among the states to simplify, harmonize and modernize the retail sales tax. SSUTA came

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Attorney General conceded that a tax on tangible personal property would be improper, but in this instance the tax was properly imposed on services (not tangible personal property) within the state. The Supreme Court vacated the lower court's judgment and remanded on the question of whether tangible personal property (the camera-ready texts) or services (the development of the camera-ready texts) were being sold (402 U.S. 969). The Court of Appeals reaffirmed their decision, finding (a) as a factual matter what was sold was tangible personal property, and (b) as a matter of law the distinction between sales of property and sales of services was irrelevant.

The Supreme Court disagreed. Citing Department of Treasury v. Ingram-Richardson Manufacturing Co., 313 U.S. 252 (1941) the court stated, "Our prior cases indicate that a State may tax the proceeds from services performed in the State, even though they are sold to purchasers in another State." (409 US at 93). Thus, it concluded, "since the Court of Appeals approved the imposition of a tax on the proceeds of the out-of-state sale of tangible personal property, its judgment is reversed." (409 US at 94).

[203] *Ingram-Richardson*, 313 US 252 (1941); *Evco*, 409 US 91 (1972).

[204] This determination of origin jurisdictions is based on a recent count with the best available information, and represents 573 counties, 2,793 cities, and 141 districts. At one extreme is Texas with 1,243 origin jurisdictions (1,141 cities, and 101 districts). At the other extreme are states like Pennsylvania where just the city of Philadelphia is origin, and Mississippi where just the city of Tupelo is origin.

into effect on October 1, 2005. It has an operating board of 18 member states.[205] The SSUTA seeks uniform destination-based sourcing rules[206] for all goods and services.[207] By August 2004 fifteen states[208] representing 24% of the US population[209] had passed conforming legislation. There had been delays in effective dates and some threats to reverse course. A key issue delaying the implementation of SSUTA was the provision for destination sourcing. Opposition was strongest in Ohio, Kansas, Texas, Tennessee, Utah, and Washington.[210]

Strong resistance to harmonized destination sourcing rules among the small number of states that were committed to broad sales tax reform is not a good sign. Even with SSUTA success, eighteen states is nowhere near the number needed to implement even a marginally effective tax of the National Sales Tax design. Major sales tax states like California, Texas, and Illinois are expected to have difficulties with SSUTA's

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[205] They are: Arkansas, Indiana, Iowa, Kansas, Kentucky, Michigan, Minnesota, Nebraska, New Jersey, North Carolina, North Dakota, Ohio, Oklahoma, South Dakota, Tennessee, Utah, West Virginia, and Wyoming.

[206] Walter Hellerstein & John A. Swain, *The Streamlined Sales and Use Tax Agreement's Sourcing Rules*, 2004 STATE TAX NOTES 375 (Oct. 13, 2004) (presenting a comprehensive discussion of the destination sourcing rules in the Streamlined Sales and Use Tax Agreement).

[207] Streamlined Sales and Use Tax Agreement (SSUTA) *supra* note 26, at § 309(A) (indicating that the same sourcing rules apply to both tangible personal property and services); § 310(A) (setting out a uniform five-step sourcing hierarchy to be followed in all cases, comprised of four sequentially applied destination-based rules and an origin-based rule to be applied as a last resort).

[208] The 15 states with conforming legislation as of August 2004 were: Indiana, Iowa, Kansas, Kentucky, Michigan, Nebraska, North Carolina, Ohio, Oklahoma, South Dakota, West Virginia, Wyoming, Montana, Tennessee, and Utah.

[209] SSUTA *supra* note 26, at § 701 (establishing the 10 state, 20% rule); § 805 (requiring that state legislation must be "substantial compliance" with the SSUTA).

[210] Letter from Bob Taft, Governor of Ohio, to Conforming States and the Streamlined Sales Tax Project Representatives (Jan. 5, 2005) *at* http://tax.ohio.gov/channels/business/documents/doj50016;Gov%27sapptSSTP.pdf (last visited Aug. 29, 2005, and on file with author) (Governor Taft's letter explained that Ohio, which had enacted destination rules for sourcing, had enacted a delay in their adoption. This delay was quickly followed by a similar delay in Utah. The reason for the delay was that destination rules would have a significant impact on small businesses that sold mostly in local markets and only an occasional distance sale. These businesses would now have to collect sales and use taxes in Ohio locations, where they had never filed before. Governor Taft asked for "an amendment that would provide relief for small businesses. This relief could take the form of a longer transition period or a permanent *de minimis* exception for small retailers. Such a modification of the Agreement would be very welcome by Ohio's small business community, and would help ensure Ohio's continued full participation in the SSTP.").

Ohio's problem with destination sourcing are outlined in NOTES ON OHIO REQUEST TO AMEND SSUTA FOR SOURCING TRANSACTIONS," *at* http://tax.ohio.gov/channels/business/documents/doj50016;Gov%27sapptSSTP.pdf (last visited Aug. 29, 2005 and on file with author) ("It is unclear at this point in time whether software will be available and affordable for vendors. We have contacted numerous Point of Sale vendors to check on the status of software development, but we have had limited response. [In addition,] despite a massive education effort, there are still some unresolved issues that make the switch difficult for small businesses. We have sent more than a million letters to vendors, have provided brochures, have conducted seminars for the general public and interested groups, and have developed an Internet application to determine tax rate and track sales, as well as paper solutions. … Larger/national vendors in their dealings with multiple states and the differences between those states do not have the same problems that sellers with single or limited locations have in making the change from origin to destination sourcing [small sellers].").

destination sourcing, if and when they propose conforming legislation. As Charles Collins indicates:

> The [SSUTA] effort has been ongoing since March 2000, when the project was organized. After five years, the project is at a pivotal point. In order for the [SSUTA] to become effective, … at least 10 states with 20 percent of the population of states with sales taxes must be in compliance with the requirements of the agreement … . The target date to reach that threshold is July 1, 2005. … The agreement provision that has resulted in the most controversy in several states is the sourcing of intrastate shipments on a destination basis.[211]

Thus, the pattern of resistance to harmonized, destination-based sourcing rules, apparent in the SSUTA negotiations, makes successful implementation of the National Sales Tax proposal unlikely. However, the non-harmonized approach considered by Fair Tax proponents presents daunting administrative burdens. For at least half of all US jurisdictions the "administering states" under the Fair Tax will need to roughly double their audit and collection efforts, as they will determine tax on both origin and destination basis for the same sales transaction.

2.3.1.4.2 – *Tax Base Harmonization:* *The Efficiency Need to Harmonize and the Political Resistance to It*

Both the Fair Tax and the National Sales Tax rely on state expertise in enforcing retail sales taxes to make the federal tax work. However, the federal tax base under both the Fair Tax and the National Sales Tax is both broader and narrower than the current state and local tax base. The federal base will cover 84% of GDP whereas the average state and local base covers 36% of GDP.[212] In addition, business purchases are exempt from the federal base,[213] but average up to 40% of the state and local base, with individual state amounts reaching between 65% and 72%.[214]

If state and local jurisdictions harmonize their base with the federal, as is assumed under the National Sales Tax, then efficiency claims like the following from Burton and Mastromarco are easy to understand: "Since the marginal cost to a state of collecting the federal tax in addition to their own sales tax (for which they already incur costs) would be quite small, the 1% fee should constitute a strong incentive to become a conforming and administering state."[215] However, if base harmonization is not presumed, as under the

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[211] Charles Collins & Carolyn Iafrate, *Will the Failure of Some States to Enact Destination-Based Sourcing Prevent the Streamlined Agreement From Becoming Effective July 1?* 2005 STATE TAX NOTES 967 (March 28, 2005) [2005 STT 58-2].

[212] Edwards, *Options for Tax Reform, supra* note 193, at 1548 (further citing statistical work of Fox, *Should Hawaii Look Like Other State's Sales Taxes? supra* note 193, at 12).

[213] Linder & Chambliss, The Fair Tax, H.R. 25/ S. 25, *supra* note 163, at §§ 201 (a) and 202; Tauzin & Schaefer, The National Retail Sales Tax, H.R. 4168, *supra* note 162, at §§ 2(a)(1); 2(b)(1) and (b)(2)-(3).

[214] Ring, *Consumer's Share, supra* note 194, at 85 (a 1999 study finding a high of 72% in Hawaii); Ring, *Proportion of Consumer's, supra* note 194, at 171 (a 1989 study finding a high of 65% in Wyoming).

[215] David R. Burton & Dan R. Mastromarco, *The National Sales Tax – Moving Beyond the Idea*, TAX NOTES at paragraph 22 (May 28, 1996) [96 TNT 104-88].

Fair Tax, then it is unlikely that "the marginal costs to a state to collect the federal tax … would be quite small."

This is because harmonizing with the federal base would be a major undertaking in most jurisdictions. Taken as a percent of GDP, state bases range from a low of 26% of GDP in New Jersey to a high of 71% of GDP in New Mexico.[216] Most of the reason for this range has to do with the inclusion of services in the New Mexico base, for example and the omission of services, or at least a very limited inclusion in most other states.

A study conducted by the Federation of Tax Administrators focused on state taxation of service. This study isolated 164 different potentially taxable services and found that Hawaii had the highest rate of taxing them (157 out of 164), and that Nevada was at the low end (11 out of 164).[217] Considered another way, Hawaii and three other states were the only states to tax physicians and dental services.[218] Similarly accountants and lawyers services were taxed in only five jurisdictions.[219] At the other extreme, all 50 states taxed hotel, motel, and lodging services, 46 taxed general repair services, and 45 taxing printing and video rentals. The states with the broadest coverage of services are Hawaii, New Mexico and South Dakota. Those with the least coverage include California and Nevada.[220] Under both of the federal sales tax proposals doctors, lawyers, dentists and accountants will be taxed just as comprehensively as are hotels, motels and lodging services under the current system.

Thus, if local decisions about the tax base do indeed reflect the local political sense of what is "fair," then one might expect more resistance to the National Retail Sales Tax and the Fair Tax in California and Nevada, but not so much in Hawaii, South Dakota or New Mexico. For either of these taxes to be considered "fair" in this sense it would require considerable accommodation with the thousands of "fairness formulas" in operation in the US.

Reaching this consensus will require more than mere legislative change. There is a political cost to extending sales tax to services. Grassroots resistance has overpowered good theoretical arguments made in favor of the expansion of a traditional tangible property sales tax base to services; arguments like broadening the tax base, lowering the tax rate, or minimizing substitution effects have not always held sway. On occasion, however, theory has prevailed.[221] At least three states today do successfully tax a broad range of services.[222]

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[216] Edwards, *Options for Tax Reform supra* note 194, at 1548 (further citing statistical work prepared by Fox, *Should Hawaii Look Like Other State's Sales Taxes? supra* note 126, at 12 indicating that European VATs cover about 41% of GDP).
[217] FEDERATION OF TAX ADMINISTRATORS, 1997 SALES TAX OF SERVICES REPORT (not updated after 1997), *at* http://www.taxadmin.org/fta/pub/services/services.html (last visited Aug. 29, 2005).
[218] Delaware, New Mexico and Washington are the other states in the survey.
[219] Hawaii, South Dakota, Delaware, New Mexico and Washington are the states in the survey.
[220] JOHN F. DUE AND JOHN L. MIKESELL, SALES TAXATION: STATE AND LOCAL STRUCTURE AND ADMINISTRATION 89-90 (2nd Edition 1994).
[221] Kirk J. Stark, *Florida Services Tax: The Uneasy Case for Extending the Sales Tax to Services*, 30 FLA. ST. U. L. REV. 435, 437-438 (2003) (summarizing these arguments as, "[c]urrent calls for reforming the

Both Massachusetts and Connecticut added professional services to the sales tax base for a short period of time. The laws were quickly suspended or repealed.[223] However, it is the 1987 Florida experience with taxing services that is the one that resonates most in state tax circles. During its regular 1987 session the Florida legislature enacted a sales and use tax on a broad range of services consumed in the state. Walter Hellerstein records:

> The storm of controversy surrounding Florida's sales tax on services did not subside with its enactment and implementation. Indeed, it intensified. … Coca-Cola, General Foods, Kraft, Lever Brothers, and Proctor & Gamble cancelled or reduced their advertising in Florida to protest the tax. Media trade associations … cancelled at least 60 conventions they had booked in the state. Advertisers and media were joined by lawyers, realtors, and homebuilders in assailing the tax. … [T]he tax became effective July 1, 1987 … Responding to the public outcry against the tax … Governor Martinez, whose initial support of the sales tax on services was critical to its enactment, reversed course. In late August 1987, the Governor called for a public referendum … By mid-September he had taken a position in favor of outright repeal. … On December 11, 1987, the Florida legislature enacted legislation … raising the sales tax rate from five to six percent and repealing the sales tax on services effective January 1, 1988.[224]

This was more than an emotional grass roots resistance to extending the retail sales tax to services. The movement in Florida was buttressed by sound economic analysis[225] pointing to a critical flaw in the taxation of services through the retail sales

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sales tax harkens back to the proposals made by those who advocated a 'comprehensive tax base' as a principal goal of federal income tax reform. The idea here is the same – all else being equal, it is generally preferable for the tax base to be as broad as possible. In addition to enabling lower rates, broadening the base minimizes the likelihood that close substitutes will be taxed differently. As a result, a broad base will generally result in fewer behavioral distortions than a narrow base.").

[222] Hawaii, New Mexico and South Dakota all tax a broad range of services.

[223] DUE AND MIKESELL, SALES TAXATION (1994), *supra* note 219, at 90.

[224] Walter Hellerstein, *Florida's Sales Tax on Services*, 41 NAT'L TAX J. 1, 14-15 (1988) (as an interested observer of the Florida services tax Hellerstein notes, "In the interest of full disclosure, it should be noted that I played a significant role in drafting Florida's tax on services, and that I served as counsel to the Florida Department of Revenue in connection with its legal defense of the statute.").

Two earlier studies of the Florida services tax are useful. Walter Hellerstein, *Extending the Sales Tax to Services: Notes from Florida*, 34 TAX NOTES 823 (Feb. 28, 1987) (a legal policy paper on the taxation of services under a retail sales tax that uses the Florida services tax as the baseline example); Walter Hellerstein, *A Primer on Florida's Sales Tax on Services,* 35 TAX NOTES, 1219 (May 25, 1987) (a brief but thorough description of the Florida services tax statute).

[225] William F. Fox & Matthew Murray, *Economic Aspects of Taxing Services*, 41 NAT'L TAX J. 19, 33 (1988) (demonstrating that: (1) the administration and compliance costs to taxing services are greater than those associated with simply increasing the rate on the current base, (2) the impact on the development of certain industries is greater with expanding the base to services, than it would be to simply increase the rate on the current base, and (3) that taxing services is regressive for incomes under $30,000, and proportional for incomes above that amount). *Contra* John Siegfried & Paul Smith, *The Distributional Effects of a Sales Tax on Services*, 44 NAT'L TAX J. 41, 52 (1991) (demonstrating that the overall tax on services in Florida

tax. As Due and Mikesell note, " … it is virtually impossible to delineate services that are production inputs from those that are consumption purchases…. Only the value-added tax form of a sales tax can successfully distinguish effectively between business input and consumer services."[226]

2.4 – EU-STYLE CREDIT-INVOICE PROPOSALS

The leading academic proponents of an EU-style credit-invoice VAT for the US are Professors Michael Graetz (Yale),[227] and Reuven Avi-Yonah (Michigan).[228] The leading Congressional proponent is Senator Ernest Hollings.[229] The common characteristic of each of these VAT proposals is that, unlike the Flat Tax, Bradford's X-tax, the USA Tax, the Simplified USA Tax, the National Retail Sales Tax and the Fair Tax, they are not offered as full replacements for the income tax.

Professor Graetz's original proposal was for a revenue-neutral credit-invoice, 12% destination VAT[230] that would cut corporate tax rates in half, and eliminate

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was "slightly less regressive" than the rate increase that replaced the services tax , "but the difference is hardly noticeable.").

[226] DUE AND MIKESELL, SALES TAXATION (1994), *supra* note 219, at 91-92; BEN TERRA, *The Superiority of the VAT*, in SALES TAXATION: THE CASE OF VALUE ADDED TAXATION IN THE EUROPEAN COMMUNITY, ed. Ben Terra, 145, 150 (presenting the views of a European VAT scholar who compares the American RST with the European VAT and reaching the same conclusion).

[227] GRAETZ, THE DECLINE (AND FALL ?), *supra* note 5, at 262-67 (as initially proposed, the Graetz VAT was advanced very casually in about four or five pages near the end of this book).

[228] Avi-Yonah, *Risk, Rents, and Regressivity, supra* note 79, at 1651 (supporting Graetz, Avi-Yonah favors a credit invoice VAT with revenue enhancing modifications).

[229] The War Financing Act of 2003, S. 112, 108th Cong. (2003), *available at* http://thomas.loc.gov/bss/d108/d108laws.html; The National Health Insurance Act, S. 169, 103rd Cong. (1993), *available at* http://thomas.loc.gov/bss/d103/d103laws.html (parallel legislation to S. 169 was offered by Representative Dingle, HR 16, 103rd Cong. (1993), *available at* http://thomas.loc.gov/bss/d106/d106laws.html).

There have been earlier proposals for a European-style VAT in the US. In 1980 Representative Al Ullman proposed a tax reform package that included the adoption of a 5-percent European-style value added tax. The VAT was intended to offset cuts in the individual and corporate income taxes and the payroll tax. Senator Hollings proposed a federal VAT in 1991 and again in 1994. The Deficit and Debt Reduction Act of 1991, S.169, 102nd Cong., (1991), *available at* http://thomas.loc.gov/bss/d102/d102laws.html; The Deficit and Debt Reduction and Health are Financing Act of 1994, S. 2143, 103rd Cong., (1994), *available at* http://thomas.loc.gov/bss/d103/d103laws.html.

Representative Dingell also proposed a European-style credit- invoice VAT to finance national health care. (H.R. 16, 103rd Cong., (1991), *available at* http://thomas.loc.gov/bss/d103/d103laws.html).

[230] GRAETZ, THE DECLINE (AND FALL ?), *supra* note 5, at 264-266 (suggesting that a VAT rate of 10% would be sufficient to replace half of the revenue from personal income tax, and that an additional 2% would be needed to reduce the corporate income tax by 50%). *Contra* William G. Gale, *Tax Reform in the Real World*, 15 YALE J. ON REG. 387, 424 and n.231 (1998) (questioning the methodology that Graetz uses to determines rates, but comes to the same number of 12% based significantly on Vito Tanzi's analysis of the European VATs and the need to raise revenue of about 5.1% of GDP [VITO TANZI, TAXATION IN AN INTEGRATING WORLD 50 (1995)]; Daniel R. Feenberg et al. *Distributional Effects of Adopting a National Retail Sales Tax*, 11 TAX POL'Y & ECON. 49, 75 (1997) (estimating the VAT rate for Graetz proposal by assuming his VAT to be roughly equal to a pure retail sales tax on all goods and services, and arriving at a rate of 8.5%, but if demogrants are provided (as is the case under the Greatz proposal) and if 20% of the tax

individual income tax filings for families with and adjusted gross income of less than $75,000. The paperback edition of his book contains an essay, "Appendix A: A Tax System for the 21st Century,"[231] where Graetz revises his proposed tax rate to a range of 10 to 15%, and raises the exemption amount to $100,000 for married filers, $50,000 for single. For income earned over $100,000 (or $50,000) the income tax rate would remain a flat 25%. It would not be progressive.

Avi-Yonah agrees with Graetz's approach, but disagrees with Graetz's revenue neutrality stance. Avi-Yonah believes that the current income tax is not so complex that it needs to be modified, and more importantly he believes that the revenue from a VAT should be used to fund social programs. "To finance the retirement and health needs of the baby boom generation, not to speak about other urgent needs like extending health insurance to all Americans, we face a budgetary gap of US $70 trillion. There is simply no way to raise that kind of revenue with the existing income tax."[232]

Both of the recent VAT proposals by Senator Hollings adopt the ABA Model VAT Statute[233] as a template. In one instance a 5% VAT is offered by Hollings as a financing mechanism for the National Health Insurance Act, in the other a 1% VAT is offered as a way to finance the Iraq conflict in the War Finance Act of 2003. The Hollings proposals are not intended as fundamental tax reform proposals, although they have been accepted as such in the ongoing tax reform debate.

Neither the Graetz[234] nor the Avi-Yonah[235] proposals focus on VAT design or administration issues. Both prefer to discuss theory, and engage in discussions that are reminiscent of the debate engage in among the early proponents of the cash-flow or consumed income tax, particularly that of Professors Andrews and Warren in their assessment of the relative fairness of alternate reform proposals.

If we are to take these proposals seriously, we need to come to grips with the fact that the Graetz, Avi-Yonah, and Hollings proposals are, in a very real sense, all looking backward. They offer an assessment of how well the historical European VAT would "fit" within the present day American tax landscape. The European-style VAT that these proposals reference was designed and implemented in a paper world, and the future is clearly digital. The European VAT is moving slowly toward a Digital VAT. However, subject to very limited exceptions, the system today remains paper-intensive; one that is

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base is exempted from the VAT (as is the case in Graetz proposal), then Feenberg estimates that the VAT rate of 26% would need).

231 MICHAEL J. GRAETZ, THE U.S. INCOME TAX 303-314 (1999).

232 Avi-Yonah, *Risk, Rents, and Regressivity, supra* note 79, at 1651.

233 SCHENK, ABA MODEL *supra* note 24, at 12 ("The Model Act is a consumption-style, destination principle, invoice method VAT imposed on the seller's sale of taxable property and services. The Model Act adheres closely to the economic concept of a destination principle tax, taxing imports and zero rating exports of property and services.").

234 GRAETZ, THE U.S. INCOME TAX, *supra* note 231 at 333, n.5 (indicating a preference for the VAT draft statute contained in the BASIC WORLD TAX CODE (Ward Hussey & Donald Lubick eds., 1990)).

235 Avi-Yonah accepts the Graetz proposal and does not advance a preference for one model statute over another, nor does Avi-Yonah make VAT administration an issue.

struggling with the addition of 10 new accession countries; one that now has 20 official languages and a wide range of technological ability. At the moment tax laws, regulations, forms and instructions are not only not digital, but they are often available only in local languages.

If the US were to adopt a federal level VAT it should have a forward-looking design. Unencumbered by a currently operating paper VAT, unencumbered by language barriers and cultural differences, the US can look forward to an advanced, fully digital VAT. A Digital VAT is the only federal consumption tax that will "fit" easily into the present state-federal tax landscape without demanding difficult structural and political change.[236]

2.5 – DIGITAL VAT (D-VAT)

A Digital VAT (D-VAT) is proposed for the US following the basic design and structure of the EU VAT. For ease of reference, this discussion will, when necessary, reference the ABA Model VAT, or the IMF *Vatopia* model.[237] If based on the ABA

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[236] Richard Bird & Pierre-Pascal Gendron, *Dual VATs and Cross-Border Trade: Two Problems, One Solution?* 5 INT'L TAX & PUB. FIN. 429, 439 (1998) (A common solution to the "fit" of a federal VAT with state level RSTs is to encourage the States to adopt sub-national VATs in the manner of the Canadian Provinces. Richard Bird and Pierre-Pascal Gendron advocate this Dual VAT solution. It is anticipated that a change like this would be at least as difficult, if not more so, than asking the States to adopt the federal sales tax base and sourcing rules under either the National Sale Tax or the Fair Tax. But according to Bird and Gendron, "… there is no need to be excessively pessimistic about the possibility of decent subnational VATs, (if there is) … good tax administration … (and) an overriding central VAT on approximately the same base … " But, "… one of the major lessons of the Canadian experience … not everyone has to follow the same path …Canada shows, for instance, one can have both a dual VAT (as in Québec) and a "harmonized" (or "common") VAT (as in several Atlantic provinces). Indeed, one can even have member "states" such as Alberta with no VAT at all, or other members (the other five provinces) with quite independent forms of sales taxation. The Canadian system is complicated. It lacks conceptual purity, and no doubt violates some efficiency and administrative criteria; but it works."); Richard Bird & Pierre-Pascal Gendron, *CVAT, VIVAT, and Dual VAT: Vertical 'Sharing' and Interstate Trade*, 7 INT'L TAX & PUB. FIN. 753, 758 (2000) (further developing the Dual VAT concept and contrasting it with other proposals for VATs in a federal system); Alan Schenk, *Choosing the Form of a Federal Value-Added Tax: Implications For State and Local Retail Sales Taxes*, 22 CAP. U. L. REV. 291, 318 (1993) (suggesting that the Canadian solution might work for the US). Schenk, *A Federal Move to a Consumption-Based Tax, supra* note 83, at 111-118 (fully developing the Canadian option for the US); Charles E. McLure, *Coordinating State Sales Taxes With a Federal VAT: Opportunities, Risks, and Challenges*, STATE TAX NOTES 907, 918 (June 20, 2005) (After establishing five principles of an ideal sales tax: (1) imposing the tax on all goods and services at a single rate, (2) exempting all business purchases, (3) uniform destination sourcing, (4) low administrative costs, and (5) freedom at all levels of government to determine the tax rate, he concludes that, "Either a state VAT or an state RST could relatively easily be combined with a federal VAT, as long as both conformed with the principles of an ideal sales tax." McLure, of course, is assuming his conclusion. The real issues have always involved how to coordinate the 7,588 RSTs in the US, each of which is designed very far from the ideal, and for this McLure has no answer other than to say that, "My conclusions are generally consistent with those that Richard Bird reached a decade ago [in Richard M. Bird, *Cost and Complexity of Canada's VAT: The GST in International Perspective*, 1994 TAX NOTES INTERNATIONAL 37, 47 (Jan. 3, 1994)] … 'agreeing on a common tax base and letting one level of government collect the tax…' ").

[237] IMF, TAX LAW DRAFTING SAMPLES *supra* note 27 (a working paper of the IMF legal staff *Vatopia* has "… not been considered by the IMF executive Board and, hence, [is] not [an] official document of the IMF;

Model or *Vatopia*, the D-VAT would make significant changes in the administration provisions, but would adopt most other provisions.[238]

The premise of this proposal is that if a destination-based national VAT of the credit-invoice type is designed with attention to automated tax collection, digital reporting, technology-intensive audit, and enforcement structures, then many of the problems that have plagued proposals for a national consumption tax in the US can be resolved.[239]

This is not a case of simply adding technology to any national consumption tax. It is not just the technology that produces a winning solution. It is the specific marriage of technology with the European VAT that does. Because it is transactional, rather than periodic, the credit-invoice VAT is far more receptive to digitization than the subtraction VATs proposed as part of the Hall-Rabushka Flat Tax, or any of the myriad hybrid (or "two-tiered") consumption taxes.

The D-VAT base is comprehensive and the data collected is fungible. The transactional data can be shared with the states at a primary level, as simply the digital record of all transactions in the economy. Sharing at this level does not necessitate fundamental changes in the nature of the state retail sales taxes. States will be allowed to "piggy-back" on the federal database without requiring the adoption of the federal taxing method (VAT), the federal tax base (comprehensive) or the federal sourcing conventions (destination). Piggy-backing in this manner will allow the 7,588 American retail sales tax jurisdictions to maintain their independence and their diversity. Not that some simplification or harmonization of these rules might be desirable or even necessary in some respects, but that is a separate question.

2.5.1 – Digital VAT in Europe

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and should not be attributed to the IMF as an institution. … the principle author is Alan Schenk (Professor of Law, Wayne State University, and technical advisor, Legal Department, IMF). Contributors include Lee Burns (University of Sydney) and Victor Thuronyi (IMF).").

[238] There are many model VATs to choose from. When statutory references are needed, this proposal will make reference to both the ABA Model and *Vatopia*. The ABA Model occasionally varies from the standard E.U. VAT under the *Sixth Directive*. It is notably less detailed, leaving places for political compromise and adjustments. Among the variances are the provisions for casual sales where a threshold provision applies, § 4003(a)(3); the omission of a small trader exception, discussed at pages 57-58; special rules for taxing gambling activities, lotteries and other games of chance, §4011(e).

[239] SCHENK, VALUE ADDED TAX – A MODEL STATUTE, *supra* note 24, at 123, n.305 (The ABA Model anticipates this proposal, although it is unlikely that in 1989 the drafters foresaw the full impact of modern technology. The commentary associated with §4022(c), Tax Invoices, discusses the "self-enforcing" aspect of a VAT as something that needs to be reinforced with traditional audits. "It would be impractical for the Service to audit VAT returns in detail. Sampling will be necessary. To facilitate cross-matching of VAT charged and input tax claimed, large taxpayers could be required by regulations to report transactions on computer tape.")

Digitizing the VAT in Europe is part of a broad effort to bring the efficiencies of an information society to the EU. Dubbed the "Lisbon Strategy,"[240] this is an effort to make the EU a more competitive, dynamic knowledge-based economy, with improved employment and social cohesion by 2010.[241] A number of changes have been made in the *Sixth Directive* in line with this movement. *Council Directive* 2001/115/EC of December 20, 2001[242] and *Council Directive* 2002/38/EC of May 7, 2002[243] were two of the key decisions moving the European VAT in the digital direction.

2.5.1.1 – *Digital notices, digital returns, digital periodic and recapitulative statements.*

Council Directive 2002/38/EC of May 7, 2002 made four significant changes to the *Sixth Directive* with respect to digitizing the VAT. First, the requirement to provide notice that taxable activity has begun, or has terminated,[244] can now be perform in every Member State electronically, and if a Member State wants to it can require taxpayers to be perform this function electronically.[245] Secondly, VAT returns that formerly were entirely paper, may now be filed in every Member State electronically. And as with the notices of activity beginning and ending, a Member State has the option to require that VAT returns be filed electronically.[246] Similar changes were made in provisions relating to both periodic statements, and recapitulative statements. Each may be filed electronically, or may be subject to a Member State's requirement that they be filed electronically.[247]

There is a common theme in these modifications of the *Sixth Directive.* In each instance *Council Directive* 2002/38/EC applies a two-part structure, first allowing any taxpayer throughout the EU, at their own election, to file documents electronically instead of on paper, and secondly, permitting Member States to go further and mandate an electronic submission of these documents by all taxpayers.

2.5.1.2 – *Digital invoices.*

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[240] European Commission, eEurope - An Information Society for all, COM(2000)0130 final *available at* http://europa.eu.int (last visited Aug. 29, 2005) (indicating that the "Lisbon Strategy" is a shorthand expression for the broad e-commerce policy objectives set out at the Lisbon European Council of March 24 and 24, 2000).

[241] Communication from the Commission to the Council, the European Parliament, the Economic and Social Committee and the Committee of the Regions, *eEurope 2005: An Information Society for All. An Action Plan to be Presented in view of the Sevilla European Council, 21/22 June 2002*. COM(2002)263 final, *available at* http://ue.eu.int (last visited Aug. 29, 2005) (presenting the specific steps expected to be taken to achieve the "Lisbon Strategy" by 2010).

[242] 2001/115/EC, 2002 O.J. (L 15) 24 [Invoicing Directive] *supra* note 25.

[243] 2002/38/EC, 2002 O.J. (L 128) 41 [Digital Sales Directive] *supra* note 25.

[244] Former Art. 22(1)(a) of the *Sixth Council Directive* 77/388/EEC, 1977 O.J. (L 145) 1, *supra* note 40.

[245] *Id*. *Sixth Directive* at (New) Art. 22, added by 2002/38/EC, 2002 O.J. (L 128) 41 [Digital Sales Directive] *supra* note 25.

[246] *Id. Sixth Directive,* at (New) Art. 22(4)(a), as amended by 2002/38/EC, 2002 O.J. (L 128) 41 [Digital Sales Directive] *supra* note 25.

[247] *Id. Sixth Directive,* at (New) Art. 22(6)(a), as amended by 2002/38/EC, 2002 O.J. (L 128) 41 [Digital Sales Directive] *supra* note 25 (on periodic statements); Article 22(6)(b), as amended by 2002/38/EC, 2002 O.J. (L 128) 41 [Digital Sales Directive] *supra* note 25 (on recapitulative statements).

Far more important to digitizing the VAT are the efforts made under *Council Directive* 2001/115/EC to begin the process of digitizing the invoice.[248] The bedrock principles of the European VAT are embedded in the invoice.[249] Almost all critical legal, accounting, reporting, and enforcement issues are tied to information found on the invoice.[250] An invoice performs three basic functions: (1) it contains the information needed to determine which VAT regime is applicable to a particular transaction, (2) it enables tax authorities to carry out enforcement controls, and (3) it allows the purchaser to prove their right to deductions.[251]

There is nothing in the original *Sixth Directive* that considers electronic invoicing. Old Article 22(3)(c) is silent.[252] Through Article 28h *Council Directive* 2001/115/EC amends Article 22(3)(c) to unambiguously authorize the use of electronic invoices, subject to a customer's acceptance.[253] The amendments of Article 28h then go to great lengths to establish a new legal framework within which Member States must accept electronic invoices. "Invoices sent by electronic means shall be accepted by Member States provided that the authenticity of the origin and integrity of the contents are guaranteed [either] by means of advanced electronic signature[254] … or by means of electronic data interchange[255] (EDI)…"[256]

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[248] Proposal for a Council Directive amending Directive 77/388/EEC with a view to simplifying, modernizing and harmonizing the conditions laid down for invoicing in respect to value added tax. (November 17, 2000) COM(2000)650 final at 6, *available at* http://europa.eu.int (last visited Aug. 29, 2005) (referencing a study carried out for the Commission estimated the cost of an electronic invoice at EUR 0.28 to 0.47, as against EUR 1.13 to 1.65 for a traditional invoice resulting in a savings per invoice could between EUR 0.66 to 1.37).

[249] *Sixth Directive*, 77/388/EEC, 1977 O.J. (L 145) 1, *supra* note 40, at (New) Art. 22, as amended by The Digital Sales Directive, *supra* note 173 (listing seven other critical administrative aspects of the European VAT as: (1) registration, (2) identification numbers, (3) keeping accounts, (4) keeping a register, (5) submitting a return, (6) submitting a statement, and (7) submitting a recapitulative statement).

[250] SCHENK, VALUE ADDED TAX – A MODEL STATUTE, *supra* note 24, at 120 n.172 ("The seller's invoice is a key element in an invoice VAT. At levels before the retail sale, the VAT listed on the seller's invoice can be used to cross-match the seller's output tax liability against the buyer's input credit on its purchases. … Experience in Europe suggests that civil servants do not have much time to cross-match invoices. *See* Carlson, *Value Added Tax: European Experiences and Lessons for the United States*, reprinted in 1980 Department of Treasury (Office of Tax Analysis) 51. Korean and Taiwan have relied on an elaborate computer system of cross-matching invoices sent to the government by the seller and the buyer.").

[251] Case 123/87, Léa Jorion, née Jeunehomme v. Belgian State, 1988 E.C.R. 4517 (AG Sir Gordon Slynn famously characterized the invoice as "the 'ticket of admission' to right to deduct.").

[252] *Sixth Directive*, 77/388/EEC, 1977 O.J. (L 145) 1, *supra* note 40, at (New) Art. 22(3)(c), as amended by Article 28h added by 2002/38/EC, 2002 O.J. (L 128) 41 [Digital Sales Directive] *supra* note 25 ("The Member State shall determine the criteria for determining whether a document serves as an invoice.").

[253] *Id.* at (New) Art. 22(3)(c), as amended by Article 28h added by 2002/38/EC, 2002 O.J. (L 128) 41 [Digital Sales Directive] *supra* note 25 ("Invoices issued pursuant to point (a) may be sent either on paper or, subject to an acceptance by the customer, by electronic means.").

[254] *Id.* at (New) Art. 22(3)(c), as amended by Article 28h added by 2002/38/EC, 2002 O.J. (L 128) 41 [Digital Sales Directive] *supra* note 25 (specifically referencing the electronic signatures rules in Article 2(2) of Directive 1999/93/EC, of 13 December 1999 on a Community framework for electronic signatures, 2000 O.J. (L 13)12, *available at* http://europa.eu.int (last visited Aug. 29, 2005)).

[255] *Id.* at (New) Art. 22(3)(c), as amended by Article 28h added by 2002/38/EC, 2002 O.J. (L 128) 41 [Digital Sales Directive] *supra* note 25 (specifically referencing electronic data interchange (EDI) as defined in Article 2 of Commission Recommendation 1994/820/EC of 19 October 1994 relating to legal

It is clear that these conditions are expected to develop, to change over time. The amendments to Article 22(3)(c) made by Article 28h include a provision that: “The Commission will present, at the latest on December 31, 2008, a report, together with a proposal, if appropriate, amending the conditions on electronic invoicing in order to take account of possible future technological developments in this field.”

The two-part common theme of *Council Directive* 2002/38/EC (allowing any taxpayer at their own election to file electronically and then permitting Member States to mandate an electronic submission) is not carried over into the invoicing adjustments made by *Council Directive* 2001/115/EC. There is no authority for Member States to mandate electronic invoices, nor is the seller authorized on his own account to convert to electronic invoicing. It is the buyer’s acceptance of an electronic form of invoicing that is the critical pre-condition to usage.

However, two additional modifications to Article 22 by Directive 2001/115/EC have a direct relationship to electronic invoicing. These adjustments appear to pave the way for standardized electronic invoicing, first by allowing for third-party involvement in preparation of invoices (outsourcing), and secondly by setting out for the first time a set of exclusive, uniform legal requirements for valid invoices.

Original Article 22(3) required the taxable person to issue his or her own invoice. Directive 2001/115/EC amends Article 22(3)(a) in the following manner (additions in italics):

(a) Every taxable person shall *ensure that an invoice is issued, either by himself or by his customer or, in his name and on his behalf, by a third-party,* in respect of goods and service which he has supplied or rendered to another taxable person or to a non-taxable legal person. Every taxable person shall also *ensure that an invoice is issued either by himself or by his customer or, in his name and on his behalf, by a third party,* in respect of the supplies of goods, …

Similarly, original Article 22(3)(b) referred to a non-exhaustive list of statements that needed to be mentioned on the invoice. The list could be extended by any Member State if it wished. Amended Article 22(3)(b) harmonizes the statements required on an invoice[257] and removes the authority of local administrations to require additional

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aspects of electronic data interchange 1994 O.J. (L 338) 98, *available at* http://europa.eu.int (last visited Aug. 29, 2005)).

[256] *Id.* at Art. 22(c)(second paragraph), as amended by 2001/115/EC, 2002 O.J. (L 15) 24 [Invoicing Directive] *supra* note 25.

[257] *Id.* at Art. 22(3)(b), as amended by 2001/115/EC, 2002 O.J. (L 15) 24 [Invoicing Directive] *supra* note 25 (listing the 12 items that must appear on an invoice, and two more (13 and 14) that may occasionally appear:

(1) the date of issuance of the invoice;
(2) a sequence number that uniquely identifies the invoice;
(3) the VAT identification number of the seller;
(4) the VAT identification number of the buyer (if the customer is required to pay VAT on the transaction);
(5) full name and address of the buyer;

statements. In addition, the third subparagraph of Article 22(3)(b) stipulates that: "Member States shall not require invoices to be signed." The Explanatory Memorandum to the Proposal indicated that this provision was needed to remove yet another potential barrier to electronic invoicing.

Is the D-VAT a reasonable way to go? It is far more than the reasonable way to go, it is the inevitable way to go. In 2000 the University of California at Berkeley's School of Information Management Systems conducted the first study of newly created information, and demonstrated that 93 percent of the three billion gigabytes of data generated worldwide (using 1999 data) was computer generated.[258] Updated in 2002, a new study reached much the same conclusions, and indicated (using 2001 and 2002 data) that "… about 5 exabytes[259] of new information [was] created in 2002. Ninety-two percent of the new information was stored on magnetic media, mostly hard disks. … film represented 7% of the total, paper 0.01%, and optical media 0.002%."[260] Thus, it may be presumed that almost all enterprise source data content for operations, accounting, audit, as well as tax filing, financial reporting, regulatory submissions, and almost all other purposes is digitized both in generation and in storage. In other words, there is no paper and ink parentage for this data.

If the provenance of most data today is electronic (or digital), not physical, then it makes sense to determine, collect, report, and enforce tax obligations digitally. The credit-invoice VAT is the consumption tax that most completely tracks these digitized commercial processes. Thus, it only makes good sense that a credit-invoice VAT should be digital tax. Whenever manual intervention is required to resolve returns, reports, and other filings into paper documents, the tax system is being made inefficient and error prone.

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(6) the quantity and nature of the good/ extent and nature of the services supplied;
(7) the date on which the supply was completed, or the date on which the payment was made – in so far as that date can be determined and differs from the date of issuance of the invoice, (1) above;
(8) the taxable amount; unit price exclusive of tax, discounts, and rebates;
(9) the VAT rate applied;
(10) the VAT amount payable;
(11) where either an exemption applies, or where the buyer is liable self-assess the VAT, reference to the section of the *Sixth Directive* or the national law that allows this procedure;
(12) special rules for the supply of new means of transportation require particulars under Article 28a(2);
(13) special rules related to margin schemes require reference to national laws;
(14) in instances where a tax representative is used, then the VAT identification number as well as the name and address of that representative needs to be listed).

[258] Eric Woodman, *Information Generation: Berkeley Study measures gargantuan information boom*, EMC2, *at* http://www.emc.com (last visited Aug. 29, 2005) referencing SCHOOL OF INFORMATION MANAGEMENT AND SYSTEMS AT THE UNIVERSITY OF CALIFORNIA AT BERKELEY, HOW MUCH INFORMATION? (2000).

[259] Lyman & Varian, HOW MUCH INFORMATION, *supra* note 39, at Executive Summary ("How big is five exabytes? If digitized, the 19 million books and other print collections in the Library of Congress would contain about ten terabytes of information; five exabytes of information is equivalent in size to the information contained in half a million new libraries the size of the Library of Congress print collections.").

[260] *Id.* at Executive Summary.

2.5.1.3 – *Test Case for the Digital VAT: Directive 2002/38/EC – Article 26c*

The Lisbon European Council focused the Commission's attention on one particularly troublesome aspect of digital commerce, the sale of digital products to non-taxable EU customers by non-EU businesses. The technical issue was sourcing. The *Sixth Directive* sourced these supplies outside the EU, making them not subject to VAT. Consumption (use and enjoyment) however, was clearly occurring within the EU.[261]

The solution worked out by the Commission had technical and practical aspects. On the technical side, as of May 7, 2002 all electronically supplied services from non-EU businesses were listed within the exceptions of Article 9(2)(e). A special rule dealing with similar B2C transactions was added in Article 9(2)(f). Thus, VAT now became due on these sales, because the source of these supplies had moved within the EU.

Working out the practical aspect of this solution was more complicated. B2B transactions from non-EU suppliers, by far the largest part of e-commerce in monetary terms, were handled rather simply through the reverse charge procedure.[262] B2C transactions were another story. Because consumers do not file VAT returns (they are not "taxpayers" in VAT terms) a reverse charge procedure was not possible. The only solution for B2C sales from non-EU businesses was to require the non-EU business to collect and remit the tax.

For those businesses willing to comply there were essentially two options. They could either (1) establish themselves in a Member State,[263] or (2) register in each Member State where they made taxable supplies.[264] Neither option was optimal. Although under the first option all digital sales would be sourced to one EU jurisdiction, the place where the business was established (Article 9(1)), establishment itself led to direct tax obligations. The formerly non-EU business would become a real EU business for tax and regulatory purposes. Sourcing of sales under this option would be origin-based. The second option also had disadvantages. Under this option a business could conceivably be required to register in 25 Member States, file 25 sets of VAT returns, and do so in as many as 20 different languages. Sourcing of sales under this option would be destination-based.

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[261] *Sixth Directive*, 77/388/EEC, 1977 O.J. (L 145) 1, *supra* note 40, at Art. 9(1) (presenting the specific sourcing issue, the fall back sourcing provision, that placed any service not covered in the series of exceptions that make up the rest of Article 9 into a residual category that sourced the supply where the supplier was located, thereby placing the supply in the US for digital sales by many US companies into the EU).

[262] *Id.* at Art. 21 (indicating that a reverse charge is a self-assessment obligation imposed on businesses purchasing taxable supplies).

[263] *Id.* at Art. 9(1) (indicating that in this instance the place of supply for digital services would be the Member State where the supplier is established, thereby subjecting the business to direct taxation in that state).

[264] *Id.* at Arts 9(2)(f) & 21 (indicating that the place of supply of digital services is where the customer resides, and requiring registration and the filing of returns in as many as 25 States).

Article 26c was adopted to provide a third alternative. This was a one-stop-shop option. It allowed non-EU established businesses to select a single "Member State of identification" where they could be registered, but not be established, under a simplified arrangement. VAT from sales made throughout the EU would be determined on a destination-basis using the rates and rules of the jurisdiction where the customer resided. However the VAT collected on these sales would be paid over to the Member State of identification on a single electronic return.

Importantly, Article 26c requires all communication between the taxpayer and the Member State to be electronic, if the taxpayer elects to file according to this special scheme.[265] Registration and all notifications about changes in status,[266] statements and recapitulative statements,[267] filing of returns,[268] payments of VAT amounts due and collected,[269] and even communications by the Member State to the non-established taxpayer,[270] must be in electronic form. Article 26c therefore presents in microcosm a fully functional D-VAT. If elected by the taxpayer, Member States are required to accept and engage in this fully digital VAT relationship.[271]

2.5.2 – *Workability of a Digital VAT in the US*

There is doubt that a federal level VAT in the US is a workable option as long as the states remain dependent on revenues from the retail sales tax. Professors Alan Schenk, the reporter for the ABA Model VAT, along with Oliver Oldman set out the two main reasons: (1) administrative and compliance costs, and (2) political resistance.

> There are substantial administrative and compliance costs associated with the adoption of a European-style credit-invoice VAT that would operate side-by-side with a wide range of state retail sales taxes (RSTs), especially the costs for retailers who would have to list each tax separately on invoices or cash register

[265] *Id.* at Art. 26c(B)(1).
[266] *Id.* at Art. 26c(B)(2) ("The non-established person shall state to the Member State of identification when his activity as a taxable person commences, ceases or changes to the extent that he no longer qualifies for the special scheme. Such a statement shall be made electronically.").
[267] *Id.* at Art. 26c(B)(9) ("The non-established taxable person shall keep records of the transactions covered by this special scheme in sufficient detail to enable the tax administration of the Member State of consumption to determine that the value added tax return referred to in (5) is correct. These records should be made available electronically on request to the Member State of identification and the Member State of consumption.").
[268] *Id.* at Art. 26c(B)(5) ("The non-established taxable person shall submit by electronic means to the Member State of identification a value added tax return for each calendar quarter …").
[269] *Id.* at Art. 26c(B)(7) ("The non-established taxable person shall pay the value-added tax when submitting the return. Payment shall be made to the bank account denominated in Euro, designated by the Member State of identification.").
[270] *Id.* at Art. 26c(B)(3)(second paragraph) ("The Member State of identification shall notify the non-established taxable person by electronic means of the identification number allocated to him.").
[271] Proposal for a Council Directive Amending Directive 77/388/EEC as regards the rules governing the right to value added tax, 1998 O.J. (C 219)16, *available at* http://europa.eu.int (last visited Aug. 29, 2005) (proposing a similar digital scheme, without provision for a single payment of EU-wide VAT obligations, but with a single return and filing obligations has been proposed by the Commission under Article 22b).

> tapes. … States also may view the adoption of a European-style credit- invoice VAT as an intrusion into their sales tax domain.[272]

In other writings Professor Schenk suggests that if the US were to adopt a federal level VAT, then the best option would be for the states to follow suit and adopt sub-national VATs with harmonized bases. This is the lesson from Canada where some Canadian Provinces harmonized local transaction taxes with the federal GST after its passage.[273]

This article offers another option, a D-VAT based on the ABA Model or *Vatopia*.[274] The D-VAT makes most of its changes in the reporting, administrative, and payment provisions. Essentially this proposal requires the Model or *Vatopia* to adopt and mandate the electronic tax administration principles set out *Council Directive* 2002/38/EC, and *Council Directive* 2001/115/EC. In addition, the third-party automated collection and reporting provisions of the *Streamlined Sales and Use Tax Agreement* are to be adopted federally. There are seven specific areas where modifications are needed.

2.5.2.1 – *Electronic notices, returns, periodic and recapitulative statements, tax determinations and payments mandated.*

The Digital VAT would require all taxpayers file electronically. This provision would essentially adopt the reporting requirement under Article 26c of the *Sixth Directive*.[275] Unlike Article 26c, electronic filing will not be elective, although in some exceptional circumstances paper filing may need to be permitted by regulation.

Two exceptions to the filing rules are anticipated; one for small businesses, and another for invoices issued to final consumers. These exemptions are considered at 2.5.2.7 below.

2.5.2.2 – *Third-party invoicing, tax calculation, return-filing authorized.*

This is a two-part modification. The first element requires the ABA Model or *Vatopia* to adopt the third party invoicing provisions of *Council Directive* 2001/115/EC. These provisions amended Article 22(3)(a) of the *Sixth Directive* allowing third-party "outsourcing" of VAT invoices.

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[272] Oldman & Schenk, *The Business Activities Tax*, *supra* note 183, at 1565, text & accompanying note 167.
[273] Schenk, *Choosing the Form of a Federal Value-Added Tax*, *supra* note 236, at 318; Schenk, *A Federal Move to a Consumption-Based Tax, supra* note 83, at 111-117.
[274] SCHENK, VALUE ADDED TAX – A MODEL STATUTE, *supra* note 24, at v (indicating that the ABA Model VAT is more of a "model," than a formal "proposal" for a US VAT, Walter H. Beaman's *Transmittal Letter to the Council of the Section of Taxation, American Bar Association*, provides the following: "As instructed, the Committee has avoided taking a position for or against the adoption of a VAT in the United States, but has addressed itself to the task of preparing a statute that the Congress could enact if it decides to propose such a tax.").
[275] *Sixth Directive*, 77/388/EEC, 1977 O.J. (L 145) 1, *supra* note 40, at Art. 26c, added by 2002/38/EC, 2002 O.J. (L 128) 41 [Digital Sales Directive] *supra* note 25.

The second modification is the incorporation into the ABA Model or *Vatopia* of provisions dealing with certified service providers (CSP) and certified automated/ proprietary systems (CAS and CPS) from the *Streamlined Sales and Use Tax Agreement* (SSUTA).[276] The certified service providers (CSPs) provision would authorize third-party collecting agents, certified by the federal government, to assume all VAT functions for the taxpayer, at no cost to the business.[277] The certified automated system (CAS)[278] and certified proprietary system (CPS)[279] variations on this theme would also be incorporated. Following the SSUTA provisions, the federal government would certify tax-calculation software, the proper use of which by the taxpayer would effectively insulate the taxpayer from liability from errors in determining the proper tax due.

Although CSP/ CAS / CPS concepts have their genesis within the SSUTA, their operation within the D-VAT would be far more effective. In terms of the critical accuracy of the automated processes, the D-VAT relies on the inherent "self-checking" attribute of a credit invoice VAT.[280] Buyers and sellers have an incentive to assure correct determinations in a VAT, whereas under the SSUTA the accuracy of the digital record is dependent on state oversight of the digital service providers, or the certified/ proprietary automated systems. This level of technical oversight is not only expensive in the SSUTA, it is dependent on government initiative.

Linear tax enforcement regimes, like that of the RST, have always had an Achilles heal; the government audit staff. Without an adequately trained, vigorous and motivated audit staff revenue expectations are not readily met. The SSUTA does not repair this Achilles heal it only moves it into a software oversight function. The fundamental difference between a VAT and a RST is the way the VAT changes linear tax enforcement, making it a circular, self-checking flow of data that taxpayers (as well as the government) have an interest in assuring its accuracy and completeness. The D-VAT's automation of the invoice flows will allow this self-checking function to be measured, assured, and verified.

2.5.2.3 – *Use of uniform product and service identifier codes.*

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[276] *SSUTA*, *supra* note 26.

[277] *Id.* at § 203 (defining a Certified Service Provider (CSP) as "[a]n agent certified under the Agreement to perform all the seller's sales and use tax functions, other than the seller's obligation to remit tax on its own purchases.").

[278] *Id.* at § 202 (defining a Certified Automated System (CAS) as a "[s]oftware certified under the Agreement to calculate the tax imposed by each jurisdiction on a transaction, determine the amount of the tax to remit to the appropriate state, and maintain a record of the transaction.").

[279] *Id.* at § 207 (defining a Certified Proprietary System (CPS) as the system owned by "[a] seller that has sales in at least five member states, has total annual sales of at least five hundred million dollars, has a proprietary system that calculates the amount of tax due each jurisdiction, and has entered into a performance agreement with the member states that establishes a tax performance standard for the seller.").

[280] ECC FISCAL AND FINANCIAL COMMITTEE, REPORT ON TAX HARMONIZATION IN THE COMMON MARKET (tr., by CCH staff from original French and German texts) Report 21, Document SD-322 (1963) [commonly known as THE NEUMARK REPORT] at ¶ 3458.10- .14 (considering in the formative days of the European Common Market the relative advantages of a multi-state VAT over a single stage RST).

The Digital VAT would require the digital identification of each good or service sold in the US economy. Codes would be uniformly applied and federally determined. If starting from scratch, this would be a daunting task, however two data-bases are readily available for this purpose, and are commonly used for VAT and trade reporting purposes: the CN8 codes[281] are used in the EU to identify movements of goods, and the UN CPC[282] codes are used to numerically identify services as well as goods transactions. Alternate codes could be developed using UPC codes, for example, but the advantage of adopting an already workable system both for cross-border tax enforcement, and for taxpayer acceptance (particularly for those businesses already using these codes in international VAT compliance) is an important consideration.

Some changes would be required in the ABA Model or *Vatopia* to accommodate uniform goods and services codes. For example, each invoice would need to associate particular goods or services transactions with appropriate numeric identifiers. Tax calculations would be tied to appropriate codes.[283] Following the European pattern, each periodic and recapitulative statement,[284] each return,[285] and declaration would be required to identify taxable activities with numeric identifiers. The records retained under the D-VAT would be electronic. The D-VAT would mandate that these records would be made available electronically (on site and remotely) upon request of taxing authorities.

2.5.2.4 – *State RST piggy-backing encouraged.*

[281] EUROSTAT, RAMON: CLASSIFICATION SERVER, *at* http://europa.eu.int (last visited Aug. 29, 2005). Norbert Ranier, *Revised System of International Classifications, at* http://europa.eu.int (last visited Aug. 29, 2005) (Norbert Ranier (Statistics Austria) presents a recent assessment of developments in global economic classification systems, explaining the effort to harmonize EU and UN classification systems. He indicates that, "[a] thorough revision of the international statistical classifications has recently been completed, with the result that the new classifications have been developed as an integrated system of statistical classifications, whereby a) the various product classifications have been harmonized and b) the central product classifications have been related to the classifications of economic activities by the economic origin criterion. In addition, the European Union's classifications have been harmonized with global classifications. This also applies to the national classifications of the EU Member States.").

[282] U.N. C.P.C. (Central Product Classification, Version 1.1) (Feb. 21, 2002) 8, *at* http://unstats.un.org (last visited Aug. 29, 2005) ("The main purpose of the CPC is to provide a framework for the international comparison of statistics dealing with products and to serve as a guide for developing or revisin existing classification schemes of products in order to make them compatible with international standards. … CPC constitutes a comprehensive classification of all goods and services. With regard to services, no international classification covering the whole spectrum of outputs of the various service industries and serving the analytical needs of statistical and other users was available before the development of CPC.").

[283] SCHENK, VALUE ADDED TAX – A MODEL STATUTE, *supra* note 24, at § 4022 (modification would be needed to this section, as well as referenced IRC § 6652(m) to impose penalties for not including numeric identifiers on the invoice); *Vatopia*, *supra* note 28, at § 29(1) & paragraph 1 of Schedule IV (requiring similar modifications to tie transactions to the uniform good or service code).

[284] SCHENK, VALUE ADDED TAX – A MODEL STATUTE, *supra* note 24, at §4026 Secretary to be Notified of Certain Events (modification would be needed to require the use of electronic means). *Vatopia*, *supra* note 28, at §§11-12 (registration requirements will need to be changed similarly).

[285] SCHENK, VALUE ADDED TAX – A MODEL STATUTE, *supra* note 24 (modification would be needed to accommodate electronic filing necessary for filing of returns, payment of the tax, signing of returns, and assessments and deficiencies; *Vatopia*, *supra* note 28, at §§ 32, 60-61 (modifications needed in the returns requirements as well as record keeping requirements needed to accommodate electronic filing and electronic signature).

The D-VAT would encourage states to piggy-back on the federal database. An important distinction is drawn between the federal *tax base* and the federal *database*. States would not need to adopt the federal tax structure (as occurred in some Canadian Provinces after passage of Canada's federal GST), nor would they need to adopt the federal tax base (as is expected to occur under either the National Sales Tax or Fair Tax proposals). However, should the states decide to follow the federal tax base, it is expected that the D-VAT's tax base will be broader than that currently in operation under most state retail sales taxes.[286]

A D-VAT would affect a very different form of "piggy-backing," but nevertheless a very acceptable one in an American view of fiscal federalism. The D-VAT will assemble uniform, verifiable data on all goods and service transactions. The database will be more comprehensive than any state's retail sales tax base (particularly those of states that impose tax only on the final consumption of tangible personal property).[287] As a multi-stage consumption tax, the D-VAT will record goods and services transactions along the whole supply chain, not just on transactions between retailers and final consumers. Accurate information on this range of transactions would greatly facilitate state verification of taxes imposed on business purchases, an important consideration in some states where as much as 40% of the tax base is collected at this level.

In addition, even though the D-VAT is a destination-based consumption tax, the database itself is source-neutral. Companies operating in states with origin-based RST's can report in the same manner as they do today. Origin states can access invoice records in the federal database to confirm total sales of goods and services from a particular business location. Audits could sort this data by product codes for taxable items. The same would occur in destination states, although in this instance the federal database would be accessed on the purchasing side. These audits would be for use tax obligations.

2.5.2.5 – *State access to the federal database at a national level.*

Access to the full federal database would allow states to sort for sales sent to consumers within their state. Digital invoices would contain names, and address of the ship-to location. The same information would be available for the bill-to location, if different. State-federal exchange of information agreements would be sufficient to provide access to national data.

[286] Edwards, *Options for Tax Reform*, *supra* note 193, at 1548 (relying on Fox, *Should Hawaii Look Like Other State's Sales Taxes? supra* note 193, at 12). The tax base of the Digital VAT should be broader than that of the European VATs, which are imposed on approximately 41% of GDP. The D-VAT base could conceivably cover close to 80% of GDP and be similar in scope to the coverage of a comprehensive retail sales tax. The D-VAT Card allows inclusion of necessities for all but the poorest individuals, limiting the zero-rating of these supplies to those identified to be in most need.

[287] Edwards, *Options for Tax Reform*, *supra* note 193, at 1548. (indicating that the average state RST base covers about 36% of GDP, ranging from a low of 26% of GDP in New Jersey to a high of 71% of GDP in New Mexico).

Difficulties posed by businesses established in one of the five no-tax jurisdictions where state-to-state exchange agreements are ineffective would be circumvented. In addition, having this information readily accessible would obviate the need to for the US Congress to overturn the US Supreme Court's decision in Quill v. North Dakota.[288] This decision blocks states from requiring out-of-state retailers without nexus from collecting sales and use tax on sales made to in-state locations.

2.5.2.6 – *Digital relief from the regressivity of taxing consumption*.

Each of the major proposals for a national consumption tax, except the ABA Model, struggle with the regressivity of a federal tax on consumption, and provide relief. The ABA Model takes a different view. The ABA Model is "… imposed on a broad base to permit the adoption of the lowest possible rate. Congress should accommodate social or economic concerns, such as the regressive effects of a VAT, outside the VAT regime."[289] The universal complaint levied against all attempts to counter the regressivity of a consumption tax from within the tax itself is that the relief is never well targeted. Effective relief requires overly broad exemptions, narrowing the base and raising the rates. The D-VAT is different. The D-VAT allows surgical targeting of relief at the federal level, and if states piggy-back on the federal database, then similarly effective relief will be available at state and local levels also.

Subtraction VAT + YET Proposals. The Hall-Rabushka Flat Tax contains a significant standard deduction for all individuals. It imposes a flat tax on all income in excess of the deduction.[290] David Bradford's X-tax differs from the Hall-Rabushka model by providing more deductions and a graduated rate, and then levels off with a flat rate equal to the business rate.[291]

Subtraction VAT + CIT Proposals. The USA Tax,[292] the Simplified USA Tax[293] and the proposal by Professor McCaffery[294] each respond to regressivity concerns with

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[288] 504 U.S. 298 (1992). In *Quill* the U.S. Supreme Court for the first time distinguished between nexus for Due Process Clause and Commerce Clause purposes. The Court stated that although closely related, "the clauses pose distinct [constitutional] limits on the taxing powers of the States." (504 U.S. at 312). The Court noted that while the Commerce Clause's "substantial nexus" requirement is "a means for limiting state burdens on interstate commerce," the Due Process Clause "centrally concerns the fundamental fairness of governmental activity" and is often regarded as "a proxy for notice." (504 U.S. at 313). Therefore, "at the most general level, the due process nexus analysis requires that we ask whether an individual's [or corporation's] connections with a State are substantial enough to legitimate the State's exercise of power over [them]." (504 U.S. at 325). In so holding, the Supreme Court overruled its prior holding in National Bellas Hess v. Illinois, 386 U.S. 753 (1967) which required physical presence to satisfy Due Process, and imposed a more relaxed standard. The Court reaffirmed the general principle that the taxpayer must have some "minimum contact" with the taxing state so as to "not offend traditional notions of fair play and substantial justice."

[289] SCHENK, VALUE ADDED TAX – A MODEL STATUTE, *supra* note 24, at 11.

[290] HALL & RABUSHKA, THE FLAT TAX (1995), *supra* note 71, at 59 & 144 [§ 201(a) of the proposed statute] (providing a $25,500 allowance for a family of four, reflecting an allowance of $16,500 for married taxpayers filing jointly, $14,000 for head of households, $9,500 for single taxpayers, and $4,500 per dependent).

[291] Bradford, *The X Tax in the World Economy, supra* note 119, at 3-5 (providing similarly a standard deduction, regular deductions, and even an earned income tax credit).

graduated rates, in a manner similar to Bradford's. They also provide deductions for mortgage interest,[295] education,[296] and charitable contributions.[297]

Sales Tax Proposals. The National Sales Tax[298] and the Fair Tax[299] provide direct rebates of estimated sales tax amounts. The rebates are not limited to individuals who have income levels below the poverty level. They are calculated using poverty level indicators, and are provided to all wage earners.

Credit Invoice VAT Proposals. Professor Graetz uses VAT revenues to eliminate income tax obligations for families earning less than $100,000 ($50,000 for single individuals), essentially granting everyone a very large standard deduction. Graetz also counters the regressivity of his VAT with a direct refund through the payroll tax.[300] In addition he would zero-rate goods and services that are perceived to be necessities.[301] Professor Avi-Yonah believes the "… Graetz proposal is sensible …but the wrong way to go … [because] we cannot afford it…."[302] Professor Avi-Yonah does not go into more detail, but it seems fair to say that Professor Avi-Yonah would grant few of the concessions that Graetz does.

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[292] Nunn & Domenici, USA Tax Act of 1995, S. 722, *supra* note 122, at § 15 (providing rates in three tiers, 19%, 27% and 40%, falling each year for five years reaching rates of 8%, 19% and 40%).
[293] English, Simplified USA Tax Act of 2003, H.R. 269, *supra* note 123, at § 15 (providing rates in three tiers of 15%, 25% and 30%).
[294] MCCAFFERY, FAIR NOT FLAT, *supra* note 71, at 100-101 (proposing rates in five tiers, with the 0% rate extending to $80,000 (for a family of four), followed by rates of 10%, 20%, 30%, and 40% with the 40% rate being effective for amounts over $1,000,000).
[295] Nunn & Domenici, USA Tax Act of 1995, S. 722 *supra* note 122, at § 9; English, Simplified USA Tax Act of 2003, H.R. 269, *supra* note 55, at § 9; MCCAFFERY, FAIR NOT FLAT, *supra* note 3, at 98.
[296] Nunn & Domenici, USA Tax Act of 1995, S. 722 *supra* note 122, at § 10; English, Simplified USA Tax Act of 2003, H.R. 269, *supra* note 55, at § 10; MCCAFFERY, FAIR NOT FLAT, *supra* note 3, at 98.
[297] Nunn & Domenici, USA Tax Act of 1995, S. 722 *supra* note 122, at § 11; English, Simplified USA Tax Act of 2003, H.R. 269, *supra* note 55, at § 11; MCCAFFERY, FAIR NOT FLAT, *supra* note 3, at 98.
[298] Tauzin & Schaefer, The National Retail Sales Tax, H.R. 4168, *supra* note 162, at §§ 13 and 15(c) (providing for a family consumption refund equal to the sales tax rate times the lower of wages or the poverty level is provided to be added to each worker's paycheck through an adjustment to the payroll tax at the employer level).
[299] Linder & Chambliss, The Fair Tax, H.R. 25/ S. 25, *supra* note 163,at § 301 (providing for the federal government to annually mail checks to each household sufficient to offset the burden of sales taxes on consumption up to the poverty level).
[300] Graetz, *100 Million Unnecessary Returns*, *supra* note 7 at 291, n.141 (borrowing and modifying concepts from the National Retail Sales Tax a standard deduction is provided in a flat amount, rather than by multiplying the poverty level times the tax rate. "This tax relief and wage subsidy for low-income workers would be administered by having employers adjust their employees paychecks to provide 'negative withholding,' or additional take-home pay. Individuals would be eligible for this benefit if they earned wages of $20,000 or less. An additional amount would be provided based upon the worker's number of children. To avoid an abrupt termination of relief with attendant high marginal rates on wages, families with children might be eligible for some tax offset with wages up to about $50,000.").
[301] *Id.* at 288, n.123 (indicating that, "[e]xpenditures on education and religion would be exempt from the consumption tax, as would most expenditures on health care. However, rather than exempting food or clothing, as many foreign VATs and state sales taxes do to reduce the tax burden on necessities, low-income people should be protected from tax increases through a reduction in payroll tax withholdings.").
[302] Avi-Yonah, *Risk, Rents, and Regressivity*, *supra* note 79, at 1665, n.56.

Neither the ABA Model nor *Vatopia* has a direct refund mechanism for the poor. Neither the ABA Model nor *Vatopia* allows for multiple rates. Neither model zero-rates necessities like food,[303] although *Vatopia*, through regulation, allows consideration for medical care.[304] Considerations like this are necessary to preserve a broad tax base. The D-VAT addresses regressivity concerns differently. Technology and universal product codes proved the D-VAT with a mechanism to remove the tax from selected purchases by designated individuals.

Digital VAT. The D-VAT will surgically target tax relief to those determined to be most in need, and for purchases which society feels relief should be granted. No other consumption tax proposal can make this claim. The digital core of the D-VAT allows the use of procurement card technology to remove the tax from selective transaction types. The D-VAT can do this on an individual-by-individual, economic and socially determined need basis.

For example, assume a low income individual qualifies for exemption from the D-VAT on purchases of necessities, determined in this case to be certain food, clothing items and necessary medical services. This individual would be issued a card, similar to a credit or a purchase card that would, when scanned at the point of sale, remove the D-VAT from the purchase. In effect, the purchase of designated items by this individual would be zero-rated.[305] Other individuals purchasing the same items would be subject to tax. Thus, the D-VAT Card functions the same way that preferred customer cards function at most supermarkets. Because universal product codes would identify all goods and services transactions in the economy, exemptions could be tailored to the specific circumstances of the qualifying individual. D-VAT Cards would be valid nationally, because universal products codes identify the same goods and services in every state.

D-VAT Cards could be issued monthly, allowing welfare agencies the opportunity to regularly re-evaluate an individual's status. Dollar limitations could be associated with these cards, so that an individual in a particular income bracket would qualify for D-VAT exemptions up to, but not exceeding certain limits. In addition, a D-VAT Card would require no cash refunds, no adjustments to payroll tax withholdings, and no annual or periodic returns seeking reimbursement. Relief is narrowly targeted to those in need, immediately provided at the point of sale, and narrowly tailored to the items for which that person's need has been recognized. This attribute of the D-VAT Card assures the expansion of the VAT base to food and other necessities purchased by the well-to-do.

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[303] SCHENK, VALUE ADDED TAX – A MODEL STATUTE, *supra* note 24, at 70-71; *Vatopia*, *supra* note 28, at § 9 (providing for only one rate of tax on all goods and services with food neither exempt not zero-rated).

[304] SCHENK, VALUE ADDED TAX – A MODEL STATUTE, *supra* note 24, at 71-72 and *Vatopia*, *supra* note 28, at §2(b) (Schedule II) (allowance is made for zero-rating supplies of medical goods and services).

[305] Because this transaction is zero-rated rather than exempted the retailer selling to low-income or high-income purchasers would be indifferent. A zero-rated sale allows the seller to reclaim the whole amount of the VAT (input credit) that was paid on the purchase of inventory, in exactly the same manner as a sale to a regularly taxed transaction.

Technology to accomplish this task is already available commercially. It is used by all international businesses that have VAT reporting obligations, and any commercial enterprise in the US that has automated systems to determine sales and use tax obligations. It is a very simple matter to associate a zero rate of tax with a particular purchase when an authorizing card is passed, and a standard rate of tax when no card is passed. In the D-VAT this technology would be made available to those who do not already have it through a CSP. The D-VAT would accommodate proprietary systems that are certified (CPS), and would certify other automated systems (CAS) to perform this function in-house.

2.5.2.7 – *Small business and final consumer exemptions added*.

Two exemptions need to be added to Digital VAT, one for small businesses, and the other for invoices issued to final consumers. Others may be needed in certain circumstances.

The ABA Model VAT differs from most VAT systems by not allowing a small business exemption. The commentary to the Model VAT explains, "[i]f a small business exemption is included in a VAT system, the exemption creates opportunities for abuse, produces multiple taxation, and distorts competition between taxable and exempt traders."[306]

The D-VAT however, needs a small business exemption. The exemption however, will not be to exempt small businesses from charging VAT, rather it will be to exempt a small business from the mandatory electronic filing requirements. Very small businesses, businesses where automation would be a hardship, would be allowed to submit paper returns, statements and reports, in lieu of the digital documentation requirements generally required in the D-VAT.

There is no reason to disagree with the ABA Reporter who explains, "[t]he Model Act does not contain a *de minimus* or small business exemption [from the tax itself]. The states have been highly successful in collecting retail sales taxes, even from small retailers with minimal record keeping. While the record keeping and reporting requirements under a VAT may be somewhat more complicated because of the input credit, there does not seem to be any significant compliance problem that should prompt Congress to remove small businesses from the tax rolls."[307] However, the burden of digital compliance, as opposed to traditional paper compliance may indeed be burdensome to some.[308]

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[306] SCHENK, VALUE ADDED TAX – A MODEL STATUTE, *supra* note 24, at 87.
[307] *Id.* at 90.
[308] Regulations should determine the scope of exemption. Advances in technology could make the exemption unnecessary, so a firm rule need not be placed in the statute. Authority to regulate other hardship variances from digital recordkeeping should be allowed. Religious objections could be anticipated from some, like the Amish, who have objected to proposed changes in sourcing rules in the Ohio sales tax statute, because new rules (destination sourcing) anticipate the use of a modern technology that is at odds with their beliefs. Woo, *supra* note 47; Emily Dagostino, *Tax Officials: Streamlining States*

A second exemption, again to dispense with the general requirement to perform all reporting functions electronically, should be allowed for sales to final consumers. Invoices (sales receipts) issued to the final consumers transactions (supermarket receipts, department store sales slips, etc.) should be permitted in paper. The retailer's record of the transaction would still be required to be maintained digitally. The reason for this exception is to make the transition to the D-VAT as smooth as possible. In addition, final consumers are not taxpayers in a VAT system. They file no returns, reports or statements with the taxing authority, and would have no need for a digital record of purchases. Thus the omission of digital records on the final consumer's side of this transaction will have no impact on the integrity of the D-VAT.

2.6 – CONCLUSION

This proposal for the US adoption of a D-VAT is intended as an administrative supplement to proposals for a European-style, destination based, credit-invoice VAT. As drafted, it is not concerned with achieving revenue neutrality, a concern of the President's Advisory Panel on Federal Tax Reform. It is however very concerned with the "fit" of this tax within the broader context of the American tax system (federal, state and sub-state level systems). This is one of the two tax design barriers identified by the Panel that prevented the Panel from recommending a VAT in its final report.

Like the PR-VAT considered by the Panel, the D-VAT seeks to partially replace the revenue generated through the income tax from the less wealthy segment of the population with a consumption tax. The D-VAT proposal does not conflict with the VAT proposals advanced by Professor Graetz and Avi-Yonah, or with those proposed in Congress by Senator Hollings. What it does is suggest that if the US is contemplating a national consumption tax, and if the tax is to be a VAT, then the administrative design should be intensely digital. There are strong efficiency, equity, state-federal harmonization, and tax administrability reasons for the adoption of a D-VAT.

This is a truly modern VAT design, one that will not only achieve the self-enforcing promise of the earliest advocates of this tax, but one that will re-enforce the diversity of tax design that has been a hallmark of American fiscal federalism. The D-VAT provides a mechanism for achieving the broadest possible consumption tax base. It also will facilitate the incorporation of the D-VAT Card into the system that will provide a surgical answer to the inherently regressive nature of this tax. The D-VAT Card will be considered in greater detail in Chapter 4. However, before examining the D-VAT Card in detail, it is important to consider how the principles of the D-VAT apply in the context of developing countries. Developed economies with VATs are already moving in the D-VAT direction.[309]

Struggle With Sourcing Provisions, STATE TAX NOTES (Aug. 19, 2004) [Doc. 2004-16766; 2004 STT 161-1].

[309] *See supra* text accompanying notes 240 to 271.

CHAPTER THREE: THE DIGITAL VAT (D-VAT) IN DEVELOPING COUNTRIES

Developing countries pose a different set of problems for the adoption of D-VAT technologies. Although the VAT is well developed legally and is a critically important revenue source for developing economies, the penetration of technology in these economies makes comprehensive D-VAT applications difficult.

Then again, if developing countries are compared with the U.S., the considerable experience that they have with the VAT makes some of the most important D-VAT applications immediately applicable. Developing economies are certainly not faced with the complexities that U.S. advocates of a national VAT face with finding a way to "fit" the federal level tax into the pre-existing web of local sales taxes.

3.1 -- INTRODUCTION

Since the e-commerce revolution began in the 1990's, tax policy discussions in developed economies have enlisted "e-solutions" to streamline consumption tax administration, as well as to resolve technical problems. These well-considered discussions are now producing systemic, multi-jurisdictional changes in European[310] and United States[311] consumption tax regimes.

Inspiration came from the marketplace. Policy-makers observed widespread, business-initiated e-solutions to consumption tax compliance problems in a wide spectrum of jurisdiction. Although individually effective, when considered globally these options appeared piecemeal, and confusing. E-solutions frequently targeted single-issues, and were often jurisdiction-specific. Thus, it only made good sense for policy professionals to coordinate these advances, to harmonize e-solutions across multiple jurisdictions, and to make them more comprehensive within the jurisdictions that embraced them.

There are two aspects to these developments: horizontal – the availability of a single e-solution to the same consumption tax issue across many jurisdictions; and vertical – the availability of a comprehensive e-solution to multiple consumption tax issues within a single jurisdiction. Examples abound of e-registration, e-filing, e-payment, e-audit, e-refunds,[312] at almost every tax jurisdictional level – national, state,

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[310] 2001/115/EC, 2002 O.J. (L 15) 24 [Invoicing Directive] *supra* note 25 (standardizing the legal elements required on an invoice and authorizing fully digital invoicing). and 2002/38/EC, 2002 O.J. (L 128) 41 [Digital Sales Directive] *supra* note 25 (permitting digital registration, notices, returns, as well as digital periodic and recapitulative statements in conjunction with establishing a fully digital regime for B2C sales of digital products by non-established businesses; *Sixth Directive* Article 26c).

[311] Streamlined Sales and Use Tax Agreement (SSUTA) *supra* note 26 (providing for fully digital compliance with sales and use taxes through certified intermediaries and certified software solutions); Hellerstein, *U.S. Subnational State Sales Tax Reform, supra* note 86, at 8 ("Throughout most of its 70-year history, there has never been a concerted movement to harmonize the US subnational sales tax on a multistate basis.")

[312] Streamlined Sales and Use Tax Agreement (SSUTA) *supra* note 26, at § 401 (requiring all member states to participate in an on-line registration program, other provisions require e-filing, and e-payment, and

district, city, or sub-city unit. Similarly, there are examples where a single company's e-filing or e-payment obligations in multiple jurisdictions are handled through a single e-solution.[313] Frequently, when the details of these e-programs are examined, even in the most developed countries, the e-solutions are limited in some manner and are not truly comprehensive solutions for the whole taxpaying community. The field is still developing, even in the most developed countries.

How then should developing economies participate in this discussion? Should policymakers simply support incremental advances, and allow the "function creep" of the technology to gradually change the tax administration landscape? In other words, should the plan be to roll out vertical e-solutions at a pace roughly parallel to local technological development, or should comprehensive (horizontal and vertical) e-solutions be proposed for a dedicated segment of the economy? Which way would better stimulate

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the contract for the SSUTA on-line registration service has been awarded to a firm, Tax Watch: http://www.watchsystems.com/); *Sixth Directive*, 77/388/EEC, 1977 O.J. (L 145) 1, *supra* note 40, at Art. 26c(B)(2) (requiring on-line registration in all E.U. countries under the special digital sales scheme, other provisions require e-filing, and e-payment) and (New) Art. 22 (1)(a) as amended by Art. 28h (requiring all Member States to permit on-line registration). Switzerland has on-line VAT registration, *available at* http://www.estv.admin.ch/data/mwst/f/formulare/online/f_anmeld.html. Similarly, in Australia, *available at:* http://ato.gov.au/onlineservices/content.asp?doc=/content/36109.htm&mnu=5611&mfp=001/010

For further example, the following eight states in the U.S. have mandatory e-filing and e-payment systems in place for "large" consumption tax filers. These filing requirements are frequently reported on the state web pages. In Connecticut electronic filing is mandatory if annual liabilities exceed $100,000. (http://www.drs.state.ct.us/electronicservices/fastfiling.htm). In Florida all zero returns must be filed electronically as well as the returns for filers who have in excess of $30,000 in annual liability in the prior year. (http://www.state.fl.us/dor/forms/dr15inst.html). In Louisiana businesses with liabilities in excess of $20,000 must pay by EFT. (http://www.rev.state.la.us/sections/eservices/default.asp#efbt). Missouri has a mandatory e-filing system for all taxpayers who had in excess of $15,000 in liability in 6 of the previous 12 months, *available at* http://www.dor.mo.gov/tax/business/payonline.htm (last visited Aug. 2, 2006). New York has a mandatory e-filing system, called Propfile, for taxpayers with liabilities in excess of $500,000 annually *available at* http://www.tax.state.ny.us/prompt/Sales_Tax/sttoc00.htm (last visited Aug. 2, 2006). Oklahoma has a mandatory e-filing program for taxpayers with in excess of $100,000 in liability per month *available at* http://www.oktax.state.ok.us/oktax/quicktax.html (last visited Aug. 2, 2006). In Texas electronic filing is mandatory for filers with a past year sales tax liability of $100,000 or more. This filing must be through EDI if there are more than 30 Texas locations *available at* http://www.window.state.tx.us/webfile/index.html (last visited Aug. 2, 2006). Utah requires taxpayers with liabilities in excess of $96,000 to e-file *available at* http://www.tax.ex.state.ut.us/sales/salestaxonline.html (last visited Aug. 2, 2006).

[313] The state of Texas provides the classic example. It imposes a sales tax on sales of tangible personal property and specified taxable services. There are 1,270 sales tax jurisdictions in Texas, 124 county, 1,141 city, 104 districts in addition to the state tax. Rates may vary among the jurisdictions, but the tax base is harmonized.

All sales taxes are reported to and collected by one state-level agency, the Comptroller of Public Accounts (Tex. Tax Code Ann. §323.301). Taxpayers report these amounts on a single Texas sales tax return. The Comptroller of Public Accounts is authorized to allow or require any taxpayer to file electronically, based on a written agreement, and in a manner prescribed by regulation (34 Tex. Admin. Code § 3.9).

Prior to January 1, 2002 electronic payment was mandatory if payments in the previous year exceeded $250,000, after January 1, 2002 the payments were mandatory if amounts exceeded $100,000. Texas accepts funds transfers by EFT and EDI. Electronic filing of returns is mandatory in all instances where payments are required electronically (Tex. Tax Code Ann. §111.0625). Failure to comply with electronic filing and reporting rules is subject to penalty (Tex. Tax Code Ann. §111063).

development, encourage foreign direct investment, and more broadly integrate local businesses within world markets?

This chapter argues for the second approach (comprehensive – horizontal and vertical – e-solutions for a dedicated segment of the economy) and bases its answer on three factors: (a) revenue concentration – the fact that in developing countries the great bulk of VAT revenue is derived from a small number of large, frequently foreign business enterprises; (b) existing software – most, if not all, major multinational firms currently determine VAT obligations through global software applications integrated into their enterprise resource planning (ERP) system and encounter minimal tax-knowledge barriers when expanding in jurisdictions that align themselves with these applications; and (c) corporate governance reform – the fact that the C.E.O. and C.F.O. of global companies are under increased regulatory and shareholder pressures, often with direct personal liability, to document controls over cash flow in a manner that effectively mandates comprehensive automated consumption tax systems. These factors constitute context, opportunity and leverage for developing countries.

The remainder of this chapter is divided into four parts. The first three follow the divisions listed above: revenue concentrations, existing software, and corporate governance reform. A final part advocates the adoption of the D-VAT in a developing country context. In essence this chapter suggests that the time is right for developing countries to consider adopting a comprehensive, fully digital VAT, (complete with certified software and trusted third party intermediaries who could assume all of the taxpayer's VAT responsibilities) within the limited group of enterprises encompassed by the large taxpayer group.

3.2 – THE DEVELOPING COUNTRY CONTEXT: REVENUE CONCENTRATIONS

Although there is strong evidence supporting the proposition that in developing economies <u>total revenue</u> is concentrated in a limited number of the largest firms, empirical evidence proving the narrower proposition that <u>VAT revenues</u> are similarly concentrated is anecdotal and circumstantial. There is however one very recent study that is exactly on point, and which considers an important set of eleven Latin American countries.

If the magnitude of the revenue concentrations pointed to in these studies and anecdotes are true, then the target group for D-VAT adoption in the developing world is an exceptionally small one. It comprises, perhaps, less than one percent of the business filers, a segment that in all probability is a fully automated part of the business community.

3.2.1 – *Large Taxpayer Concentrations of VAT*

Data collected by Ebrill, Keene, Bodin and Summers on the "distribution of turnover" from 17 developing countries[314] leads them to conclude that "[i]t does appear to be an empirical regularity that value added is very strongly concentrated among a relatively few firms. Table 11.1 shows the distribution of turnover by size of firm for selected countries. Despite significant variation, a useful rule of thumb is that the largest 10% of all firms commonly account for 90% or more of all turnover."[315] Is it fair to conclude that the same 10% account for 90% of the VAT revenue?[316]

Similar evidence and questions are raised by Katherine Baer's 2002 study. She records that, "[i]n France, for example, 15,000 enterprises (0.1% of the total) reported 55% of the total turnover, and 35% of the base for the corporate income tax."[317] Again, it is not clear if 55% of the turnover translates into 55% of the VAT. In the UK she notes that the large taxpayer group in HMC&E controlled 2,200 large VAT taxpayers. This was 0.1% of the total number of taxpayers, and the VAT involved was 22.2% of total direct and indirect revenue.[318] Here too, it would be helpful to know what percent of total VAT revenues this figure represents.

Baer's study on large taxpayer units has some striking observations on revenue concentrations, but again she is looking at concentrations of total revenue. She concludes that on average, less than 1% of the taxpayers are responsible for over 50% of total revenue in developing countries.[319]

This same lack of discrimination among revenue sources carries over to an IMF presentation in 2003,[320] and a World Bank paper in 2005.[321] Both of these discussions

[314] LIAM EBRILL, MICHAEL KEEN, JEAN-PAUL BODIN & VICTORIA SUMMERS, THE MODERN VAT 114 (2001) (considering Albania, Bangladesh, Benin, Bulgaria, Burkina Faso, Cameroon, China, Croatia, El Salvador, Georgia, Mauritania, Mongolia, Pakistan, Philippines, Sri Lanka, Uganda and Vietnam.)
[315] *Id.* at 117.
[316] There is a good reason for focusing on turnover in these surveys. Katherine Baer's survey notes that turnover was, "… the most common factor for selecting large taxpayers … generally the IMF recommends that countries use annual sales, rather than quarterly or semi annual sales, as the principle criterion for identifying large taxpayers." KATHERINE BAER, IMPROVING LARGE TAXPAYERS' COMPLIANCE: A REVIEW OF COUNTRY EXPERIENCE, 15 & n.15 (IMF Occasional Paper No. 215, 2002).
[317] *Id.* at 6, n.10.
[318] *Id.* at 7, Table 1.2.
[319] *Id.* at 7, & Table 1.2.

Concentration of Tax Collection in Selected Countries for 1999 (7 of 34 in full table)

	Number of large taxpayers	% of total	% of revenue	Details provided in Baer at Page:
Argentina	3,665	0.1	49.1	32-33
Benin	812	1.0	90.0	28-29
Bulgaria	842	0.1	51.4	25
Hungary	369	0.1	42.1	25
Kenya	600	0.4	61.0	29-30
Peru	2,450	0.9	64.9	35
Philippines	833	0.2	36.0	31-32

[320] Jean-Paul Bodin, *LTU Case Studies*, power point slide 11 (Harvard International Tax Program, 2003) (on file with author).

support Baer's general conclusions, and do not further distinguish among the possible tax sources of the revenue concentrations.

In an earlier paper presented at a CIAT technical conference in 1994, Jaime Vazquez-Caro contended anecdotally that one of the reasons for establishing large taxpayer units was that (aside from being large taxpayers in their own right) these enterprises were "large collectors of withholding and VAT."[322] Carlos Silvani has indicated that based on his experience, one "… would be very safe assuming that the VAT concentration [within the large taxpayer groups] is at least as important as it is for total revenue."[323]

A recent study by Roberto Silva Legarda finally takes the next necessary step. It goes further that all previous work in this area and provides percentages of total VAT revenue derived by the large taxpayer groups in eleven Latin American countries. He concludes, "The data obtained as part of this study shows that, on average, 0.54 per cent of the total taxpayers (see Exhibit 3) - identified as large taxpayers - account for 70.11 per cent of total revenue (see Exhibit 4), and for 70.28 per cent of VAT-only revenue (see Exhibit 5)."[324] The critical data summary elements from Table 2[325] in this study are set out below:

	# of Large Taxpayers	% of Taxpayers in LTU	% of total Revenue from LTU	% of VAT Revenue from LTU
Argentina	66,666	1.36%	91.40%	86.10%
Brazil	6,940	0.01%	74.30%	N/a
Chile	n/a	N/a	37.70%	31.40%
Colombia	6,431	0.94%	62.80%	84.40%
Costa Rica	512	0.50%	71.00%	65.00%
Ecuador	3,969	0.28%	77.90%	79.20%
Guatemala	2,970	0.76%	80.29%	78.13%
Mexico	9,220	0.04%	65.33%	60.80%
Nicaragua	364	0.33%	72.90%	68.78%
Uruguay	1,516	1.00%	83.70%	65.90%
Venezuela	12,009	0.20%	53.89%	83.05%
Average		**0.54%**	**70.11%**	**70.28%**

3.2.2 – *Border Concentrations of VAT.*

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[321] William McCarten, *The Role of Organizational Design in the Revenue Strategies of Developing Countries: Benchmarking with VAT Performance*, 14, paper presented at the International Tax Dialogue Conference, Rome Italy (Mar. 15-16, 2005) *available at* http://www.itdweb.org/VATConference/Pages/Home.aspx

[322] Jaime Vazquez-Caro, *Assessing the Impact of Integrating Functions of Tax Administration on Efficiency and Effectiveness*, CIAT (1994), as referenced in *Id.* at 27.

[323] Carlos Silvani, personal e-mail communication (June 2, 2005) (on file with author).

[324] Roberto Silva Legarda, *VAT Concentrations in Latin America* 41 TAX NOTES INT'L. 821, (Mar. 6, 2006).

[325] *Id.* at 829.

There is also good empirical evidence that VAT receipts in developing countries are concentrated in another important respect – at the borders. Ebrill, Keene, Bodin and Summers find border VAT collection to be, "… a key empirical feature of the VAT: revenues collected on imports commonly accounts for a large portion of total VAT revenues." In a sample of 22 developing and transitional economies it is clear that, "in about two-thirds of them, more than half of all VAT revenue is collected on imports: the average is 55%."[326]

Thus, if a developing country's largest importers are also the large taxpayers responsible for most of the VAT revenue, then it would seem more than appropriate to encourage these taxpayers to satisfy their VAT obligations digitally. As Luc de Wulf and Gerald McLinder have demonstrated,[327] customs administration is one of the most easily automated revenue sources for developing countries. For this reason product and user codes employed by the D-VAT in a developing country need to be harmonized with the customs codes for the same goods. If a digital interface between an automated customs compliance package and a D-VAT software program is assured, then customs and VAT software could be certified in a single bundle.

3.3 – THE DEVELOPING COUNTRY OPPORTUNITY: EXISTING D-VAT SOFTWARE CAPABILITIES

The accuracy, efficiency and wide availability of software packages that determine the full range of global consumption tax obligations have been a recognized fact of business life for over a decade. These packages automatically identify taxable transactions, make an accurate calculation of tax, and provide for the automated production of invoices, paper returns, or electronic filing. Tax payments, electronic refunds, and tax audits can all be carried out electronically.

These software solutions have been a topic of continued interest in the Organization for Economic Cooperation and Development. The 1998 Ottawa Ministerial Conference initiated a public discussion of issues in e-commerce.[328] The Ottawa Conference was followed by a series of reports that broadly examined tax law

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[326] EBRILL, THE MODERN VAT, *supra* note 314, at 117.

[327] Luc de Wulf and Gerald McLinder, *The Role of Information Technology in Customs Modernization* in CUSTOMS MODERNIZATION HANDBOOK, eds. Luc de Wulf and Jose B. Sokel (2005) (providing a comprehensive survey of recent ICT applications applied to customs clearance, and concluding that it is now feasible and cost effective for even the poorest countries to employ proven off-the-self ICT applications.)

[328] OECD, ELECTRONIC COMMERCE: TAXATION FRAMEWORK CONDITIONS (Oct. 8, 1998) (The Framework established consumption tax framework principles that: (a) taxation should be in the place of consumption, (b) digital goods should be taxed as services, (c) imported services and intangible products should be reverse charged, and (e) cooperative systems be put in place to collect taxes. In tax administration the Framework established principles (a) to develop electronic signature IDs, (b) to reach international agreement on accepting digital signatures, and (c) to develop internationally compatible information requirements for record retention, record format, access to third party database arrangements, and agreed periods for record retention.) Available *at* http://www.oecd.org.

applications and the administrative impact of digital technology.[329] Throughout its work the OECD's primary concern has been with the cross-border aspects of digital commerce – the horizontal aspect. Businesses pressed strongly, [330] and the OECD conceded early, that globally effective e-solutions to consumption tax problems were already in place, and that these solutions, in aggregate, contained the elements of a fully digital compliance model.[331] Participation in global commerce was and is synonymous with participation in e-commerce and e-tax compliance.

During the opening months of 2005 the OECD issued further reports. This series of reports focused on the use of certified intermediaries for determining, reporting and remitting cross-border consumption taxes. The OECD expressly anticipates the "emergence of global intermediaries" and is proposing standards for their certification in consumption tax matters.[332] Guidance Notes are available on the proper structure, format, and application of an e-tax audit file,[333] as well as on the evaluation of tax accounting software.[334] These studies and recommendations directly and expressly impact corporate governance reforms.

There is more than theoretical discussion on the horizon. Two multi-jurisdictional experiments in consumption tax e-solutions are underway that are testing OECD principles – the One-Stop-Shop movement in the E.U., and the Streamlined Sales and

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[329] OECD, REPORT BY THE CONSUMPTION TAX TECHNICAL ADVISORY GROUP (TAG) (Dec. 2000) (considering place of consumption, tax collection options, consumption tax barriers to e-commerce development, and a simplified interim approach); OECD, REPORT BY THE TECHNOLOGY TECHNICAL ADVISORY GROUP (TAG) (Dec. 2000) (considering the technological implications of various e-commerce collection models, and making recommendations for further research); OECD, CONSUMPTION TAX ASPECTS OF ELECTRONIC COMMERCE: A REPORT FROM WORKING PARTY NO. 9 ON CONSUMPTION TAXES TO THE COMMITTEE ON FISCAL AFFAIRS (Feb. 2001) (assessing and consolidating the work of the TAGs completed the previous year); OECD, IMPLEMENTATION OF THE OTTAWA TAXATION FRAMEWORK CONDITIONS (2003) (assessing progress since Ottawa and setting out the research goals in third party providers, certified software, audit interface for remote enforcement in consumption taxes); OECD, REPORT ON AUTOMATING CONSUMPTION TAX COLLECTION MECHANISMS (DAFFE/CFA(2003)43/ANN5) (July 1-2, 2003) all Reports *available at* http://www.oecd.org.

[330] OECD, CONSUMPTION TAG, *supra* note 329, at 8 (discussing how "business members feel strongly the simpler the solution, the greater the level of compliance would be and that future requirements should leverage the developments of commercial business models.")

[331] OECD, TECHNOLOGY TAG *supra* note 329, at 14-90 (considering collection models, jurisdiction verification systems, party identification and classification systems, credit card applications, registration systems, the tax at source and transfer model, trusted third party models, hybrid tax and transfer and clearinghouse models, electronic payments, electronic invoicing, electronic remittance and reporting, electronic record integrity systems and electronic database solutions.)

[332] OECD, ELECTRONIC COMMERCE: FACILITATING COLLECTION OF CONSUMPTION TAXES ON BUSINESS-TO-CONSUMER CROSS-BORDER E-COMMERCE TRANSACTIONS (Feb. 11, 2005) at 9 ("A global intermediary may be based in one country and would undertake intermediary activities in as many countries as suppliers are required to collect and remit consumption taxes on behalf of e-commerce suppliers. In cases where satisfactory levels of approval or financial security are evident, countries could be more relaxed …") *available at* http://www.oecd.org.

[333] OECD, GUIDANCE NOTE: GUIDANCE FOR THE STANDARD AUDIT FILE – TAX (May, 2005) *available at* http://www.oecd.org.

[334] OECD, GUIDANCE NOTE: GUIDANCE ON TAX COMPLIANCE FOR BUSINESS AND ACCOUNTING SOFTWARE (May 2005) *available at* http://www.oecd.org.

Use Tax Agreement in the U.S. Both efforts aim at providing businesses with comprehensive solutions to consumption tax obligations across multiple jurisdictions.

These experiments contain the critical elements of the D-VAT. They will be separately considered. There are two major differences between them: (1) the US experiment utilizes third parties as administrative and financial intermediaries (certified service providers) whereas the EU experiment places the Treasury of Member States in this intermediary function;[335] and (2) the US experiment is broadly applicable to all businesses in a jurisdiction, whereas the EU experiment isolates particular business in a segment of the economy for special treatment, and excludes other businesses similarly situated. Participation is voluntary under both experiments.

3.3.1 – *The One-Stop-Shop of Article 26c*.

As previously discussed,[336] Article 26c was added to the *Sixth Directive* following up on the "Lisbon Strategy."[337] Article 26c effectively became the European test case for the D-VAT. This is a multi-jurisdictional digital solution to VAT compliance.

Article 26c requires all communication between the taxpayer and the Member State of Identification to be electronic, if the taxpayer elects to file according to this special scheme.[338] Registration and all notifications about changes in status,[339] statements and recapitulative statements,[340] filing of returns,[341] payments of VAT

[335] When the European Commission proposed an expansion of the E.U. experiment, the expansion of the Article 26c one-stop-shop to include B2B sales in October 2004 (COM(2004) 728 final *available at* http://europa.eu.int/comm/taxation_customs/publications/official_doc/COM_728_en.pdf), the Commission pulled back from one their experiment in one important respect: the single e-payment provision that was facilitated by the Member States under the original version of the experiment. The reason for the pull-back was the burdens of "… dealing with the re-distribution of money received [which would require] … [d]eveloping the kind of major treasury function needed to handle the volume of money flows which would be inherent to a much wider application…" (COM(2004) 728 final, page 5).

The Commission went on to say, "It is however probable that financial intermediaries or other trusted third party service providers might offer a payment handling function to operators under this scheme which would relieve them from the burden of multiple payments. Such a commercial service would be particularly attractive to smaller operators but would have to be based on commercial realities." (COM(2004) 728 final, page 5).

[336] *See supra* text accompanying notes 240 to 271.

[337] *See supra* note 240.

[338] *Sixth Directive*, 77/388/EEC, 1977 O.J. (L 145) 1, *supra* note 40, at Art. 26c(B)(1).

[339] *Id.* at Art. 26c(B)(2) ("The non-established person shall state to the Member State of identification when his activity as a taxable person commences, ceases or changes to the extent that he no longer qualifies for the special scheme. Such a statement shall be made electronically.").

[340] *Id.* at Art. 26c(B)(9) ("The non-established taxable person shall keep records of the transactions covered by this special scheme in sufficient detail to enable the tax administration of the Member State of consumption to determine that the value added tax return referred to in (5) is correct. These records should be made available electronically on request to the Member State of identification and the Member State of consumption.").

[341] *Id.* at Art. 26c(B)(5) ("The non-established taxable person shall submit by electronic means to the Member State of identification a value added tax return for each calendar quarter …").

amounts due and collected,[342] and even communications by the Member State to the non-established taxpayer,[343] must be in electronic form. It is estimated that approximately 617 taxpayers participate in the Article 26c digital VAT.[344] Thus, Article 26c clears the path for taxpayers and third-party software developers to design tax compliance regimes that automate the VAT determination, reporting and payment system. It facilitates, but does not require the development of unitary tax compliance software.

3.3.2 – *The U.S. Streamlined Sales and Use Tax Agreement*

The Streamlined Sales and Use Tax Agreement is a broad effort by the States to harmonize and streamline the collection of state and local consumption taxes. There are clearly two aspects to SSUTA, the effort to harmonize and standardize laws, and the effort to establish a digitized compliance regime.

The Streamlined Sales Tax Project (SSTP) was organized in March 2000, largely in response to the states' perception that they were losing sales tax revenue from increasing online sales.[345] After five years of effort, SSUTA came into effect on October 1, 2005. It has an initial Governing Board of nineteen states.[346]

SSUTA states have agreed to harmonize their tax bases, standardize their electronic reporting requirements, [347] restrict jurisdictional reporting obligations for local

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[342] *Id.* at Art. 26c(B)(7) ("The non-established taxable person shall pay the value-added tax when submitting the return. Payment shall be made to the bank account denominated in Euro, designated by the Member State of identification.").

[343] *Id.* at Art. 26c(B)(3)(second paragraph) ("The Member State of identification shall notify the non-established taxable person by electronic means of the identification number allocated to him.").

[344] European Commission, Amended Proposal for a Council Directive Amending Directive 77/388/EEC as regards the place of supply of services (submitted by the Commission pursuant to Article 250(2) of the EC Treaty) COM(2005)334 final at 13.

> Member states have provided the Commission with information showing that on 30 June 2004 there were 617 live registrations for non-established taxable persons availing themselves of the simplified scheme. In the year to 30 June 2004, these non-established persons paid VAT totaling 90,315,000 euro.

[345] Sellers without a physical presence in a state could not be compelled to collect tax on sales destined for that state, according to the U.S. Supreme Court's decision in *Quill Corp. v. North Dakota*, 504 U.S. 298 (1992). The stated goal of the SSTP is to simplify and modernize sales and use tax administration in member states with an eye toward getting Congress to overturn this decision.

[346] These nineteen states are divided into two groups, the full members, and the associate members. A full member state is a state that is in compliance with the Streamlined Sales and Use Tax Agreement through its laws, rules, regulations, and policies. Those states are: Indiana, Iowa, Kansas, Kentucky, Michigan, Minnesota, Nebraska, New Jersey, North Carolina, North Dakota, Oklahoma, South Dakota, and West Virginia. An associate member state is either (a) a state that is in compliance with the Streamlined Sales and Use Tax Agreement except that its laws, rules regulations and policies to bring the state into compliance are not in effect but are scheduled to take effect on or before January 1, 2008, or (b) a State that has achieved substantial compliance with the terms of the Streamlined Sales and Use Tax Agreement taken as a whole, but not necessarily each provision, and there is an expectation that the state will achieve compliance by January 1, 2008. Those states are: Arkansas, Nevada, Ohio, Tennessee, Utah and Wyoming, *see* http://www.streamlinedsalestax.org (last visited Aug. 2, 2006).

[347] Streamlined Sales and Use Tax Agreement, *supra* note 26, at § 318(D) (indicating that the intent of the SSUTA is to facilitate electronic filing of returns in all jurisdictions under the agreement.)

RSTs to state level filings, and generally streamline the collection of state and local RSTs. [348] A standardized system for refunds is also established, both for end consumers, and for businesses remitting the tax.[349]

On October 1, a centralized online registration system, [350] and an amnesty[351] for qualifying sellers came into effect. Registration constitutes an agreement by sellers to collect and remit tax for sales into all full member states. This registry will function like the registration system under the Digital Sales Directive where non-established taxpayers (non-E.U. businesses) receive a unique identification number that is recognized for VAT purposes throughout the E.U. In a very real sense the SSUTA is an agreement between governments and business to technologically simplify and harmonize the RST in exchange for a sincere effort by business to increase voluntary collection.

3.3.2.1 – *Digital Intermediaries – Certified Service Providers (CSPs).*

The concept of a digital intermediary is the most innovative part of the SSUTA. There are two aspects to the digital intermediary, both involve certified software programs – the first is the certified service provider (CSP)[352] – the second is the certified automated system (CAS)[353] or certified proprietary system (CPS).[354] Although SSUTA provides for the certification of software under all three models (CSP, CAS, CPS) it is the CSP model that provides taxpayers with a full-service third-party intermediary.

SSUTA provides for the certification of entities (CSP's)[355] that will provide point of sale, automated tax determinations. CSPs will file returns and make tax payments for

[348] *Id.* at §§ 318(A); 318(B)
[349] *Id.* at §§ 325
[350] *Id.* at §§ 303; 401(A); 401(C); 404.
[351] Member states must provide an amnesty for uncollected or unpaid sales and use tax (together with penalty or interest) to a seller that registers under the Agreement, provided the seller was not registered in that state in the 12-month period preceding the state's participation in the Agreement. Sellers must register within 12 months of the state's participation to benefit, and the amnesty does not apply to matters for which the seller has received notice of the commencement of an audit.
[352] Streamlined Sales and Use Tax Agreement, *supra* note 26, at § 203 (defining a Certified Service Provider (CSP) as "[a]n agent certified under the Agreement to perform all the seller's sales and use tax functions, other than the seller's obligation to remit tax on its own purchases.").
[353] *Id.* at § 202 (defining a Certified Automated System (CAS) as a "[s]oftware certified under the Agreement to calculate the tax imposed by each jurisdiction on a transaction, determine the amount of the tax to remit to the appropriate state, and maintain a record of the transaction.").
[354] *Id.* at § 207 (defining a Certified Proprietary System (CPS) as the system owned by "[a] seller that has sales in at least five member states, has total annual sales of at least five hundred million dollars, has a proprietary system that calculates the amount of tax due each jurisdiction, and has entered into a performance agreement with the member states that establishes a tax performance standard for the seller.").
[355] In 2001 four states (Kansas, Michigan, North Carolina, and Wisconsin) participated in a pilot project to test the CSP concept. Three firms applied to participate as CSP's, (Taxware International, Pitney-Bowes/Vertex, and esalestax), two were certified as CSPs, (Taxware International, Pitney-Bowes/Vertex). The pilot project was successful in establishing the viability of the CSP concept. The Streamlined Sales Tax Project web site indicates: "The pilot project established that the use of a third-party provider was viable. Systems and procedures were established that resulted in the actual collection and remittance of sales and use tax by a vendor on behalf of a retailer. Knowledge and experience was obtained by the participating states and vendors." *see* http://www.streamlinedsalestax.org (last visited Aug. 2, 2006).

taxpayers.[356] Because the CSPs will function in this manner with respect to all RST obligations of the taxpayer in each of the Streamlined States, the CSP is essentially a private sector multi-jurisdictional one-stop-shop.

If the SSUTA were to be adopted by all the states with RSTs, then the CSP would handle RST obligations for all 7,588 jurisdictions in the U.S. The CSP is the equivalent of the "Member State of identification" under Article 26c of the Sixth Directive. In both instances the taxpayer enters into a voluntary relationship with a third party who then interfaces with each of the governments concerned.

The three critical differences between the EU and US approaches are: (1) where Article 26c uses the Treasury of one of the Member States as the intermediary, the SSUTA uses a private sector third-party provider, (2) where the taxpayer under Article 26c remains the party obligated to determine the tax amount due, under the SSUTA it is the CSP who actually performs the calculations with software certified by the government concerned, and (3) where taxpayers under Article 26c remain subject to normal audit in all jurisdictions, under the SSUTA the taxpayer will be subject only to limited audit for fraud.[357]

Under both Article 26c and the SSUTA the use of intermediaries (the government or the private sector) comes at no cost to the taxpayer.[358] However, under the SSUTA there is a clear expectation of cooperation between the taxation authorities and the CSP in terms of providing accurate and timely information about changes in rates or other critical tax determinants.[359] CSP's are expressly relieved of liability from having charged and collected an incorrect amount of tax, if the error was due to erroneous data provided by the state.[360]

Thus, while Article 26c offers the opportunity for the development of broad digital intermediary functionality (all 25 E.U. countries are covered) for non-established businesses selling to final consumers, the SSUTA's CSPs provide certified depth of

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[356] Streamlined Sales and Use Tax Agreement, *supra* note 26, at §§ 501(A), (B), (C) and (D).

[357] Uniform Sales and Use Tax Administration Act [USUTA] (as approved on Dec. 22, 200, and as amended on Jan. 22, 2001) § 9(a) (indicating that, "A seller that contracts with a Certified Service Provider is not liable to the state for sales or use tax due on transactions processed by the Certified Service Provider unless the seller misrepresented the type of items it sells or committed fraud. In the absence of probable cause to believe that the seller has committed fraud or made a material misrepresentation, the seller is not subject to audit on the transactions processed by the Certified Service Provider. A seller is subject to audit for transactions not processed by the Certified Service Provider.") The USUTA is the "enabling" legislation that authorizes a State's participation in the SSUTA.

[358] However, depending on the payment arrangements, the taxpayer may (but not necessarily) looses the value of the "float" on monies drawn from the taxpayer's account to pay the taxes due. The interest earned between the time of this withdrawal and the due date of the payment to the government may be a "cost."

[359] Streamlined Sales and Use Tax Agreement, *supra* note 26, at § 328 (indicating that the states have an obligation to provide a taxability matrix of rate and product or service taxability in a downloadable format. CSPs and sellers are relieved of liability for collecting the wrong amount of tax if they relied on erroneous data provided in the matrix); and § 304 (indicating that the state rate or base changes will only be effective on the first day of a calendar quarter, and are obligated to provide as much advance notice of changes as possible).

[360] *Id.* at § 306.

digital intermediary services (full calculation, reporting and payment of obligations) for all of the states joining the SST. As would be expected, efforts are underway in the E.U. to extend Article 26c to B2B transactions,[361] and under the SSUTA to expand state membership.

Clearly, consumption taxes, both VATs and RSTs, are on the cusp of a digital revolution. Pilot programs in the E.U. and U.S. have proven that this tax is particularly receptive to digitization. Efficiencies of the marketplace, demands of the tax administration as well as the sheer volume of transactions involved in these taxes make the digital solution optimal. Thus, if the E.U. and U.S. pilot projects can be deemed a success, it is time to consider whether or not similar certification mechanisms can be put in place in the developing world. If the studies of developing country VAT concentrations are accurate, then a certification program that extended to approximately 1% of the businesses in a country would assure digital compliance for approximately 70% of the VAT revenues.

However, in all of these efforts to digitizing the consumption tax, both in the E.U. and in the U.S., the sticking point has never really been the <u>ability</u> to digitize, but it has rather been with <u>verification</u> – how do we know that what was digitized was accurate. In this regard, the final piece of the D-VAT puzzle for developing counties is found in the reforms in corporate governance.

3.4 – THE DEVELOPING COUNTRY'S LEVERAGE: COPORATE GOVERNANCE REFORM

Corporate governance, particularly governance practices at the largest multinational corporations, is undergoing reform – transparency, good business practice and investor protection are the keys to this process. There are at least three major catalysts of change – the natural efficiencies of the marketplace, widespread investor outrage at recent accounting failures, and a broad recognition of regulatory inadequacy. Each is a pressure urging corporate governance reform, and each is having a direct impact on automated tax compliance by these companies.

Can developing countries find leverage in these pressures for reform? Can they apply this leverage and utilize the opportunities presented by "e-solutions" to VAT compliance to maximize revenue from the large taxpayer group?

3.4.1 – *Natural efficiencies of the marketplace.*

In recent years there has been considerable academic discussion about a global convergence of corporate governance. Scholars have postulated a natural globalization processes with business efficiencies and cultural dispositions bringing corporate governance practices into global harmony.[362] Such a convergence would significantly

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[361] COM(2005)334 final *supra* note 344.

[362] Lucian A. Bebchuk and Mark. J. Roe, *A Theory of Path Dependence in Corporate Ownership and Governance*, 52 STAN. L. REV. 127 (1999) (developing the theory of path dependencies in the context of

impact investment decisions and economic development. The regulatory oversight of multinational enterprises could be streamlined, financial systems would be simplified, and global investment would be facilitated. No academic however, contended that "natural convergence" would come quickly.

3.4.2 – *Investor outrage at accounting failures.*

The second catalyst of change – investor outrage – has demanded immediate action. The outrage has been global, because financial failure has been global. A partial list of the failures would start in Australia with the collapse of HIH (March, 2001)[363] and One.Tel (July, 2001),[364] followed quickly by the bankruptcy of Enron (October, 2001),[365] and WorldCom (June, 2002)[366] in the US. In the EU scandals arose at Vivendi (July 2002) in France, then at Ahold (February, 2003)[367] in the Netherlands, and finally at the Italian dairy giant Parmalat (February, 2003).[368]

In each case, the failures were caused by accounting irregularities; irregularities that should have been, but were not, reported to shareholders by the statutory auditors. The further fact that the irregularities were in many cases the result of tax shelters promoted by the very same auditors, who were obligated to caution shareholders about

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corporate governance). *See also* A. N. Licht, *The Mother of All Path Dependencies Toward a Cross-Cultural Theory of Corporate Governance Systems*, 26 DEL. J. CORP. L. 147 (2001); L. E. Ribstein, *Politics, Adaptation and Change*, 8 AUST. J. CORP. L. 246 (2001); R. Romano, *A Cautionary Note on Drawing Lessons from Comparative Corporate Law*, 102 YALE L. J. 2021 (1993). *But see* Paul von Nessen, *Corporate Governance in Australia: Converging with International Norms*, 15 AUST J. CORP. L. 1, 47, n. 73 (2003) citing further to P.G. Maloney, *The Common Law and Economic Growth: Hayek Might Be Right*, 30 J. LEG. STUD. 503 (2001) (postulating that this convergence "coincide[s] with the civil/common law divide."

363 JUSTICE NEVILLE OWEN, HIH ROYAL COMMISSION, FAILURE OF HIH: A CORPORATE COLLAPSE AND ITS LESSONS: A REPORT OF THE HIH ROYAL COMMISSION, (April 4, 2003) *available at* http://www.hihroyalcom.gov.au/finalreport/ (HIH was the largest general insurance company in Australia. Accounting entries hid claims that exceeded accounting reserves, forcing the company's liquidation.) M. De Martinis, *Do directors, regulators, and auditors speak, hear and see no evil? Evidence from the Enron, HIH and One.Tel collapses*, 15 AUST. J CORP. L. 66 (2003).

364 Gerald Acquaah-Gaisie, *Toward More Effective Corporate Governance Mechanisms*, 18 AUST. J CORP. L. 1 (2005) . (Discussion of One.Tel and the lessons learned. One.Tel was one of Australia's largest telecommunications companies. One.Tel paid high performance bonuses to the directors as the company was on the verge of collapsing. That internal incentives could have rewarded directors of a failing company outraged Australians and accelerated reform efforts there.)

365 Enron was the seventh largest company in the US. Sham transactions involving Caymen Island entities improperly inflated asset values. See: Peter Behr and April Witt, *Visionary's Dream Led to Risky Business: Opaque Deals, Accounting Sleight of Hand Built an Energy Giant and Ensured Its Demise*, Washington Post, July 28, 2002, at A-1.

366 WorldCom was the second-largest long distance carrier in the US. Expenses for client development were books as assets. See: Carrie Johnson and Ben White, *WorldCom Arrests Made: Two Former Executives Charged with Hiding Expenses*, Washington Post, August 2, 2002, at A-1.

367 *Ahold Reveals e170m in Legal Bill in Year-end Results*, THE LAWYER 5 (Apr. 26, 2004) (Ahold's earnings were overstated due to improper booking of supplier discounts.)

368 James E. Rogers, *Comment: Going Too Far Is Worse Than Not Going Far Enough: Principle-Based Accounting Standards, International Harmonization, and the European Paradox*, 27 HOUS. J. INT'L. L. 429 (2005) (indicating that the Parmalat case involved $3.5 billion in false assets recorded in Cayman Island subsidiaries.)

the risks involved, compounded the problems and heightened the demand for corporate governance reform.[369]

Only in Japan, among the major industrial countries undergoing corporate governance reform in the 2000-2005 time frame, was the reform itself not preceded by a serious domestic financial scandal.

3.4.3 – *Recognition of regulatory inadequacy.*

The fact that these collapses occurred in both of the major regulatory systems points to the third catalyst for change – widespread recognition that the regulatory systems put in place to assure economic stability were not working. The two dominant regulatory methods are known in shorthand as principles-based and rules-based standard setting systems. For years there have been differences between the major rules-based system (U.S. Generally Accepted Accounting Principles) and the dominant principles-based system widely preferred in the E.U. and elsewhere (International Accounting Standards). There is considerable evidence that recent events have encouraged the U.S. and E.U. to finally move closer to one another and harmonize corporate regulation.[370]

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[369] U.S. GOVERNMENT ACCOUNTING OFFICE, TAX SHELTERS: SERVICES PROVIDED BY EXTERNAL AUDITORS: A GAO UNITED STATES GOVERNMENT ACCOUNTABILITY OFFICE REPORT TO THE RANKING MINORITY MEMBER, PERMANENT SUBCOMMITTEE ON INVESTIGATIONS, COMMITTEE ON HOMELAND SECURITY AND GOVERNMENT AFFAIRS, U.S. SENATE [hereinafter GAO: TAX SHELTERS] (February, 2005) (GAO-05-171) *available at* http://www.gao.gov/docsearch/repandtest.html (A comprehensive examination of the role of the statutory auditor in providing tax shelters for audit clients. In the Executive Summary the GOA reported that, "…61 Fortune 500 companies obtained tax shelter services from their external auditors during 1998 through 2002 for transactions generally reportable on tax returns sent to the IRS. …Estimated potential revenue loss to the federal government from the 61 companies' auditor-related transactions was about $3.4 billion [about $1.8 billion in categories the IRS considered abusive."); JOINT COMMITTEE ON TAXATION, REPORT OF INVESTIGATION OF ENRON CORPORATION AND RELATED ENTITIES REGARDING FEDERAL TAX AND COMPANSATION ISSUES, AND POLICY RECOMMENDATIONS (JCS-3-03) 3 Vols., a*vailable at* http://www.house.gov/jct/pubs03.html (a comprehensive examination of the tax and accounting related issues in Enron); U.S. SENATE PERMANENT SUBCOMMITTEE ON INVESTIGATIONS & COMMITTEE ON HOMELAND SECURITY AND GOVERNMENT AFFAIRS, THE ROLE OF PROFESSIONAL FIRMS IN THE U.S. TAX SHELTER INDUSTRY (February 8, 2005). (Urging the PCAOB to "… strengthen and finalize proposed rules restricting certain accounting firms from providing aggressive tax services to their audit clients, charging companies a contingent fee for providing tax services, and using aggressive marketing efforts to promote generic tax products to potential clients.") *Available at* http://www.quatloos.com/Tax_Shelter_Industry_Firms.pdf

[370] SECURITY AND EXCHANGE COMMISSION, STUDY PURSUANT TO SECTION 108(d) OF THE SARBANES-OXLEY ACT OF 2002 ON THE ADOPTION BY THE UNITED STATES FINANCIAL REPORTING SYSTEM OF A PRINCIPLES-BASED ACCOUNTING SYSTEM, [hereinafter SEC: STUDY PURSUANT TO SECTION 108(d)] *available at* http://www.sec.gov/news/studies/principlesbasedstand.htm (Congress mandated that the SEC consider moving to a principles-based system of regulation. The study concludes that flaws in both methods encourage the development of a middle-ground termed an "objectives-oriented" standard. The SEC and PCAOB are now attempting to draft accounting and security rules in this manner.)

In the U.S. the Sarbanes-Oxley Act of 2002[371] mandated sweeping reforms in the public company financial reporting process. Similar legislation has been enacted in France,[372] U.K.,[373] Australia[374] and Japan.[375] Additional legislation will be required in each of the 25 countries of the European Union, now that the modifications to the Eighth

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[371] Sarbanes-Oxley Act of 2002, Pub. L. No. 107-204, 116 Stat. 745 (2002) (codified in scattered sections of 11, 15, 18, 28, and 29 U.S.C.) [hereinafter *Sarbanes-Oxley Act*] *available at* http://www.law.uc.edu/CCL/Soact/soact.pfd

[372] The *Loi de Sécurité Financière* is published in the Official French Journal, Aug. 2, 2003 [in French] *at* http://www.legifrance.gouv.fr/Waspad/UnTexteDeJorf?numjo=ECOX0200186L

[373] Direct oversight of U.K. auditors is delegated to professional associations. (See: REPORT TO THE SECRETARY OF STATE FOR TRADE AND INDUSTRY, REVIEW OF THE REGULATORY REGIME OF THE ACCOUNTANCY PROFESSION (January 2003) URN 03/589, *available at* http://www.dti.gov.uk). The legislative response to Enron in the U.K. was the Companies (Audit, Investigations and Community Enterprise) Act of 2004 (COMPANIES (AUDIT, INVESTIGATIONS AND COMMUNITY ENTERPRISE) ACT, 2004, ch., 27 a*vailable at* http://www.opsi.gov.uk/acts/acts2004/20040027.htm [hereinafter Companies Act].). As of October 1, 2005 companies will also be required to make detailed disclosures of audit and non-audit services provided by auditors. (Companies Act, *supra* page 9, note 2, at §21-24). Thus in many respects, the U. K. rules are similar to the U. S. rules under Sarbanes-Oxley. Both U. K. and U. S. rules require company directors or CEOs to sign off on audits; both allow authorities to require foreign subsidiaries to comply with their provisions; and both created semiprivate organizations to monitor compliance with the regulations. For the U.S. the PCAOB, and in the U. K. the FRRP is designated to monitor the law. Unlike the PCAOB, the FRRP has no authority to punish companies that issue faulty reports.

[374] Australia began a comprehensive corporate law economic reform program in 1997 (the CLERP initiative). The ninth package of reforms in this initiative took up the issue of auditor independence, *Corporate Disclosure: Strengthening the Financial Reporting Framework*, is referred to as CLERP 9. CLERP 9 is based on proposals for change from three sources: (1) the Ramsay report *Independence of Australian Company Auditors* (October 2001) (The Ramsay Report can be found at http://www.treasury.gov.au/documents/183/PDF/ramsay.pdf) (2) the Joint Committee on Public Accounts and Audits *Report 391*: *Review of Independent Auditing by Registered Company Auditors* (September 2002) (See: http://www.aph.gov.au/house/committee/jpaa/indepaudit/reportscript.pdf), and (3) recommendations from the HIH Royal Commission. (HIH Royal Commission (Justice Neville Owen), *Report of the HIH Royal Commission*, 2003. At: http://hihroyalcom.gov.au/finalreport). The essence of CLERP 9 is the legislative decision that auditor independence was a governmental concern as well as a concern of the accounting profession. Australian reforms are principles-based, because they adopt the rules of the profession which in turn are based on International Accounting Standards.

[375] Japan responded, not to accounting failures but to the wave of overseas regulatory reforms that threatened to impact Japanese businesses and the Japanese accounting profession itself. The defining event for Japanese regulators was section 106(a) of Sarbanes-Oxley. This is the extra-territorial enforcement provision of the Act whereby the SEC and PCAOB are authorized to oversee foreign accounting firms if they perform statutory audits for firms listed on US exchanges. (See the comments of Naohiko Matsuo, Director for International Financial Markets, Japanese Financial Services Agency responding to the PCAOB's proposed rules on January 26, 2004. See item 6 in the zip file associated with "Rulemaking Docket Matter 013" at: http://www.pcaobus.org/rulemaking_docket.asp). When the PCAOB initiated rulemaking procedures that would potentially bring Japanese auditing firms under direct US oversight, Japan began to replace its peer review system with an independent regulatory structure. Japan's response to Sarbanes-Oxley has two aspects: (a) the Japanese legislature amended the "Certified Public Accountant Law" (*Kouninkaikeishihou* 1948-8-1) through "An Act to Amend Part of the Certified Public Accounting Law" (*Kouninkaikeishihou no ichibu wo kaisei suru houritsu* 2004-4-1), and (b) the Japanese government issued Cabinet Office Ordinances (*Naikakuhurei* 2004-4-1). In the law, promulgated June 6, 2003, a new government oversight and inspection agency, the CPA and Auditing Oversight Board (CPAAOB) was established. In the Cabinet Ordinance at Article 5 rules on auditor independence were published. The Cabinet Ordinance rules are a literal translation of Sarbanes-Oxley section 201(a)(1)-(8).

Corporate Directive (84/253/EEC) are agreed upon. The European Commission recommended these changes in May 2003.[376]

Thus, global changes are underway in corporate governance that very likely will reshape the way governments, corporations and their auditors relate to one another for years to come. Reforms involving the provision of tax services are central to this effort. Auditor-provided tax services have raised some of the most contentious governance issues.[377] The intensity of the controversy is directly related both to how lucrative tax services have become for major accounting firms, as well as how often the auditor's tax advice has become the source of corporate governance problems.[378] Each of the highly publicized US security scandals involved either the tax positions taken by the companies or the determination of their tax reserves. The cases of Enron,[379] Tyco,[380] and WorldCom[381] are only the most prominent examples.

If, however, the major accounting scandals of the past half-decade are predominantly concerned with income tax shelters, and mostly with shelters for income

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[376] Commission of the European Community, Communication from the Commission to the Council and the European Parliament: Modernising Company Law and Enhancing Corporate Governance in the European Union - A Plan to Move Forward, COM(2003) 284 final, *available at* http://europa.eu.int

During the 1990's the convergence of accounting regulation was a major concern in the EU. The lack of a harmonized position on the role, position and liability of the statutory auditor was seen as a barrier to the development of the Single Market. Not only was the quality of European audits impacted, but the EU also felt handicapped when it tried to influence international accounting standards. This convergence theme was advanced in a Green Paper [European Commission Green Paper, The Role, the Position and the Liability of the Statutory Auditor within the European Union, 1996 O.J. (C 321) *available at* http://europa.eu.int], and was soon followed by a Communication from the Commission (1998) [Communication from the European Commission, The Statutory Audit in the European Union: The Way Forward, 1998 O.J. (C 143) *available at* http://europa.eu.int], a Consultative Paper [European Commission, Consultative Paper On: Statutory Auditors' Independence in the EU, (Dec. 15, 2000, *available at* http://europa.eu.int], a Commission Recommendation [European Commission Recommendation, Quality Assurance for the Statutory Audit in the European Union: Minimum Requirements, (Nov. 21, 2000) *available at* http://europa.eu.int], and finally a comprehensive study of auditor liability [European Commission, A Study on Systems of Civil Liability of Statutory Auditors in the Context of a Single Market for Auditing Services in the European Union, (Jan. 15, 2001) *available at* http://europa.eu.int].

[377] For a survey of the empirical literature in the US and UK on this issue see: Vivian Beattie and Stella Fearnley, *Auditor Independence and Non-Audit Services: A Review of the Literature* (2000) at 28-30. At: http://www.icaew.co.uk/library/index.cfm?AUB=TB21_63272,MNXI_63272 For a similar survey from an Australian perspective see the Ramsay Report. http://www.treasury.gov.au/documents/296/PDF/ramsay2.pdf

[378] In a survey of SEC audit clients performed by the then Big 5 audit firms, the ratio of accounting and auditing revenues to consulting revenues dropped from approximately 6 to 1 in 1999 to 1.5 to 1 in 1999. For the year 1999, 4% of the Big 5 firm's SEC audit clients had consulting fees in excess of audit fees, up from 1% in 1990. Panel on Audit Effectiveness, *Report and Recommendations*, (2000) chaired by Shaun F. O'Malley at paragraph 5.14. At: http://www.pobauditpanel.org/download.html

[379] Peter Behr and April Witt, *Visionary's Dream Led to Risky Business: Opaque Deals, Accounting Sleight of Hand Built an Energy Giant and Ensured Its Demise,* Washington Post, July 28, 2002, at A-1

[380] Mark Maremount and Laurie P. Cohen, *New York Prosecutors Seek Auditor Link in Tyco Probe*, Wall Street Journal Europe, September 30, 2002, at A-1.

[381] Carrie Johnson and Ben White, *WorldCom Arrests Made: Two Former Executives Charged with Hiding Expenses*, Washington Post, August 2, 2002, at A-1.

from developed countries, then, how do these events impact VAT administration in developing countries? There are two answers, both dealing with certifications.

First, the emerging trend in governance regulation is to demand C.E.O. and C.F.O. certification of internal controls over corporate cash flow (as well as traditional profit and loss amounts). The second certification follows from the first – it is the certification of tax compliance software. Because VAT obligations can be 20% of sales, the use of certified VAT compliance software systems significantly reduces corporate cash flow certification risks. Thus, governments willing to certify tax compliance software reduce business risks for foreign investors while they assure accurate VAT determinations, reporting and remission of funds.

3.4.4 – *Certification of internal controls over cash flow.*

To counteract the tax shelter industry the SEC now compels corporate management and the statutory auditor to alert shareholders to high-risk tax shelter transactions. It does this through certifications that directly consider cash flow statements.[382] Under severe personal penalty,[383] the C.E.O. and C.F.O. must certify on a quarterly basis (a) that they have designed[384] internal controls to monitor corporate cash

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[382] The concern with cash flow accountability constitutes a change in emphasis for the SEC. Securities and Exchange Commission, Final Rule: Certification of Disclosure in Companies' Quarterly and Annual Reports, (RIN 3235-AI54) at II(B)(3) *available at* http://www.sec.gov/rules/final/33-8124.htm.

> The certification, as adopted, states that the overall financial disclosure fairly presents, in all material respects, the company's financial condition, results of operations and **cash flows**. We have added a specific reference to **cash flows** even though Section 302 of the Act does not include such an explicit reference. We believe that it is consistent with Congressional intent to include both income or loss and cash flows within the concept of "fair presentation" of an issuer's results of operations.
>
> The certification statement regarding fair presentation of financial statements and other financial information is not limited to a representation that the financial statements and other financial information have been presented in accordance with "generally accepted accounting principles" and is not otherwise limited by reference to generally accepted accounting principles. We believe that Congress intended this statement to provide assurances that the financial information disclosed in a report, viewed in its entirety, meets a standard of overall material accuracy and completeness that is broader than financial reporting requirements under generally accepted accounting principles. In our view, a "fair presentation" of an issuer's financial condition, results of operations and **cash flows** encompasses the selection of appropriate accounting policies, proper application of appropriate accounting policies, disclosure of financial information that is informative and reasonably reflects the underlying transactions and events and the inclusion of any additional disclosure necessary to provide investors with a materially accurate and complete picture of an issuer's financial condition, results of operations and **cash flow**s. (Emphasis added).

[383] *Sarbanes-Oxley Act, supra* note 74, at § 906. (Amending the criminal code and imposing a fine of not more than $1,000,000 and 10 years in prison, or both, for a signing officer who certifies a report "knowing" it to be false. For a "willful" violation the penalties rise to not more than $5,000,000, 20 years in prison, or both.

[384] 17 CFR 240.13a-14(a), or Exchange Act Rules 13a-14(a) at item 4(a) (the CEO and CFO certify that they have "designed" the internal controls over cash flow.)

flow, (b) that they have evaluated[385] the performance of the cash flow controls within the past 90 days, and (c) that that the results of this examination and any material weaknesses discovered in them have been disclosed.[386] Systemic errors that point to design failures in the internal controls over cash flow need to be disclosed and quickly remedied. To fail to do so would risk the delisting of the corporation from exchanges.[387]

3.4.5 – *Certification of automated consumption tax software solutions.*

To satisfy VAT collection and reporting obligations globally, multinational companies have for a long time turned to software solutions. But now the risks are higher, and the pressure is greater – multinational companies must satisfy the quarterly certification and disclosure requirements imposed by the SEC and parallel regimes in the E.U., Australia, U.K., France, and Japan. As a result, multi-national enterprises are looking for certification of their automated systems to do this.

Because multi-national enterprises have global VAT obligations, the software certifications they seek are also global in reach. In this regard, the two May 2005 *Guidance Notes* of the OECD, the *Guidance for the Standard Audit File – Tax,*[388] and the *Guidance on Tax Compliance for Business and Accounting Software*[389] have a critical importance for business and governments trying to attract business development. These OECD *Guidance Notes* are a first effort to develop a tax-specific international software certification regime.

It is clear that the OECD anticipates the development of software certification regimes similar to those under the SSUTA. Some certifications may be single-jurisdiction based, while others may be multi-jurisdictional. The OECD's work expressly references the software certification aspects of SSUTA.[390] It also expressly link this software-standard setting effort to the rules of corporate governance developing under the

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[385] *Id.* at item 4(b) (the CEO and CFO certify that they have "evaluated" the internal controls over cash flow.)

[386] *Id.* at item 4(c) (the CEO and CFO certify that they have "disclosed material weaknesses" in the internal controls over cash flow.)

[387] Nasdaq, Summary of Nasdaq Corporate Governance Proposals As of February 26, 2003 (2003) (revising the earlier November 20, 2002 proposals) at 4-5 *available at* http://www.nasdaq.com; New York Stock Exchange, Corporate Governance Rule Proposals Reflecting Recommendations from the NYSE Corporate Accountability and Listing Standards Committee (As Approved by the NYSE Board of Directors August 1, 2002) at 17-18 *available at* http://www.nyse.com/pdfs/corp.

[388] OECD, GUIDANCE NOTE: GUIDANCE FOR THE STANDARD AUDIT FILE *supra* note 333, at 3. (The audit file standards are intended to function as "… a comprehensive description of the Standard Audit File for tax compliance checking purposes [which] … contain[s] reliable accounting data exportable from an original accounting system, for a specific time period and easily readable by virtue of its standardization of layout and format that can be used by revenue authority staff for compliance checking purposes.")

[389] OECD, GUIDANCE NOTE: GUIDANCE ON TAX COMPLIANCE FOR BUSINESS AND ACCOUNTING SOFTWARE *supra* note 334.

[390] OECD, ELECTRONIC COMMERCE: FACILITATING COLLECTION OF CONSUMPTION TAXES ON BUSINESS-TO-CONSUMER CROSS-BORDER E-COMMERCE TRANSACTIONS *supra* note 332, at 10 & 17-21; OECD, REPORT ON AUTOMATING CONSUMPTION TAX COLLECTION MECHANISMS *supra* note 329, at 10-14.

Sarbanes-Oxley Act, and the International Financial Reporting Standards that have become mandatory throughout the E.U. as of the close of 2005.[391]

3.5 – CONCLUSION: THE D-VAT FOR DEVELOPING COUNTRIES

How should a developing country respond to the fact that VAT revenue is concentrated in less that one percent of businesses, most of which have advanced software capabilities, and the CEO's of which are under global (and in many instances personal) governance pressures that demand system-wide financial and accounting accuracy?

Developing countries should consider offering a digital, fully certified VAT compliance option for all businesses within the large taxpayer group.[392] The CEO and CFO of these enterprises should welcome certified VAT regimes. Developing countries that took this approach would be following the example of the EU under Article 26c or the US under the SSUTA. The narrow adoption of D-VAT technologies follows a segment-of-the-business community approach similar in design to that of Article 26c.

In addition, developing countries should consider adopting aspects of the SSUTA, particularly the trusted third party option of the CSP, [393] as well as the alternative CAS,[394] and CPS[395] models. Certification should be similarly linked to provisions for audit immunity (barring fraud and misrepresentation).[396] The CSP option in developing countries should be available to large taxpayers at no cost.[397]

[391] OECD, GUIDANCE NOTE: GUIDANCE ON TAX COMPLIANCE FOR BUSINESS AND ACCOUNTING SOFTWARE *supra* note 334, at 11. ("This guidance is published at a time when corporate governance is under scrutiny as never before, as Governments worldwide demonstrate a firm resolve to increase corporate responsibility and accountability through legislations such as the Sarbanes-Oxley Act in the US, and the EU ruling that all listed companies in Europe must adopt the International Financial Reporting Standards by 2005 at the latest. This guidance does not deal with Corporate Governance issues specifically, but its key principles, especially in the establishment of internal controls and access to data entry for compliance and substantive testing of these controls will be a useful tool in enabling businesses to meet the essential requirements of this type of legislation.")

[392] There is a policy question at this point between voluntary and mandatory D-VAT options. In both the E.U. and the U.S. participation in the digital consumption tax regime is elective. There are good reasons for this in terms of the business acceptance of these systems, but those reasons have a lot to do with the scope of these regimes. Both the SSUTA and Article 26c are open to businesses large and small. There may well be concerns that small businesses will find a fully digital system unnecessarily burdensome. This would not be the case under the proposed D-VAT for developing countries, because it is limited by definition to the very largest taxpayers, and it is very unlikely that these enterprises are determining VAT obligations manually. There may of course be other reasons for resistance to a D-VAT in developing countries relating to the kinds of enforcement issues that were in turn the reason for setting up large taxpayer units in these countries to begin with.

[393] Streamlined Sales and Use Tax Agreement (SSUTA) *supra* note 26, at § 501 (B).

[394] *Id.* at § 501 (C).

[395] *Id.* at § 501 (D).

[396] USUTA, *supra* note 357, at § 9(a).

[397] This would involve transferring the value of the "float" on the VAT to the benefit of the CSP.

Such a proposal would constitute a comprehensive (horizontal and vertical) e-solution to VAT compliance at the large taxpayer level. It would contain the promise of increasing VAT revenue, streamlining reporting requirements, and stimulating economic development, foreign direct investment and integration of local businesses into the global marketplace.

Because e-solutions to consumption tax compliance issues have been strongly promoted by business globally, almost every country with a VAT already possesses at least part of the D-VAT. The objective therefore is to complete the vertical aspect (provide rules for comprehensive digital compliance within a country) and then develop the horizontal aspect (adopt rules for the harmonization of domestic VAT with international standards relating to the audit file, software certifications and trusted third party arrangements). Most of these attributes of the D-VAT have been considered earlier, and are adaptations of rules either in the EU or the SSUTA. They are briefly listed here:

> Digital notices, returns, periodic and recapitulative statements, following Council Directive 2002/38/EC.[398]
>
> Digital invoice rules, including rules that specify the legal requirements for a valid invoice (and not including a rule that requires a physical signature), including rules authorizing third-party (outsourcing) of the invoice, following Council Directive 2001/115/EC.[399]
>
> Certification of VAT compliance software (in a CAS or CPS mode), by following the certification rules under the SSUTA (which involves measuring software against three third party standards -- (1) the AICPA's SAS 94;[400] (2) the US-GAO Federal Information Systems Control Audit Manual[401] and for CSP and CAS software developers (3) ISO Number 17799[402] of the International

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[398] 2002/38/EC, 2002 O.J. (L 128) 41 [Digital Sales Directive] *supra* note 25 and text accompanying *supra* notes 244 to 247.

[399] 2001/115/EC, 2002 O.J. (L 15) 24 [Invoicing Directive] *supra* note 25, at 24 and text accompanying *supra* notes 248 to 255.

[400] AMERICAN INSTITUTE OF CERTIFIED PUBLIC ACCOUNTANTS, PROFESSIONAL STANDARDS, Vol. 1 AU § 319 *The Effect of Information Technology on the Auditor's Consideration of Internal Control in a Financial Statement Audit*, as amending SAS No. 55 *Consideration of Internal Control in a Financial Statement Audit*.

[401] U.S. GOVERNMENT ACCOUNTING OFFICE, ACCOUNTING AND INFORMATION MANAGEMENT DIVISION, FEDERAL INFORMATION SYSTEMS CONTROL AUDIT MANUAL, (FISCAM) Vol. 1 (GAO-AIMD12.19.6) *available at* http://www.gao.gov/special.pubs/ai12.19.6.pdf.

[402] INTERNATIONAL ORGANIZATION FOR STANDARDIZATION, ISO 17799: INFORMATION TECHNOLOGY, SECURITY TECHNIQUES, CODE FOR INFORMATION SECURITY MANAGEMENT (ISO/IEC 17799:2005).

Organization for Standardization[403]), or the OECD principles and standards for certification of the standard audit file and tax compliance accounting software.[404]

Certification of service providers (in a CSP mode), following the certification rules under SSUTA. It would be expected that all VAT compliance functions would be transferred to the CSP – the determination of taxability, calculation of the tax, provision of e-invoices, maintenance of the tax audit file, production of VAT returns, and payment of VAT liabilities.

An established mechanism for e-payment of VAT amounts due, as well as e-refunds of overpaid amounts through third-party (CSP mode), or direct taxpayer involvement (CAS or CPS modes).

Commitment by the VAT administration to provide a downloadable taxability matrix of tax rules and changes,[405] and a commitment to make changes effective only the first day of a calendar quarter.[406]

Commitment by the government that it would not hold CSPs or other software developers liable for over or under assessments of taxes – if the errors are attributable to government errors in the taxability matrix.[407]

Requirement that the CSP, CAS or CPS software developer would accept liability for tax shortfalls caused by errors of their own making.[408]

Adoption of uniform product and service identifier codes. Because the D-VAT requires the digital identification of each good or service in the economy, codes for this purpose should be nationally determined. Two data-bases are available for this purpose, and are commonly used for VAT and trade reporting: the CN8 are used in the EU to identify movements of goods, and the UN CPC are used to numerically identify services as well as goods transactions. Alternate coding systems could be developed using UPC codes, for example, but the goal would be

[403] STREAMLINED SALE TAX PROJECT, CERTIFICATION STANDARDS (rev. 5/17-04) *available at* http://www.streamlinedsalestax.org/ (provides a detailed application of SAS 94, FISCAM and ISO 17799 to the SSUTA).

[404] The OECD discusses a range of government "approvals" for tax accounting software. At one extreme is "accreditation," an approval process functions simply as a mechanism to "formally identify" software that meets certain criteria of acceptability. At the other extreme is "certification," an approval process that designates software as "an officially authorized mechanism to perform specified functions." Although this discussion is broader than that found in SSUTA documents, the end result is that the SSUTA the O.E.C.D. uses the term "certification" in this same manner. OECD, ELECTRONIC COMMERCE: FACILITATING COLLECTION OF CONSUMPTION TAXES ON BUSINESS-TO-CONSUMER CROSS-BORDER E-COMMERCE TRANSACTIONS *supra* note 332, at 17-18.

[405] Streamlined Sales and Use Tax Agreement (SSUTA) *supra* note 26, at § 328.

[406] Streamlined Sales and Use Tax Agreement (SSUTA) *supra* note 26, at § 304.

[407] Streamlined Sales and Use Tax Agreement (SSUTA) *supra* note 26, at § 306.

[408] USUTA, *supra* note 357, at § 9(a).

> to establish a workable system both for cross-border tax enforcement, and for taxpayer acceptance.[409]

Although the CSP, CAS, and CPS concepts have their genesis in the SSUTA, a retail sales tax system, they would be far more effective in a VAT. The critical accuracy component (calculating the correct tax) using accurate rates, and taxability determinations, benefits considerably from the inherent "self-checking" attribute of the credit invoice VAT. Buyers and sellers have an incentive to assure correct determinations in a VAT, whereas under retail sales taxes the accuracy of the digital record is dependent on state oversight of the CSP, CAS or CPS. This level of technical oversight is not only expensive under the SSUTA – it is dependent on government initiative. Linear tax systems, like the retail sales tax, have always had an Achilles heal – the government audit staff. Without an adequately trained, vigorous, and motivated audit staff equity suffers under the retail sale tax. The SSUTA does not repair this Achilles heal it only moves it into a software program and demands that the auditors exercise their oversight function remotely – over the software program. However, by fully automating the VAT invoice and having access to comprehensive data files of commercial transactions, revenue authorities under a D-VAT will be able to quickly match invoices among the largest taxpayers – checking the D-VAT against itself for accuracy.

3.5.1 – *Remission of funds by and compensation of the CSP*

One final note is needed on the issue of VAT funds remitted by the CSP on behalf of taxpayers. Under the SSUTA's CSP model a trusted third party not only determines the correct tax and fills out the appropriate returns, forms and reports, it remits the tax to the government on behalf of the taxpayer, on time and through electronic means. There are two traditional ways to remit funds electronically. Both employ proven technology and are used effectively with large-scale transfers of taxes to governments. One utilizes an Automated Clearing House (ACH) debit mechanism, and the other an ACH credit mechanism.

Electronic Federal Tax Payment System (EFTPS) is an example of an ACH debit mechanism. In 1993 the US Congress mandated EFTPS as part of the North American Free Trade Agreement Implementation Act. EFTPS was an efficiency provision intended to fund a portion of the budget impact of the legislation.[410] EFTPS exclusively uses the remitONE System of First Data Corporation's subsidiary, First Data Government Solutions (FDGS), for EFTPS transactions both domestic and international. "In fiscal year 2003, the federal government collected almost $1.5 trillion through EFTPS."[411]

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[409] *See supra* notes 281 to 285 and accompanying text.

[410] U.S. House Committee, (1993, pp. 4, 88, 105-6, 16305 and 170). EFTPS is described in US DEPT. TREAS., INTERNATIONAL ELECTRONIC FEDERAL TAX PAYMENT/DEPOSIT INSTRUCTION BOOKLET (Oct. 2002) *available at* http://www.fms.treas.gov/eftps/dib.pdf

[411] Kenneth D. Garbade, John C. Partlan and Paul J. Santoro, *Recent Innovations in Treasury Cash Management* in FEDERAL RESERVE BANK OF NEW YORK, CURRENT ISSUES IN ECONOMICS AND FINANCE 6-7 (Nov. 2004) *available at* http://www.newyorkfed.org/research/current_issues

FDGS offers the remitONE System through the banking system. "The system provides for several input methods: Internet, personal computer (PC), touch-tone phone, and live operator. Each bank signs a contract with FDGS defines which of these value-added services they may offer their customers. [All together] the remitONE System covers 175 taxing authorities and support over 1,700 total tax types across all authorities."[412] Under this system a business makes a tax payment by authorizing withdrawal of the payment from its account at a participating bank (on a specified future date). The funds are then placed in a bank-controlled impounding account. On the payment date, the funds are then withdrawn by the U.S. Treasury and transmitted to a Treasury account at a Federal Reserve Bank via an ACH debit transfer.

Importantly, it is the federal government (not FDGS and not the bank) that initiates the ACH transfer (ACH debit). "Federal payments are batched and sent to the EFTPS through the bulk filer program, and EFTPS issues an ACH transaction to debit the bank impounding account and credit the U.S. Treasury. The bank retains any interest earned on the impound account …"[413]

A different way of accomplishing the same electronic transfer places the bank in the role of the transfer agent. This is the approach adopted by FDGS's State EFT System. Under this system tax payments are once again transferred to a bank's impounding account on instructions by the taxpayer, but in this instance "… an ACH credit file is prepared for state payments … Upon receipt of the [instructions from the taxpayer], the bank debits the taxpayer's account(s) and credits the bank's impounding account. For state and local authorities, the bank distributes the taxes collected directly to each taxing authority from the bank's impounding account on the date they are due."[414]

Under the SSUTA the States are required to accept tax payments under either ACH credit or ACH debit.[415] Additionally, the SSUTA expects that if a taxpayer uses a CSP, then that CSP is "… an agent to perform for all the seller's sales or use tax functions, other than the seller's obligation to remit tax on its own purchases."[416]

Because the CSP is "… liable for sales and use taxes due each member state on all sales transactions it processes for the seller …"[417] it is expected that the CSP (not the bank) will be in control of an impounding account under either an ACH debit system (like FDGS's remitONE) or an ACH credit system (like FDGS's State EFT System). This must be the case, because, "… a seller that contracts with a certified service provider is not liable to the state for sales or use tax due on transactions processed by the certified

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[412] ERNST & YOUNG, L.L.P., REPORT ON CONTROLS PLACED IN OPERATION AND TESTS OF OPERATING EFFECTIVENESS OF THE REMITONE AND STATE EFT SYSTEMS 4 (Nov. 9, 2004) (on file with author).
[413] *Id.* at 5.
[414] *Id.* at 5.
[415] Streamlined Sales and Use Tax Agreement (SSUTA) *supra* note 26, at § 319 (C).
[416] Streamlined Sales and Use Tax Agreement (SSUTA) *supra* note 26, at § 403(A).
[417] USUTA, *supra* note 357, at § 9(a) (as approved by the Streamlined Sales Tax Project on Dec. 22, 2000, and amended on Jan. 22, 2001), and as § 10(a) of the Simplified Sales and Use Tax Administration Act (as adopted by the National Conference of State Legislatures' Executive Committee on Jan. 27, 2001).

service provider unless the seller misrepresented the types of items it sells or committed fraud."[418]

No CSP would step forward and assume liability for a seller's obligation to remit taxes, if it did not have assurance that it would have in its possession all of the funds required to be remitted. CSP's therefore, have an interest in getting the tax receipts as close to the transaction date as possible, not only because a portion of their compensation comes from the value of the "float" on those funds between the day they are received and the time when they are required to be remitted, but also because they are obligated to make tax payment to the State. Most likely this transfer will be accomplished through an earlier ACH (debit) transactions where the CSP debits the taxpayer's account on some predetermined schedule for amounts determined to be due based on transactions already processed.

There are provisions for additional measures of compensation under the SSUTA for a CSP, CAS or CPS. These amounts are contractual between the CSP, CAS and CPS and the State. They may be based on (1) a base rate that applies to taxable transactions processed, or (2) a percentage of the generated in instances where sellers without nexus volunteer to collect sales taxes for a state because they have adopted one of the certified systems.[419]

A D-VAT that has a CSP option will need to have provisions similar to those in the SSUTA that will both assign liability for remitting the VAT to the CSP, relieving the taxpayer of that obligation, as well as determining the method (ACH debit or ACH credit, or some other system) by which the CSP will transfer the tax receipts to the government. Conditions like requiring that the funds always remain in an account within the country, as well as requiring the tax data to be hosted in a secure facility within the country are to be expected.

3.5.2 – *Final words for Developing Countries*

The D-VAT proposed here is a technologically intensive, fully automated VAT that is made available or mandated for the large taxpayers. All invoices, statements, reports, returns, and notices are electronic. All payments, refunds and most audit functions will be digital. The Digital VAT requires uniform digital identification of each good or service transaction in the economy. Nationally defined, internationally harmonized product and service codes will be used. The D-VAT will certify service providers (CSPs) whose automated invoicing, tax calculation, collection and return preparation and funds payment systems will conform to the highest international standards as set out by the O.E.C.D. The D-VAT will allow outsourcing of all VAT compliance obligations to trusted third parties, thereby improving accuracy and efficiency. As under the SSUTA use of a CSP will be at no cost to the taxpayer, and except for misrepresentation or fraud, will immunize users from liability for calculation

[418] *Id.* at § 9(a).
[419] Streamlined Sales and Use Tax Agreement (SSUTA) *supra* note 26, at §§ 601-03.

or reporting errors. The D-VAT will also certify third-party software systems (CAS), and proprietary systems (CPS).

Are developing countries ready for a D-VAT? It is very clear that the E.U. sees the D-VAT as the future. Article 26c is more than a solution for cross-border digital sales from businesses not established in the E.U. that make sales to consumers within the EU, it is a microcosm of the future.

It is equally clear that the 7,588 consumption tax jurisdictions in the U.S. see things the same way the E.U. does, but they have gone further. The States have designed a trusted third party system, and have pilot tested the determination, collection and remission of multi-jurisdictional sales and use taxes using this system in four states.

All of these developments are being closely watched. The OECD is advancing international standards for the audit file, and the certification of automated systems that closely track the certification standards under the SSUTA.

Businesses too are watching, and for two very good reasons: efficiency and risk aversion. In the first instance, because enterprise data is already digital, thus efficiency dictates that fully automated VAT compliance is the preferred route. The credit-invoice VAT is the consumption tax that most completely tracks the digitized commercial processes. The D-VAT is perfectly fit to digital commerce. Whenever manual intervention is required to resolve returns, reports, and other filings into paper documents, the tax systems are being made inefficient and error prone. The risks associated with compliance errors leads to the second business concern, governance reform.

Thus, developing countries have a context within which the D-VAT can be adopted, the large taxpayer group. They also have the opportunity to do so with present technology and certification standards. They also have the leverage to make this work, leverage provided by the convergence of global regulatory regimes around verifiable cash flow controls. Developing countries should take this opportunity to enhance VAT compliance, increase administrative efficiency and harmonize the VAT compliance obligations of their largest taxpayers. The D-VAT would bring a comprehensive vertical and horizontal VAT solution to developing countries that would facilitate economic integration with digital solutions in the major developed economies.

CHAPTER FOUR: RESOLVING REGRESSIVITY – BIOMETRICS AND THE D-VAT

This chapter returns to the regressivity concern identified by the President's Advisory Panel on Federal Tax Reform as one of the three barriers to adoption of the VAT at the US federal level.[420] Those barriers were the structural tax barriers of (1) state sales tax coordination (considered in Chapter Two) as well as (2) the regressivity issue and (3) the political perception that the VAT is uncontrollable "money machine."

This chapter will demonstrate that not only is the D-VAT able to resolve the state sales tax coordination problem through its federal-state shared database,[421] it is also able to resolve the regressivity concern by interfacing with another technological development – national IDs embedded with biometric identifiers and exemption (zero-rate entitlement) certificates.

Biometric identifiers[422] embedded in national identity cards (in conjunction with D-VAT and certified tax determination systems) puts a formerly impossible goal of consumption taxation within the grasp of policymakers for the first time. Never before has it been possible to design a broad-based, single rate consumption tax that is truly and independently progressive.[423]

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[420] *See supra* note 9 to 21 and accompanying text.
[421] *See supra* notes 286 to 288 and accompanying text.
[422] "The strict definition of biometrics is the science that involves statistical analysis of biological characteristics. A (slightly) more pragmatic definitions is:

> **biometrics n.** The application of computational methods to biological features, especially with regard to the study of unique biological characteristics of humans."

Richard Hopkins, *An Introduction to Biometrics and Large Scale Civilian Identification,* 13 INT'L. REV. L. COMPUTERS & TECH. 337 (1999).
[423] ALAN A. TAIT, VALUE ADDED TAX: INTERNATIONAL PRACTICE AND PROBLEMS (1988) at 59 (arguing that it is a thankless task to try to design a progressive VAT and recommending instead that "… distributional issues are better served by income taxation and by carefully targeted transfers to the households it is wished to help."); RICHARD A. & PEGGY B. MUSGRAVE, PUBLIC FINANCE IN THEORY AND PRACTICE 443 (1976) (explaining that VAT is regressive because "… the ratio of consumption to income (the average propensity to consume) falls when moving up the income scale, so does the ratio of tax burden to income."); *see also* Robert J. Landry III, *The Regressivity of Individual State Taxes from 1980 to 2000: A Nationwide Comparison* 11, 12, Tables 7 & 8 (July 16, 2006) (indicating that even though California has a regressive retail sales tax [comparing the sales tax burden of a hypothetical poor person as a percent of income in Table 7 with the state tax burden of a hypothetical rich person as a percent of income in Table 8] it has the second most progressive tax system of any of the states due primarily to the progressive strength of its income tax) *available at* http://ssrn.com/abstract=908068.

New analysis questions the premise of this argument – that the search for progressivity in consumption taxes should be abandoned because the income tax can be relied upon to make the whole tax system progressive. This premise may not hold in a developing contry context, because the income tax is very weak. Thus, making the consumption tax the only real hope for progressivity in those tax systems. *See* Richard M. Bird & Eric M. Zolt, *Redistribution via Taxation: The Limited Role of the Personal Income Tax in Developing Countries,* 52 UCLA L. REV. 1627, 1682 (2005) (arguing that because the personal income tax plays a limited role in wealth distribution in developing countries policymakers, "… concerned with distributive issues can and should pay close attention even to apparently minor features of consumption tax design and implementation, because such details may have more important distributive effects than the income taxes in such countries.").

No consumption tax has ever had all three of the critical attributes of a progressive consumption tax: a broad base, a single rate, and measured relief for those in greatest need.[424] Although economists have urged that a broad base and a single rate be pursued over progressivity,[425] most consumption taxes instead seek progressivity at the expense of both base and rate considerations.[426] The reason is entirely political. Popular

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[424] For example, consider the New Zealand and South African VATs. Both have (1) very broad (but not comprehensive) tax bases, and (2) a single rate, but do not have (3) a mechanism for providing measured (selective) relief to the poor.

For an international assessment of the breadth of the tax bases of the New Zealand and the Republic of South Africa VATs see ALAN SCHENK & OLIVER OLDMAN, VALUE ADDED TAX: A COMPARATIVE APPROACH IN THEORY AND PRACTICE 27 (2001) (indicating that the base of the New Zealand VAT is much broader than the EU VAT base, and that New Zealand has become the model for other equally broad VATs such as the VAT in South Africa and Botswana).

In both New Zealand and the Republic of South Africa the VAT is imposed at a single rate. New Zealand's rate is 12.5% rate (GOODS & SERVICES TAX ACT § 8(1) (1985) (N.Z.) *available at* http://www.ird.govt.nz/library/publications/business/ir375.pdf). South Africa's rate is 14%. (VAT Act §7(1) (Act No. 89 of 1991) amended up to and including Taxation Laws Second Amendment Act, 2005 (No. 10 of 2005) (S.A.) *available at*: http://www.acts.co.za/vat/index.htm).

New Zealand expressly resisted making universal base concessions for the purchase of necessities. Supplies of basic food products and medical services, for example, are subject to tax. There are only eleven categories of zero-rated supplies, ten of which deal with exports, and one other dealing with the disposal of a "going concern." (GOODS & SERVICES TAX ACT §§ 11, 11A AND 11B) (1985) (N.Z.). There are eight categories of exempt supplies, four of which deal with real estate. The others deal with financial intermediation services, penalty or default interest, the supply of fine metals, and supplies made by a non-profit organization. (GOODS & SERVICES TAX ACT § 14) (1985) (N.Z.). The Republic of South Africa could not go as far as New Zealand even though policy analysts wanted to follow New Zealand. Political demands were strong for visible relief through the exemption of basic necessities. Thus, South Africa adjusts the New Zealand model, allowing a zero-rate for all insurance provided medical and dental supplies (VAT Act §10(21A) (S.A.)), and a zero-rate for the purchase of all basic foodstuffs (VAT Act §11(1)(j) and SCHED. 2(B)(1) (S.A.)). Thus, neither New Zealand nor South Africa provides measured relief for the poor. New Zealand provides no relief. South Africa provides universal relief for the purchase of necessities by rich and poor alike.

[425] EBRILL *supra* 314, at 105-12 (2001) (indicating that the standard IMF advice is for a VAT that has a single rate with a broad base, and that progressivity should be considered an attribute of a fiscal system as a whole and achieved most effectively through direct expenditures); *see also* Sanjeev Gupta et al., *Should Equity Be a Goal of Economic Policy*, IMF Economic Issues No. 16 (January 22, 1999 available at: http://www.imf.org/external/pubs/ft/issues/issues16/index.htm (stating that the IMF regularly advises that a broad base and a low rate is the controlling policy in all taxes).

[426] Jurisdictions attempting to follow this advice study the New Zealand experience. The four hallmarks of New Zealand's broad based VAT are (1) zero-rating limited to exports and international services, (2) exempt supplies limited to real estate and financial services, (3) inclusion of the government sector in the base, and (4) an attempt to include at least some financial intermediation services in the base. "… [C]ountries which have adopted a GST-type regime after studying the New Zealand experience include Canada, South Africa, Thailand, Fiji, Singapore and Australia." (ALASTAIR MCKENZIE, GST: A PRACTICAL GUIDE, 1 CCH New Zealand (2002)).

However, economic theory does not translate the same way in all political contexts. For example, both Singapore and Fiji base their VATs on the New Zealand model, but the political and economic situations within which these VATs differ significantly. These differences are reflected in the VAT statutes. Singapore followed the New Zealand model much more closely than did Fiji. The reason has to do with the level economic development, the presence of a strong centralized government in Singapore, and the polarized, ethnic-based political strife of Fiji.

acceptance of a consumption tax frequently requires that efforts be made to mitigate the perception of unfairness arising from taxing the poor when they purchase necessities.[427] These mitigation efforts almost always fail to transform the tax into a progressive levy.[428]

Singapore consciously designed its consumption tax with the standard IMF economic advice in mind. It did not try to achieve progressivity within the tax itself, focusing instead on a broad base with a single rate. The Singapore Goods and Services Tax Act is primarily based on the U.K. Value Added Tax Act of 1983, but at critical points the New Zealand Goods and Services Tax Act is applied instead of the UK model. The New Zealand overlay makes the Singapore tax base very broad. Zero-rated supplies are limited to exports and international services, and exempt supplies are limited to land and financial transactions. Singapore does not follow New Zealand with respect to the inclusion of the government sector in the tax base, nor does it extend the VAT to any financial intermediation services. (GOODS & SERVICES TAX ACT, CAP. 117A, §§ 28, 21, 22 & FOURTH SCHED. (1993) (SINGAPORE) *available at* http://statutes.agc.gov.sg/). Singapore's stated intention to follow New Zealand was set out in a White Paper issued at the inception of the Singapore VAT:

> Beyond exempting companies with turnovers below $1m, we do not intend to further exempt specific goods or services. Goods and services tax can then be applied across-the-board. This way we avoid the problems faced by other countries … Instead of exempting essentials, New Zealand took the opposite route. After examining the experiences of countries with complex goods and services tax schemes, New Zealand decided to hardly exempt any items from its goods and services tax. Instead it offset the goods and services tax's impact by reducing other taxes and giving direct rebates to citizens through their comprehensive welfare system.

Fiji also listened to the economic advice of the IMF when it introduced a VAT in 1992. Once again the New Zealand VAT was consulted, but when the base was considered Fiji political realties resisted the economists. In Fiji zero-rated supplies include the supply of sugar cane, prescription medicines, drugs, and fertilizers for planting sugar cane. In addition, for the 2000 tax year all "essential food items" defined to be "tinned fish, flour and sharps, powdered milk, edible oil, rice and tea" were zero-rated. Exemptions include "the supply and provision of the right to partake in any gambling" and "the supply of education by an educational institution." The government sector is not included in the VAT, and no effort is made to tax financial intermediation services. VALUE ADDED TAX DECREE 1991 (Revised to 30 April 2003) First Sched. §§ 5 & 8; Second Sched. §§ 16, 17 & 22 (Fiji) *available at* *http://www.frca.org.fj/legislations/VAT%20DECREE%201991%20-%20REVISED%20TO%2030%20APRIL%202003%20_FINAL_.pdf*

[427] RICHARD BIRD & PIERRE-PASCAL GENDRON, VAT REVISITED: A NEW LOOK AT THE VALUE ADDED TAX IN DEVELOPING AND TRANSITIONAL COUNTRIES 20 n.37 & 45-46 n.78 (2005) *available at:* http://www.fiscalreform.net/research/pdfs/VATR%20Final%20Report%20181005.pdf (indicating that concern with "distributional issues" lead to "political unrest" in Mexico, Colombia, the Philippines, Guatemala – where opposition was characterized by the political slogan "el IVA no va" (No to VAT) -- and Canada – where it was responsible for the defeat of the Canadian government that proposed it).

[428] Landry, *supra* note 423, at 10, 12, Tables 7 & 8 (indicating that, "… the overall ranking show that most state systems are regressive. Thirty states are regressive, twenty-two are progressive … [and that] sales and excise taxes [taken in isolation] generally are regressive among the states and add to the [overall] regressive nature of a state's tax system …" In fact, Landry's tables indicate that in 2000 the RST was significantly regressive in each state [comparing the sales tax burden of his hypothetical poor person as a percent of income in Table 7 with the state tax burden of his hypothetical rich as a percent of income in Table 8]. The top ten states, the states with the most regressive RSTs are West Virginia, Mississippi, Tennessee, Idaho, South Carolina, North Carolina, New Mexico, Kansas, Utah, and Arkansas. Louisiana has the least regressive RST. Landry indicates that the Louisiana RST is 16% more burdensome on the poor than it is on the rich (considering the RST as a percentage of income). West Virginia, which has the most regressive RST in the U.S., is ten times as regressive as Louisiana. West Virginia's RST is 172% more burdensome on the poor than on the rich [arrived at using Landry's figures by dividing the difference between the RST burden on the rich and the poor in each state by the burden on just the rich in each state]).

The essential problem (under the current system) is that when tax relief is granted it is universal not surgical. Thus, for example, under most consumption tax regimes rich and poor alike enjoy an exemption for the purchase of food for home consumption.[429] Similar exemptions broadly apply to prescription medicines.[430] The near universality of these exemptions classify them as true necessities.[431] However, with each universal exemption – tax practice compromises tax theory without achieving progressivity.

Technology offers policymakers a surgical option. Three critical technology-intensive developments ("smart" national IDs; fully digital consumption tax regimes; certified tax calculation software) make it possible for a new breed of consumption tax to be designed. Through technology – relief can be granted to select individuals (the poor or the handicapped, for example), within the context of a broad-based, single rate consumption tax of either VAT or RST design.

4.1 – SUMMARY OF THE ARGUMENT

This chapter proceeds in four parts. Each of the first three examines one of the three tax-technology developments that are shaping this area ("smart" national IDs; fully digital consumption tax regimes; certified tax calculation software). The fourth section presents an integrated assessment of these developments and articulates a reform proposal based on them that will eliminate the regressivity of the consumption tax.[432]

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[429] BIRD & GENDRON, *supra* note 427, at 94 (indicating that in both VAT and RST "… by far the most common exemption for equity reasons is that of food"); JOHN F. DUE & JOHN L. MIKESELL, SALES TAXATION: STATE AND LOCAL STRUCTURE AND ADMINISTRATION 74 and 79 (2d ed. 1994) (noting that the exemption for food is "… the most expensive … cost[ing] a state from 20 percent to 25 percent of sales and use tax revenue… [and] is perhaps the largest mistake the states have made in their sales tax structures, … Larger volumes of expenditure of persons above the lowest income levels are freed from tax for no justification whatsoever"). *See, e.g.,* VALUE ADDED TAX ACT 1994, Sched. 8 Group 1 General Item 1 (U.K.) (zero-rating "food of a kind used for human consumption") *available at* http://www.opsi.gov.uk/acts/acts1994/Ukpga_19940023_en_1.htm; MASS. GEN. LAWS ch. 64H, §6(h) and MASS. REGS. CODE tit. 64H.6.5(4), § 830 (exempting food products for human consumption unless they are included in a meal sold by a restaurant).

[430] *See, e.g.*, 2 STATE TAX GUIDE (CCH) ¶ 900-480 (2005) (indicating that in all states, except Illinois, prescription medicines are exempt for sales and use tax); VALUE ADDED TAX ACT 1994, Sched., 8 Group 12 Item 1 and Notes 2, 5 (U.K.) (zero-rating the supply of "qualifying goods" dispensed to and individual for his "personal use" where the dispensing is by a registered pharmacist on "prescription").

[431] EBRIL, *supra* note 425, at 83-100-12 (listing VAT exemptions that have become commonplace around the world, and arguing against the advisability of them).

[432] The regressivity of a consumption tax – the concept that the weight of a consumption tax falls less heavily on the wealthy than on the poor or disadvantaged – can be considered from various perspectives. The following examples illustrate these perspectives by considering the two major variables in the argument: (a) the single year verses the lifetime measure of consumption and (b) the ratio of consumption tax paid to total income verses the ratio of consumption tax paid to consumed income.

First example – the basic argument. Assume a rich man earns 1,000 and a poor man 100 in a jurisdiction where consumption is taxed at 10%. If the rich man consumes half of his income, and saves the other half, his consumption tax is calculated as follows: [1,000 – 500] = 500 x 10% = 50. If the poor man consumes all that he earns, his consumption tax is calculated as follows: 100 x 10% = 10. The effective tax rate based on total income in a single year is 5% for the rich man [50/1,000 = 5%], and 10% for the poor man [10/100 = 10%]. However, based on consumed income the tax is neutral. Both rich and poor pay tax on their consumption at a 10% rate. Consumption taxes are commonly considered regressive based on single year and total income comparisons. Opponents frequently shift the focus from total income to consumed income.

The first part (4.2) considers national identity “smart” cards embedded with biometric identifiers. It observes that biometric IDs are in use today – currently they are popular in Asia and the EU. Similar IDs will be the norm in America by 2008 under the Real ID Act. This part goes on to demonstrate how the use of these cards is transforming tax delivery services in the EU, and argues that they will do the same in the U.S. It further argues that excess capacity in these cards can effect an even more dramatic change in the delivery of tax services – it will allow the surgical delivery of consumption tax exemptions (zero-rate entitlements) to the needy while at the same time taxing others (applying the broad-base and single rate principle).

The second part (4.3) considers digital consumption tax regimes. It observes that fully digital consumption tax systems are here today (as “pilot” programs) in both VAT and RST systems. In the E.U. a limited digital reporting and payment regime is operational under the Digital Sales Directive, while in the U.S. a limited digital reporting, payment, and calculation regime is in full operation under the Streamlined Sale Tax. This part then argues that the time has come for a comprehensive digital consumption tax, similar to the one proposed to the President’s Advisory Panel on Federal Tax

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Second example – the lifetime consumption permutation. If one assumes that all income is eventually consumed (over a lifetime) then it can be argued that the consumption tax is <u>not</u> regressive (when based on a total income). In the above example, assume that over a lifetime both the rich and the poor man will spend all of their income. Under this assumption, both rich and poor will be taxed at the same overall 10% rate. This <u>lifetime consumption</u> hypothesis is questionable. Wealthy individuals commonly pass on income that is earned and not consumed. Sometimes this inherited wealth carries over unconsumed for many generations.

Third example – the universal exemption permutation. Notice that exempting necessities does not necessarily change these results. Assume that 20% of the rich man’s consumption (100) and 20% of the poor man’s consumption (20) is spent on exempt necessities. Based on a single year and <u>total income</u> analysis, the rich man’s tax burden is 4% [500 – 100 = 400 x 10% = 40; and 40/1,000 = 4%]. The poor man’s tax burden is 8% [100 – 20 = 80 x 10% = 8; and 8/100 = 8%]. Thus, the tax remains regressive. This does not always need to be the result. It may be possible (although it is probably difficult to achieve in practice) for a statute to identify exemptions that constitute a very large portion of the poor man’s consumption (80%) but very little of the rich man’s consumption (20%). In this case the rich man’s tax burden would remain at 4%, but the poor man’s burden would fall to 2%.

This is the result many jurisdictions are trying to achieve through universal exemptions on necessities. Consider the South African exemption for all basic foodstuffs, something that would be expected to be biased toward the poor. However, the exemption for all insurance-provided medical and dental supplies that South Africa also allows has the opposite bias (assuming that the poor are less likely than the rich to have medical and dental insurance.) *See supra* note 3.

Fourth example – lifetime consumption in conjunction with universal exemptions. If considered over a <u>lifetime</u> (x 50), and under the assumptions specified above, a consumption tax can actually appear to be progressive. Using the figures in the first example, the rich man’s aggregate tax burden would be 9% [50,000 – 5,000 = 4,500 x 10% = 450; and 450/50,000 = 9%], and the poor man’s aggregate tax burden would be 8% [5,000 – 1,000 = 4,000 x 10% = 400; and 400/5,000 = 8%]. Once again however, this result is based on the unlikely assumption that the unconsumed income of wealthy individuals is fully consumed in their lifetime and not passed on from generation to generation as savings.

Fifth example – the surgical exemption through technology. What technology offers is the ability to exempt the poor man, but not exempt the rich man on the purchase of necessities. It is possible to surgically reduce the tax burden of the poor through selectively applied exemptions (based on either a single year or lifetime time frame, or on a total income or total consumed income basis) so that the weight of the tax falls more heavily on the rich than the poor.

Reform.[433] With such a consumption tax in place, full advantage can be taken of the capacity of the "smart" ID to exempt the poor from the tax. (This is not to say that resolving regressivity through "smart" IDs is dependent on adoption of the D-VAT. Paper processes (although not as efficient as the D-VAT) can be used to achieve the same results. In fact, there are instances where even under a D-VAT that paper processes will be retained – small businesses or remote locations are two examples.

The third part (4.4) considers certified compliance software. It observes that software certification regimes for global VAT compliance have been proposed by the OECD, and are operational under the Streamlined Sales Tax in the U.S. This part then argues that certification of tax software is the final piece in solving the regressivity puzzle of the consumption tax. Tax calculation software not only (a) answers the global demand for corporate governance reform through certification of software solutions but it (b) is the vehicle through which the "smart" ID can seamlessly exempt the poor or disadvantaged from the tax without disrupting normal commercial processes.

The final part (4.5) summarizes the argument of this chapter by turning it on its head. Instead of considering from the perspective of the technology that solves it, this part argues from the perspective of the technical barriers that have stood in the way of progressivity. The specific barriers considered are (a) fraudulent claims of exemption, (b) capacity of the system to efficiently provide exemptions and (c) ability of the system to audit compliance. This part closes with a proposal for reform.

4.2 – IDs WITH BIOMETRIC INDENTIFIERS

National identity cards with biometric identifiers play a central role in present day public and private sector efficiency[434] and security efforts.[435] As these cards become

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[433] Ainsworth *supra* note 22 and reproduced at text at notes 23 to 55 (proposal in response to the second request for comments); Richard T. Ainsworth, *The Digital VAT (D-VAT)* 25 VA. TAX REV. 875 (2006) (presenting a expanded and developed analysis of the prior submission to the Panel).

[434] UNITED STATES GENERAL ACCOUNTING OFFICE, ELECTRONIC BENEFITS TRANSFER: USE OF BIOMETRICS TO DETER FRAUD IN THE NATIONWIDE EBT PROGRAM, GAO/OSI-95-20, SEPT. 1995 at 4 (reporting that from June 1991 through July 1994 the Los Angeles County Department of Public Services used fingerprinting of welfare recipients to eliminate 3,000 previously-approved entitlement cases, saving over $14 million); John D. Woodward, *Biometric Scanning, Law and Policy: Identifying the Concerns – Drafting the Biometric Blueprint*, 59 U. PITT L. REV. 97, 152 (1997) (indicating that the states of Connecticut, Illinois, Massachusetts, New Jersey, New York, Pennsylvania and Texas are using similar fingerprint imaging to prevent welfare fraud).

Globally it is the health care sector is a leader in identifying where smart card efficiency gains can be found – increasing quality and decreasing the cost of care. Both government and private sector institutions have adopted smart card technology. For example, an EU Council Regulation made health care available to citizens temporarily present in another Member State, and this in turn quickly lead to the adoption of private sector smart cards containing patient medical data, as well as an EU-wide smart card to facilitate the sharing of services among countries. Commission Regulation 1408/71 of 14 June 1971 on the application of social security schemes to employed persons, to self-employed persons, and to members of their families moving within the community, Article 22(1)(a), 1971 O.J. (L 149) *available at* http://www.dwp.gov.uk/advisers/docs/lawvols/bluevol/pdf/a9_2001.pdf). *See also* Attila Naszlady & Janos Naszlady, *Patient Health Record on a Smart Card*, 48 INT. J. MED. INFORMATICS 191 (1998) (studying the adoption of smart card technology in Hungary for efficient communication of patient histories and the more and more commonplace, it is time for the tax collector to consider whether or not there is a willingness to use some of the excess functionality of these cards for tax purposes – functionality that would accurately and immediately associate the identified person with a deserved consumption tax exemption – functionality that would then interact with a certified tax calculation system to precisely remove the tax on just the purchases that are exempt consumption for this particular consumer (within any combination of dollar, quantity or frequency of purchase limitations desired).

Security concerns have understandably received heightened attention in the post September 11th world, and the capabilities of "smart cards" in this context are precipitating a global convergence of identity information.[436] Privacy concerns are

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findings of physical examinations); Administrative Commission on Social Security for Migrant Workers Decision 189 of 18 June 2003 aimed at introducing a European insurance card to replace the forms necessary for application of Council Regulation (EEC) No 1408/71 and (EEC) No 574/72 as regards access to health care during a temporary stay in a Member State other than the competent State or the State of residence, O.J. (L 276) 1; Administrative Commission on Social Security for Migrant Workers Decision 190 of 18 June 2003 concerning the technical specifications of the European health insurance card, O.J. (L 276) 4.

Outside of the E.U. *see also* Alvin T. S. Chan, *WWW+ Smart Card: Towards a Mobile Health Care Management System* 57 INT. J. MED. INFORMATICS 127 (2000) (presenting a study on extending medical smart card technology through World Wide Web applications as a standard interface tool for accessing medical records contained within smart cards, conducted and implemented in Hong Kong); Benoit A. Aubert & Genevieve Hamel, *Adoption of Smart Cards in the Medical Sector: the Canadian Experience*, 53 SOC. SCI. & MED. 879 (2001) (presenting a Canadian study on the adoption of smart card technology in the medical sector that stresses the need for providing both direct benefits to the user and completeness of information for acceptance by the medical professional).

Similar efforts in the U.S. were advanced under a reform of the U.S. health care system. Although ultimately unsuccessful, the Clinton Health Security Act (H.R. 3600/ S.1757, 103d Cong., 1st Sess. (1993)) made the issuance of a Health Security "Smart" Card a key component in the program. The card was intended to identify the holder as a person entitled to health benefits and was designed to permit access to patient medical data through a system of databases, improving the quality of care and minimizing administrative costs. William H. Minor, *Identity Cards and Databases in Health Care: The Need for Federal Privacy Protections*, 28 COLUM. J.L. & SOC. PROBS. 253, 256 (1995).

[435] UNITED STATES GENERAL ACCOUNTING OFFICE, ELECTRONIC GOVERNMENT: AVIATION SECURITY: CHALLENGES IN USING BIOMETRIC TECHNOLOGIES, GAO-04-785T, MAY 19, 2004 at 24 (reporting on progress made in the adaptation of biometric smart card technologies in airport security systems); UNITED STATES GENERAL ACCOUNTING OFFICE, ELECTRONIC GOVERNMENT: PROGRESS IN PROMOTING ADOPTION OF SMART CARD TECHNOLOGY, GAO-03-144, JAN. 2003 at 13-14 (reporting on the progress of 62 U.S. government smart card security and efficiency oriented programs established over the prior two year period); UNITED STATES GENERAL ACCOUNTING OFFICE, TECHNOLOGY ASSESSMENT: USING BIOMETRICS FOR BORDER SECURITY, GAO-03-174, NOV. 2002 at 4-5 (providing an assessment of the seven leading biometric technologies including facial recognition, fingerprint recognition, hand geometry, iris recognition, retina recognition, signature recognition, and speaker recognition and determining that the first four not only are suitable for border security, but have successfully been used in border control pilot projects); UNITED STATES GENERAL ACCOUNTING OFFICE, INFORMATION SECURITY CHALLENGES IN USING BIOMETRICS, GAO-03-1137T, SEPT. 9, 2003 at 4-5 (subcommittee testimony of the Chief Technologist of Applied Research and Methods, Keith A. Rhodes, assessing the costs and benefits of using biometric identifiers in a national border control security system).

[436] Biometric identifies were added to EU passports and travel documents. Facial image biometrics are required, fingerprint biometrics are optional. Council Regulation (EC) No 2252/2004, 2004 O.J. (L 385) 1, at Art. 1(2). The express reason for the biometric facial image was that, "[t]he facial image is interoperable and can be used in our relations with third countries such as the U.S. However, the

considerable.[437] Nevertheless, both advocates and opponents of national identity smart cards agree that there is little likelihood that this movement will slow down.[438] The best

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fingerprint could be added as an option for Member States who wish to do so, if they want to search their national databases, which would be currently the only possibility for identification." Commission Proposal for a Council Regulation on standards for security and biometrics in EU citizens' passports, COM(2004)116 final at 7. On June 2, 2006 the Commission proposed applying biometric identifiers to E.U. visas through the Common Consular Instructions (CCI). In a press release the Commission Vice-President Franco Frattini, Commissioner responsible for freedom, security and justice, declared:

> This Proposal will have a knock on effect: it will facilitate the visa issuing procedure, prevent visa shopping, facilitate checks at external borders and strength the fight against fraud and, within the territory of the Member States, assist in the identification and return of illegal immigrants and the prevention of threats to the internal security of the Member States. … Common Application Centers will have the advantage of reinforcing and streamlining local consular cooperation between Member States as resources can be pooled and shared, which will be of benefit to both states and visa applicants. One central access point will even ensure that the data protection requirements, to which I attach the greatest importance, are more easily met.

Press Release IP/06/717 (June 2, 2006) *available at* http://ec.europa.eu/idabc/en/document/5674/355

[437] There is general consensus that privacy rights are threatened by national identity cards systems, a threat that grows more serious when smart card technologies are involved. Some societies have for a long time resolved this issue in favor of identity cards others have not. A growing body of legal scholarship is responding to the new technologies. Some focuses on security issues and terrorist threats, others focus on the promise of governmental or commercial efficiencies. Inconsistent conclusions have been reached. Some find that an individual's right of privacy weighs more heavily than society's needs – others reach the opposite result.

These differences are more than mere "preferences." One of the main reasons for inconsistency centers on the definition privacy. James Whitman argues that Europeans and Americans respond to identity cards differently precisely because their understand of privacy is different. According to Whitman, a European's understanding of privacy is a dignity-based concept – privacy is violated when there is an unauthorized portrayal of the self. However, an American's sense of privacy is more liberty-based – privacy is violated when the state makes an unauthorized intrusion into the sanctity of the home. Whitman synthesizes his observations with the following rhetorical questions: "Why is it that Americans comply with court discovery orders that open essentially all of their documents for inspection, but refuse to carry identity cards? Why is it that Europeans tolerate state meddling in their choice of baby names?" James Q. Whitman, *The Two Western Cultures of Privacy: Dignity Versus Liberty*, 113 YALE L.J. 1151, 1160, 1204 (2004).

When legal scholars consider the privacy problem of embedding national identity cards with smart chips therefore, it is conceptually much easier to identify and protect against an abuse of privacy rights when privacy rights are defined in dignity terms – the European conception – rather than in liberty terms – the American conception. Identity cards are acceptable in dignity terms as long as comprehensive regulations are in place that will prevent unauthorized disclosures. The classic dignity-based defense of privacy can be found in the E.U. Data Protection Directive. (Directive 95/46/EC of the European Parliament and of the Council 95/46/EC, on the protection of individuals with regard to the processing of personal data and on the free movement of such data, 1995 O.J. (L 281) 31 *available at* http://europa.eu.int/eur-lex/lex/LexUriServ/LexUriServ.do?uri=CELEX:31995L0046:EN:HTML) (setting out detailed rules on all aspects of data processing, the confidentiality and security of the processing, the criteria to be met for appropriate data processing systems, the information required to be provided to the data subject, the data subject's right of access, right to object, and the establishment of authorities to supervise and provide remedies in cases of privacy violations).

When Whitman considers the roots of the American, liberty-based sense of privacy he focuses on the Bill of Rights, in particular the Fourth Amendment's prohibition of unlawful search and seizure. The classic statement of liberty-based privacy rights is found in Boyd v. United States, 116 U.S. 616 (1886) (forbidding the government to seize the documents of a merchant in a customs case where the court issued an aggressive declaration of the "sanctity" of the American home). Liberty-based privacy advocates that can be done is to offer protections against mistakes, misuse,[439] and abuse,[440] while we try to extend the social benefits of this highly accurate and immediate form of

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therefore, object to more than the unauthorized disclosure of private information, they object to the State's mandate that identity data be assembled and made readily available to the State.

When legal scholars with a liberty-based sense of privacy consider national identity cards with embedded smart chips the scale weighs heavily against the cards. Preventing unauthorized disclosure, no matter how efficient, cannot blunt the impact of the State's mandate itself, and with the seemingly limitless capacity of smart chips to hold data the privacy defense of a national smart ID card becomes difficult. *See* Richard Sobel, *The Demeaning of Identity and Personhood in National Identification Systems*, 15 HARV. J. L. & TECH. 319 (2002) (arguing that even before September 11, 2001 the movement in America toward a system of national identification numbers, databanks and identity cards contradicted the "constitutional and philosophical bases of democratic government and undermine[d] the fundamental foundations of political and personal identity … by transforming personhood from an intrinsic quality inhering in individuals into a quantity designated by numbers, represented by physical cards, and recorded in computer banks."). Sobel's argument (based in a liberty-based conception of privacy) cannot be met head-on by advocates of smart identity cards that define privacy in dignity terms. *See* Daniel J. Steinbock, *National Identity Cards: Fourth and Fifth Amendment Issues*, 56 FLA. L. REV. 697 (2004) (assuming the existence of identity cards to be inoffensive per se, and then demonstrating that adequate Fourth and Fifth Amendment protection exist to protect individual privacy.)

Whitman's privacy dichotomy is both analytically useful and deceptively simple. It is usefulness comes from its ability to ferret out the nuances of the privacy debate. Its deception is in its suggestion that the dichotomy he offers is a real culturally specific attribute – so that the national smart ID card could be accepted in the E.U. after comprehensive data protection rules are put in place, while they will never be accepted in the U.S. because the card itself is an offensive state mandate. The social reality of the dichotomy is its deception. It is reasonably clear that most countries have privacy concern with smart national ID cards that has both dignity and liberty components.

The U.S. has a strong tradition of seeing privacy in dignity terms. Perhaps the most cited of all American law review articles, the Warren and Brandeis article on *The Right of Privacy* makes this argument. Warren and Brandeis argue that privacy is the "right to be let alone," and that public disclosure of private facts so affronts human dignity that it should be protected as a matter of constitutional right. Samuel D. Warren & Louis D. Brandeis, *The Right to Privacy*, 4 HARV. L. REV. 193, 195 (1890). For Whitman, the Warren and Brandeis position is an anomaly. It is a "patch" of continental law that like a "… patch[es] of snow [that] sometimes survive[s] in a hollow on an early spring day … [will soon] melt away." (Whitman *supra* at 1203). It would be a mistake for national identity card advocates to ignore either the dignity or the liberty conception of privacy. The first can be met by making the cards voluntary, the second by adopting comprehensive data protection rules.

[438] Gwen Wendy Kennedy, *Thumbs Up for Biometric Authentication!* 8 COMP . L. REV. & TECH. J. 379, 379 (2004) (favoring biometric identity cards and indicating that "[t]he only remaining impediment to the large-scale deployment of biometric authentication devices is the perceived threat to privacy."); Lawrence O. Gostin et al., *Privacy and Security of Personal Information in a New Health Care System*, 270 JAMA 2487, 2487 (1993) (indicating that even though the Clinton Health Security Act was defeated, "[t]he collection and transmission of vast amounts of health information in automated form will occur with or without reform of the health care system."); Sobel *supra* note 437, at 320 (opposing biometric identity cards but indicating that the movement toward a national identity system in the U.S. had begun and seemed unstoppable long before the terrorist attacks of September 11, 2001).

[439] Stephen Moore, *A National Identification System: Testimony Before the US House of Representatives Subcommittee on Immigration and Claims, Judiciary Committee*, (May 13, 1997) (reporting that over 500 IRS agents were uncovered in 1995 using the government's confidential taxpayer database to check on the financial status of friends, neighbors, or famous people, and that public outrage was considerable, but that less than 10 agents lost their jobs, and within two years later a similar incident occurred, again with hundreds of agents) *available at* http://www.cato.org/testimony/ct-sm051397.html; OFFICE OF TECHNOLOGY ASSESSMENT, CONGRESS OF THE UNITED STATES, INFORMATION SECURITY AND PRIVACY IN NETWORK ENVIRONMENTS, 2-3 (1994) (OTA-TCT-606).

identification. This chapter concerns itself with benefits that can be realized in consumption taxes.

4.2.1 –*National identity cards and biometric identifiers: History and contemporary use*.

National identity cards – history. National identity cards have been around for a long time, and have served many purposes. Identity cards were introduced in France in the 1890's and were used primarily to regulate immigration, integration and assimilation. The French cards were seen as a means of preserving the "Frenchness of France."[441]

Hong Kong made paper national identity cards mandatory in 1949. The Hong Kong cards performed social service functions in addition to providing a measure of national security from "foreign" Chinese nationals. The Hong Kong cards were intended to "… assist measures that might be found necessary for the maintenance of law and order <u>and for the distribution of food or other commodities</u> as a result of prevailing conditions of political and economic unrest (emphasis added)."[442] Hong Kong probably holds the record for the longest continual use of a mandatory national identity card system (among the democratic governments where they are currently in use). Even with its assimilation into the People's Republic of China, Hong Kong has no intention of discontinuing identity cards. On August 19, 2003 Hong Kong began a transition to "smart" ID cards,[443] a process that (as of July 2006) is ongoing.[444]

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[440] Sobel *supra* note 437, at 343-49 (recording the most notorious abuses of national identity card systems as: (1) the requirement that American slaves carry "passes" in order to travel away from plantations before the American Civil War, (2) the power of the Secretary of State to deny passports (a national identity document) to individuals deemed to be Communists under the Passport Act of 1926 before the Supreme Court found the statute unconstitutional in Kent v. Dulles, 357 U.S. 116 (1958), (3) the use of identity cards by the Nazis to identify Jews for extermination during World War II, (4) the use of "passes" by the South African government to control the movement of black men and women during apartheid, (5) the system of identity cards used in Rwanda for distinguishing between Hutus and Tutus that facilitated the genocide, (6) the use of the Census Bureau by Franklin Delano Roosevelt prior to Pearl Harbor to collect data on Japanese-Americans for later isolation in internment camps); *see also* Neda Matar, *Are You Ready for a National ID Card? Perhaps we don't have to choose between Fear of Terrorism and Need for Privacy*, 17 EMORY INT'L L. REV. 287, 310-13 (2003).

[441] Gerard Noiriel, *The French Melting Pot: Immigration, Citizenship, and National Identity*, tr. Geoffroy de Laforcade (Minneapolis, University of Minnesota Press, 1996) xix, 45-90 (discussing the revolution in identity that occurred during this period and the critical role that identity cards played in making this happen).

[442] Hong Kong Special Administrative Region Identity Card Project, *Initial Privacy Impact Assessment Report* at 15 (Nov. 2000) [citing from Speech by Attorney General Moving the First Reading of the Registration of Persons Bill 1949 and Objects and Reasons for the Bill, Hong Kong Legislative Council Hansard, 1949, pp. 225-27] *available at* http://www.legco.gov.hk/yr00-01/english/fc/esc/papers/esc27e1.pdf (last visited Aug. 2, 2006).

[443] LEGISLATIVE COUNCIL PANEL ON SECURITY: POLICY INITIATIVE OF THE SECURITY BUREAU, LC PAPER NO. CB(2)64/05-06(01) at 6 (indicating that by the end of August 2005 an estimated 2.85 million residents had been issued new smart identity cards) *available at* http://www.legco.gov.hk (last visited Aug. 2, 2006).

[444] LEGISLATIVE COUNCIL BRIEF, APPLICATION FOR NEW IDENTITY CARDS (PERSONS BORN IN OR BEFORE 1942, IN 1990 TO 1992 OR 1997 TO 2003) ORDER, SBCR 1/1486/81 (setting out the schedule based on year of birth for mandatory smart card replacement for three additional groups of residents) *available at* http://www.legco.gov.hk (last visited Aug. 2, 2006).

Biometric identifiers – history. Considered by themselves, biometric identifiers have a longer history than identity cards. Fingerprints pressed in wax were used as far back as the third century B.C. to authenticate written documents. Documents from the Qin Dynasty in China are the oldest extant evidence of the use of biometrics as identifiers (fingerprints in this case).[445] Fingerprints remain among the most reliable of all biometric identifiers,[446] and along with iris, and face recognition are the most easily digitized and incorporated into the memory chips on smart cards.

National identity cards & biometric identifiers – Contemporary use. Modern security concerns are digitally merging biometric identification into the traditional ID card – a move from paper to plastic.[447] Before Hong Kong converted to smart identity

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[445] Two original (ancient) Chinese documents record the use of fingerprints. The first is by Prime Minister Hsiao He. In the text HAN DISCIPLINES, written approximately in 200 B.C., it was required that legal testimonials must be certified with "hand prints." The second source is from the Qin Dynasty (B.C. 248 to B.C. 206). In 1975 archeologists found bamboo slices (essentially ancient books where the writing was engraved on the bamboo) that describe the ancient science and technology of identifying murders and other criminals. In one case a thief is identified through footprints previously taken. (Personal communication from Professor Xiaoqiang Yang, Sun Yat-Sen University School of Law, Guangzhou, China, on file with author, and confirmed by Li-Huan (Joyce) Lin, Senior Tax Associate, Taxware, L.P.). *See also* David Lyon, *Identity Cards: Social Sorting by Databases*, Oxford Internet Institute, Internet Issue Brief No. 3 (Nov. 2004) *available at* http://www.internet-institute.ox.ac.uk/resources/publications/IB3all.pdf (last visited Aug. 2, 2006); Johan Bloommé, *Evaluation of Biometric Security Systems Against Artificial Fingers* (PhD dissertation, Linkoping University, Sweden, 2003) at 10-11 (considering the history of fingerprints in more detail, and indicating their use not only in the Chinese Qin Dynasty, but in Babylon, as well as 14th century Persia; and also reviewing the work of Professor Marcello Malpighi at the University of Bologna in 1686, Sir William Hershel's fingerprinting of Indian natives in 1856, Dr. Henry Faulds' method of fingerprint classification devised in the 1870's, the work of Sir Francis Galton whose book "Fingerprints" in 1892 first observed that fingerprints were scientifically unique identifiers, and finally the work of the Argentine police officer Juan Vucetich, who is credited with the modern world's first criminal fingerprint identification case in 1892) *available at*: http://www.ep.liu.se/exjobb/isy/2003/3514/ (last visited Aug. 2, 2006).

[446] BIOMETRICS AT THE FRONTIERS: ASSESSING THE IMPACT ON SOCIETY, TECHNICAL REPORT FOR THE EUROPEAN PARLIAMENT COMMITTEE ON CITIZENS' FREEDOM AND RIGHTS, JUSTICE AND HOME AFFAIRS (LIBE), INSTITUTE FOR PROSPECTIVE TECHNOLOGICAL STUDIES (Feb. 2005) at 35 (indicating that biometric identifiers are commonly dividend into three broad categories: (1) physiological biometric features – height, weight, body odor, the shape of the hand, the pattern of veins, retina, or iris, the face and patterns on the skin of thumbs or fingers; (2) behavioral biometrics – voice patterns, signature and keystroke sequences and gait (the body movement while walking); (3) DNA) *available at* http://cybersecurity.jrc.es/docs/LIBE%20Biometrics%20March%2005/iptsBiometics_FullReport_eur21585en.pdf (last visited Aug. 2, 2006).

[447] Embedding a biometric (fingerprint) on a microchip in a card is an exceptionally easy task. A detailed and technical explanation of the process in the context of a biometrically secure credit card is provided by Jain and Pankanti:

> Here's how it would work. When activating your new card, you would load an image of your fingerprint onto the card. To do this, you would press your finger against a sensor in the card—a silicon chip containing an array of micro-capacitor plates. (In large quantities, these fingerprint-sensing chips cost only about $5 each.) The surface of the skin serves as a second layer of plates for each micro-capacitor, and the air gap acts as the dielectric medium. A small electrical charge is created between the finger surface and the capacitor plates in the chip. The magnitude of the charge depends on the distance between the skin surface and the plates. Because the ridges in the fingerprint pattern are

cards it surveyed similar programs in Finland,[448] Brunei[449] and Malaysia.[450] Smart cards in Finland are voluntary, whereas those in Brunei and Malaysia are mandatory.

> closer to the silicon chip than the valleys, ridges and valleys result in different capacitance values across the matrix of plates. The capacitance values of different plates are measured and converted into pixel intensities to form a digital image of the fingerprint. Next, a microprocessor in the smart card extracts a few specific details, called minutiae, from the digital image of the fingerprint. Minutiae include locations where the ridges end abruptly and locations where two or more ridges merge, or a single ridge branches out into two or more ridges. Typically, in a live-scan fingerprint image of good quality, there are 20 to 70 minutiae; the actual number depends on the size of the sensor surface and the placement of the finger on the sensor. The minutiae information is encrypted and stored, along with the cardholder's identifying information, as a template in the smart card's flash memory.
>
> At the start of a credit card transaction, you would present your smart credit card to a point-of-sale terminal. The terminal would establish secure communications channels between itself and your card via communications chips embedded in the card and with the credit card company's central database via Ethernet. The terminal then would verify that your card has not been reported lost or stolen, by exchanging encrypted information with the card in a predetermined sequence and checking its responses against the credit card database.
>
> Next, you would touch your credit card's fingerprint sensor pad. The matcher, a software program running on the card's microprocessor, would compare the signals from the sensor to the biometric template stored in the card's memory. The matcher would determine the number of corresponding minutiae and calculate a fingerprint similarity result, known as a matching score. Even in ideal situations, not all minutiae from the input and template prints taken from the same finger will match. So the matcher uses what's called a threshold parameter to decide whether a given pair of feature sets belong to the same finger or not. If there's a match, the card sends a digital signature and a time stamp to the point-of-sale terminal. The entire matching process could take less than a second, after which the card is accepted or rejected.

Anil K. Jain & Sharathchandra Pankanti, *A Touch of Money*, IEEE SPECTRUM ON-LINE (July 2006) *available at* http://www.spectrum.ieee.org/jul06/4123 (last visited Aug. 2, 2006).

[448] Implemented in December 1999, the Finnish cards are valid for three years. They are issued to Finish citizens and foreigners residing permanently in Finland. It is an official travel document in the EU and features a photograph and a microchip. The face of the card shows the ID card number, name, sex, personal identity code, date of expiration, nationality (Finnish citizens only), issuing authority, photograph of the holder and signature of the holder. The microchip digitally stores all of the data on the face of the card. In addition the microchip holds certificates that will allow the holder to make electronic transactions within administrations of social and health service organizations, perform on-line authentications as well as provide encryption and digital signature. Certificates hold the following information: name of the issuer of the certificate, name of the certificate holder, electronic transaction identifier of the certificate holder, validity of the certificate, data on the method for calculating the public key of the certificate holder, country code of the issuer of the certificate, serial number of the certificate data on the calculation method for signing the certificate, data on the certificate policy, data on the storage of the certificate, and other technical data needed for use of the certificate. BILLS COMMITTEE OF THE LEGISLATIVE COUNCIL: REGISTRATION OF PERSONS (AMENDMENT) BILL 2001, EXPERIENCE OF USING SMART IDENTITY CARDS IN OTHER COUNTRIES, LC PAPER NO. CB(2)2836/01-02(02) 1 & ANNEX 3-7 *available at* http://www.legco.gov.hk (last visited Feb. 23, 2006).

[449] As of July 2000, Brunei required identity cards for all citizens and permanent residents aged twelve or above, and all temporary residents staying in Brunei for longer than three months. The data collected for the Brunei card includes the name (including Chinese characters, if any) full address of place of residence, race, place and date of birth, physical abnormalities (if any), citizenship, blood type photograph, fingerprint impressions, and other information deemed necessary by the registration officer. Although confirmation

Biometric identification systems can be effectively certified, and their performance can be independently validated.[451]

4.2.2 – *European Leadership – The Smart ID in the E.U.*

Accelerated by the US move to incorporate biometric identifiers in U.S. visas and a U.S. mandate that similar technology be used in foreign passports under the Visa Waiver Program,[452] European governments redoubled existing efforts toward the

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was not provided by Brunei it is assumed that this information is both digitally stored on the embedded chip and available on the face of the card. *Id.* 1 & ANNEX 3-6.

[450] As of July 2001, Malaysia required identity cards for all Malaysian citizens or permanent residents aged twelve or above (approximately 18 million cards). The face of the card includes the card number, name resident address, citizenship, sex, religion (only for those of Muslim faith), the old ID card number and a serial number. The microchip stores all of the data on the face of the card, and includes a digital photo, digital fingerprint, driving license information, passport number, and expiration of passport, e-cash information. *Id.* at 1 & ANNEX 3-7.

[451] Satat Dass, Yongfang Zhu & Anil Jain, *Validating a Biometric Authentication System: Sample Size Requirements*, IEEE TRANSACTIONS ON PATTERN ANALYSIS AND MACHINE INTELLIGENCE (forthcoming 2006) *available at* *http://biometrics.cse.msu.edu/Publications/GeneralBiometrics/DassZhuJain_SampleSize_PAMI06.pdf* (last visited Aug. 2, 2006).

[452] Theodore H. Cohen, *Cross-Border Travel in North America: The Challenge of U.S. Section 110 Legislation*, CANADIAN AMERICAN PUBLIC POLICY NO. 40 (Oct. 1999) Occasional Paper Series of the Canadian-American Center, University of Maine at Orono (noting that the automated entry-exit system for all U.S. border crossing was mandated in 1996, and that the Immigration and Naturalization Service was to have in place an operational database (without biometric identifiers) by the end of 1998 (Illegal Immigration Reform and Immigrant Responsibility Act of 1996 (IIRIRA), Pub. L. No. 104-208, § 110, 110 Stat. 558-59 (1996), 8 U.S.C. 1221), but that the deadline for this database assembly was pushed back in October 1998 in response to opposition from U.S. business groups bordering Canada when concerns were raised by U.S. automakers at the Detroit-Windsor crossing where just-in-time production lines crossed the border).

Because the volume of data, even with smart card technology, exceeded INS capacity Congress amended section 110 and limited the entry-exit system to the 50 most highly trafficked land ports by the end of 2004, and all ports of entry by the end of 2005 (Immigration and Naturalization Service Data Management Improvement Act of 2000 (DMIA), Pub. L. 106-215, § 2, 114 Stat. 337 (2000), 8 U.S.C. 1365a). The visa tracking system that existed prior to September 11, 2001 was improving, however it primarily covered passengers arriving by airplane and consisted of a paper form stamped at the port of entry, returned to the airline, and then entered manually into the database.

This paper-based, manual data entry system was transformed into a highly automated system of machine-readable, tamper-resistant visas and passports with digitized biometric identifiers after September 11, 2001. By October 26, 2004 all U.S. visas were required to incorporate a biometric identifier. Facial recognition (digital photo) and fingerprint scanning (electronic fingerprints) were taken of all non-immigrant visa applicants at U.S. embassies and consulates. Upon arrival the biometrics on the visa could then be compared with the biometrics of the person presenting the visa (Enhanced Border Security and Visa Entry Reform Act of 2002 (EBSVER), Pub. L. No. 107-173, §§ 301-03, 116 Stat. 552-53 (2004), 8 U.S.C. 1731-32) The database may be made available to other Federal, State and local law enforcement officials. (8 U.S.C. 1365a(f))

Citizens of the twenty-seven countries that participate in the U.S. Visa Waiver Program, many of them European (Andorra, Australia, Austria, Belgium, Brunei, Denmark, Finland, France, Germany, Iceland, Ireland, Italy, Japan, Liechtenstein, Luxembourg, Monaco, the Netherlands, New Zealand, Norway, Portugal, San Marino, Singapore, Slovenia, Spain, Sweden, Switzerland, and the United Kingdom) are treated differently. Because individuals holding passports from these countries are allowed to enter and stay within the U.S. for 90 days without a visa, these countries were required to issue machine-development of an integrated system of mutually recognized passports and national identity cards, both with embedded biometric identifiers.[453] The push and pull of security and privacy concerns are more than evident in the E.U. debates. The Madrid bombings further underscored the need for immediately accurate national identity cards.[454] At the same time, longstanding concerns over the creation of new centralized databases and the digital integration of pre-existing databanks were heightened as the scope of the privacy threat posed by digital ID's was now global in scope, rather than purely local.[455]

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readable, tamper-resistant passports containing biometric data. The deadline for biometric passports was the same as the deadline for the issuance of biometric visas, October 26, 2004. (EBSVER §303(b)(1), 116 Stat. 553, 8 U.S.C. 1732(b)(1)) With this set of requirements, all persons entering and leaving the U.S. were now subject to the same biometric data requirements.

The U.S. is pushing for comprehensive biometric identification at the borders as fast, or faster than technology and inter-governmental relations will allow. For example, the deadline of October 26, 2004 set by EBSVER for biometrics identifiers in passports issued by the countries in the Visa Waiver Program was too ambitions, and needed to be extended for one year to October 26, 2005. (Pub. L. 108-299, 118 Stat. 1100, 8 U.S.C. 1732 (August 9, 2004). But even with this extension two of the twenty-seven countries in the Visa Waiver Program (France and Italy) failed to meet the deadline, and as a result citizens of these countries will be required to secure a visa to enter the U.S. if they hold non-electronic passports issued prior to October 26, 2005. These passports are required to have digitized biometric identifiers. Valid machine-readable passports issued prior to this date are still accepted. (eGovernment News, *France and Italy Miss U.S. Passport Deadline* (Nov. 1, 2005) *available at* http://europa.eu.int/idabc/en/document/5095/355 (last visited Aug. 2, 2006).

The only exceptions to the requirement for biometrics in visas or passports to enter the U.S. involve citizens (but not permanent residents) of Canada, and citizens of the British Overseas Territory of Bermuda (unless criminally ineligible or have previously violated the terms of their immigration status). Citizens and permanent residents of Mexico must secure a Border Crossing Card (also known as Laser Visa), which is a biometric, machine-readable document obtained like a visa at US Embassies and Consulates. None of these exceptions are universal. Exceptions-to-these-exceptions apply in each instance.

[453] Thessaloniki European Council, Presidency Conclusions at 3 (Jun. 19 & 20, 2003) ("… [A] coherent approach is needed in the EU on biometric identifiers or biometric data, which would result in harmonized solutions for documents for third country nationals, EU citizens passports and information systems (VIS and SIS II). The European Council invites the Commission to prepare the appropriate proposals, starting with visas, while fully respecting the envisaged timetable for the introduction of the Schengen Information system II.") *available at* http://europa.eu.int/constitution/futurum/documents/other/oth200603_en.pdf (last visited Aug. 2, 2006).

[454] *See* REBEKAH ALYS LOWRI THOMAS, BIOMETRICS, INTERNATIONAL MIGRATION AND HUMAN RIGHTS 4 (Global Commission on International Migration, Global Migration Perspectives, No. 17, Jan. 2005).

[455] The following sequence of events is instructive. (1) On February 18, 2004 the European Commission submitted a draft resolution on standard security features and biometrics in E.U. citizens' passports. In this draft the Commission proposed that passports and other travel documents should include a storage medium with a digital facial image. Although the facial image was mandatory, Member States were allowed to add digital fingerprints into the passports by national law. The draft regulation suggests the fingerprints be stored in a national database. (COM(2004) 116 final, O.J. (C 98) 39). (2) On October 25-26, 2004 the text of the proposal was changed as a result of input from the Justice and Home Affairs Council so that both facial and fingerprint biometrics were incorporated as mandatory features. (COM 15139/2004). (3) The European Parliament's non-binding resolution of the Commission's proposal for a Council regulation was adopted on December 2, 2004 with 471 votes in favor, 118 votes against and 6 abstentions. However, the Parliament rejected both the mandatory inclusion of biometric fingerprints, and the creation of a central database of E.U. passports and travel documents. (4) On December 13, 2004 the Council adopted Regulation (EC) No. 2252/2004 which did not take into account the suggestions of the Parliament. The regulation came into force on January 18, 2005 and envisages the inclusion of digital facial images within 18 months and digitized fingerprints within 36 months after the adoption of technical specifications and

Italy currently leads all European governments in the use of smart card technology for identification. Over 13.1 million cards have been issued as of October 2005.[456] The rest of Europe has issued about 1.8 million smart cards with Estonia (800,000) and Belgium (585,000) falling a distant second and third.[457]

4.2.2.1 – *Tax Application of European Leadership – The Smart ID & Tax Services.*

It is not surprising therefore that the recently completed IDABC e-Government Observatory[458] benchmarking survey placed the tax administrations of Italy, Estonia and Belgium at the forefront of technological applications of e-government tax services. Each country has a national electronic portal linked to the tax administration through which taxpayers can enter into secure, encrypted, fully transactional tax relationship with the authorities. The digital capacity of each tax administration's web site facilitates far more than the mere submission of digital returns. These sites allow a full range of declarations, payments, and comprehensive forms downloading capabilities, authentication, full case handling, decision requests, confidential document deliveries and notifications.

The critical component facilitating this comprehensive range of digital tax services is the ability of the tax administration to rely (with legal certainty) on government-issued smart ID cards to accurately and securely identify taxpayers.[459]

It is clear that this comprehensive range of digital taxpayer services, accessed through e-government web portals is the consequence of the receptivity of tax administrations to technology in conjunction with the appearance of the "smart" ID. When the comparable web services of the American RSTs are examined the range of tax services provided are nowhere near as comprehensive as those in the E.U. Although American tax administrations appear equally receptive to tax technology as their E.U. counterparts, none of the American web portals can be considered fully transactional, a standard achieved in eighteen of the twenty-five E.U. Member States. The reason is clear. The U.S. lacks a nationally recognized digital ID.

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standards. (5) Technical specifications and standards were adopted on February 28, 2005. (COM(2005) 409 final).

[456] IDABC [Interoperable Delivery of European e-Government Services to Public Administrations, Businesses and Citizens] E-GOVERNMENT NEWS (OCT. 13, 2005) reporting on a study published in CARD TECHNOLOGIES (indicating that of the 13.1 million smart cards 10 million are National Service Cards for the online authentication of citizens and another 2 million are electronic identity cards that include a digital photo and fingerprint of the holder, and that beginning in January 2006 these e-ID cards will replace all paper IDs with the expectation that each citizen will have one within five years) *available at* http://europa.eu.int/idabc/en/document/4985/355 (last visited Aug. 2, 2006).

[457] *Id.* at summary table.

[458] IDABC stands for Interoperable Delivery of European e-Government Services to public Administrations, Businesses and Citizens.

[459] *See infra* APPENDIX A, at Belgium, Estonia & Italy (indicating that in Belgium and Estonia smart ID cards are mandatory for all citizens, and in Italy after 2006 traditional paper ID's will no longer issued and have been replaced with smart ID's).

4.2.2.2 – *Proof of European Leadership – Benchmarking Digital Tax Service in the E.U.*

The IDABC benchmarking survey has assessed European adoption of smart card technology for national ID's and government e-services each year for the past five years. The European Commission announced the creation of IDABC on February 22, 2001, and the Internal Market Council agreed upon the benchmarks and measured functionalities of the survey.[460] On March 23-24, 2001 the Stockholm European Council endorsed the Commission's benchmarking methodology (a grading scale from 1 to 4[461]) and the public services measured (20 basic public services – 12 for citizens and 8 for businesses). Four of the twenty public services concern tax matters – government/taxpayer relations in personal income tax, corporate income tax, VAT and customs administration.

The fifth IDABC report[462] issued in May 2006 draws three important conclusions: (1) E.U. adoption of smart ID card technologies is very fast growing. Of the twenty-five E.U. Member States: (a) seven already have national smart card ID's (five are voluntary,[463] two are mandatory[464]); (b) fourteen have smart ID card programs under development;[465] and (c) only four have no announced plans for national smart ID cards.[466] (2) All E.U. countries have web portals. Most allow direct and secure interaction between citizens and government agencies through these portals either with digital signatures contained in smart ID cards or with digital certificates issued by accrediting agencies. (3) Tax administrations have aggressively adapted to smart ID card technological opportunities. With only seven exceptions,[467] all E.U. tax administrations

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[460] European Commission, eGovernment Indicators for Benchmarking eEurope (Feb. 22, 2001) *available at* http://ec.europa.eu/idabc/servlets/Doc?id=18401 (last visited Aug. 2, 2006).

[461] The four benchmarks are:

1. **Informational** (only): online information about public services is provided.
2. **Interactional**: online information about public services plus downloadable forms.
3. **Two-way interactional**: online information and downloadable forms plus full processing of forms, including authentication functions.
4. **Fully Transactional**: online information, downloadable forms, full processing, authentication, plus full case handling, decision, and delivery functions, including payment.

[462] IDABC e-Government Observatory, e-Government in the Member States of the European Union, 5th Edition (May 2006) *available at* http://europa.eu.int/idabc/egovo (last visited Aug. 2, 2006).

[463] *See* IDABC Report *supra* note 462 & *infra* APPENDIX A (indicating that the five countries are: Austria, Finland, Italy, the Netherlands, and Sweden).

[464] *See* IDABC Report *supra* note 462 & *infra* APPENDIX A (indicating that the two countries are: Belgium and Estonia).

[465] *See* IDABC Report *supra* note 462 & *infra* APPENDIX A (indicating that the fourteen countries are: Cyprus, France, Germany, Hungary, Ireland, Latvia, Lithuania, Malta, Poland, Portugal, Slovakia, Slovenia, Spain and the United Kingdom).

[466] *See* IDABC Report *supra* note 462 & *infra* APPENDIX A (indicating that the four countries are: Czech Republic, Denmark, Greece, and Luxembourg).

[467] The exceptional countries and their benchmarks in personal and corporate income taxes, VAT and customs are listed below (if not specified the benchmark is "4"):

Czech Republic – customs is benchmarked at 3.
Hungary – personal income tax is benchmarked at "3," VAT and customs benchmarked at "2."
Latvia – personal income tax, corporate income tax, and VAT are all benchmarked at "1."
Luxembourg – personal income tax and corporate income tax are benchmarked at "2."
Poland – personal income tax, corporate income tax, and VAT are all benchmarked at "2."
Slovakia – VAT is benchmarked at "2," and customs is benchmarked at "1."

are benchmarked at stage "4" across all taxes – they have fully transactional relationships with taxpayers over the net. [468] Each of the seven "exceptional" cases are countries that are benchmarked at stage "4" for some, but not all, taxes.

4.2.3 – *Comparing America & Europe – Tax Services & "Smart" IDs*

Comparing the delivery of consumption tax services and "smart" ID card use in the American states and the E.U. is a complex, but related inquiry. Complicating factors include (a) the 7,588 American retail sales tax (RST) jurisdictions as opposed to the 25 E.U. member states, (b) the absence of any significant degree of national coordination of the American RSTs as opposed to the coordinating influence of the Sixth Directive in the E.U., and (c) the lack of a government-authorized e-infrastructure in America as opposed to the wide use of "smart" national ID's and government-certified digital signatures in the E.U.

The American retail sales tax is a sub-national (and frequently a sub-state level) tax. Where the E.U. has twenty-five national VAT regimes coordinated by the Sixth Directive, the U.S. has forty-five relatively independent States (and the District of Columbia) where RSTs are imposed. But, there are not just forty-six RSTs in the U.S. – there are 7,588.[469] The RST is found at the state, county, city, and district levels of government. These RSTs are constructed on non-harmonized bases, employ non-uniform rates, and are built upon fundamentally conflicted foundations of both destination and origin design.

Thus, although there is a structural similarity among the American RSTs there is an exceptional degree of diversity in the details. Neither federal legislation nor a significant series of constitutional rulings control the contours of these taxes.[470] This is not to say that the RSTs lack all harmonization. The sheer number of these levies has always made some coordination essential. Almost since the beginning, some states have coordinated their local level RSTs thorough "one-stop-shops" where many (or all) of the RSTs in a single state are managed through a single set of reporting rules, tax base measures, and rate restrictions.[471] These state-coordinated systems are frequently

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Slovenia – customs is benchmarked at "2."

[468] *See* IDABC Report *supra* note 462 (the IDABC report is nearly 600 pages in length, the critical tax observations made under each of the 25 Member States are summarized *infra* APPENDIX A).

[469] This figure is based on a recent count with the best available information, and represents 46 state level jurisdictions (including Washington, D.C.), 1,732 counties, 5,571 cities, and 229 districts. At one extreme is Texas with 1,370 taxing jurisdictions (124 counties, 1,141 cities, and 104 districts in addition to the state itself), and at the other extreme are states like Connecticut, Hawaii, and Maine where there is only one taxing jurisdiction at the state level.

[470] Hellerstein *supra* note 311, at 6 (indicating that, "[I]n the absence of federal legislation requiring the states to conform to some national norm, the American constitutional structure not only tolerates diversity among the states, it tends to celebrate it. … To be sure, there are constitutional constraints on the states' fiscal powers when they burden the national common market. But these restraints are limited and, in contrast to state corporate and personal income taxes that conform closely to the national model, there is no national consumption tax that serves as a similar model for the states.").

[471] Richard T. Ainsworth, *The One-Stop-Shop for VAT and RST: Common Approaches to EU-US Consumption Tax Issues*, 2005 TAX NOTES INT'L 693 (Feb. 21, 2005).

automated for reporting and payment purposes. But this assemblage of non-comprehensive one-stop-shops is a far cry from the type of control that arises in the EU VAT under the Sixth Directive where all Member States must adhere to a single set of rules, occasionally with clearly defined optional methodologies, and where derogations from standards require Commission approval.

Finally, the U.S. has no national ID, and certainly has no government standard for digital identification – it has no e-government infrastructure that will facilitate easy citizens-to-government digital correspondence. Thus, the kinds of secure digital correspondence that most citizens in the E.U. expect to have with their government as a matter of course are simply not the norm in the U.S. This is changing. As changes in digital identification roll through American society there will be significant change the delivery of tax services in the retail sales tax.

The events of September 11, 2001 fundamentally altered the American perception of the appropriateness of "smart" national IDs. The U.S. is far more accepting today of the proposition that biometric identifiers (and more) should be embedded in national IDs. There have been two notable pushes in the U.S. for these kinds of IDs – the first push was for secure identity documents at the borders (passports and visa documents of foreigners[472]) – the second push is domestic, standardized biometric IDs for all Americans (the Real ID Act of 2005).

Based on the E.U. experience, American taxpayers should expect to see significant tax service delivery improvements when the American "smart" IDs are in place. The Real ID Act should change the way Americans relate to their taxing authorities – even though improving this relationship was certainly <u>not</u> one of the stated or intended benefits of the Real ID Act. Once digital ID's (complete with biometric identifiers and encrypted digital signatures) become commonplace in America, it will only be a matter of time before taxpayers (and tax authorities) demand that fully digital, fully transactional web portals be opened.

4.2.4 – *America Following the E.U. – The Real ID Act of 2005*

Long before September 11, 2001 some Americans saw the basic components of an American national ID system rolling into place (informally), and they generally opposed it. Five very large databases holding a great deal of information about Americans were constructed in the late 1980's and 1990's.[473] A national ID could be

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[472] Cohen *supra* note 452.

[473] Sobel, *supra* note 437, at 323, n. 10, 11, 12 & 13 (identifying these five databases as: (1) the Immigration Reform and Control Act of 1986 ("IRCA) Pub. L. No. 99-603, 100 Stat. 3359 (1986); (2) the Illegal Immigration Reform and Immigrant Responsibility Act of 2996 ("IIRIRA") Pub. L. No. 104-208, 110 Stat. 3009-546 to 3009-724 (1996); (3) the Personal Responsibility and Work Opportunity Reconciliation Act of 1996 ("Welfare Reform Act") Pub. L. No. 104-193, 110 Stat. 2105 (1996); (4) the Health Insurance Portability and Accountability Act of 1996 ("HIPAA") Pub. L. No. 104-191, 110 Stat. 1936 (1996) and (5) the Federal Aviation Administration ID requirement and Computer Assisted Passenger Screening system ("CAPS"), and indicating that this assembly of databanks can be enhanced with data

established by linking these databases. It would simply require the assignment of a unique digital identifier to every American, then merging the databases.

If done covertly such a "constructed" national ID would likely produced a public outcry – similar to the outrage seen in France when the magazine Le Monde exposed a secret French government effort to do this (March 21, 1979).[474] This event remains one of the reasons that smart ID cards are encountering more resistance in France than elsewhere in Europe. It also accounts for the French insistence that biometric data on smart ID cards be stored anonymously in separate files.[475]

The American smart ID card is not being developed covertly. It is however, being constructed indirectly. On May 11, 2005 President Bush signed the Real ID Act of 2005 into law.[476] The Act sets minimum document requirements for <u>state</u> driver's licenses, without which "… a Federal agency may not accept, for any official purpose, a driver's license or identification card issued by a State to any person …"[477] The minimum requirements are:

(1) The person's full legal name.
(2) The person's date of birth.
(3) The person's gender.
(4) The person's driver's license or identification card number.
(5) A digital photograph of the person.
(6) The person's address of principle residence.
(7) The person's signature.
(8) Physical security features designed to prevent tampering, counterfeiting, or duplication of the document for fraudulent purposes.
(9) A common machine-readable technology, with defined minimum data.[478]

Three parts of this federal legislation make the Real ID into a *de facto* national ID in the minds of many: (1) the standardized requirements specifying how the states must verify the minimum required data on driver's licenses,[479] (2) the requirement that the source documents for this verification be retained in digital files,[480] and (3) the requirement that all states link their databases.[481]

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from the FBI's National Crime Information Center 2000, the Department of Transportation, the Social Security Administration and a whole series of educational databanks.).

[474] IDABC Report *supra* note 462 & *infra* APPENDIX A, at France.

[475] IDABC Report *supra* note 462 & *infra* APPENDIX A, at France.

[476] The Real ID Act started out as H.R. 418, which passed the House. It was attached to a military spending bill (H.R. 1268) and was enacted as Pub. L. No. 109-13.

[477] *Id.* at § 202 (a)(1).

[478] *Id.* at § 202 (b).

[479] *Id.* at § 202 (c)(2)(B) & (3).

[480] *Id.* at § 202 (d)(1).

[481] *Id.* at § 202 (d)(12).

There is opposition to the Real ID Act of 2005.[482] But there are also significant levels of support. Some states, Tennessee and Utah for example, complied with the licensing aspect of this legislation well in advance of its effective date (May 11, 2008).[483] The more costly aspect, the actual scanning of source documents and the assembly of the digital database, is not being carried out early.[484] States are waiting for federal funding and regulation.[485] California tried to pass conforming legislation several times.[486] The most recent problem with the California legislation is that it failed to include a provision on "temporary drivers' licenses" (those issued to people who failed to meet the data verification requirements – primarily illegal immigrants) that would make these documents visibly different from the standard license. Governor Schwarzenegger vetoed the earliest version of this legislation on cost considerations (September 22, 2004) and then vetoed the follow-up legislation (October 7, 2005). Legislation has been reintroduced.

4.2.4.1 – *The Function Creep Effect (why America will catch up)*

The Hong Kong survey that supported the adoption of "smart" IDs observed that function creep was one of most notable characteristics of national identity smart cards. E.U. documents refer to this characteristic as "the diffusion effect."[487] Function creep occurs when new technology (in this instance biometrics in identity cards) becomes so established or accepted in a society[488] that adaptations both unforeseen and unintended by the technology initiators become commonplace.[489]

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[482] The NH House and Senate passed a resolution, "…declare[ing] its opposition to the federal Real ID Act of 2005, Public Law 109-13, and urges Congress to enact its repeal keeping the State out of the Real ID Act." The reason for the resolution was specifically that "… the collection of biometric identifying information, … is an intrusion of privacy; … [that it] creates a de facto national identification card … [and that] the costs imposed on the states by the Real ID Act … may run well into the hundreds of millions of dollars over the next 5 years;" 2006 N.H. S. Con. Res. 8.

[483] Both Utah S.B. 227 amending the Utah Code [Utah Code § 53-3-207 (1)(b)] effective March 8, 2005 and Tennessee S.B. 3430 [Tenn. Code Ann. § 55-50-102 (18)] effective May 29, 2004 passed laws to implement the Real ID Act before the Real ID Act was signed into law federally. hat are issuing driving privilege, or certificate cards under the Real ID Act, § (c)(2)(C) for individuals who cannot prove their legal status in the U.S. to obtain liability insurance, although with a "temporary diver's license." These documents are valid for one year and are clearly marked an not qualifying as a "real ID."

[484] The legislation in Tennessee has no provision for retaining a digital record of source documents, and the law in passed in Utah only requires that the Social Security Numbers (SSN) or Temporary Identification Number (ITIN) be retained in digital files. [Utah 53-3-205(9)(b)].

[485] Real ID Act *supra* note 476, at §204(a) & (b).

[486] AB 2895. Passed Aug. 27, 2004. Vetoed Sept. 22, 2004. Re-introduced as S.B. 60, passed Sept. 8, 2005, vetoed Oct. 10, 2005. Re-introduced as S.B. 1160 Jan. 10, 2006. S.B. 1160 does not contain a provision that would make the temporary licenses visibly different from regular licenses.

[487] BIOMETRICS AT THE FRONTIERS, *supra* note 446, at 10.

[488] John T. Cross, *Comment: Age Verification in the 21st Century: Swiping Away Your Privacy*, 23 J. MARSHALL J. COMPUTER & INFO. L. 363 (2005) (discussing the common use of driver's licenses for age verification at bars and convenience stores by swiping the license through a scanning machine that then records name, address, expiration date, and sometimes social security number, electronic fingerprint and the electronic image of the holder, and the lack of state of federal laws protecting the data); Rina C.Y. Chung, *Hong Kong's "Smart" Identity Card: Data Privacy Issues and Implications for a Post-September 11th America*, 4 ASIAN-PACIFIC L. & POL'Y J. 442 (2003) (discussing instances where bar management uses scanned ID data to "… develop customer lists based on specific characteristic, and target groups of

The Malaysian identity card provides several good examples of function creep. Formally called the Government Multi-Purpose Card (GMPC) the Malaysian card is the product of an open-ended collaboration of five government agencies, the National Registration Department, the Road Transportation Department, the Immigration Department, the Ministry of Health and the Royal Malaysian Police. The Malaysian card functions as a passport, a driver's license, and an access card to government facilities. The open infrastructure of the card allows it to serve in the private sector – and this is the function creep effect – as E-cash and an Automated Teller Machine (ATM) access card, as well as a vehicle for the payment of fees for public transport services, and "Touch and Go" auto toll and parking services. The implementation of Public Key Infrastructure (PKI) within the cards in 2003 allows e-commerce transactions and ensures the authenticity and integrity of data.[490] The ID card legislation in Malaysia does not restrict future incorporation of additional non-government data on the card.[491] The same is true in Finland and Brunei.[492]

If funding for the construction of the American digital database is made available to the States, and if political opposition remains mild, then it seems reasonable that some time between 2008 and 2010 the U.S. will have a smart national ID card. In addition, because the Real ID Act only sets minimum standards for card content, the American card, like most smart ID cards globally, will be open for new uses and new data elements. The addition of a legally recognized, state or federally certified digital signature embedded in the card is only the most obvious addition.[493]

Thus, based on E.U. and other country experiences with open technology smart IDs, once the ID becomes widely held, is easily and frequently used by a large portion of the population, at low or no cost to government and citizen, then tax delivery services begin to change. To measure the extent of the change that should be expected in the U.S. one simply needs to benchmark the current system and project developments along the E.U. trajectory.

4.2.4.2 – *Benchmarking Digital Tax Services in the American RSTs.*

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customers for a particular event (e.g., an 'all-male-performer show" that would appeal to women in the 21-34 age range)," an example which is based on a news report by Jennifer Lee, *Welcome to the Database Lounge*, N.Y. TIMES, MAR. 21, 2002, at G1.)

[489] THOMAS *supra* note 454, at 11-13 (indicating that function creep's downside is the privacy concerns raised by increased profiling, skimming of data, private companies improperly obtaining [retaining] data, and the use of comprehensive cross-data-base searching all because biometrics embedded in national identity cards provide the "handle" to do so, resulting in abusive 'stop and search' procedures for migrants). *See supra* note 14.

[490] REGISTRATION OF PERSONS (AMENDMENT) BILL 2001, EXPERIENCE OF USING SMART IDENTITY CARDS IN OTHER COUNTRIES *supra* note 448 at 3 & ANNEX 15-16.

[491] REGISTRATION OF PERSONS (AMENDMENT) BILL 2001, EXPERIENCE OF USING SMART IDENTITY CARDS IN OTHER COUNTRIES *supra* note 448 at ANNEX 15-16.

[492] REGISTRATION OF PERSONS (AMENDMENT) BILL 2001, EXPERIENCE OF USING SMART IDENTITY CARDS IN OTHER COUNTRIES *supra* note 448 at ANNEX 15-16.

[493] Real ID Act *supra* note 476, at §202(b)(7) (requiring that only an individual's physical signature be captured).

Applying the benchmarks developed by IDABC e-Government Observatory to the U.S. states, the difference in the level of technical facility is striking. Generally speaking, divergence is most apparent when an average is taken. E.U. tax administrations were commonly benchmarked at "stage 4, " whereas the U.S. states are all benchmarked at "stage 3" or lower.[494] The most extreme divergence is that two states do not allow e-filing of any sales and use tax returns (Colorado and Michigan).[495] No E.U. jurisdiction is comparable.

In all cases what is missing from the U.S. systems is the digital handling of the full range of case activities,[496] decision requests, confidential document deliveries and notifications, declarations, and authentications that are standard in the E.U. systems. All of these functions require secure identity verification, something readily found in smart ID cards with an embedded, encrypted digital signature.

Considered as a whole, there is wide variation in the U.S. systems. Some remain reliant on paper processes (Arizona,[497] Arkansas,[498] Connecticut,[499] and Missouri[500]), while others make state e-payments dependent on the taxpayer's commitment to make

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[494] The results from applying the four-part IDABC benchmarking standard at the U.S. state level are summarized *infra* APPENDIX B. This summary only applies to the RST. Thus, it covers only forty-five states plus the District of Columbia. In APPENDIX A the comparable analysis for the E.U. was much broader. It included all taxes, and was divided into three categories: *(1) Smart ID Cards*; *(2) Electronic Portal*; and *(3) Tax Administration & Technology*. The same scope and breakdown is not followed in APPENDIX B. The scope is more limited, and the analysis is focused on category three: *Tax Administration & Technology*. The first category (*Smart ID Cards*) is applicable in no state, and the second category (*Electronic Portal*) has been fully functional in every state for some time. The issue considered was whether a state's tax web site operates at "stage 1," "stage 2," "stage 3," or "stage 4" with respect to the state-level consumption tax, a *Tax Administration & Technology* question. The information is a "snapshot" collected on July 18, 2006. Changes are occurring so rapidly in this area that this profile will be out-of-date shortly. [NOTE: A new category of "almost stage 3" seemed appropriate, and was used on occasion.]

[495] *See* IDABC Report *supra* note 462 & *infra* Appendix B, at Colorado and Michigan.

[496] N.Y. DEP'T. OF TAX & FINANCE, RELEASE (Sept. 23, 2003) *at* http://www.tax.state.ny.us/press/archive/2003/nelectronicserv.htm (last visited Aug. 2, 2006). Although the State of New York announced in September 2003 that taxpayers would be allowed to access a new electronic service for sales taxes through the Business Service Center. Taxpayers can request a password to view or pay open assessments. After requesting a password on-line, taxpayers can log into the Business Service Center and view their "Consolidated Statement of Tax Liabilities" which will display the real-time status of a taxpayer's open assessments, including any balance due.

[497] ARIZ. REV. STAT. § 42-1105(F) (all e-filed returns must be maintained on paper for six years).

[498] ARK. Reg. 2000-2(1) (E) & (F) & 5(A) (paper signature cards must be retained for electronically filed returns); KY. REV. STAT. ANN. § 45.345 (amended returns must be filed on paper with "Amended" printed or stamped at the top of the return).

[499] Registration requires a form to be downloaded, completed and then mailed to the tax office. The tax office then mails the taxpayer a user ID and password providing access to the eTSC site. OFFICE OF TAX & REV., NOTICE REGARDING ELECTRONIC FILING REQUIREMENTS (Jan. 15, 2004). Similar requirements can be found widely: Florida requires completion of the Registration/Authorization Form (Form DR-600F) and the Electronic Filing Agreement (Form DR-653).

[500] Missouri Department of Revenue web site: http://www.dor.mo.gov/tax/business/payonline.htm (last visited Aug. 2, 2006) (requiring a duplicate set of paper returns for all returns filed electronically).

federal income tax e-payments (Rhode Island,[501] and Vermont[502]). In other states e-filing and e-payment solutions are offered selectively. Some discriminate based on the tax-type (Washington[503]), while others discriminate within a single tax-type, based on types of sales and use tax return filed (California,[504] Illinois,[505] Kentucky,[506] New Mexico,[507] and Utah[508]). Some states allow e-filing only when the taxpayer is making e-payments (Illinois,[509] South Dakota,[510] and Texas[511]), while others do the reverse allowing e-payments, but not the e-filing of the related return (Michigan[512]). Still other states view e-payment as an enforcement rather than a taxpayer service or tax-efficiency measure (Vermont[513]).

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[501] R.I. DIV. OF TAXES, FEDERAL/STATE ONLINE FILING, *at* http://www.tax.state.ri.us/elf/on-line.htm (last visited Aug. 2, 2006) (indicating that, in order for the Rhode Island e-filing and e-payment system to work a taxpayer must file both a federal and state return, and that if a taxpayer has already filed a federal return using another electronic filing service, state returns cannot be filed electronically).

[502] VT. STAT. ANN. tit. 32, §§ 9243 (indicating that the Commissioner can mandate state e-payment if a taxpayer is making federal e-payments).

[503] The Washington taxes subject to the EFT requirement include all taxes administered by the Department of Revenue under WASH. REV. CODE § 82.32, with the following exceptions: city and town taxes on financial institutions (WASH. REV. CODE § 82.14A); county tax on telephone access lines (WASH. REV. CODE § 82.14B; cigarette tax (WASH. REV. CODE § 82.24); enhanced food fish tax (WASH. REV. CODE § 82.27); leasehold excise tax (WASH. REV. CODE § 82.29A); and forest tax (WASH. REV. CODE § 82.33).

[504] CA. SBE TAX INFO. BULL. No. 12-1-05 (Dec. 1, 2005) (indicating that e-filing is not allowed in California for taxpayers required to make prepayments or to pay taxes by electronic funds transfer (EFT)).

[505] 20 ILL. COMP. STAT. ANN. 2505/39c-1a; ILL. ADMIN. CODE tit. 86, § 760.100 (indicating that e-filing is voluntary in Illinois, and limited to two sales and use tax forms, Form ST-1 (Sales and Use Tax Return) and Form ST-2 (Multiple Site attachment for Form ST-1)).

[506] KY. REV. STAT. ANN. § 45.345 (indicating that amended returns must be filed on paper with "Amended" printed or stamped at the top of the return).

[507] 13th month returns, those using special rates, and all amended returns. These returns must be filed on paper forms. *See* “Who can use this system” at https://ec3.state.nm.us/crs-net/help/WhoUse.htm (last visited Aug. 2, 2006).

[508] UTAH STATE TAX COMMISSION, ONLINE SALES AND USE TAX FILING *at* http://tax.utah.gov/sales/salestaxonline.html (last visited Aug. 2, 2006) (indicating that sales and use tax returns that must be filed on paper include TC-61F, TC-61FV, TC-61T, and TC-61W, and that in addition amended returns and late-filed returns remain paper-based even though most but not all sales and use taxpayers are able to make payments on line).

[509] Although voluntary the Illinois system limits e-filing to two sales and use tax forms, Form ST-1 (Sales and Use Tax Return) and Form ST-2 (Multiple Site attachment for Form ST-1) (20 ILL. COMP. STAT. ANN. 2505/39c-1a; ILL. ADMIN. CODE tit. 86, § 760.100). Voluntary electronic funds transfer are also limited, but not in a harmonious manner. E-payments are voluntary with the following forms: ART-1 (payment only); PST-1 (payment only); PST-3, (for accelerated sales tax filers); RR-3 (for accelerated sales and use tax filers). (ILL. ADMIN. CODE tit. 86, § 750.500(e)).

[510] 2006 S.D. LAWS H1048, §1; S.D. CODIFIED LAWS § 10-46E-7; S.D. CODIFIED LAWS § 10-59-39 (recent legislation linking e-payment and e-filing by requiring taxpayers to e-file a return by the 23rd day of the month following each monthly period if they e-pay the tax by the second to the last day of the month following each monthly period).

[511] TEX. TAX CODE ANN. tit. 111, § 626 (providing for mandatory e-filing linked to mandatory e-payment, and therefore the e-filing of a sales and use tax return is required if the tax payments are required under EFT).

[512] MICH. COMP. LAWS §§ 205.56(3); 205.96(3).

[513] VT. STAT. ANN. tit. 32, §§ 9243 (providing the Commissioner with the authority to mandate state e-payments if prior payments by the taxpayer were with checks that were uncollectible).

This is not to say that American jurisdictions could not achieve E.U. levels of performance without national smart ID cards. A number of E.U. Member States use agency-specific certifications of digital signatures to achieve "stage 4" benchmarking, but this is normally a temporary accommodation as the country moves toward a national digital ID and a single electronic portal facilitating all citizen-to-government and government-to-citizen correspondence.[514] However, no U.S. jurisdiction does this today, nor is there any published plan to do so in any state.

With 7,588 RST jurisdictions the U.S. cannot move ahead with multiple "smart" IDs, one for each jurisdiction. The confusion cause by these many IDs would stifle rather than facilitate digital compliance. What the U.S. needs (and probably will get) is a national "smart" ID and an authenticated digital signature regime. The Real ID will provide this opportunity. Much more is possible however, if national IDs are linked to a fully digital consumption tax regimes (D-RSTs) that are operated by certified service providers (CSP) or with certified software systems (CAS or CPS models) installed within businesses obligated to collect the tax.

4.2.5 – *Beyond Simple Function Creep.*

The function creep of "smart" IDs technology is what will allow the U.S. to catch up to the E.U in terms of basic e-tax services. But, there are two distinct kinds of function creep – one is passive and predictable (*linear function creep*), while the other is active and dynamic (*hyper function change*).[515] Linear function creep is the natural and intuitive extension in digital form of formerly non-digital processes. This is what can be observes when a comparison is made between the tax functionality of the e-government interface in the E.U. with the similar interface in the U.S. With this perspective one can predict the direction of change in the U.S.

U.S. portals are not nearly as robust as those in the E.U., and the reason is the absence of a national ID with secure digital features. Thus, a very predictable consequence of the adoption of a national smart ID with encrypted digital signature functionality would be E.U.-like advances in U.S. tax services.

The further point of this chapter is that far more than linear function creep is possible. With active intervention the government can merge the "smart" ID with other marketplace technologies (the D-VAT and certified transactional software) to not only improve the basic delivery of tax services, but to reform the system itself.

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[514] IDABC Report *supra* note 468 & *infra* APPENDIX A, at Cyprus, Czech Republic, France, Germany, Greece, Luxembourg, Malta, Portugal, Slovakia, Spain, and the United Kingdom (indicating that in these countries there is a "stage 4" tax web site without a national ID, thus the certification of the digital signature is by the tax administration).

[515] Joe Burns, *Basic HTML*, in HTML GOODIES (defining "hyper" in the context of the **H**-T-M-L initials that stand for **H**yper **T**ext **M**arkup **L**anguage. "… **Hyper** is the opposite of linear. It used to be that computer programs had to move in a linear fashion. This [comes] before this, this [comes] before this, and so on. HTML does not hold to that pattern and allows the person viewing the World Wide Web page to go anywhere, any time they want.") *available at* http://www.htmlgoodies.com/primers/html/article.php/3478141 (last visited Aug. 2, 2006).

This would amount to a wholesale re-composition of the consumption tax. The consumption tax can become a progressive tax, because National IDs with smart chips will allow the surgical identification of taxpayers-in-need (those who are entitled to tax exempt status when purchasing necessities). This can be done without compromising the broad base of the tax – taxing the same supplies made to other members of society. This reform targets the inherent regressvity in all contemporary consumption tax regimes (VATs as well as RSTs). This is more than a *linear function creep* it is a *hyper change in functionality*.

4.3 – FULLY DIGITAL CONSUMPTION TAX REGIMES

"Smart" national IDs are part of a larger context of technological change that is having a powerful effect on consumption tax administration. The consumption tax itself is digitizing. As "smart" national ID technologies merge with digital consumption tax regimes not only will the delivery of tax services be transformed but also the nature of the tax itself will be transformed from a regressive to a progressive levy. This kind of *hyper change in functionality* will come as exemption certificates (zero-rate entitlements) are embedded in national ID's, and digital compliance systems are reconfigured to recognize the certificate and act upon it. Technology will exempt the poor from paying tax on necessities while the wealthy will remain subject to tax on the same purchases.

The speed of these changes will depend entirely on the degree to which technology has penetrated society. In both Europe and America national identity smart card regimes are under development simultaneously with experiments in fully digital VATs and RSTs, but the pace of these developments is uneven among these jurisdictions. Europe appears to be ahead of the U.S. in the adoption of "smart" national IDs, but the U.S. appears to lead in the development of the fully digital consumption tax.

Thus, the comparative IDABC benchmarking results of e-tax functionality in the E.U. and the U.S. is entirely expected. Almost all E.U. VAT jurisdictions are at "stage 4",[516] whereas not one of the 5,788 U.S. RST jurisdictions register above a "stage 3" benchmark.[517] The reason is the far greater use and acceptance of "smart" ID's in the E.U.[518] than in the U.S.[519]

In contrast, the Digital Sales Directive[520] in the E.U. provides for a limited, but paperless VAT reporting and payment environment, but only for non-established

[516] *See supra* note 467, accompanying text, & *infra* Appendix A (indicating that of the 25 member states only Hungary, Luxembourg, Poland and Slovakia are benchmarked less than "stage 4" in VAT administration, and that each country has a commitment to reach "stage 4" and has done so in other several other taxes already).
[517] *See supra* notes 494 to 514, accompanying text, & *infra* Appendix B (indicating that no retail sales tax jurisdiction is rated higher that "stage 3."
[518] *See supra* notes 452 to 457 and accompanying text.
[519] *See supra* notes 469 to 486 and accompanying text.
[520] *See supra* notes 240 to 271 and accompanying text.

businesses selling to final consumers in the E.U.[521] However, in the U.S. a select group of eighteen states under the Streamlined Sales Tax will allow any business to use certified service providers (CSPs) to enter into a fully paperless world of RST compliance.[522]

What is already reasonably clear is that as these technological applications expand – as the "smart" ID technology becomes more pervasive, and as the "pilot" programs (the Digital Sale Directive and the Streamlined Sales Tax) expand – the digital linkages between taxpayers and tax administration deepen. The lesson from Europe is that this taxpayer-tax administration connectivity not only will become more comprehensive – it will become more expected.[523] The reason is the marketplace. In developed as well as developing countries it is the marketplace that is driving digital tax compliance.[524] The "smart" ID will become a tool of the marketplace. It will be used to press governments for fairer and more efficient taxpayer-tax administration interfaces.

The discussion that follows has two major parts, one (4.3.1) considers changes in the U.S. consumption tax service environment as "smart" ID technology expands the other (4.3.2) considers changes in the E.U. consumption tax framework as Digital Sales Directive expands. Both systems seem poised for development and convergence. Both systems can see the future in the present development of the other. Some of these aspects have been previously considered. They are summarized as they arise with the earlier discussions cross-referenced in the notes.

The U.S transition to a comprehensive D-RST would be greatly facilitated by the adoption of a federal level D-VAT, as proposed to the President's Panel on Federal Tax Reform.[525] Under such a regime, not only would the states have access to a verified federal database of domestic consumption,[526] they would also be able to piggy-back a federal exemption scheme,[527] thereby allowing both state and federal consumption taxes to be progressive.

A European transition to a comprehensive D-VAT would be greatly facilitated by an extension of the Digital Sales Directive to domestic (intra-community) and business-to-business transactions, as well as an extension of digital processes to refund requests. In October 2004 the European Commission proposed two Council Directives and a Council Regulation that would bring about these kinds of changes.[528] These proposals have not been acted upon.

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[521] Set to expire on June 30, 2006 the Digital Sales Directive was extended to December 31, 2006. Council Directive 2006/58/EC of 27 June 2006 amending Council Directive 2002/38/EC as regards the period of application of the value added tax arrangements applicable to radio and television broadcasting services and certain electronically supplied services, 2006 O.J. (L 174) 5

[522] *See supra* notes 345 to 361 and accompanying text.

[523] *See supra* notes 458 to 468 and accompanying text.

[524] *See supra* notes 311 to 313 and accompanying text.

[525] *See supra* notes 23 to 55 and accompanying text.

[526] *See supra* note 287 and accompanying text.

[527] *See supra* notes 288 to 305 and accompanying text.

[528] Commission Proposal for a Council Directive amending Directive 77/388/ECC with a view to simplifying value added tax obligations; Proposal for a Council Directive laying down detailed rules for the refund of value added tax, provided for in Directive 77/388/ECC, to taxable persons not established in the

4.3.1 – D-RST

4.3.1.1 – *D-RST – The scope of the Problem*

Without a federal D-VAT, digitizing the American RST is a daunting task. However, based on the developments in the E.U. and the passage of the Real ID Act, with or without a federal D-VAT, the end result is a foregone conclusion. Change is only a matter of time and business/ marketplace pressure.

How far does the U.S. have to go to achieve a D-RST? The minimum standard for a digital consumption tax is an e-filed tax return. Thus, it is significant that there remain a number of RST jurisdictions where provisions for e-filing are limited. A 2006 survey by the Federation of Tax Administrators examined e-filing options in sales and use taxes in the forty-five states (plus the District of Columbia). The FTA identified thirteen states[529] (containing 854 discrete RST jurisdictions[530]) that had still had significant paper return filing requirements.

In the majority of states that do have e-filing options, e-filing is voluntary – paper filing remains a common practice. Many states have made e-filing mandatory for "large" taxpayers, although the definition of a "large taxpayer" varies from state to state.[531] At

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territory of the country but established in another Member State; Proposal for a Council Regulation, amending Regulation (EC) No 1798/2003 as regards the introduction of administrative cooperation arrangements in the context of the one-stop scheme and the refund procedure for value added tax, COM(2004) 728 final, *available at*: http://europa.eu.int/

[529] FEDERATION OF TAX ADMINISTRATORS, STATE EC SNAPSHOTS (updated April 18, 2006) *available at* http://taxadmin.org/fta/edi/ecsnaps.html indicates that Alabama, Arkansas, Georgia, Kentucky, Maryland, Michigan, Mississippi, Nebraska, Nevada, New Jersey, Utah, Vermont and West Virginia require some or all RST returns to be filed on paper. This determination is not a dire at it may seem. In many of these states many sales and use tax returns can be e-filed, and in most cases there is a commitment by the state to move toward fully digital filing options.

[530] The 854 jurisdictions are comprised of 12 states [Alaska has no state level RSTs but numerous sub-state level RSTs], 281 counties, 559 cities and 2 districts.

[531] For example, the following eight states have mandatory e-filing and e-payment systems in place for "large" consumption tax filers. These filing requirements are frequently reported on the state web pages. In Connecticut electronic filing is mandatory if annual liabilities exceed $100,000. (http://www.drs.state.ct.us/electronicservices/fastfiling.htm). In Florida all zero returns must be filed electronically as well as the returns for filers who have in excess of $30,000 in annual liability in the prior year. (http://www.state.fl.us/dor/forms/dr15inst.html). In Louisiana businesses with liabilities in excess of $20,000 must pay by EFT. (http://www.rev.state.la.us/sections/eservices/default.asp#efbt). Missouri has a mandatory e-filing system for all taxpayers who had in excess of $15,000 in liability in 6 of the previous 12 months, *available at* http://www.dor.mo.gov/tax/business/payonline.htm (last visited Aug. 2, 2006). New York has a mandatory e-filing system, called Propfile, for taxpayers with liabilities in excess of $500,000 annually *available at* http://www.tax.state.ny.us/prompt/Sales_Tax/sttoc00.htm (last visited Aug. 2, 2006). Oklahoma has a mandatory e-filing program for taxpayers with in excess of $100,000 in liability per month *available at* http://www.oktax.state.ok.us/oktax/quicktax.html (last visited Aug. 2, 2006). In Texas electronic filing is mandatory for filers with a past year sales tax liability of $100,000 or more. This filing must be through EDI if there are more than 30 Texas locations *available at* http://www.window.state.tx.us/webfile/index.html (last visited Aug. 2, 2006). Utah requires taxpayers with

the present time the three main electronic solutions for RST e-filing in the U.S. are: extensible markup language – XML,[532] electronic data interchange – EDI,[533] and Internet based.

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liabilities in excess of $96,000 to e-file *available at* http://www.tax.ex.state.ut.us/sales/salestaxonline.html (last visited Aug. 2, 2006).

[532] *XML (extensible markup language):* XML is a newer technology and one that shows promise of coming closest to the goal of a universal language for electronic commerce. In XML, a "tag" is attached to each data element within a transaction, giving information concerning both the semantic meaning of the data element itself, but also its structure within the tax-reporting document. Because the "tags" are not pre-determined by any generic XML standard, XML is "extensible"- meaning that the user may extend the language through the definition of any document. A tax return document definition may be transmitted along with the data or stored in a database. The databases would be that of the taxpayer and the tax administration.

XML capability is built into leading Internet browsers. Taxpayers with Internet access and a browser can 'interpret' XML by linking to the database server containing the document definition. An XML transmission can be associated with a "style sheet" indicating how the data is to be displayed and manipulated. Thus, XML allows the taxing authority to create an Internet filing application, control how the taxpayer interacts with the application through the browser, and specify unambiguously the meaning and structure of the data within the tax return.

The State of California currently offers sales and use tax filing over the web using XML. http://www.boe.ca.gov/elecsrv/efiling/srvprovider.htm (last visited Aug. 2, 2006).

[533] *EDI (electronic data interchange):* EDI is a computer application to computer application system. Information is transmitted in standardized format. Consensus bodies set EDI standards. EDI is best used in the following situations:

-Large volume transmitters (EDI is very receptive to large data volumes)
- Self-programmers
- Third-party bulk filers
- Batch applications (where real time responses are not expected)
- Industry segments (where a large EDI commitment has been made)

Prior to the emergence of new electronic technologies to transact business, EDI was the best way for a business to reduce its paper processing cost, as well as the costs, errors and time delays associated with data entry. Large corporations, their customers and suppliers implemented EDI in the mid-1980's and 1990's. The use of EDI for tax filing was a natural extension.

One of the drawbacks to EDI is that specialized software is needed to translate normal business records into EDI format for transmission. Small and mid-sized businesses saw this as a barrier for tax filings. Thus, software vendors (California offers taxpayers the ability to file through two companies that are electronic returns operators; *see*: http://www.boe.ca.gov/elecsrv/efiling/srvprovider.htm (last visited Aug. 2, 2006); participation is voluntary) and tax administrations (Indiana's e-filing system, called "Trust File," involves a software program that is offered free of charge; *see*: http://www.in.gov/dor/electronicservices/insite/btef.html (last visited Aug. 2, 2006); as well as Kansas, *see*: http://www.ksrevenue.org/rcuwebfile.htm (last visited Aug. 2, 2006) (participation is voluntary) developed applications that made EDI a viable option for these businesses. Because the EDI technology is embedded in the tax filing software, no knowledge of the technical specifications involved in creating an EDI-formatted data file are needed.

An additional barrier to EDI concerns the transmission of the tax data from the taxpayer to the tax authority. EDI has traditionally made use of the "value added network" (VAN) for data transmission. Both the tax authority and the taxpayer must maintain a "mailbox" provided by the VAN. The taxpayer transmits EDI tax filings to the tax authority's mailbox, and receives acknowledgements in the taxpayer's mailbox. The VAN has advantages and disadvantages. The advantage is that the tax authority needs to maintain only one communications interface. It does not have to maintain communications lines to support a large volume of taxpayer calls, nor does it have to support a variety of communications speeds and protocols. The VAN also enforces the security of the transmissions. However, VAN costs generally include not only the monthly mailbox fee, but also the costs of the toll calls and a per-character transmission charge. To overcome this some tax administrations pay the toll and transmission charges for

More than e-filing is required before a jurisdiction can be considered to be fully e-transactional under the IDABC benchmarking system – "stage 4" compliance. There must be the capacity for a full range of digital declarations, comprehensive forms downloading capabilities, digital authentication, full case handling, decision requests, confidential document deliveries and notifications through a secure digital medium and uniform web portal. These changes should come to most American RST jurisdictions as the Real ID Act takes hold after 2008, and as the function creep of the technology penetrates the existing RST administrations. This was the E.U. experience.

4.3.1.2 – *An established D-RST framework – The SST with CSPs*

The Streamlined Sales Tax presents the framework for a D-RST in the U.S.[534] Of the thirteen states that were identified in the 2006 FTA[535] as having significant paper return obligations for the RST, five of them are among the thirteen founding "full" members of the SST.[536] Two others are "associate" founding members of the SSTA.[537] Participation in SST by these states is significant, because SST states have agreed to harmonize their tax bases, standardize their electronic reporting requirements,[538] restrict jurisdictional reporting obligations for local RSTs to state level filings, and generally streamline the collection of state and local RSTs.[539]

There is a standardized system for refunds, both for end consumers, and for businesses remitting the tax,[540] a centralized online registration system,[541] and an amnesty[542] for qualifying sellers. Registration constitutes an agreement by sellers to collect and remit tax for sales into all full member states.

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taxpayers (Florida's Easy Link VAN is explained at: http://www.state.fl.us/dor/forms/dr15inst.html (last visited Aug. 2, 2006); South Carolina's Easy Link VAN is explained at: http://www.sctax.org/Electronic+Services/default.htm (last visited Aug. 2, 2006).

[534] These nineteen states are divided into two groups, the full members, and the associate members. A full member state is a state that is in compliance with the Streamlined Sales and Use Tax Agreement through its laws, rules, regulations, and policies. Those states are: Indiana, Iowa, Kansas, Kentucky, Michigan, Minnesota, Nebraska, New Jersey, North Carolina, North Dakota, Oklahoma, South Dakota, and West Virginia. An associate member state is either (a) a state that is in compliance with the Streamlined Sales and Use Tax Agreement except that its laws, rules regulations and policies to bring the state into compliance are not in effect but are scheduled to take effect on or before January 1, 2008, or (b) a State that has achieved substantial compliance with the terms of the Streamlined Sales and Use Tax Agreement taken as a whole, but not necessarily each provision, and there is an expectation that the state will achieve compliance by January 1, 2008. Those states are: Arkansas, Nevada, Ohio, Tennessee, Utah and Wyoming, *see* http://www.streamlinedsalestax.org (last visited Aug. 2, 2006).

[535] *See supra* note 529 and accompanying text.

[536] Those states are Kentucky, Michigan, Nebraska, New Jersey and West Virginia, *see* http://www.streamlinedsalestax.org (last visited Aug. 2, 2006).

[537] Those states are Arkansas and Utah, *see* http://www.streamlinedsalestax.org (last visited Aug. 2, 2006).

[538] Streamlined Sales and Use Tax Agreement, *supra* note 26, at § 318(D) (indicating that the intent of the SSUTA is to facilitate electronic filing of returns in all jurisdictions under the agreement.)

[539] *Id.* at §§ 318(A); 318(B)

[540] *Id.* at § 325

[541] *Id.* at §§ 303; 401(A); 401(C); 404.

[542] Member states must provide an amnesty for uncollected or unpaid sales and use tax (together with penalty or interest) to a seller that registers under the Agreement, provided the seller was not registered in

The SST provides for the certification of third-party service providers (CSPs),[543] entities that will provide point of sale, automated tax determinations for businesses, file returns and make tax payments.[544] Because the CSPs functionsin this manner with respect to all RST obligations of the taxpayer in each of the Streamlined States, the CSP is a private sector multi-jurisdictional one-stop-shop. If the SSUTA were to be adopted by all the states with RSTs, then the CSP would handle RST obligations for all 7,588 jurisdictions. This would constitute a comprehensive D-RST in the U.S.

4.3.2 – D-VAT (E.U.)

4.3.2.1 – *D-VAT (E.U.) – Digital Taxpayer/ Tax Administration Interface*

A fully digital taxpayer/ tax administration interface requires dual technologies. On one hand the taxpayer must have a “smart” ID form of identification and legally recognized digital signature. On the other hand the tax administration must operate a full service web portal. Reaching the IDABC’s “stage 4” benchmark in VAT administration means that a jurisdiction is fully transactional – it can and does conduct business in a full-digital environment.

Most E.U. VAT jurisdictions are at “stage 4”[545] compliance. There is a general commitment by all E.U. jurisdictions to reach this level of compliance. Some have gone above and beyond. Belgium and Estonia embrace “smart” IDs so fully that they have made it mandatory.[546] After 2006 Italy will issue only digital IDs.[547] The Netherlands will issue only digital ID and records to children who are born after January 1, 2007 (the Electronic Child File).[548] Some Member States, like Austria, have positioned their digital ID infrastructure so that it will advance in step with technology at relatively little cost by piggy-backing bank cards.[549] Others jurisdictions, like Finland, have dispensed with the

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that state in the 12-month period preceding the state's participation in the Agreement. Sellers must register within 12 months of the state's participation to benefit, and the amnesty does not apply to matters for which the seller has received notice of the commencement of an audit.

[543] In 2001 four states (Kansas, Michigan, North Carolina, and Wisconsin) participated in a pilot project to test the CSP concept. Three firms applied to participate as CSP’s, (Taxware International, Pitney-Bowes/Vertex, and esalestax), two were certified as CSPs, (Taxware International, Pitney-Bowes/Vertex). The pilot project was successful in establishing the viability of the CSP concept. The Streamlined Sales Tax Project web site indicates: “The pilot project established that the use of a third-party provider was viable. Systems and procedures were established that resulted in the actual collection and remittance of sales and use tax by a vendor on behalf of a retailer. Knowledge and experience was obtained by the participating states and vendors.” *see* http://www.streamlinedsalestax.org (last visited Aug. 2, 2006).

[544] Streamlined Sales and Use Tax Agreement, *supra* note **Error! Bookmark not defined.**, at §§ 501(A), (B), (C) and (D).

[545] *See* IDABC Report *supra* note 462, accompanying text, & *infra* Appendix A (indicating that of the 25 member states only Hungary, Luxembourg, Poland and Slovakia are benchmarked less than “stage 4” in VAT administration, and that each country has a commitment to reach “stage 4” and has done so in other several other taxes already).

[546] *See supra* note 459and accompanying text.

[547] *See* IDABC Report *supra* note 462 & *infra* Appendix A, at Italy.

[548] *See* IDABC Report *supra* note 462 & *infra* Appendix A, at Netherlands.

[549] *See* IDABC Report *supra* note 462 & *infra* Appendix A, at Austria.

plastic card itself. Finland has passing beyond embedding data in a chip in a traditional ID card, and has made the digital ID a fully mobile attribute that can be accessed and verified with a cell phone (the m-ID).[550]

4.3.2.2 – *Establishing a D-VAT (E.U.) framework – Extending the Digital Sales Directive*

The E.U. has not advanced as far with its extension of the digital framework, the Digital Sale Directive, as it has with "smart" IDs. However, serious efforts are being made. In March 2004 the European Commission solicited comments on a proposal to simplify VAT obligations.[551] The proposal was modest in scope, but it was based on the premise that the Digital Sales Directive, Article 26c, should be extended.[552]

The Commission proposed that businesses established within the EU be allowed to participate in a scheme similar to that of Article 26c. The new scheme would be limited to B2C transactions, like Article 26c, however it would encompass more than digital sales. After a five-month public comment period, ending in October 2004, the Commission proposed two Council Directives and a Council Regulation.[553] The October proposals far exceeded the vision of March *Consultation Paper*.

Business response to the *Consultation Paper* was overwhelmingly positive. Businesses outside the EU[554] as well as within the EU[555] welcomed it. Differences were mostly attributable to perspective. Americans tended to express confidence based on experiences with Article 26c. Europeans on the other hand tended to urge expansion of the Article 26c scheme to the internal market and to B2B transaction based on what they saw as a simplification that worked, but had been unfairly open only to foreigners.

4.3.2.2.1 – *Extending the Digital Sales Directive –*
The Consultation Paper's Proposals – An Internal Market Digital Filing Option

The Commission's *Consultation Paper* was designed to do just a little bit more than leveling the playing field. The *Consultation Paper* suggested that any businesses selling products (digitized or otherwise) directly to EU end users in a Member State

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[550] *See* IDABC Report *supra* note 462 & *infra* Appendix A, at Finland.
[551] European Commission, *Consultation Paper: Simplifying VAT Obligations, The One-Stop System* (March, 2004) TAXUD/590/2004-EN. Available at: http://europa.eu.int/comm/taxation_customs/taxation/consultations/One_stop_en.pdf
[552] This scheme essentially applies only in B2C transactions where the B is a business located outside the EU (non-established in the EU) and the C is an individual purchasing electronic services for personal consumption within the EU. Although primarily directed at individuals, C in this instance could also be an exempt legal entity (non-taxable person), like a government department, university or hospital.
[553] COM(2004) 728 final, *supra* note 528.
[554] See for example the response of Taxware LP summarizing the positive response of many American businesses to the Article 26c one-stop scheme and urging continued expansion of the system. *Available at*: http://www.Taxware.com
[555] See for example the response of Eurochambres, *Position Paper 2004: Simplifying VAT Obligations: the One-Stop System.* Eurochambres is a 17 million-member business organization that is the sole European body serving the interests of every sector and every size of European business. Available at: http://www.eurochambres.be/PDF/pdf_position_2004/VAT%20One-Stop-Shop.pdf

where they were not established should be allowed to file under a fully digital procedure – a single return for sales into all other Member States. However, instead of just expanding the scope of Article 26c, the proposal was for a separate and distinct regime. The new scheme was to be "… primarily concerned with persons carrying out taxable activities in a Member State where they are not established … restricted to B2C transactions, [and] … available to all non-EU [as well as EU] businesses (even those not engaged in e-commerce) …"[556]

In fact, participants in the original Article 26c scheme were excluded from the new scheme, even though differences between the schemes were minimal. Both schemes mandate full electronic registration and filing. The major difference between Article 26c and the new scheme concerned the remission of funds. Under Article 26c the Member State of identification is obliged to re-allocate VAT receipts to the states where the sales occurred on behalf of registered taxpayers. Under the new proposal there would be no assistance with fund transfers.[557]

4.3.2.2.2 – *Extending the Digital Sales Directive – The October 29th Directives and Regulation – Digital Filing & Digital Refunds*

It is apparent that the Commission listened to business, because the October 29 proposals derived from the *Consultation* take businesses suggestions to heart and as a result are breathtakingly wide ranging. If adopted in full they would fundamentally change the way a large portion of EU cross-border transactions are taxed.

There are six distinct components in the Commission's proposal, only two of which will be considered here:[558] (a) a filing rule – the new rule changes the filing options of established EU business involved in cross-border sales into Member States where they are not established, and (b) a refund rule – a new rule modifies the refund procedure under the *Eighth Directive*.[559]

4.3.2.2.2.1 – *Extending Digital Filing*

The October 2004 proposal adds Article 22b, an elective provision. It is available for taxable persons, established in one or more Member States to the extent they are making supplies of goods or services into Member States where they are not established.

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[556] Although not clearly stated in the *Consultation Paper* it appears that non-EU established persons would have to become established to participate. *See* Commission, *Consultation Paper supra* note 551, at 3.

[557] An additional difference concerned the VAT number. Under the *Consultation Paper's* scheme traders would use VAT numbers already issued to them by their Member State of establishment, whereas under the Article 26c scheme businesses are provided a special E.U. number, a numeric code prefaced with a two-digit alpha-identifier "EU…" for all Article 26c returns, reports and filings.

[558] The other proposals concern (1) a simplification/ limitation on tax blocking rules, (2) an extension of the reverse charge mechanism into additional services areas, (3) a redefinition of what constitutes a small business, and (4) a simplification of the distance sales scheme.

[559] *Eighth Council Directive*, 79/1072/EEC of December 6, 1979 on the harmonization of the laws of the Member States relating to turnover taxes – Arrangements for the refund of value added tax to taxable persons not established in the territory of the country (1979 O.J. (L 331) 11).

Businesses participating in the Article 26c scheme are excluded from the Article 22b scheme.

Both the Article 26c and Article 22b schemes are paperless, fully digital. Like the scheme under Article 26c, the Article 22b scheme requires that only one return be filed for all transactions in non-established States. That return is filed with its Member State of establishment. A harmonized set of compliance rules covers the content and frequency of the return.

Unlike the Article 26c scheme, all funds transferred under proposed Article 22b will be done directly, Member State-by-Member State. The Member State of establishment will not redistribute funds on behalf of the taxpayer. Along with the requirement to make direct payments to each Member State of consumption, national rules governing declaration periods, payment and refund procedures must still be complied with on a country-by-country basis.

Comparison of Article 26c and Proposed Article 22b

	Article 26c Digital Sales	**Article 22b Established business Scheme**
Taxpayers	Non-EU established businesses only.	Established EU businesses only.
Customers	Non-taxable end users only (B2C).	All purchasers (B2B and B2C).
Identification number	Special EU number. For example, "EU1234567."	The VAT number already issued by the Member State of establishment.
Goods/ services	Only digital products.	All goods and services.
Returns	One return, filed with the Member State of identification. Return may only be submitted electronically.	
Payment	One payment, made to the Member State of identification and redistributed on the taxpayer's behalf to the Member State(s) of consumption.	Separate payments made directly to each Member State of consumption by the taxpayer.
Refunds	Not anticipated to be significant. Special refund rules applicable under Directive 86/560/EEC.	Special scheme for refunds also proposed.
Number of taxpayers involved	1,000	250,000

4.3.2.2.2.2 – *Extending Digital Refunds*

Refund procedures under the *Eighth Directive*[560] have been recognized as a problem for a long time. In June of 1998 the Commission proposed a "cross border deduction" [561] to resolve many of the issues, but in eight years the Council has not found a way to agreed on implementation. The business community is greatly concerned. The *European Tax Survey*, completed in the later half of 2003 indicated that 53.5% of large companies had in some cases not requested VAT refunds that were due. The reasons ranged from the complexity of the process to the amount of time the procedures took.[562]

When the Commission decided to include a substantial number of B2B transactions (and not just B2C intra-E.U. digital sales) within the ambit of Article 22b, the old refund procedure concerns were revisited.[563] Intra-community, cross-border B2B transactions are frequently part of significant, on-going business relationships. It is easy to anticipate that these kinds of transactions will involve purchases as well as sales in the destination state. As a result, Article 22b would not achieve true simplification if it did not deal with refunds as well as net VAT payments.

The solution proposed by the Commission was once again a digital one. Characterized as a short-term solution, because the Commission still prefers the 1998 approach, the recommendations would nevertheless make a significant improvement in the present system.[564] Three critical aspects of the current refund process would not change under the Commission's proposal:

1. Refund requests would continue to be handled by the Member State where the expenses were incurred, not the Member State where the taxpayer is established and where the request for the refund is actually made.
2. The deduction rules of the Member State of consumption would continue to apply to the refund.
3. The refund itself would be made directly by the Member State of consumption to the taxpayer.

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[560] COM(1998) 377 final. OJ C: 219/16 15.7.98. Available at: http://europa.eu.int/eur-lex/pri/en/oj/dat/1998/c_219/c_21919980715en00160019.pdf

[561] Under the cross-border deduction proposal a business established in one Member State would be allowed a deduction for input VAT paid to another Member State where it was not established. Thus, funds remitted to the French government would be allowed as a credit against funds payable to the German government. There were understandable problems with government-to-government fund transfers with this proposal.

[562] Commission of the EU, *Commission Staff Working Paper: European Tax Survey*, SEC(2004) 1128/2, October 9, 2004, at page 4. Available at: http://europa.eu.int/comm/taxation_customs/publication/working_doc/working_doc.htm

[563] Refunds are not a concern for Article 26c sales, because those transactions involve B2C sales of downloaded digital content from Internet sites. The VAT involved in these sales would only be output VAT, an obligation for the business selling the digital goods. In the vast majority of cases the seller would not be making related purchases in the state where the sales occurred (input VAT). Thus, refunds were never an issue under Article 26c.

[564] COM(2004) 728 final, *supra* note 528, at 7.

The digital refund proposal would make significant changes in the fiscal administration of each Member State. A web-based refund portal would be required to be part of each Member State's web page through which EU-wide electronic refund requests could be presented. The portal would be open only to businesses established in that Member State, and only for refunds from Member States where they were not established. Original invoices or import documents would not be required. Only information relevant to the refund itself would be required and would need to be submitted electronically. The refund request would be forwarded on behalf of the taxpayer by the Member State of establishment to the Member States where the refund was due. The Member State of establishment would be required to verify the taxpayer's status – confirming its status as an active taxable person.

Two measures to increase the speed of refund actions are also proposed: (1) the proposal sets a three-month deadline for government action on a refund request, after which time a request for refund could no longer be denied,[565] and (2) any refunds made after this three month period would carry with it a mandatory 1% per month interest charge – running from the day the refund was first due.[566]

4.3.3 – *Just Over the Horizon – The D-RST & D-VAT (E.U.)*

As with "smart" national IDs,[567] a D-RST and a European D-VAT are just over the technological horizon. There are differences as well as similarities in the current status of the U.S. and E.U. digital regimes.

The significant differences are: (1) where Article 26c uses the Treasury of one of the Member States as a fund-transferring intermediary, the SSUTA uses a private sector third-party provider (CSP) (proposed Article 22b has no provision for assisting taxpayers with the transmission of funds to the appropriate Member States), (2) where the taxpayer under Article 26c (and proposed Article 22b) remains the party obligated to determine the tax amount due, under the SSUTA it is the CSP who actually performs the calculations with software certified by the government, and (3) where taxpayers under Article 26c (and proposed Article 22b) remain subject to normal audit in all jurisdictions, under the SSUTA the taxpayer will be subject only to limited audit for fraud.[568]

The significant similarities are: (1) under Article 26c (and proposed Article 22b) as well as the SSUTA the use of intermediaries (the government or the private sector) comes at no cost to the taxpayer,[569] and (2) under both regimes there is a clear expectation of cooperation between the taxation authorities and the taxpayers which under the SSUTA extends to the provision of accurate and timely information about

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[565] *Id.* at 30 (Article 7(5)).
[566] *Id.* at 30 (Article 8).
[567] *See supra* note 438 and accompanying text.
[568] Uniform Sales and Use Tax Administration Act, *supra* note 357 at § 9(a).
[569] However, depending on the payment arrangements, the taxpayer may (but not necessarily) looses the value of the "float" on monies drawn from the taxpayer's account to pay the taxes due. The interest earned between the time of this withdrawal and the due date of the payment to the government may be a "cost."

changes in rates or other critical tax determinants.[570] CSP's are expressly relieved of liability from having charged and collected an incorrect amount of tax, if the error was due to erroneous data provided by the state.[571]

Thus, while Article 26c (and proposed Article 22b) offers breadth of digital intermediary functionality (all 25 E.U. countries are covered), the SSUTA's CSP offers depth of digital intermediary functionality (full calculation, reporting and payment of obligations) but limited to the eighteen states that have joined the SST.

Consumption taxes, both VATs and RSTs, are on the cusp of a digital revolution. "Pilot" programs in both the E.U. and U.S. have proven that this tax is particularly receptive to digitization. Efficiencies of the marketplace, demands of the tax administration as well as the sheer volume of the transactions involved in these taxes make digital solutions optimal. Although the "smart" ID does not need a fully digital consumption tax regime to "work," because the existence of a valid exemption certificate could be displayed on a monitor signaling to a manual entry sales person that a transaction should be exempt, a fully digital tax regime would make the exemption process seamless. Both recordkeeping and verification requirements would be far simpler also.

However, in all of the efforts to digitizing the consumption tax, both in the E.U. and in the U.S., the sticking point has never really been with the <u>ability</u> to digitize, but it has rather been with <u>verification</u> of the digitized result – how do we know what the systems reports is accurate. In this regard, the final piece of the regressivity puzzle in consumption taxes is the certification of the tax calculation software.

4.4 – CERTIFIED TAX COMPLIANCE SOFTWARE

Almost all business information today – including all critical data needed for determining consumption taxes – is digitized.[572] Digitizing business data has not been a problem for some time now. The problem has been in the controls – in what has been done with the data. The solution to this problem, one that has been broadly applied from tax administrations to security regulators, has been to certify (pre-audit and confirm) the accuracy of the software and computer systems that control the data (and the people who manage the machines).

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570 Streamlined Sales and Use Tax Agreement, *supra* note 26, at § 328 (indicating that the states have an obligation to provide a taxability matrix of rate and product or service taxability in a downloadable format. CSPs and sellers are relieved of liability for collecting the wrong amount of tax if they relied on erroneous data provided in the matrix); and § 304 (indicating that the state rate or base changes will only be effective on the first day of a calendar quarter, and are obligated to provide as much advance notice of changes as possible).

571 *Id.* at § 306.

572 *See supra* notes 38, 39, & 258 to 260 and accompanying text (referencing studies performed at the School of Information Management and Systems at the University of California at Berkeley that show 93% of business data generated world-wide is computer generated and that 92% of all new data is stored on magnetic media, mostly hard disks).

Corporate governance reform on a global scale in the wake of Enron and other accounting failures have focused attention on the certification of financial data and processes – certifications of profits, losses and more comprehensively of the cash flow itself.[573] More specifically, certification is required of the internal controls over the data and systems.[574] In this context therefore, it stands to reason that as traditional paper-based consumption tax regimes are being replaced by fully digital tax systems,[575] that government certification of the accuracy of taxpayer's automated tax calculation systems are coming to the forefront of tax policy discussions.[576] Tax compliance is, after all, simply a subset of the larger field of the accurate enterprise-wide financial reporting.

4.4.1 – *The Reality of Tax Software Certification*

Although the OECD has considered and encourages the certification of transaction tax software in the VAT context, the reality of transaction tax software certification at the present time can be observed only in the RST under the Streamlined Sales and Use Tax Agreement. The SSUTA provides three models for software certification: the certified service provider (CSP); [577] the certified automated system (CAS); [578] and the certified proprietary system (CPS).[579] In 2001 the viability of the CSP model was successfully tested in a pilot project,[580] and on June 1, 2006 three software companies, Taxware, L.P., Exactor and Avalara, became the first three CSPs. Taxware additionally was certified as a CAS.

Two of the SSUTA certifications, the Certified Automated System (CAS) and the Certified Proprietary System (CPS), allow for the certification of automated systems that are kept in-house.[581] Unlike with the CSP model, relief from liability under a CAS or a

[573] *See supra* notes 363 to 387 and accompanying text (discussing the global crisis in confidence over corporate governance and financial reporting controls that has lead to a global enactment of new corporate governance regulation focusing on multiple layers of certification from the CEO, CFO and attestations of these certification statements by the independent accountant).
[574] *See supra* note 382 and accompanying text (discussing the specific controls over cash flows).
[575] *See supra* notes 545 to 566and accompanying text (discussing the development of a D-RST in the U.S. and a D-VAT in the E.U.).
[576] *See supra* notes 328 to 351 and accompanying text (discussing the OECD's efforts to find global, multi-jurisdictional certification standards for software certification, as well as the specific standards currently in use under the Streamlined Sales Tax in the U.S.).
[577] Streamlined Sales and Use Tax Agreement, *supra* note 26 at § 203.
[578] *Id.* at § 203.
[579] *Id.* at § 207.
[580] In 2001 four states (Kansas, Michigan, North Carolina, and Wisconsin) participated in a pilot project to test the CSP concept. Three firms applied to participate as CSP's, (Taxware International, Pitney-Bowes/Vertex, and esalestax), two were certified as CSPs, (Taxware International, Pitney-Bowes/Vertex). The pilot project was successful in establishing the viability of the CSP concept. The Streamlined Sales Tax Project web site indicates: "The pilot project established that the use of a third-party provider was viable. Systems and procedures were established that resulted in the actual collection and remittance of sales and use tax by a vendor on behalf of a retailer. Knowledge and experience was obtained by the participating states and vendors." *See* http://www.streamlinedsalestax.org (last visited Aug. 2, 2006).
[581] Streamlined Sales and Use Tax Agreement, *supra* note 26 at § 501 (C) and (D).

CPS model is dependent on the taxpayer properly using the certified system.[582] Questions about liability allocation among all these systems (CSP, CAS and CPS) remain, and even though fully operational these certifications are best considered as "works-in-progress" until they are tested for a number of tax cycles.[583]

The SSUTA certification process involves measuring the software against third party standards: (1) the AICPA's SAS 94[584] and (2) the US- GAO Federal Information Systems Control Audit Manual.[585] In addition, CSP's and CAS software developers must comply with (3) ISO Number 17799[586] of the International Organization for Standardization.[587] A similar expectation for objective standards for certification is discussed in the OECD materials.[588]

Essentially SSUTA certification is conducted in two steps; (1) an extensive security check of the software system, the developer and the service provider is performed, and then (2) a comprehensive test of tax calculation and return preparation capabilities is carried out by running thousands of hypothetical tax scenarios through the system.

Properly programmed, it is a relatively easy matter for an automated tax calculation system to match up the skew code of a good or service with a specified tax rate to determine the tax due. It is not at all a large leap in technology for a tax calculation system to be programmed to recognize that a different rate should be applied where an exemption (or zero-rating) code is received from a "smart" ID passed during the purchasing process.

From a systems perspective the question presented by what was referred to as the D-VAT Card in the proposal to the President's Advisory Panel on Federal Tax Reform, or what has been referred to here as the "smart" ID with an embedded exemption (zero-rating) certificate, is no different than the problem that is presented to an automated

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[582] Uniform Sales and Use Tax Administration Act, *supra* note 357 at §§ 9(b) and (c) (for CAS and CPS respectively).

[583] Stephen Moore, *An Uneasy Marriage: Sellers and Certified Service Providers*, 21 J. STATE TAX'N 65, 72 (2003). ("The relationship [between sellers and service providers] is inherently adversarial and each party needs to develop audit strategies for protecting itself from the other party in what may prove to be an unhappy marriage for these partners in commerce. … Can CSPs audit sellers to determine whether there is probably cause to believe that a seller has committed fraud or made a material misrepresentation?" Moore asks what would happen if a seller simply provides faulty information to the CSP without, rising to the level of misrepresentation or fraud, but there tax collection was short nevertheless?).

[584] *See supra* note 400 and accompanying text.

[585] *See supra* note 401 and accompanying text.

[586] *See supra* note 402 and accompanying text.

[587] *See supra* note 403 and accompanying text.

[588] OECD FACILITATING COLLECTION, *supra* note 332, at 17-18 (discussing a range of government "approvals" for tax accounting software and indicating that at one extreme is "accreditation" – an approval process functions simply as a mechanism to "formally identify" software that meets certain criteria of acceptability – while at the other extreme is "certification" – an approval process that designates software as "an officially authorized mechanism to perform specified functions" – reaching a conclusion that the SSUTA the OECD uses the term "certification" in this same manner even though the OECD discussion is broader than that found in SSUTA documents) *available at* http://www.oecd.org (last visited Aug. 2, 2006).

system when the same item is processed through the system, but for multiple taxing jurisdictions. Different jurisdictions frequently have different rates and reporting requirements for the same items. Functionally, the poor, elderly, or disabled person qualifying for an exemption is seen by an automated system as simply another taxing jurisdiction with a different set of rates and filing requirements. Rather than discriminating among geographic jurisdictions, the system in this instance discriminates within the same jurisdiction among purchasers based on a set of codes embedded in the certificate in a "smart" ID.

Thus, because highly discriminatory, multi-jurisdictional tax calculation systems are certified today under the SSUTA, it is not difficult to imagine that the same type of discrimination function (within a single jurisdiction) can be certified as equally accurate. This level of automated tax processing only awaits the adoption of certificates of exemption in "smart" IDs. The programming and systems design barriers have already been overcome for the 5,788 taxing jurisdictions in the U.S. as well as for all of the global VAT jurisdictions.

Certified automated tax calculation software completes the circle. For the first time, a consumption tax can now be designed that is progressive. A consumption tax can now be exceptionally broad based and not burden the poor. This new breed of consumption taxes can be simple, applying a single rate on all consumption. The only exception to the requirement to tax will be for those transactions where a qualified certificate is passed through a scanner at the time of purchase.

If the tax compliance system itself is set up to accept digitally processed returns, digital invoices, and electronic funds transmissions of payments and refunds (as well as the other myriad of compliance requirements) then a robust and certified tax system can be put in place. Such as system will not only assure the accuracy of the tax collected, but will also assure the accuracy of all reporting obligations in a real-time, pre-audited format.

4.5 – CONCLUSION AND PROPOSAL: SURGICALLY TARGETING CONSUMPTION TAX RELIEF

Regressivity is an inherent problem of the consumption tax. In traditional form consumption taxes burden the poor more heavily than the wealthy because the poor consume all of their income whereas the wealthy consume only a portion of it. What the wealthy save is not taxed.[589]

Although surgical options that would exempt specific individuals-in-need when they purchase identified products have been considered before, the volume of transactions that pass through a broad-based consumption tax simply exceed the capacity of paper-intensive systems to handle them. As a result, when a consumption tax provides relief to those in need, it does so through universal exemptions and/ or multiple rates. Even though these relief mechanisms are themselves a problem, there is little aside from

[589] *See supra* note 432 and accompanying text.

tax theory to oppose them. These relief efforts either drastically compromise the base,[590] or seriously complicate the taxing mechanism.[591]

Technology offers an answer. Consumption taxes (both VATs and RSTs) can benefit from three technological advances: (1) widespread adoption of national identity smart cards embedded with biometric identifiers; (2) fully digital consumption tax regimes; and (3) certified consumption tax software solutions. The tax policy opportunity is to harness these developments – to do more than passively observe the linear function creep of this technology into the consumption tax field. The opportunity is to use technology to design the first broad-based, single rate consumption tax that is truly and independently progressive.

4.5.1 – *Inverting the Argument*

The argument of this chapter can be summarized by turning it on its head. If we consider the establishment of a truly progressive consumption tax from the perspective of the barriers that have prevented it, rather than from the perspective of the technology that now enables it, there are three distinct problems. (1) *The fraud problem* – how to assure that only those entitled to make exempt purchases are allowed to do so. (2) *The surgical capacity problem* – how to design a system that is capable of sifting through thousands of transactions, selecting only those that qualify for exemption, and then taxing the rest without interrupting the efficient flow of commerce. (3) *The audit/ compliance problem* – how to effectively audit a system where exempt transactions are not singularly tied to the type of good or service provided by the supplier, but are instead tied to the dual requirements of an entitled individual and a designated supply.

4.5.1.1 – *The Fraud Problem*

There are two aspects to the fraud problem[592] – targeting and verification. The tax system is compromised if unauthorized individuals or entities are able to bypass security, and enroll in the group targeted for exemption. Thus, targeting must be accurate. In addition, once the target group is identified fraud prevention requires controls so that only individuals (or entities) within the target group are allowed to benefit from the exemption.[593] Thus, verification must be accurate.

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[590] DUE & MIKESELL, *supra* note 220, at 74 (indicating that the exemption for food products for human consumption reduces the tax base by 20-25%).

[591] BIRD & GENDRON, *supra* note 429 at 10, Table 2.1 (listing the French VAT rates at 19.6%; 5.5% and 2.1%; with regional rates of 0.9%, 2.1%, 8.0% 13.5% and 19.6% in Corsica; rates of 1.05%, 1.75%, 2.1% and 8.5% in the French Overseas Departments with the exception of French Guyana).

[592] The range of possible difficulties here should not be minimized. Accuracy is at a premium. "False positives" and "false negatives" are possible under both criteria. It is a problem if ineligibles enroll, just as it is a problem if eligible individuals or entities are not able to enroll. Secondly, even if an accurate target population is identified the system must accurately verify that only those individuals are actually making the purchases – a second chance for false negatives and positives to impact the system.

[593] Unresolved, the fraud problem alone is sufficient to kill a program of targeted exemptions. For example, after examining the costs of the government's general subsidy on propane, the Dominican Republic determined in 2001 that it would replace this subsidy with a program of coupons that would target the poor who used propane for heating an cooking. Others would pay market prices for propane. The

4.5.1.1.1 – *Targeting*

Targeting is a difficult and time-consuming task. It is not fully susceptible to automation. The most difficult part is making case-by-case entitlement judgments, a function normally performed by social services agencies, not the tax administration. In developing countries this targeting function has proven particularly difficult to carry out for a number of reasons,[594] the most significant being that many of those in most need do not carry identity documents.[595]

In this respect, a mandatory national ID, like that currently in use in Hong Kong, Brunei, Malaysia,[596] Belgium and Estonia[597] would be helpful. A voluntary national ID, like those now in use in Austria, Finland, Italy, the Netherlands, and Sweden[598] and soon to be implemented in Cyprus, France, Germany, Hungary, Ireland, Latvia, Lithuania, Malta, Poland, Portugal, Slovakia, Slovenia, Spain, the United Kingdom, and the United States[599] would be nearly as effective. If the "voluntary" nature of the ID is tied to other necessary privileges, like a driver's license (as under the Real ID Act of 2005) or the receipt of welfare entitlements (as in the Los Angeles welfare fraud prevention program) then these IDs would become *de facto* mandatory IDs.

4.5.1.1.2 – *Verification*

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coupon program was projected to be a less costly and more economically rational way to provide assistance. Within two years the program failed. The failure was due in part to the inability of the government to effectively target individuals in need (an effort that needs to begin well in advance of the termination of the subsidy), and in part due to official corruption. Government subsidy coupons soon became available on the black market. Those with access to coupons effectively split the value of the discount with commercial enterprises. In 2003 the general subsidy was reintroduced, even though it was clear that 70% of all propane consumption was by businesses (transportation, hotels and other private industries) and 30% was consumed by households (the rich, middle class and poor combined). Litigation in various fraud enforcement actions is ongoing. Personal communication, Ramon Frias, (former) Deputy Director of the General Directorate on Internal Taxes (Dominican Republic) July 5, 2005 (on file with author).

[594] FERDINANDO REGALIA & MARCOS ROBLES, SOCIAL ASSISTANCE, POVERTY AND EQUITY IN THE DOMINICAN REPUBLIC 10-13 (Inter-American Development Bank, RE2-05-007, Dec. 2005) (indicating that targeting can work in developing countries, but that design and implementation details have a considerable effect on the final distributional outcome of the effort, and emphasizing the importance of (1) a consolidated national database, (2) proper identification of individuals, (3) updating an re-certification of databases, and (4) database management needs to be flexibly designed).

[595] *Id.* at 12 & n. 25 (indicating that targeting social programs to the poor in the Dominican Republic was difficult because as much as 25% of the population that would qualify as poor lacked personal identification documents, and that in other countries (Mexico and Nicaragua) this targeting process was greatly facilitated by holograms and pictures on IDs issued by the social service agency).

[596] *See supra* note 449 & 450 and accompanying text.

[597] *See supra* notes 464 and accompanying text, 468, & *infra* APPENDIX A at Belgium and Estonia.

[598] *See supra* notes 463 and accompanying text, 468 & *infra* APPENDIX A at Austria, Finland, Italy, the Netherlands, and Sweden.

[599] *See supra* note 468, *infra* APPENDIX A at Cyprus, France, Germany, Hungary, Ireland, Latvia, Lithuania, Malta, Poland, Portugal, Slovakia, Slovenia, Spain, and the United Kingdom, & note 476 and accompanying text.

Once the target population is identified the success of smart ID's with biometric identifiers in preventing fraudulent entitlement claims is very good. This was the case in Los Angeles where over 3,000 fraudulent welfare cases were identified between 1991 and 1994 through the use of fingerprint biometrics in welfare-IDs. Saving over $14 million, the Los Angeles success story quickly lead to similar programs in Connecticut, Illinois, Massachusetts, New Jersey, New York, Pennsylvania and Texas.[600] Biometric IDs can solve the fraud problem once the target group is identified. Thus, verification of consumption tax exemptions is easily within the grasp of present technology.

It is important to note that the biometric ID is being asked to perform a verification function not an identification function.[601] Verification is cost effective and technologically viable today. Identification, although technologically possible usually requires multiple biometric identifiers and extensive data-base matching.[602] Identification is not presently a financially reasonable option, but it is not needed.[603]

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[600] ELECTRONIC BENEFITS TRANSFER *supra* note 434 and accompany text.

[601] Richard Hopkins, *supra* note 422, at 338-39 (indicating that,"[v]erification by biometrics asks the question 'Am I who I say I am?' It works by comparing a previously stored piece of biometric data against an actual physical biometric as read by a scanner. Typical applications for this technology are for gaining access to buildings or for proving entitlement to welfare payments. … Identification by biometrics asks the wider question of 'Who am I?" It works by comparing a scanned biometric against a library of stored biometric data. In the idea form of the process each individual in the library is compared and the question 'Am I this person?" is asked. Identification is therefore like a very long series of individual verifications. Each such verification is known as a 'match.'").

[602] ARUN A. ROSS, KARTHIK NANDAKUMAR & ANIL K. JAIN, HANDBOOK OF MULTIBIOMETRICS (2006) (discussing the current state of the science of digital identification systems operating through multibiometric identifiers).

[603] Richard Hopkins, *supra* note 422, at 338-39, 347,& 362. This study contrasts the feasibility of biometric verification and biometric identification systems for a country with a population of approximately 25 million people. He concludes that a verification system is viable, but an identification system would be difficult to put in place today.

Essentially, "[b]iometric verification performs the same function as a PIN number, password or signature, but involves measurements performed on a physical biometric … it is usually deemed to be more secure … [and has] a high degree of accuracy. …

However, in a biometric identity system, just to be completely successful in determining that there are no duplicate identities, the system would effectively have to compare a new enrollee against all the people already enrolled in the database. Thus, to enroll a single individual into a population of 1 million people, 1 million individual verifications would effectively need to be performed. Imagining a system where 25 million people are enrolled at a steady rate of 5 million people per year over 5 years would require in the fifth year that each one of the 5 million people enrolled would have to be compared to over 20 million people already in the system. During this year over 100 million matches (asking 'Am I this person?') will need to take place. "If we assume human experts were employed to operate the system and each individual match took 5 seconds for a highly trained person, over 3 million experts working round the clock would be necessary to cope with the workload!" … [Thus,] [w]hat seemed at first to be a perfectly reasonable request: 'establish unique identities for 25 million people within 5 years using biometrics' now seems unreasonable." Under Hopkins' "reasonable assumptions" the underlying requirements of this identification system for 25 million people is in fact a request to implement a system that performs 3.5 million biometric comparisons per second, and at this throughput the system should ensure that for each comparison (a) only 1 in 20 true matches are missed and that (b) only 1 in 1,000 million non-matches are wrongly construed as matches. Based on these requirements Hopkins believes that it is "… unlikely that the US or an EU country will adopt a biometrically enabled identity system in the foreseeable future."

4.5.1.2 – *The Surgical Capacity Problem*

The concept of surgically exempting an identified segment of the population from a consumption tax is not new; having the technical capacity to do so is.

In 1972 Selma J. Mushkin considered a very similar problem; the problem of exempting a target population on a graduated scale (based on family income) from government fees and charges imposed on necessary services. Mushkin proposed using a variety of paper IDs, credit cards, coupon books, stamps, tokens or punch cards. Limitations based on frequency of use, a period of time, age criteria, as well as adjustments for changes in income levels, probability of unauthorized use, and overall quantitative limits on benefits were accommodated as variables.[604]

Mushkin presented an "experimental demonstration" in the context of a school lunch program. The critical variable in this program was that bills for lunches would be sent home monthly to parents. This mechanism allowed time for making adjustments in the charges based upon family income levels. Some would pay in full, others would pay at a discount, and still others would be fully exempt from payment. She indicated:

> The experiment might be designed more or less as follows. Each child in a school might be issued a numbered plastic card that could be read by a machine. On inserting the card in a computer card reader, the child is admitted to the lunchroom. The machine would scan each number presented to ensure (if repeated use is considered a problem) that the number had not been presented before during that particular meal period.
>
> If there are problems regarding card exchanges, or thefts, a random number generator can provide the basis for a quality control check on the match between card user and card ownership. The information is stored to be used to prepare monthly billing to all parents. The bill would be adjusted for the income of the parents on a sliding scale. Thus, for example, lunch might be "free" to all children in families with an income equal to less than one and one-half times the current welfare maximum allowance for that size of family …[605]

This experiment contains the germ of the surgical exemption principle. Its expression is hampered by the technology of the day. Even though "… the proposed approach depends heavily upon a central computer with inexpensive remote readers," micro-capacity chips and the flexibility of contemporary software applications are not contemplated. These missing pieces limit the vision of her experiment.

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[604] Each of these limitation can be encoded on a "smart" chip in an ID: frequency of use, a period of time, age, changes in income levels, overall quantitative limits can be set as operative parameters determining whether or not the individual presenting the card will be allowed to purchase exempt from tax.

[605] Marjorie C. Willcox & Selma J. Mushkin, *Public Pricing and Family Income: Problems of Eligibility Standards*, in PUBLIC PRICES FOR PUBLIC PRODUCTS, 395, 407-08 (Selma J. Mushkin, ed., 1972).

There is no expectation that a single, secure ID with biometric identifiers is possible; no vision that IDs will have the capacity to record and immediately display qualifications to entitlement programs. Thus, the horizon of the experiment is pulled back – simple credit purchases with time-delayed billings is what this example is all about. Secondly, the prospect of an instantaneous exemption for a cash point-of-sale transaction is not imagined. The experiment does not anticipate that software programs will automate both the sales and exemption/ adjustment aspects of the transaction in real time.

However, today we have the technical capacity to surgically exempt individuals from state-imposed charges on necessities in real time. It is technically no different for an individual to make a purchase with a credit card than it is for a person to swipe a national ID authorizing a consumption tax exemption for designated purchases. Thus, today's technology removes the surgical capacity barrier to the establishment of a truly progressive consumption tax.

4.5.1.2 – *The Audit/ compliance Problem*

Although Mushkin's experimental demonstration depends heavily upon a central computer with inexpensive remote readers, she does not speculate on the capacity of the digital economy. It would have been valuable if she had. Fully automated transactional compliance, remote digital audits of businesses extending exemptions, is not contemplated.

However, fourteen years earlier, in 1959, Benjamin Higgins, Director of the MIT Center for International Studies saw the contours and the tax compliance implications of a fully digital economy. Higgins observed that such a system would allow for the dramatic streamlining of tax determination. The context was a tax advisory mission to Indonesia. Higgins indicates,

> It became apparent that conceptually simple extensions of existing statistical operations would permit the government to follow the flow of goods through every stage of the economy, providing the base for a completely efficient system of income, sales and excess inventory taxes. … With these materials an appropriate system of coding and [IBM computer] cards, it would be technically possible to compute for any period after the starting date, the average stocks, sales, and incomes of every firm.[606]

As the UC Berkeley studies have made clear, the digital economy that Benjamin Higgins foresaw is here today: (a) because 93 percent data generated worldwide is computer generated – based on three billion gigabytes of global data observed in 1999, and the five exabites of global data observed in 2002, and (b) because 92 percent the new

[606] Benjamin Higgins, *Self-Enforcing Incentive Tax System for Underdeveloped Countries*, in ECONOMIC DEVELOPMENT: PRINCIPLES, PROBLEMS AND POLICIES (1959) 531-532.

information generated is stored on magnetic media, mostly hard disks (2002 study).[607] Because there is no paper and ink parentage for most source documents today, the economy is, for all practical purposes, a digital one.

It only makes sense then that today's audit and compliance functions should be performed digitally. A certified tax determining system is a pre-audited, real time compliance system. In the consumption field systems like this are currently in place and operational under the Streamlined Sales Tax.[608] Proposals to extend certification to VAT compliance are under study by the OECD,[609] and have been advanced as a solution to the E.U.'s carousel fraud problem.[610]

Therefore the final barrier to the establishment of a truly progressive consumption tax, the audit and compliance problem, also falls away with technology, when the software performing the tax determination is certified in advance of its use.

4.5.2 – *The Proposal*

This chapter proposes a technological re-thinking of consumption taxes (VATs and RSTs) to resolve the inherent regressivity problem of these taxes. Three proven technological developments (1) exemption certificates tied to biometric data and embedded in national identity smart cards, (2) fully digital consumption tax regimes, and (3) certified tax determination software make it possible for the first time to design a broad-based, single rate consumption tax that is truly and independently progressive.

The point-of-sale is where most of the activity under this proposal will occur.[611] At the point-of-sale a final consumer (who qualifies to purchase exempt of the consumption tax) will present a national ID smart card to a retailer when making a purchase of otherwise taxable goods or services. Biometric identifiers in the card[612] will confirm that the person presenting the card is a person who qualifies for an exemption of

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[607] *Supra* at notes 38, 39, & 258and accompanying text.
[608] *Supra* notes 352 to 360 and accompanying text.
[609] *Supra* notes 328 to 335 and accompanying text.
[610] Richard T. Ainsworth, *Carousel Fraud in the EU: A Digital VAT Solution*, 42 TAX NOTES INT'L. 443 (May 1, 1006).
[611] There are exceptions in both VAT and RST systems. In both systems final consumers can be legal persons. These entities sometimes qualify for exemption from the consumption tax. *See* SIXTH DIRECTIVE *supra* note 40, at Art. 14(1)(g) (importation of goods under diplomatic or consular arrangements, international organizations); MASS. GEN. LAWS ch. 64H, § 6(e) (exempting purchases by any corporation, foundation, institution, or other organization if the organization is exempt from federal income tax under IRC § 501(c)(3)). In these instances an institutional ID with a smart card exception certificate will need to be issued.

In addition, under both systems there are instances where sales made by certain institutions are exempt from either the VAT or RST. In these transactions an ID with a smart card exemption certificate will need to be issued. *See* SIXTH DIRECTIVE *supra* note 40, at Art. 13A(1) (exempting supplies by the postal service, and hospitals); MASS. GEN. LAWS ch. 64H, § 6(cc) (exempting sales by a church or synagogue of meals prepared by its members and served on its premises by its members to members or guests if the proceeds of the sales are to be used for religious or charitable purposes).
[612] Embedding biometrics in an identity card is neither a complicated or expensive process.

that particular item purchased under the RST, or for a zero-rated[613] purchase under the VAT.[614] A secure communications channel will then be established via a communications chip in the card.[615] The smart chip in the ID, interacting with retailer's financial system through the digital interface, will identify the goods and services (limited as necessary by quantity or dollar amount) that the final consumer may purchase without paying consumption tax.

Because the consumption tax system under this proposal is fully digital,[616] and because all tax determinations are made by a certified service provider (or a certified automated system purchased by the retailer, or a certified proprietary system developed independently by the retailer) exemptions will be processed and recorded automatically.[617] As in biometric credit card transactions today, this process will take less than a second.[618]

The participation of sellers in this system could be either voluntary or mandatory. Under a mandatory system all businesses making sales to final consumers, some of whom could qualify for exemption (RST) or zero-rated purchases (VAT), would be required to secure biometric readers and have their accounting and their consumption tax determination system set up to recognize certificates embedded in IDs. Third party providers could offer these services to retailers for a fee, or the government could provide these services at no charge, as under the Streamlined Sales Tax.[619] Transactions made outside the system as well as all transactions not associated with a qualifying "smart" ID would bear the full weight of the consumption tax – at the single standard rate.

Under a voluntary system two approaches are possible. Sellers who do not voluntarily participate could either be denied the right to honor exempt purchases, effectively making all sales from their establishments taxable at the single standard rate,

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[613] The purchase would be zero-rated not exempt. A zero-rated transaction allows the retailer to claim back all input VAT paid. When making an exempt sale a retailer cannot claim an input credit and as a result the purchased item is carries with it the cost of the VAT paid by the retailer to the wholesaler.

[614] The cost for a biometric scanner (fingerprint) is minimal, and like all technology is continually going down. A. K. Jain, A. Ross & S. Prabhakar, *An Introduction to Biometric Recognition*, 14 IEEE TRANSACTIONS ON CIRCUITS AND SYSTEMS FOR VIDEO TECHNOLOGY, SPECIAL ISSUE ON IMAGE-AND-VIDEO-BASED BIOMETRICS 4, 9 (Jan. 2004) (indicating that finger print scanners cost about $20 US when ordered in large quantities). In instances where an individual did not have his national ID with him, it would be technically possible to extend the right for an exemption through biometrics alone. Doing this would require maintaining records of an individual's exemption qualifications within the retailer's computer system similar and allowing access to this data through just the application of a biometric identifier at the retailer's sales terminal. Systems like this are regularly applied on college campuses where access is granted to university facilities through biometrics alone. Vincent Kiernan, *Show Your Hand Not Your ID: Colleges use biometric scanners to screen for access to dining halls, labs, dorms, gyms, and computer networks* 52 CHRON. HIGH'R ED. A-28 (Dec. 2, 2005) (indicating that biometric scanning technology is widely used in higher education, and that it is not only less expensive than standard IDs per student, but more accurate).

[615] *See supra* note 447 and accompanying text.

[616] *See supra* notes 516 to 571 and accompanying text..

[617] *See supra* notes 572 to 588 and accompanying text.

[618] *See supra* note 447 and accompanying text.

[619] *See supra* note 358 and accompanying text.

or they could be required to keep auditable paper records of exempt transactions (recording the person who made the purchase, the item purchased, along with the government issued code that associates the person and the exempt purchase).[620]

This is an aggressive response to technological change. It suggests that rather than wait for gradual change brought about through the *linear function creep* of technology, tax policy professionals should seek *hyper changes in functionality*. They should respond in a manner that fundamentally redesigns the system. This is an old suggestion, but its time has come.

In 1961, a time probably very near the dawn of the computer age in tax policy discussions, the future Nobel economist, William Vickrey posed a rhetorical question about the electronic data processing (EDP) revolution that was just beginning. He asked: "Does EDP open up possibilities for reforming the way in which tax liability is defined?" Vickrey's answer was *hyper responsive*.

> What is required is a re-thinking of the problems of tax policy in terms of socially desirable goals. Once the problem has been defined and alternative choices explored, then the machines can be adapted to fit the requirements of the solution. As automation increases, the whole social structure of our environment will be subject to revolutionary change; tax administration must keep abreast of this change."[621]

The problem (to re-state Vickrey) is how to exempt from the consumption tax (RST or VAT) select individuals when they purchase specifically determined goods or services, while at the same time maintaining a single rate broadly based on all other purchases of goods and services in the economy. If this problem is re-thought with modern technology in mind it can be solved.

It is a simple matter of embedding exemption certificates inside of "smart" IDs equipped with biometric identifiers, and then processing sales transactions through certified tax calculation software operating within the context of a digital VAT or RST regime. Not only is the technology to do this is available today but all the critical pieces have been part of successful pilot projects. The time has come to design the first truly and independently progressive consumption tax.

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[620] It would be expected that a voluntary system would most likely achieve the same end results as a mandatory system over time, particularly as the cost of a biometric reader is approximately $20.00 and if the certified service provider option is offered to retailers at no charge. Additionally, retailers making a high number of sales to potentially exempt final consumers would eventually find their customer base eroded as individuals went to a retailer who was equipped to provide the exemption.

[621] William Vickrey, *Electronic Data Processing and Tax Policy*, 14 NAT'L. TAX J. 271 at 271 and 285 (September 1961).

CHAPTER FIVE: FINAL APPLICATION – THE D-VAT, BIOMETICS AND THE JAPANESE CONSUMPTION TAX

This text has discussed consumption tax applications of modern technology – specifically biometric “smart” IDs with embedded exemption certificates, fully digital VAT and RST regimes, and certified tax calculation software – in U.S., E.U., and developing country contexts. Moving from one tax system to another the application of the argument – that modern technology can transform consumption tax regimes – has been adjusted to fit differences in levels of government,[622] degrees of technological penetration,[623] and types of consumption tax.[624]

In doing this we have been following the advise of William Vickrey. This has been a “… re-thinking of the problems of tax policy … [because] [o]nce the problem[s] have been [re-]defined … the machines can be adapted to fit the requirements of the solution.”[625] It only makes sense therefore to conclude this study with an examination of the Japanese Consumption Tax (CT) as it remains one of the more unusual permutations of consumption taxation in the world, and because just such a “re-thinking” and “re-defining” of consumption tax policy is being undertaken by a Tax Commission appointed by Prime Minister Junichiro Koizumi.

This chapter proceeds in four parts. The opening two sections describe the Japanese CT. The first (5.1) describes the CT through numeric examples. The second (5.2) describes the CT theoretically by considering how close the CT is to possessing the three critical attributes of a progressive consumption tax. The third (5.3) considers how the Tax Commission has been “re-thinking” the problems of the CT. The final section (5.4) applies modern technology to the (new) CT as it has been re-defined by the Tax Commission.

5.1 – JAPANESE CONSUMPTION TAX

[622] The initial D-VAT proposal to the President’s Advisory Panel on Federal Tax Reform was for a national tax in a federal system where strong concerns were raised about the “fit” of a federal level tax where pre-existing state and local level taxes that shared the same base. In this context the advantages of a digital national tax were drawn broadly, because the fungible federal database could be shared with local tax administrations bringing efficiencies to revenue systems at both levels of government.

[623] The developing country application looked at technology applications in countries where technology is not as universally available as in the U.S. or the E.U., but where the concentrations of VAT revenues were significantly within the large taxpayer groups. The Roberto Silva Legarda study showed that over 70% of VAT revenues are received from less than 1% of the businesses. In this context the leverage of Sarbanes-Oxley and similar corporate governance regulation would lend itself to limited software certification regimes for these businesses. The results could easily lead to increased foreign direct investment by multinationals seeking the security of real-time, government certified tax compliance results.

[624] Both the certification of tax calculation software and the biometric “smart” ID with embedded exemption certificates solutions have been applied in a single-stage RST and a multi-stage VAT context.

[625] Vickrey, *supra* note 621, at 285.

Unlike the EU VAT, the Japanese Consumption Tax[626] is not a transactional tax. It does not rely on invoices to verify taxable sales and deductible purchases. Additionally, there is no requirement that the amount of tax be shown separately on an invoice.[627] It is nevertheless, a destination-based tax that exempts (or "zero-rates") exports.[628] The shorthand expression commonly used to describe the tax is a "credit subtraction VAT without invoices."[629] Its uniqueness is in the mechanics of its operation, not in its tax results.

5.1.1 *Numerical Description of the Japanese Consumption Tax*

The Japanese CT is imposed on the sale and lease of assets and on services rendered for consideration in Japan, as well as on imports.[630] The tax base starts with taxable sales made by each vendor or supplier.[631] Taxable businesses must account separately for taxable sales, and the amount of tax levied.[632] A deduction is allowed for the consumption tax applicable to qualified purchases of goods and services, that is for goods or services that are incorporated into the products or services that are eventually sold.[633]

The relevant operating provisions of the CT can be explained through four examples. The initial example demonstrates a basic, domestic-only transaction. The next example considers the treatment of Japanese exports (both goods and services), followed by two examples that consider the importation of goods and finally the importation of services.

5.1.1.1 – *Basic Domestic Tax Calculation Under the Consumption Tax*

Assume that Japan Co. needs a new corporate headquarters in Tokyo. It hires a famous Japanese architect to design the building for 100. The architect, a Japanese business, imposes the CT on the services rendered. All work is done in the Tokyo offices

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[626] JAPAN'S REVISED CONSUMPTION TAX LAW (SHOUHIZEIHOU), LAW NO. 108, 1988, and APPENDIXES by approving the changes contained in LAW NO. 49, 2000; CABINET ORDER (SHOUHIZEIHOU SEKOUREI) NO. 360, 1988 (most recent amendment, ORDER NO. 147, 2000 *available at*: http://law.e-gov.go.jp/cgi-bin/idxsearch.cgi. (in Japanese). For an English translation of the Consumption Tax law based on Law No. 108, 1988 by approving changes contained in Law No. 49, 2000, see "Consumption Tax Law," tr. Vickie L. Beyer, 2000 WTD 247-20 (December 22, 2000). For a translation of the appendixes to Japan's revised consumption tax law, Law No. 108 see "Translation of Exemptions to Japan's Revised Consumption Tax Law," tr. Vickie L. Beyer, 2000 WTD 247-21 (Dec. 22, 2000). For a translation of the final regulations, Cabinet Order No. 360, 1988 (most recent amendment, Order No. 147, 2000) see "An Order for the Enforcement of the Consumption Tax Law," tr. Vickie L. Beyer, 2001 WTD 36-24 (Feb. 20, 2001).
[627] Alan Schenk, *Japanese Consumption Tax After Six Years: A Unique VAT Matures*, 11 TAX NOTES INT'L 1379, 1380 (Nov. 20, 1995).
[628] JAPAN'S REVISED CONSUMPTION TAX, *supra* note 626, at Articles 7 and 30(1).
[629] SCHENK & OLDMAN, *supra* note 424 at 38.
[630] JAPAN'S REVISED CONSUMPTION TAX, *supra* note 626, at Articles 28
[631] *Id*. at Articles 4 and 5.
[632] *Id*. at Article 45(1).
[633] *Id*. at Articles 2-1-12 and 30.

of the architect. The other tax attributes of Japan Co. include taxable sales of 1,000 and deductible purchases of 600. The current tax rate is 5%.[634]

a. Cost of architectural services = 100 + CT paid of 5
b. Other financial information for Japan Co.
    i. Taxable sales 1,000 + CT collected of 50
    ii. Taxable purchases 600 + CT paid of 30
c. Calculation of CT return:
    i. Total CT collected on taxable sales = 1,050 x 5/105 = 50
    ii. Total CT due on deductible purchases = 735 x 5/105 = 35
    iii. Net CT payable = 15
d. Calculation of profit for Japan Co.:
    i. Sales = 1,050
    ii. Less:
        1. Purchases = 735
        2. CT = 15
    iii. Profit = 300

The tax is determined in three steps at item "c" above. First, the tax on sales is determined by multiplying the aggregate receipts from taxable sales plus consumption tax collected times a fraction. The fraction is tax rate divided by 100 plus the tax rate (5/105). Thus, the CT on sales of 1,050 is 50. Second, the deductible tax amount is determined in the same manner. In this case the total of creditable purchases is the sum of the architect's services and other taxable purchases, plus related consumption taxes paid (100 + 600 + 5 + 30 = 735). This amount, 735, multiplied by 5/105, yields a deduction of 35. The CT return will then net the 50 collected with 35 paid to determine the tax due of 15. The after-consumption tax profit of Japan Co. is 300.

No difference would arise if Japan Co. had purchased taxable goods for 100 from a domestic supplier instead of purchasing taxable architectural services from a domestic supplier. Both goods and services are taxable under the Japanese Consumption Tax.

5.1.1.2 – *Cross-Border (Export) Treatment Under the Consumption Tax*

Japan Co.'s CT liability would change however, if 200 of the 1,000 in taxable sales had been exported instead of sold domestically. Export sales are free of tax.[635] Importantly, the operation of this export exemption would not produce a change in Japan Co.'s after-CT profits.

The treatment of exports can be demonstrated by adjusting the previous example as follows – 200 is removed from the taxable sales amount on line b(i), and a new line is added at b(ii) to record the 200 in export sales. The related CT amounts will be 40 (on line b(i)) and 0 (on line b(ii)).

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[634] The "local Consumption Tax" in Japan is 1%, and it is an addition to the 4% national Consumption Tax rate. Thus, even though the national law indicates that the rate is 4% (*Id*. at Article 29) for these examples the rate used is 5%.
[635] *Id*. at Article 7.

Importantly, when calculating the tax deduction, Japan Co. is allowed to fully deduct the CT paid on purchases, even those related to exports. The calculation of the tax is presented below.

a. Cost of architectural services = 100 + CT paid of 5
b. Other financial information for Japan Co.
    i. Taxable sales 800 + CT collected of 40
    ii. Non-taxable export sales 200 + CT collected of 0
    iii. Taxable purchases 600 + CT paid of 30
c. Calculation of CT return:
    i. Total CT collected on taxable sales = 840 x 5/105 = 40
    ii. Total CT due on deductible purchases = 735 x 5/105 = 35
    iii. Net CT payable = 5
d. Calculation of profit for Japan Co.:
    i. Sales = 1040
    ii. Less:
        1. Purchases = 735
        2. CT = 5
    iii. Profit = 300

Japan Co.'s tax liability falls from 15 to 5 in this example because the tax is removed from the 200 in export sales (200 x 5% = 10). The CT is neutral with respect to exports. Profits remain the same for Japan Co. whether it sells its output domestically or overseas. Additionally, there would be no difference in treatment if Japan Co. had exported 200 in services instead of 200 in goods. Japan's CT basically treats all exports the same.[636]

The cross-border treatment of imports is more complex than the treatment of exports. The final two examples consider the importation of goods and then services.

5.1.1.3 – *Cross-Border (Import) Treatment of Goods Under the Consumption Tax*

Using the same basic example, assume that instead of purchasing architectural services Japan Co. imports foreign goods for 100. The imported goods will be used along with the other taxable purchases to produce Japan Co.'s taxable goods or services. A tax will be imposed on the imported goods when they are removal from the bonded warehouse.[637]

Under these facts Japan Co.'s CT liability remains unchanged from the first example where all taxable purchases were from domestic sources. Once again, there is no impact on Japan Co.'s corporate profits. The CT is neutral. It neither encourages nor

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[636] *Id*. at Article 2-8 (defining the transfer of assets to include the "provision of services as a business for compensation") and Article 7-1-1 (exempting the "transfer of assets effected as an exportation from this country.")
[637] *Id*. at Article 4-2.

discourages choices among domestic or foreign purchases of goods for business inputs. The calculation of the tax is presented below.

a. Cost of imported foreign goods = 100 + CT paid of 5
b. Other financial information for Japan Co.
    i. Taxable sales 1,000 + CT collected of 50
    ii. Taxable purchases 600 + CT paid of 30
c. Calculation of CT return:
    i. Total CT collected on taxable sales = 1050 x 5/105 = 50
    ii. Total CT due on deductible purchases = 735 x 5/105 = 35
    iii. Net CT payable = 15
d. Calculation of profit for Japan Co.:
    i. Sales = 1050
    ii. Less:
        1. Purchases = 735
        2. CT = 15
    iii. Profit = 300

5.1.1.4 – *Cross-Border (Import) Treatment of Services Under the Consumption Tax*

Assume the same facts as in the first example, except that Japan Co. decides to hire the services of a famous French architect to design its new Tokyo building for 100. A third party (not related to the architect) does all the necessary site inspections and preparations (measurements, soil tests etc.) in Japan. The French architect never visits Japan. All work is done in the architect's offices in Paris. All documentation is presented to Japan Co. in Paris.

No Japanese CT due: The French architectural services are not subject to the CT. The CT is levied only on transfers of assets or the provision of services in Japan.[638] Cabinet Order determines the place where services are provided.[639] There are seven categories of services listed in the Cabinet Order.[640] Either the fifth or the seventh category would seem to apply to architectural services. The fifth concerns the "provision of information or designs." The seventh functions as a catchall provision for "services other than those mentioned in the previous items." In both instances the place of taxation is the same. It is "the location of the office concerned in the provision of information or designs"[641] in the fifth category, or it is "the location of the office of the person providing the service"[642] in the catchall.

No French VAT due: In addition, no French VAT is due on provision of these services. This is the rule under current French law,[643] Article 9(2)(a) of Sixth Directive as currently in force.[644] Even though no Japanese CT is due on the importation, and no

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[638] *Id*. at Article 4-1.
[639] JAPAN'S REVISED CONSUMPTION TAX, *supra* note 626, at Article 4-3-2.
[640] AN ORDER FOR THE ENFORCEMENT OF THE CONSUMPTION TAX LAW, *supra* note 626, at Article 6-2.
[641] *Id*. at Article 6-2-5.
[642] *Id*. at Article 6-2-7.
[643] C.G.I., Art. 259 A (2˚) (2005).
[644] SIXTH DIRECTIVE, *supra* note 11, Art. 9(2)(a).

French VAT is due on the performance of these services, this is not a case of double non-taxation.

The reason has to do with the operation of the deduction rules in the Japanese CT. In effect, by excluding the cost of the French architect from taxable purchases the Japanese tax indirectly burdens the French architectural services to the same extent it would burden the importation of a similar measure of goods. The difference is a matter of timing. Consider the following example.

a. Cost of architectural services = 100 + CT paid of 0
b. Financial information for Japan Co.
    i. Taxable sales 1,000 + CT collected of 50
    ii. Taxable purchases 600 + CT paid of 30
c. Calculation of CT return:
    i. Total CT collected on taxable sales = 1,050 x 5/105 = 50
    ii. Total CT due on deductible purchases = 630 x 5/105 = 30
    iii. Net CT payable = 20
d. Calculation of profit for Japan Co.:
    i. Sales = 1,050
    ii. Less:
        a. Purchases = 630
        b. CT = 20
        c. Nontaxable fees paid = 100
    iii. Profit = 300

Corporate profits remain unchanged at 300. But notice, compared with the importation of goods example (example 3), the net consumption tax payable by Japan Co. is higher by 5. The reason for the increase is precisely because of the French architectural services and the fact that they are excluded from the amount of deductible purchases, even though they are real economic inputs.

The difference between the treatment of imported good and imported services is one of timing under the Japanese CT. Where the value added by imported good is taxed at the border, the value added by imported services is taxed on the resale of goods or services into which they are incorporated.

5.2 – DESIGN OF THE JAPANESE CONSUMPTION TAX

If the tax-design objectives of consumption tax policymakers are to fashion a tax that is (1) imposed at a single rate, (2) on as broad a base as possible, and (3) in a manner that allows for measured relief for those in greatest need,[645] then the Japanese CT measures up very well. There have always been concerns in Japan with the regressivity of the CT.[646] These concerns have put pressure on the system to increase exemptions,

[645] *See supra* note 423 to 429, and accompanying text.
[646] Vicki L. Beyer, *The Legacy of the Shoup Mission: Taxation Inequities and Tax Reform in Japan*, 10 UCLA PAC. BASIN L. J. 388, 402 (1992) (indicating that the Japan Tax Association favored a consumption

particularly on food. However, good policy and the exceptionally low rate of the levy have combined to fend off these pressures for multiple rates and/ or significant reductions in the taxable base.[647]

Japan, like most countries has suffered from "exemption creep"[648] over the years, and there have been modest changes. However, the recent Tax Commission's mid-term Report, *A Sustainable Tax System for Japan's Aging Society,*[649] proposes such a significant increase in the tax rate that wholesale changes may be necessary in the design of the CT if Japan hopes to answer the heightened concerns with regressivity that the rate increase will bring.

5.2.1 – *Tax Rate*

Except for the Shoup Mission's VAT,[650] which was enacted but never effective,[651] the Japanese Consumption Tax has always met the first goal – it has always been imposed at a single rate. The first effective rate was set at 3 percent. The rate currently stands at 5 percent. The Tax Commission proposes to raise the rate to "double digits."[652]

The rate increase of 1997, which raised the rate from 3 to 5 percent, was in fact composite of two discrete CT changes. The National Consumption Tax was raised 1 percent to make it a 4 percent levy,[653] and a companion Local Consumption Tax was imposed at an additional 1 percent.[654] Because both taxes are uniformly levied on the same base the Japanese CT can be considered (in aggregate) as a single 5 percent tax.

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tax in the mid-1980's, but indicated that food, medicine and education should be exempt, as opposed to the trade unions that opposed a consumption tax generally).

[647] *Id.* at 405 (indicating that when the Consumption Tax did finally pass it was the 3% rate which "contributed to the neutrality of the tax" and allowed the tax that was eventually passed to include only a few exemptions).

[648] EBRILL ET. AL. *supra* note 314, at 89 (discussing the pressure that an exemption puts on the creation of other exemption both upstream and downstream from the item specifically exempt).

[649] TAX COMMISSION, A SUSTAINABLE TAX SYSTEM FOR JAPAN'S AGING SOCIETY (Jun. 2003) is available in an "informal English translation" at http://unpan1.un.org/intradoc/groups/public/documents/APCITY/UNPAN019941.pdf.

[650] The Shoup Mission of 1949-1950 proposed a VAT for Japan as a prefecturial (local government) levy that would be a substitute for the enterprise tax that was currently imposed on the profits of businesses within the prefecture. The proposed rate of tax was not uniform. Standard rates were set at 4% for businesses and 3% for professions, but these amounts could be changed both up and down at local discretion. The upper limit for the rates were 8% and 6%, but rates could be as low as 0%. CARL SHOUP, WILLIAM VICKREY, HOWARD R. BOWEN, WILLIAM WARREN, STANLEY SURREY,ROLAND HATFIELD, & JEROME B. COHEN, REPORT ON JAPANESE TAXATION, Vol. 2, 200-04; M. Bronfenbrenner, *The Japanese Value Added Sales Tax*,3 NAT. TAX J. 298, 308 (1950).

[651] M. Bronfenbrenner & Kiichiro Kogiku, *The Aftermath of the Shoup Tax Reforms: Part I,* 10 NAT'L. TAX J. 236, at Appendix G (indicating that the effective date of the Shoup VAT was postponed annually through 1953 and eventually repealed in 1954).

[652] A SUSTAINABLE TAX SYSTEM FOR JAPAN'S AGING SOCIETY, *supra* note 649, at 9.

[653] JAPAN'S REVISED CONSUMPTION TAX, *supra* note 626, at Article 29 (the rate increase was effective from April 1, 1997 and was authorized by a 1994 Amendment, Law No. 109).

[654] This was accomplished by the adoption of a separate Local Consumption Tax at the tine of the 1994 Amendment and with a rate of 25% of the National Consumption Tax. Previously revenue from the

5.2.2 – *Tax Base*

The tax base of the New Zealand GST is commonly considered to be the broadest of any VAT.[655] It is the model for countries, like Singapore, that seek to come as close as possible to the ideal base.[656]

The Japanese CT has a base nearly as broad as the New Zealand GST base. There are however, some goods and services that are exempt from tax under the Japanese CT that are not exempt under the NZ GST. Some analysts consider these exemption provisions a relatively minor concern. Their scope is limited and the resulting tax base is seen as simple and broadly inclusive.[657] Those who view the tax in this manner are focusing in particular on the Japanese inclusion of most food[658] in the base.[659] If food is exempt (or taxed at a lower rate) it will remove on average between 20 to 25 percent of consumption from the base.[660] Thus, a base that includes food and exempts very few other items is an economically broad base that is very simple to explain.

Not everyone takes this view. From another perspective the design of the CT base is very complex. It is a base that could become very cumbersome to administer if (and when) exemptions are expanded. The Japanese tax base is complex precisely because Japanese policymakers (far more than policymakers in most other countries) have resisted pressures to universalize exemptions wherever possible. A concerted effort has been made to surgically target exemptions, so that the base remains as broad as possible (within the context of political compromise).

In other word, under the Japanese CT it is common to find a good or a service that is exempt from the CT for one individual (based on an entitlement program or the social status of the individual) where exactly the same good or services purchased by another is not exempt. Thus, the good or service is not universally exempt; it is selectively or surgically exempt for targeted individuals.

For example, even though food is normally taxed under the Japanese Consumption Tax, it is specifically exempt when it is related to medical treatment, but only if the medical treatment is based on provisions of one of the following laws: the Health Insurance Law (No. 70, 1922); the People's Health Insurance Law (No. 192, 1958); the Seamen's Health Insurance Law (No. 73, 1939); the National Civil Servants

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national Consumption Tax had been shared with the local governments through a 20% allocation to local governments that was apportioned among the local governments based on two sets of formulas of population and employees within the jurisdiction. *See* Schenk *supra* note 627, at 1393 n. 108-111 and accompanying text.

[655] *See supra* note 424, and accompanying text.

[656] *See supra* note 426 (discussing the economic advise provided by the IMF and the efforts of Singapore, Fiji, South Africa and Botswana to emulate the New Zealand GST).

[657] Beyer *supra* note 646, at 405 (indicating that the tax is "broadly based, exempting only a few items").

[658] *See infra* note 661 and accompanying text.

[659] Schenk *supra* note 627, at 1384.

[660] DUE & MIKESELL *supra* note 429, at 74 and 79, and accompanying text.

Mutual Aid Association Law (No. 128, 1958); the Local Civil Servants Mutual Aid Association Law (No. 152, 1962); the Private School Employees Mutual Aid Law (No. 245, 1953) or the Elderly Act (No. 80, 1982).[661] Meals were added to these specific exemption provisions with the 1994 Amendments (Law No. 56, 1994) effective on October 1, 1994. It is a classic example of "exemption creep."

Thus, the operation of the CT with respect to food and medical services is very complex. Not only is food (when considered outside the medical context) normally a taxable supply, but so too is the medical treatment itself (when it is not "based on the provisions of" one of the listed laws). Thus, the exemption for both food and medical treatment is surgically applied. It is not correct to view medical treatment as universally exempt from the CT. Medical treatment is exempt, but only if it is received "under the provisions of" a listed law. Otherwise, medical services are subject to the CT.[662] Similarly, it is not correct to view food as universally taxed under the CT.

Comparatively, the New Zealand approach is far simpler. Food (within the medical context and outside of it) as well as medical services (in any context at all) is always taxed.[663] Similar simplicity is apparent in South Africa, although the tax result is opposite. South Africa exempts all basic foodstuffs,[664] as well as all medical or dental procedures, provided they are insured procedures.[665] Thus, the New Zealand GST base is simpler and <u>broader</u> than the Japanese CT, and the South African GST is simpler and <u>narrower</u> than the Japanese CT. Japan takes a middle ground. Japan has enacted a surgical compromise between the New Zealand and South African approaches, but it has done so by adding considerable complexity to the CT.

There are additional provisions for the exemption of medical treatment under the Japanese CT. They include medical treatment based on the provisions of the Law Concerning Indemnification for Environmental Pollution-Related Health Injuries (No. 111, 1971);[666] the Laborer's Disaster Indemnification Insurance Act (No. 50, 1947) and medical measures affected by a Labor Welfare Enterprise under the same law;[667] and the Automobile Accident Indemnification Guarantee Act (No. 97, 1955).[668] However, under these provisions, even though the medical treatment is exempt, the provision of food related to the medical treatment is not.

[661] JAPAN'S REVISED CONSUMPTION TAX, *supra* note 626, at Article 6 as further specified in Appendix I-6(a) & (b).
[662] For example, this would be the case where a foreign national needed medical treatment while on vacation or business in Japan, since they would no likely be covered under any of these provisions.
[663] GOODS & SERVICES TAX ACT §§ 11, 11A AND 11B) (1985) (N.Z.), at *supra* note 424, and accompanying text.
[664] VAT Act §11(1)(j) and SCHED. 2(B)(1) (S.A.), at *supra* note 424, and accompanying text.
[665] VAT Act §10(21A) (S.A.), at *supra* note 424, and accompanying text.
[666] JAPAN'S REVISED CONSUMPTION TAX, *supra* note 626, at Article 6 as further specified in Appendix I-6(d).
[667] *Id.* at Appendix I-6(e).
[668] *Id.* at Appendix I-6(f).

Similarly, home care services (limited to visiting home care, visiting bath care, and other specified services) are exempt (provided at a residence or an institution), but only if the fees are based on the provisions of the Home Care Insurance Law (No. 123, 1997).[669] Assets transferred by a Social Welfare Service are also exempt, but only if provided for in the Social Welfare Services Law (Article 2) and the Rehabilitation Sponsorship Enterprise Law (No. 86, 1995).[670]

Complex exemptions are also found in the educational area, both for the services of teachers and founders of an institution, and for the books and supplies used in schools. Exemptions apply for educational services (limited to the portion of a fee related to tuition, entrance fees, facility equipment costs and some others) and for the services of either the person who establishes the school or individuals who provide the instruction, or specialty courses, but only if they are provided for in the School Education Law (Articles 82-3(1); 82-2; or 83(1)).[671] Books for educational purposes are exempt, but again only if provided for in specific articles of the School Education Law (Article 21(1) – educational books for Primary Schools; Article 40 – Junior High Schools; Article 51 – Senior High Schools; Article 51-9 – Junior Educational Schools; Article 76 – Special Education).[672]

Not all of the policy-based exemptions in the Japanese CT are surgically drafted. There are universally drafted exemptions for all gift certificates,[673] for all rental payments made for a dwelling for human habitation,[674] and for all transfers of goods to the physically handicapped that have special characteristics or structures designed specifically for the use of the physically handicapped.[675]

Universal exemptions are also found in the CT where the transaction (although technically a sale) does not in fact constitute consumption. These theory-based exemptions are universal and very simply drafted.[676]

5.2.3 – *Measured Relief for those in Greatest Need.*

All consumption tax systems struggle with this principle if they have a single rate and a broad base. The major theme of this text is that it is exceeding difficult to attain the third policy objective of a progressive consumption tax while maintaining the first two.

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669 *Id.* at Appendix I-7(a).
670 *Id.* at Appendix I-6(b).
671 *Id.* at Appendix I-11(a), (b), (c) & (d).
672 *Id.* at Appendix I-12.
673 *Id.* at Appendix I-4(c).
674 *Id.* at Appendix I-13.
675 *Id.* at Appendix I-10.
676 *Id.* at Article 6 as further specified in Appendix I are the following items in this category: (1) the sales and leases of land (Appendix 1-1); (2) the transfer of negotiable securities as provided in Security Exchange Law (No. 25, 1948) (Appendix 1-2); (3) interest paid on loans, and services related to credit and government bonds, and service related to insurance premiums (except if the services are contractually required and classified as an administrative expenses) (Appendix I-3); (4) sales of stamps (Appendix I-4(a)) and certificate stamps (Appendix I-4(b) (because the stamp tax was a more effective mechanism for imposing tax in this area; *see* Barry M. Freiman, *Comment: The Japanese Consumption Tax: Value-Added Model or Administrative Nightmare?* 40 AM. U. L. REV. 1265, 1281 n.130 (1991))

As demand for measured relief for those in greatest need begins to dominate policy discussions decision-makers normally select among three traditional solutions. They either make changes within the consumption tax to: (1) universally lower the rate of tax on goods and services that are identified as heavily used by those in greatest need,[677] or (2) universally exempt those goods or services from the ambit of the tax.[678] The first (the multiple rates option) destroys the single rate. The second (the universal exemption option) destroys the broad base. Because neither of these approaches allows the consumption tax to reach the goal of being a progressive levy,[679] policymakers have sought third options, outside the consumption tax itself to provide "measured relief."

The most common "third option" has been: (3) to use credits within the income tax, adjusted by income and estimated consumption patterns to (on average) relieve the burden of the consumption tax from those in greatest need.[680] This solution, which is the option selected by the President's Advisory Panel on Federal Tax Reform when they developed their Partial Replacement VAT,[681] requires an effective and efficient personal income tax system.[682] It is an option open to Japan, and appears to be among the favored options of the Tax Commission.[683]

However, what is very important to note at this juncture is that without the benefit of certified transaction tax software or biometric IDs embedded with "smart" technology, that Japan has already taken a fourth approach. The traditional Japanese approach to resolving the regressivity of the CT is: (4) surgical exemptions from the base for selected goods and services for identified individuals through a system of cross-references to statutory entitlement programs or other legal status criteria. This is a complex approach. It is employed with a limited number of exemptions, but it achieves a degree of accuracy in targeting CT relief than is achieved by any other VAT or RST system in place today.

5.3 – PENDING CHANGES IN THE DESIGN OF THE JAPANESE CONSUMPTION TAX

Significant change is expected in the Japanese Consumption Tax. On June 17, 2003 Prime Minister Junichiro Koizumi receive the mid-term report of the Tax

[677] BIRD & GENDRON *supra* notes 427, 429, and 591 (discussing problems with multiple rates and providing an example of the complexity imported into the French VAT by the use of multiple rates considering not only the French national VAT but the regional rates, the Corsican rates, and those of the French Overseas Departments).
[678] *See supra* notes 429 to 431, and accompanying text (indicating that in both VATs and RSTs necessities are commonly exempt from the tax base).
[679] *See supra* note 428, and accompanying text.
[680] *See supra* note 423 and 426 (indicating that the standard IMF advice is to seek relief in the income tax, rather than adjusting either the rate or the base of the consumption tax to achieve progressivity in the tax system as a whole rather than within the consumption tax itself).
[681] SIMPLE, FAIR, AND PRO-GROWTH, *supra* note 2, at 193-96; s*ee supra* note 67, and accompanying text.
[682] Bird & Zolt *supra* note 423 (indicating that the weakness of the personal income tax in most developing countries make this approach to achieving progressivity suspect in a developing country context).
[683] A SUSTAINABLE TAX SYSTEM FOR JAPAN'S AGING SOCIETY, *supra* note 649, at 9.

Commission from Hiromitsu Ishi,[684] *A Sustainable Tax System for Japan's Aging Society*.[685] Unlike the U.S. President's Advisory Panel on Federal Tax Reform which was charged with proposing "revenue neutral"[686] solutions that would streamline the complex federal tax system, the Japanese Tax Commission was asked to respond to a "state of crisis … [as] only about half of Japan's annual expenditure is covered by tax revenue."[687] The goal of the Japanese Tax Commission is to make proposals that will help Japan achieve fiscal balance "at the earliest time possible in the 2010's."[688]

5.3.1 – *Context for Change*

The need for change in the CT is driven by the rapidly aging population demographics of Japan. "Japan is in a phase of major transformation of its social and economic structure … the population will soon start to decrease in line with the aging of the society and declining birthrate." Japan is characterized as a "super-aging" society. "[B]y 2015 when the 'baby boomers' join the older generations, one in four people will be an elderly person [and the] … population is expected to decline after reaching a peak in 2006."[689]

Revenue needs are a serious concern, and are expected to increase. Among current revenue sources the CT is noted for its stability and its strength. It currently accounts for approximately 20 percent of national revenues.[690] When it considers the CT as a source for new revenues, Japan faces some difficult questions. If it raises the CT rate, the regressivity of the tax will place even greater financial burdens on the elderly, and this is the population demographic (the one-in-four members of society) about whom there is the most concern.

5.3.2 – *The Tax Commission's Proposed Changes*

The Tax Commission has suggested that three related changes be considered for the CT. First, and the basis for all the other revisions, the rate of tax will need to be raised into the "double digits."[691] Secondly, although "a uniform consumption tax rate is the most desirable … lower rates on foods and other [supplies] will need to be considered."[692] Thirdly, the use of multiple rates will bring with them a requirement that the "bookkeeping method" of accounting (which Japan uses very effectively with its single rate system)[693] will need to be changed to an "invoice method" (like that in the

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[684] For the public announcement of the presentation of the mid-term report see http://www.kantei.go.jp/foreign/koizumiphoto/2003/06/17zeicho_e.html

[685] A SUSTAINABLE TAX SYSTEM FOR JAPAN'S AGING SOCIETY, *supra* note 649.

[686] Executive Order 13369 *supra* note 1, at § 3.

[687] A SUSTAINABLE TAX SYSTEM FOR JAPAN'S AGING SOCIETY, *supra* note 649, at 3.

[688] *Id*. at 3.

[689] *Id*. at 4.

[690] *Id*. at 9.

[691] *Id*. at 9.

[692] *Id*. at 9.

[693] *See supra* notes 634 to 644 and accompany text (setting out examples of how the bookkeeping method works in the Japanese CT).

European VAT systems) whereby "… vendors will be required to keep invoices that clearly state the amount of tax inputs."[694]

Thus, the Tax Commission is proposing a dramatic change in Japan's CT. It believes that Japan should move to an invoice system with multiple rates where the standard rate is 10 percent or higher. While revenue needs drive the primary change (the rate increase), it is regressivity that drives the second (the adoption of multiple rates) and the third (the use of the invoice method).

The Tax Commission does not expect that these measures (internal to the CT) will be sufficient to mitigate the regressive impact of the higher rates. Echoing the standard IMF advice, and the approach taken by the President's Advisory Panel on Federal Tax Reform, the Tax Commission suggests that the government look for resolution in the progressivity of other taxes and direct expenditure programs. "… [A]s far as the issue of the regressiveness (to income) of consumption tax is concerned, deliberations must not be conducted on consumption tax alone; rather, judgment must be made on the overall tax system as well as on overall fiscal measures including benefits under social security systems and others."[695]

5.3.3 – *Assessment of the Tax Commission's Proposals*

Unlike the PR-VAT discussed by the President's Advisory Panel on Federal Tax Reform (an option that was not recommended and is not likely to be enacted) the proposals of the Japanese Tax Commission are very likely to move forward.[696] Considered in this light, two aspects of these proposals are notable, one for its departure from tradition and the other for its absence from consideration.

The first observation is that the Tax Commission has decided to move away from the traditional Japanese approach to regressivity. Previously Japan had used very targeted (selective or surgical) exemptions to the tax base for specific goods or services that were available only to qualified individuals. Qualification was determined through statutorily cross-referenced entitlement programs or through a legally recognized status, like that of a primary school student. This approach was discussed above as the fourth option to resolving regressivity.[697]

The second observation is that even though the Tax Commission commended the FY 2003 tax reform when to undertook a consideration of the corporate tax because "… measures were taken, which would directly improve research and development capacity

[694] A SUSTAINABLE TAX SYSTEM FOR JAPAN'S AGING SOCIETY, *supra* note 649, at 9.
[695] *Id*. at 9.
[696] Johnathan Rickman, *Japanese Finance Minister Proposes to Double Consumption Tax Rate*, 2006 WTD 148-3 [Doc. 2006-14495] (Aug. 2, 2006) (indicating that "Japan's Finance Minister Sadakazu Tanigaki has announced he would move to increase the country's consumption tax rate from 5 percent to at least 10 percent by some time within the next 10 years if chosen to succeed Prime Minister Junichiro Koizumi as Liberal Democratic Party (LDP) president and presumptive prime minister.").
[697] *See supra* note 661 to 672, and accompanying text, as well as the text paragraph between notes 683 and 684.

and IT investment – essential factors for the creation of new industries and technologies in Japan in the 21st century," when it came to considering technological solutions to the problems of multiple rates and the elevated regressivity of a "double digit" CT, technology is absent from the Tax Commission's report.

Rejecting surgical exemptions to the tax base. As discussed above,[698] without the benefit of a certified tax technology infrastructure Japan has endeavored to target consumption tax relief through exemptions and statutory cross-references to entitlement programs. The system is complex, as well as labor and legal-intensive. Given the fact that food (approximately 20 to 25 percent of the consumption base) would need to be handled through such a relief system,[699] the Tax Commission may have thought the traditional (tax base and entitlement) approach would be unworkable, and so moved to the tax rate (multiple rates) approach in use in much of the E.U.

The Tax Commission is aware that in doing so it will be abandoning one of the three critical attributes of a progressive consumption tax.[700] It also appears concerned that the system it is proposing may be considered to be too regressive by the public, and that the broad popular acceptance of the CT may be impacted.[701] The Japanese have not always been receptive to this tax. The Shoup Mission's VAT was rejected in 1954,[702] as was another VAT that was proposed in 1979.[703] Prime Minister Nakasone withdrew a VAT he proposed in 1987[704] because of widespread public opposition.

Absence of technological solutions. It is equally surprising that there appears to be very little consideration by the Tax Commission of how technology could assist with the resolution of the regressivity issue, enhance compliance and allow Japan to maintain its traditional approach to surgical tax relief. Such an approach has been the topic of this text. A proposal for Japan will be set out in the final section.

5.4 – BIOMETRIC IDs AND CERTIFIED TAX SOFTWARE FOR THE JAPANESE CONSUMPTION TAX

Japan is a technologically advanced economy with a deep digital penetration. The problems encountered with certified tax software solutions in developing countries will

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[698] *See supra* notes 677 to 682, and accompanying text.

[699] A SUSTAINABLE TAX SYSTEM FOR JAPAN'S AGING SOCIETY, *supra* note 649, at 9 (describing the need for relief and suggesting that multiple rates be used, but only specifying one commodity with the expression "food and others" in the text).

[700] *See supra* note 423, and accompanying text (discussing the three critical attributes – the single rate, the broad base, and the measured relief for those in need); *also supra* note 692, and accompanying text.

[701] A SUSTAINABLE TAX SYSTEM FOR JAPAN'S AGING SOCIETY *supra* note 685, at 4 & 9 (indicating the Tax Commission's belief that the tax system "by nature" is supposed to "inspire confidence among the people" and that the "[c]onsumption tax has become well accepted by the people as one of the fundamental taxes in the Japanese system, [but that] … the reliability and transparency of the consumption tax must be improved in view of the importance of this tax in the aging society.").

[702] Keimei Kaizuka, *The Shoup Tax System and the Postwar Development of the Japanese Economy*, 82 AM. EC. REV. 221, 222 (May 1992).

[703] HIROMITSU ISHI, THE JAPANESE TAX SYSTEM 273 (1989)

[704] *Id.* at 280.

not be encountered.[705] Like the U.S., Japan can adopt advanced solutions if it determines that technology offers more efficient solutions to the traditional consumption tax problems.

To go down the technology road, Japan will need to do two things: (1) establish an identity card system with biometric identifiers and embed within the "smart" chip in these cards digital exemption (or reduced rate) codes, and (2) establish a software certification regime for program used at the retail sale level that will assure that the software in use recognizes the exemption codes in validated ID cards and then calculates the correct tax for each item purchased. These steps have been considered at length in this text. They will be summarized through inter-textual cross-references in the final sections below.

With this technology in place Japanese policymakers could take one of two paths. Japan could either pursue its traditional solution, or it could adopt the multiple rates solution to the regressivity problems that an increase in the CT rate will bring. Either of these solutions can be efficiently implemented and will resolve the regressivity of the CT through technology.

If the traditional path is selected by the Tax Commission, the only difference between the current CT and the new CT would be (1) the higher rate of tax, (2) an increase in the number of exemptions, and (3) an increase in the number of individuals who qualify for exemption.

Just like under the current exemption structure – found in Appendix I-5 (legal services), I-6 (medical treatment), I-7 (home care services), I-11 (educational services) and I-12 (educational texts) – there will still be a matching of the person entitled to an exemption with good or service purchased. However, instead of the exemption verification process taking place manually the entire process would be carried out digitally.

Thus, under the old system clerical personnel in a medical office would (a) physically verify the identity of an individual and then (b) perform a research-based confirmation of the individual's exemption status (perhaps involving paper documents and a reading of the Consumption Tax rules). Under the new system an ID would be presented to a reader that would verify the identity of the person (by comparing digitize biometric identifiers embedded in the card with the actual biometrics of the individual presenting the card) and then certified software would associate this individual with an exempt/ non-exempt status and determine if tax was due.

If a multiple rate path is selected by the Tax Commission, the technology could be relied upon to (a) apply the correct rate in each instance, and also (b) to allow certified

[705] *See supra* the text accompanying notes 310 to 419 (discussing the application of digital consumption tax technology in a developing country context).

service providers to fully automate the new invoice-based record keeping and reporting requirements.[706]

5.4.1 – *Biometric Identifiers in IDs*

If the Japanese Tax Commission wanted to consider a technology-intensive solution to the regressivity issues that follow from its suggested rate increase a system of IDs would need to be established. The IDs would not be needed for the whole population. They would be needed only by those who qualified for an exemption (traditional path) or for a reduced rate of tax (multiple-rates path). The IDs would need to contain sufficient digital biometric data to verify that the person presenting an ID was the person to whom the ID was issued. It would be reasonable to include two encrypted biometric identifiers, probably a facial and a fingerprint scan.[707]

Individuals who qualified for exemption (or a reduced rate of tax) on identified goods or services would have an authorization code embedded (and encrypted) into the "smart" chip within the card. The government could issue its own ID cards. It could also adopt the Austrian approach and use space made available to it on bankcards.[708] A system of m-IDs like that being implemented in Finland could also be utilized so that a mobile phone could be substituted for a plastic ID card.[709] It is clear that ID technology and usage is an area where European technology is in the leadership position and should be considered carefully and thoroughly.[710]

5.4.2 – *Certified Tax Calculation Software*

A certification regime for tax calculation software would need to be implemented following either the model of the Streamlined Sales Tax or the OECD proposals. The software would need to be capable of determining the correct tax on any good or service sold, taking into consideration any of the exemption (or reduced rate) certificates embedded on IDs.

The software would need to interface with a biometric reader that would be able to recognize and verify the identity of the cardholder and then correctly activate the appropriate exemption (or reduced rate) criteria for the items purchased. Following the American model the software could be self-developed (CPS),[711] purchased from third-

[706] *See supra* text associated with 244 to 260 (concerning the adoption of digital notices, returns, periodic and recapitulative statements as well as digital invoices in the E.U.)
[707] *See supra* notes 446 & 447 and accompanying text (concerning both the need for multiple identifiers and the ease with which a fingerprint biometric can be embedded in a plastic ID card).
[708] *See infra* APPENDIX A, at Austria.
[709] *See infra* APPENDIX A, at Finland.
[710] *See supra* notes 452 to 467 and accompanying text (concerning the E.U. leadership in digital IDs and the tax applications of this technology).
[711] Streamlined Sales and Use Tax Agreement, *supra* note 26, at § 207 (defining a Certified Proprietary System (CPS) as the system owned by "[a] seller that has sales in at least five member states, has total annual sales of at least five hundred million dollars, has a proprietary system that calculates the amount of tax due each jurisdiction, and has entered into a performance agreement with the member states that establishes a tax performance standard for the seller.").

party vendors (CAS)[712] or could be owned and operated by a service provider (CSP).[713] It is clear that certified tax calculation software technology and usage is area where American technology is in the leadership position and should be considered carefully and thoroughly.[714]

5.4.3 – *Additional Concerns*

There are a number of additional concerns that Tax Commission might want to consider before recommending the adoption of a certified tax calculation software system and a system of biometric IDs with embedded exemption (or reduced rate) certificates. Most of these questions have been addressed earlier in this text. They are all under active operation in various consumption tax contexts.[715]

Issue like the certification criteria,[716] how to make certification determinations,[717] how funds should be remitted to the government,[718] whether the software system should be paid for by the business or provided free of charge by the government,[719] whether audit immunity should be extended to businesses operating certified software,[720] what to do in instances of fraudulent use (making sales outside a certified system),[721] what to do in cases where fraudulent use of a valid card,[722] what to do in cases of exceptionally

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[712] *Id.* at § 202 (defining a Certified Automated System (CAS) as a "[s]oftware certified under the Agreement to calculate the tax imposed by each jurisdiction on a transaction, determine the amount of the tax to remit to the appropriate state, and maintain a record of the transaction.").

[713] *Id.* at § 203 (defining a Certified Service Provider (CSP) as "[a]n agent certified under the Agreement to perform all the seller's sales and use tax functions, other than the seller's obligation to remit tax on its own purchases.").

[714] *See supra* notes 345 to 361 and accompanying text (concerning the operation of the Streamlined Sales Tax in the U.S.)

[715] *See supra* text associated with notes 261 to 271 (concerning the E.U. test case of the D-VAT under the Digital Sales Directive 2002/38/EC – Article 26c) and *supra* notes 345 to 361, and accompanying text (concerning the Streamlined Sales Tax test case in the U.S.)

[716] *See supra* notes 382 to 391 and accompanying text (concerning the actual American and proposed OECD certification standards) and *supra* notes 577 to 589 and accompany text.

[717] *See supra* text after note 588 (concerning the testing process for a certified system under the Streamlines Sales Tax).

[718] *See supra* notes 410 to 419 and accompanying text (concerning the funds remission function through ACH debit and ACH credit that can be effectively tied into a digital consumption tax regime to increase efficiency of payment and maximize revenue cash flows).

[719] *See supra* note 419 and accompanying text (concerning the compensation arrangement under the Streamlined Sales Tax) and Streamlined Sales and Use Tax Agreement (SSUTA) *supra* note 26, at §§ 601-03; *see also* notes 358 to 353 (concerning the decision of both European and American systems to provide digital access free of charge to taxpayers).

[720] *See supra* notes 417 to 418 and accompanying text (concerning liability limitation accorded certified service provider and businesses using certified systems).

[721] *See supra* notes 606 to 610 and accompanying text (concerning the ability to apply remote and digital audit techniques with certified transaction software within a broadly digital consumption tax).

[722] *See supra* text between notes 305 and 306 (concerning technology-based limitations placed on digital exemption certificates base on any of a number of criteria including total amounts purchased, total consumption tax exempted, or other status or revenue related criteria).

small, or remote businesses,[723] and what to do if individuals object to using the IDs,[724] have all been dealt with.

[723] *See supra* note 308 and accompanying text (concerning resort to paper methods of exemption in cases of small, remote or religious objections to the use of technology).
[724] *See supra* note 620 and accompanying text (indicating that the system should be a voluntary one on the part of businesses or consumers whereby those who wish to opt out of either the ID or the certified transaction tax technology will be obligated to pay or to charge and remit the full tax on all transactions).

APPENDIX A

Austria. *(1) Smart ID Card*. A voluntary Citizen Card (Bürgerkarte), first issued in February 2003, contains an embedded electronic signature and digital certificates. Smart cards technology enables citizens to securely access electronic public services and complete administrative procedures electronically. Austria' concept of e-ID is original. There is not just one type of Citizen Card, instead any card, which makes it possible to sign electronically in a secure form, and to store personal data is suitable for use as a Citizen Card. Thus, membership cards issued by certain entities (e.g. the Austrian Computer Society, the Federal Economic Chamber, etc.) as well as bankcards can include Citizen Card functionality. In addition, a "light" Citizen Card service has been developed that can be used with mobile phones, enabling citizens to digitally sign documents and conduct secure transactions with the government. Thus, the Citizen Card is not dependent on a particular form of technology. Citizens select the technology to be used. The government certifies the digital medium – double-encrypted numeric identifiers and sector-specific personal identifies are required. *(2) Electronic Portal*. On May 19, 2004 the Austrian government launches an official electronic delivery service (Zustelldienst). The service allows citizens and officials to send secure e-mails with official acknowledgement of receipt. Registered e-mails have legal status. A digital signature is required for use of the system. (3) *Tax Administration & Technology*. FINANZOnline enables electronic filing (declaration and notification of assessment) of personal and corporate income tax returns, as well as the filing of VAT returns, declarations and notifications. Access at: https://finanzonline.bmf.gv.at/. The Austrian Federal Ministry for Economic Affairs and Labor (BMWA), as part of its "Paperless Foreign Trade Administration" (Papierlose Aussenhandelsadministration – PAWA), offers companies to obtain import licenses and submit customs declarations over the internet. Access at: https://www.pawa.bmwa.gv.at/. Personal and corporate income tax, VAT and customs administration are all benchmarked at "stage 4" compliance. *Id.* at 12, 14, 20, 27, 29, 33 & 34.

Belgium. *(1) Smart ID Card.* A mandatory system of e-ID's was initiated in 2000, officially launched in March 2003 (as a pilot), and is expected to be completed by the end of 2009. Belgium expects that it will be the first European country to issue e-ID's to the entire population (10 million). Belgium was the first country in the world to issue electronic passports complying with the recommendations of the International Civil Aviation Organization (ICAO). The passports contained a facial image in a microchip. Fingerprints will be added after European legislation is passed. *(2) Electronic Portal*. On February 18, 200 the Belgian government began development of an e-government portal. The federal portal http://www.Belgium.be is launched in November 2002. *(3) Tax Administration & Technology*. Tax-On-Web enables electronic filing (declaration and notification of assessment) of personal income tax returns. Accessed at: http://www.taxonweb.be/. Similar e-filing for the corporate income tax is at http://www.minfin.fgov.be/. InterVAT enables the submission of digital VAT returns. EdiVAT allows submission via EDI conventions. An electronic Customs Declaration system has been in place since 1982, called SADBEL (Systeme Automatisé de

Dedouanement pour la Belgique et le Luxembourg). The system allows businesses to submit their declarations by communicating directly with the central computer of the Customs and Excise Administration by modem/telephone line. On January 1, 2006 this system was replaced with a web-based application. Use of the web-based system will be mandatory in 2008. Accessed at: http://fiscus.fgov.be/interfdafr/. The Customs and Excise Administration has developed a web-based application called WEB-N.C.T.S. for managing transit operations based on the EU's New Computerized Transit System (NCTS). On March 18, 2005 Belgium began implementation of an integrated system to process tax returns and collection for citizens and businesses. The system will centralize taxpayer data into a "Simplified Fiscal Account" to optimize management. The system will cover the entire tax management process – calculation, declaration, registration, collection, early payment, control and claims handling. Personal and corporate income tax, VAT and customs administration are all benchmarked at "stage 4" compliance. *Id.* at 39, 40, 53, 55, & 60-1.

Cyprus. *(1) Smart ID Cards*. Cyprus is not as advanced as other Member States. Cyprus plans on introducing e-ID smart cards, but has not done so yet. Statutory authority is in place for electronic signatures as of 2004. *(2) Electronic Portal*. The government portal, http://www.cyprus..gov.cy, is an institutional web site. A new multi-channel e-government portal is due to be launched. This portal will incorporate transactional capabilities. The gateway will provide security, authentication, encryption, decryption, as well as web-based workflow for interconnection of departmental back-end systems. The portal is expected in 2007. *(3) Tax Administration & Technology*. In tax areas Cyprus is much more advanced. TaxisNet permits electronic filing (declaration and notification of assessment) of personal income tax, corporate income tax and VAT. Accessed at: http://taxisnet.mof.gov.cy/. A similar system called Theseas allows traders or their authorized agents to submit import declarations for the clearance of goods. Accessed at: http://www.mof.gov.cy/ce/theseas/. Thus, the entire tax system in Cyprus is benchmarked at "stage 4." *Id.* at 69, 73, 74, 78, & 79.

Czech Republic. *(1) Smart ID Cards*. There is no central e-ID card infrastructure in the Czech Republic, and as of May 2006 there is no plan to adopt one. E-signatures are permitted, and three companies have been certified to issue valid e-signatures for citizens to use in their relations with the government (filing tax returns, submitting court petitions, etc.). In one area – health – there is an effort to replace existing health care cards with smart cards. *(2) Electronic Portal*. The public administration portal, http://Portal.gov.cz, was launched in October 2003 and is being implemented gradually in interlinked phases. Some limited transactional services are offered. *(3) Tax Administration & Technology*. In spite of the Czech Republic's seeming resistance to technology generally, the situation in tax is different. Personal and corporate income tax returns, as well as VAT and customs declarations may be filed electronically (declaration and notification of assessment). Accessed at: http://cds.mfcr.cz/. Although the customs administration is benchmarked at "stage 3," all other aspects of the tax administration is benchmarked at "stage 4." At stage 3 there is two-way interaction, processing of electronic forms (including e-signature), but not full case handling, decisions and delivery (including payments). *Id.* at 89, 91, 97, 99, & 103.

Denmark. *(1) Smart ID Cards*. Denmark has launched an ambitious program to issue (at no charge) digital signatures to all 1.3 million citizens. It does not have plans to introduce card-based electronic ID's. The software-based digital signature (OCES – Public Certificate for Electronic Services) can be used for both public and private sector transactions. Denmark does have medical e-ID's. All medical records (as far back as 1977) are available on-line through a secure e-service portal (http://www.sundhed.dk). *(2) Electronic Portal*. The national portal http://.Danmark.dk simply provides public information and limited services. *(3) Tax Administration & Technology*. With respect to matters of taxation Denmark is highly automated. Electronic filing (declaration and notification of assessment) of personal income tax is 100% automated. Almost all tax information is collected by the tax authority electronically, placed on a pro-forma electronic return, and sent to the taxpayer for modification and digital signature. Accessed at: http://www.toldskat.dk/. The same web site provides fully functional declaration and payment capabilities in corporate income tax and VAT. This site also provides the "Just-In-Time" web-based e-customs system. It allows import declarations through the Internet or EDI (Electronic Data Interchange). The entire tax system in Denmark is benchmarked at "stage 4" compliance. *Id.* at 108, 110, 114, 121-22, & 126-27.

Estonia. *(1) Smart ID Cards*. In January 2002 Estonia introduced a mandatory e-ID card for all citizens and permanent foreign nationals over 15 years of age. The card is the primary document for identifying citizens and foreign residents and its functions are to be used in any form of business, government or private communications. The cards have physical (biometric) identification functions as well as secure authentication and legally binding digital signature capability in a microchip that contains personal data, certificates, and a permanent e-mail address (Forename.Surname@eesti.ee). The cards have been issued to over 50% of the population (777,000 cards) and are expected to exceed 1 million cards by 2007. [In addition to the national e-ID card, Estonian citizens can access online public services through their Internet banking cards [more than 70% of Estonian residents use Internet banking, the highest proportion in Europe.] Estonia was the first country in the world to allow its citizens to vote (nationwide) over the Internet using national e-ID cards. Finland and Estonia signed an agreement in May 2003 to harmonize concepts and practices between the two countries regarding digital signatures. The project promotes the "universal digital signature." *(2) Electronic Portal*. Estonia's e-government portal is http://www.eesti.ee. It was launched in March 2003 and provides a single point of access to government information. Through authentication (via the national ID) the portal allows citizens to fill in forms and submit electronic forms access personal data, and perform transactions. *(3) Tax Administration & Technology*. In October 2000 Estonia developed the e-TaxBoard (e-Maksuamet, *available at* http://www.emta.ee/). The e-TaxBoard allows Estonian taxpayers to access their tax files, view, collect and submit personal, corporate and VAT returns on-line. VAT refund applications are also accepted. The Estonian Tax and Customs Board developed an e-Customs application (e-Toll) that enables on-line submission of customs declarations. The entire Estonian tax system is benchmarked at "stage 4" compliance. *Id.* at 131-32, 138-40, 143, 145, & 149-50.

Finland. *(1) Smart ID Cards*. Finland is a world leader in the adoption of e-ID cards. The Finnish card features biometric (facial) ID, an e-number that allows identification and digital signatures. The card is an official travel document within the EU. The chip in the Finnish card was upgraded in 2003. In 2004 citizens were allowed to volunteer to include health data on the single e-ID (a digital health card can be used instead of incorporating all information on one card.) Although the card is not mandatory, the number embedded in it is mandatory when conducting government business. Uptake of the e-ID remains low in Finland, and has inspired a series of government-sponsored upgrades, and modifications to improve demand. On November 24, 2004 the Population Registration Center and the telecom operator Sonera presented the Citizen Certificate, a mobile ID scheme. This mobile ID (m-ID) is a government-guaranteed electronic identity embedded in a SIM card that allows mobile phone users to identify themselves. Finland (similar to Estonia) has an online identification system based on identification codes issued by Finnish banks. *(2) Electronic Portal*. The citizen's portal was launched in 2002, http://www.Suomi.fi/. It provides a single access point to public information, administrative forms, and services. This new portal, replacing an earlier portal that was initiated in 1997, supports authentication base on both PKI and on the bank's authentication system for certain transactions. There is a central administrative forms service, http://www.Lomake.fi, and a dedicated business portal, http://www.YritysSuomi.fi. *(3) Tax administration & Technology*. The tax administration is very receptive to technology. Personal and corporate income tax as well as VAT returns, declarations and payments are fully digital. Access at: http://www.vero.fl/. The personal income tax return is pre-filled by the government similar to the system in Denmark. Fully digital customs declarations can be filed with the National Board of Customs at http://tulli.fl/. The entire Finish tax system is benchmarked at "stage 4" compliance. *Id.* at 154,-55, 157, 162, 167-68, &172-73.

France. *(1) Smart ID Cards*. There are plans in France for e-ID cards, but as yet there are no French cards. There is no centralized e-identification infrastructure for e-government in France. This is in part attributable to the public resistance spawned by reaction to a March 21, 1979 newspaper expose in Le Monde revealing the existence of a project by the Ministry of the Interior to interconnect electronic files containing personal data by using a unique personal identifier. Code named SAFARI (systeme automatisé pour les fichiers administratifs et le repertoire des individus) the revelation resulted in the Prime Minister prohibiting further development pending the development of rules. The French government has transposed the EU e-signature Directive into French law (March 2000) and has an e-signature framework policy (PRIS, July 2005). The government has launched an e-ID project called INES (Identité Nationale Electonique Sécuriséé) that was endorsed by the Prime Minister (April 11, 2005). The future French e-ID card will have a microchip containing all identity information about the holder, two biometric identifiers (facial and fingerprint), and an electronic signature. Personal information would be stored in a new database, and biometric data stored anonymously in a separate file. The French e-ID will be mandatory, and citizens will charged a fee. *(2) Electronic Portal*. The public portal http://Service-Public.fr/ provides a comprehensive single access point to information and services for citizens (since October 2002) and for businesses (since

November 2003). However, it does no more than provide information. *(3) Tax Administration & Technology*. In spite of French resistance to e-ID cards, in the tax area technology is welcomed. Personal and corporate income tax returns, declarations and payments are fully digitized. Accessed at: http://www.impots.gouv.fr/. Online declaration and payment of VAT obligations can be accomplished in full digital format. Accessed at: http://tva.dgi.minefi.gouv.fr/. A full service e-customs function for declarations and payments is also in place. Accessed at: http://www.douane.gouv.fr/. Thus, the entire French tax system is benchmarked at "stage 4" compliance. *Id.* at 177-80, 185, 195, 197, & 201-02.

Germany. *(1) Smart ID Cards*. Biometric passports were issued by Germany, beginning on November 1, 2005. The passports contained an embedded radio frequency identification (RFID) chip storing personal data as well as digital facial image, with a scan of the right and left index fingerprint scheduled added in March 2007. Other than this passport application, there is no e-ID infrastructure currently in use. However, an e-ID project has been launched with pilots carried out in 2002. The German e-ID card (Digitale Personalausweis) will include an electronic signature and biometric identifiers stored on a smart card. In March 2005 the German government presented a plan aimed at a common e-card strategy to coordinate the various e-card projects ongoing in Germany (e-health card, e-ID card and the jobs card). The German e-ID card will be introduced in 2007. *(2) Electronic Portal*. The German e-government portal http://www.Bund.de/ is passive, provides access to the services of the Federal Administration as well as entry into the state and municipality web sites. There is access to an online forms server. A December 1, 2001 survey identified 375 services that would be moved on line by 2005 (a figure that was surpassed by March 18, 2005). *(3) Tax Administration & Technology*. The tax-specific functionality on the Internet is interactional and transactional, exceeding the Internet functionality of government overall. The ELSTER website enables on-line filing and payment of personal and corporate income tax returns as well as VAT declarations, returns, and payments. Accessed at http://www.elster.de/. Comparable capacity for the submission of customs declarations and payments was launched in October 2002. Accessed at: http://www.zoll-d.de/. Thus, the entire German tax system is benchmarked at "stage 4" compliance. *Id.* at 206-07, 214, 221, 223, & 227-28.

Greece. *(1) Smart ID Cards*. There is no centralized e-ID infrastructure in Greece, and there is no plan to adopt one. The government has presented a digital strategy for the period 2006-2013 which would enable a "great leap," but nothing in the strategy considers e-ID's. Government sanctioned digital signatures are part of the strategic plan, and are expected in 2008. *(2) Electronic Portal*. The Greek approach to e-government has been decidedly less technology intensive that other Member States. Greece has establish a series of physical location – Citizen Service Centers (800 currently and expected to number over 1,000) that provide a "one-stop-shop" solution through a linked IP network that can be accessed through the Centers, or over the Internet. The Centers are open 8am to 8pm Monday through Friday, and with limited hours on Saturday. Internet access is at: http://www.kep.gov.gr/. However, the Greek approach has strong human service element. *(3) Tax Administration & Technology*. In the tax area the digital services theme is more in evidence than in the rest of the Greek approach to e-government. The personal and corporate income taxes as well as VAT (declarations and notices of assessment) and customs clearance are facilitated through the TAXISnet service that was instituted in May 2000. Payment, return processing, electronic certificates, and downloadable forms are all available. Accessed at: http://www.taxisnet.gr/. Thus, the entire Greek tax system is benchmarked at "stage 4" compliance. *Id.* at 232, 234, 236, 242-43, & 247-48.

Hungary. *(1) Smart ID Cards*. There is currently no central e-ID infrastructure in Hungary, although the government does have plans for an e-ID card. In October 2002 a pilot project on e-signatures and e-ID cards was launched. Requirements and specifications for the e-ID card (HUNEID) were published in 2004. *(2) Electronic Portal*. On April 1, 2005 a transactional gateway was established called "Client Gate" (Ügyfélkapu) which allows access to transactional e-government services after a secure authentication registration (however authentications are not currently through a national e-ID). *(3) Tax Administration & Technology*. In the tax area Hungary is not keeping pace with e-solutions in other EU Member States. In the personal income tax forms can be downloaded and returns filed electronically. For the corporate income tax more functionality is available (conditional on a chip card and reader) provided by the tax office (using PKI technology). VAT forms can be downloaded from the website, but returns are only accepted by the largest taxpayers. Access at: http://www.apeh.hu/. In customs there are basic interactive tools available on line, certain forms can be downloaded, and with permission be submitted electronically, accessed at: http://www.vam.hu/. Only the corporate income tax is benchmarked at "stage 4" compliance. The personal income tax is rated at "stage 3." Both the VAT and the customs functions are benchmarked at "stage 2." *Id.* at 252-54, 257, 263-64, & 268-69.

Ireland. *(1) Smart ID Cards*. In June 2004 the Irish government established an expert group to introduce a standard framework for Public Service Cards (PPC), making use of the Personal Public Service (PPS) number in a manner that could be used for e-ID and authentication purposes. The intent is to design a single multi-purpose card. The Public Service Broker (PSB) coordinates the Irish e-government initiative. The PSB interfaces between the government and public, improving service delivery through conventional (in person and telephone) and self-service (on-line) electronic channels (the "Reachservices" portal). The PSB currently uses the PPS number as a unique identifier, even though it was initially intended for use for tax and social welfare purposes. An integrated smart card electronic ticketing system, as of March 21, 2005, is operational for all public transportation services in the country. *(2) Electronic Portal*. Reachservices is Ireland's e-government portal, accessed at: http://www.reach.ie/. It provides a single point of access for informational, interactive and transactional public services. The Reachservices portal is the PSB interface. The portal includes a single identification and authentication process and a single electronic payment facility. The portal allows registered users to conduct transactions with the government from one central access point at any time. *(3) Tax Administration & Technology*. Full compliance with personal and corporate income taxes as well as VAT and customs obligations – returns processing and payments can be achieved on line, accessed at: http://www,roe.ie/. The entire Irish tax system is benchmarked at "stage 4" compliance. *Id.* at 273-75, 281, 287-88, & 292-93.

Italy. *(1) Smart ID Cards*. On March 31, 2005 Italian Law mandated that all paper ID's be replaced with electronic ID's by the end of 2005. Only digital ID's were issued from 2006 forward. The Italian e-ID card (CIE) was launched in 2001, and after two experimental phases in 2003 and 2004, distribution to requesting citizens over 15 years old began, with the goal of total replacement by 2011 (40 million cards). The CIE has a microchip, optical memory and an ICAO machine-readable strip. The card contains personal data (fiscal code, blood group, and fingerprint scan). Data is stored on the card, not in a central database; it is released only with a PIN code. The optical memory does not allow fingerprint reconstruction. Before the full implementation of the CIE a National Services Card (CNS), smart card had been developed (as a temporary measure) to allow secure identity recognition on line. However the CNS did not constitute legal "proof" of identity, and was not a legal travel document like the CIE. *(2) Electronic Portal*. The Italian web portal is at: http://www.Italia.gov.it/. It is a comprehensive and secure e-government portal for all public services. *(3) Tax Administration & Technology*. Personal and corporate income tax and VAT returns, declarations, and payments can be made on-line, accessed at: http://fisconline.agenziaentrate.it/. Similarly for customs declarations and payment. The Customs Agency has a fully transactional on-line system, accessed at: https://telematico.agenziadogane.it/. The entire Italian tax system is benchmarked at "stage 4" compliance. *Id.* at 297-98, 301, 306, 311-12, & 316-17.

Latvia. *(1) Smart ID Cards*. There is currently no central e-ID infrastructure, but there is an e-ID card project. The Latvian Parliament passed a Law of Personal Identification Documents on May 23, 2002 requiring either an identity card or passport as an identity document for every citizen over 15 years of age. A regulation issued in 2004 provides for electronic chips in ID cards holding basic personal data, as well as a biometric (facial) and electronic signature. This regulation is not fulfilled at the moment because of the absence of a "certification service provider." On June 15, 2005 the Latvian government entered into an agreement with Latvia Post and Lattelekom LTD to fulfill the requirements of the law and regulation. The tax system in Latvia is considerably behind other Member States. *(2) Electronic Portal*. Latvia doe not currently have an e-government services portal. A state portal http://www.LVonline.lv/ had been launched in 2002 to provide a single access point for all government information and services, but had to be stopped because of lack of funding. A new development effort was undertaken in 2005. *(3) Tax Administration & Technology*. In the tax area the situation is (potentially) much better. An Electronic Declaration System (http://www2.vid.gov.lv) is available. It is designed to allow full service (return submission, payments, declarations, data checks, and e-mail confirmation) for tax transactions. However, regulations on the storage and circulation of electronic documents are not in place yet, thus all filings, payments and information requests must still be done on paper. Customs however has a fully digital functionality, as businesses can use the Computerized Transit Control System to submit customs declarations and payments, accessed at: http://www.vid.gov.lv/. As a result of these difficulties, the Latvian tax system is generally benchmarked at "stage 1" compliance. The customs function however, is benchmarked at "stage 4." *Id.* at 321, 323, 329, 333-34, & 339.

Lithuania.. *(1) Smart ID Cards*. There is no central e-ID infrastructure in Lithuania at the present time. However, a government "concept paper" adopted in December 2002 urges the development of an e-ID that will include personal data, social insurance details and medical records. E-signature legislation was enacted on July 11, 2000 setting out requirements for certification and the rights and obligations of service providers. A pilot program was initiated in May 2004. *(2) Electronic Portal*. In January 2004 the Lithuanian government opened a full service digital service portal for citizens and businesses, available at: http://www.govonline.lt. *(3) Tax Administration & Technology*. In the tax area, a fully transactional system operates in personal and corporate income tax as well as VAT. The system accepts all returns, provides notifications of assessment, and new forms, as well as allows monitoring and management of filings, accessed at: http://deklaravimas.vmi.lt/. The Lithuanian Customs Administration runs a similar web site that allows fully transactional submission of declarations and payments, accessed at: http://www.cust.ly/. The whole Lithuanian tax system is benchmarked at "stage 4" compliance. *Id.* at 344-45, 349, 355-56, & 360-61.

Luxembourg. *(1) Smart ID Cards*. There is no central e-ID system in Luxembourg, and there is no government plan to adopt one. In March 2003 the LuxTrust Economic Interest Group (a public-private partnership) was formed to manage the development of a public key infrastructure (PKI) for e-commerce and e-government. A new e-Government Master Plan presented on June 13, 2005 does not mention e-ID's. Electronic payments and digital signatures are authorized in legislation passed on August 14, 2000. *(2) Electronic Portal*. There is currently no full e-government services portal in Luxembourg. A one-stop portal is expected to go live some time in 2006. A business portal, http://www.entreprises.public.lu/, is already in operation. It provides a one-stop-shop for information and services. *(3) Tax Administration & Technology*. In the tax area Luxembourg is behind other Member States in direct taxes, but a fully transactional systems is in place in VAT and customs. Web sites allow forms to be downloaded for personal and corporate income taxes, accessed at: http://impotsdirects.public.lu/. The VAT functionality allows payments and submission of returns, accessed at: https://saturn.etat.lu/etva. A fully electronic Customs Declaration system has been operational for several years called SADBEL (Systeme Automatisé de Dedouanement pour la Belgique et le Luxembourg). Thus, the Luxembourg tax system has a dual benchmarking. It is considered at "stage 2" compliance for direct taxes, and at "stage 4" for customs and VAT. *Id.* at 364, 366, 370-71, & 374-75.

Malta. *(1) Smart ID Cards*. On March 18, 2004 the Maltese government launched its e-Identity (a secure network key enabling citizens to conduct interactive and transactional e-services where strong identity security is required). This is not an identity card, and a paper card system remains in place. *(2) Electronic Portal*. The government of Malta's portal is an institutional site, accessed at: http://www.gov.mt. It provides access to information and has some interactive and transactional services. *(3) Tax Administration & Technology*. In August 2004 the Maltese Inland Revenue then launched an on-line payment system based on the government's Electronic Payment Gateway (ePG). A digital signature law was passed on January 16, 2001. Personal and corporate income taxes are fully digitized for returns and payments, accessed at: http://www.ird.gov.mt/.

Similar functionality is available with the VAT accessed at: http://www.vat.gov.mt/, and with customs, accessed at: http://ces.gov.mt/. The entire Maltese tax system is benchmarked at "stage 4" compliance. *Id.* at 379-80, 384, 388-89, & 392-93.

The Netherlands. *(1) Smart ID Cards*. The Netherlands has an e-ID system (DigiD) in place, and intends to introduce an e-ID card (eNIK) by August 28, 2006. Apart from a user name/ password for citizens (basic level), a DigiD authentication method for businesses is being developed, and an internet banking methodology for digital signatures (medium level) is being incorporated. The e-NIK will supplement the biometric passport that was in trials beginning on September 1, 2004. The passport (and the e-NIK) include two biometrics (facial and fingerprint). On September 12, 2005 the Dutch government announced the creation of an Electronic Child File for all Netherlands children. As of January 1, 2007 each child born in the Netherlands will be assigned a unique numeric identifier and an electronic file that will initially contain medical information, domestic relations, and as the child grows the school records and social services and police will be able to add data (as relevant). Once operational, all previously issued paper files of Dutch children will be digitized. Unique and uniform identification numbers for citizens (Citizens Service Number – CSN) and for businesses (Companies and Institutions Number – CIN) are being introduced as of January 1, 2006. *(2) Electronic Portal*. The Netherlands portal at http://www.Overheid.nl/ provides access to a growing amount of information, as well as a one-stop-shop for a number of interactive and transactional services. *(3) Tax Administration & Technology*. The Netherlands tax system is benchmarked at "stage 2" compliance for VAT, because the web site only provides on-line downloadable forms, however in the other tax areas, both personal and corporate income taxes and customs the Netherlands is benchmarked at "stage 4" compliance. *Id.* at 397-98, 402, 407-08, & 414-15.

Poland. *(1) Smart ID Cards*. There is no central e-ID infrastructure in Poland. The development of a "Multifunctional Personal Document" (MPD) – an intelligent, PKI-ready smart card that could replace the current plastic ID card – is being studied. The e-ID would be based on the current identification numbers and reference databases (PESEL for individuals and REGON for businesses). *(2) Electronic Portal*. There is also no central e-government portal in Poland. This too, is a key project under development. *(3) Tax Administration & Technology*. Poland is behind many Member States in the tax area. For the personal and corporate income tax, as well as the VAT it is possible to download forms (only), accessed at: http://www.mf.gov.pl/. The Ministry of Finance announced on April 20, 2005 that e-tax filing services will commence in 2006, with a priority given to the largest taxpayers. Full e-filing is not expected for all taxpayers until 2012. For customs purposes the situation is better. Customs declarations can be made with Single Administrative Documents (SAD) using on-line forms, accessed at: http://www.mf.gov.pl/sluzba_celna/. The Polish tax system is benchmarked generally at "stage 2" compliance (personal and corporate income taxes and VAT). It is benchmarked at "stage 4" compliance in customs. *Id.* at 419-20, 420-21, 428-29, & 433-34.

Portugal. *(1) Smart ID Cards*. There is currently no central e-ID infrastructure in Portugal, although in April 2005 the new government announced plans for the creation of a multi-purpose citizen card. The card will combine ID, tax, social security, health insurance and electoral information. Distribution is expected to start in 2006. *(2) Electronic Portal*. The Citizen's Portal was launched in March 2004, providing digital access to over 700 services (20% of which are fully transactional). *(3) Tax Administration & Technology*. In the tax area, personal and corporate income taxes are fully transactional over the Internet, as is the VAT, accessed at: http://www.e-financas.gov.pt/. Customs is similarly established as a fully transactional, digital system, accessed at: http://www.e-financas.gov.pt/de/jsp-dgaiec/msin.jsp. The Portuguese tax system is benchmarked at "stage 4" compliance. *Id.* at 438-39, 441, 444, 450-51 & 454-55.

Slovakia. *(1) Smart ID Cards*. There is currently no central e-ID infrastructure in Slovakia, but the government has announced plans to introduce high-tech ID's and passports, likely with multiple biometric identifiers. The e-ID cards will incorporate digital signatures. The passports issued as of April 2005 are "biometric-ready," with facial identifiers incorporated by September 2006 and fingerprint scans by March 2008. *(2) Electronic Portal*. The current electronic portal, accessed at: http://www.Obcan.sk, provides basic information on public services. It allows users to locate government officials who can help resolve a problem. A new central government portal (currently in the design stage) will offer more transactional services. *(3) Tax Administration & Technology*. In the tax area, a secure national tax portal "e-Tax" was made available March 7, 2005. The personal and corporate income tax is fully transactional for holders of the government guaranteed electronic signature, accessed at: http://www.drsr.sk/. VAT transactions can be handled at the same site, but functionality is limited to downloadable forms. The Customs Administration web site only provides information, accessed at: http://www.colnasprava.sk/. Thus, the Slovakia tax system is benchmarked at "stage 4" for income tax, "stage 2" for VAT, and "stage 1" for the customs administration. *Id.* at 459-60, 469-70, & 474-75.

Slovenia. *(1) Smart ID Cards*. A Public Key Infrastructure (PKI) has been deployed in Slovenia, and four certification authorities have been accredited. An e-ID card project has been launched, but is not yet operational. *(2) Electronic Portal*. In May 2006 a government-wide portal for e-services (eSJU) was launched, the Tax Administration had previously (March 1, 2004) established a dedicated tax portal "eDavki" (eTaxes). The Slovenian General Certification Authority (SIGEN-CA) began operation on July 9, 2001 and began issuing qualified digital certificates for natural and legal persons. *(3) Tax Administration & Technology*. In the tax area, personal and corporate income as well as VAT taxpayers can participate in a fully transactional digital interface with the government through the Internet, accessed at: http://edavki.durs.si/. The Customs Administration however only has forms available for download on the Internet, accessed at: http://carina.gov.si/. The Slovenian tax system is generally benchmarked at "stage 4" (income tax and VAT). Customs is benchmarked at "stage 2." *Id.* at 479-81, 490-91, & 494-95.

Spain. *(1) Smart ID Cards*. The Spanish government officially approved the creation and distribution of new e-ID cards containing biometric identifies (after pilot testing) on

February 13, 2004. The e-ID card was to be implemented in phases with distribution beginning in 2005. However, the pilot project was delayed until 2006, and card distribution is now expected in late 2007. The Electronic National Identity Document (DNI) project was initiated in 2001 to facilitate the use of digital signatures and digital identities (assigned by the Spanish Certification Authority (CERES)). The e-ID cards will permit digital signatures as well as provide biometric and other basic identification data. *(2) Electronic Portal*. Launched in September 2001, and revamped in May 2003 the portal, http://www.Administracion.es, is a gateway to information and services. As of October 2003 it provides a secure government notification service. As part of "Plan Conecta" for the development of e-government services (2004-2007) a new portal will be established: http://www.Ciudadano.es. Interactive and transactional services will be available on this portal. *(3) Tax Administration & Technology*. In the tax transactional and interactive services are already available in personal and corporate income taxes as well as VAT and customs. The regimes are in a fully transactional digital medium, accessed at: https://aeat.es/. The customs functionality is at https://aeat.es/aeatse.html?https://aeat.es/aduanet/aduanaie.html. The Spanish tax system is benchmarked at "stage 4" compliance. *Id.* at 499-00, 502, 504, 506, 511-12, & 515-1.

Sweden. *(1) Smart ID Cards*. Biometric passports and biometric e-ID's (nationellt identitetskort) were issued in Sweden on October 1, 2005. The passport has an RFID (Radio Frequency Identification) microchip. The e-ID is not mandatory, but functions as a valid travel document within the Schengen area. The biometric identifier is a digital facial image. The documents contain a traditional chip that permits secure access to e-government services. Swedish citizens can continue to use (for the time being) non-official electronic ID cards issued by the Swedish Post, that are based on standards approved in 1998 by the Swedish Standards Institute to access some government services as well as software based e-ID's (in particular the BankID developed by the largest Swedish banks.) *(2) Electronic Portal*. Launched in October 2004 the new Swedish e-government portal http://www.Sverige.se is not intended to be a single point of entry to the public sector. Instead it is an "intentions-based" orientation point for individuals looking for links to public sector sources of information and services. *(3) Tax Administration & Technology*. The tax administration sites are more transactional. Personal and corporate income tax as well as VAT obligations can be satisfied in fully transactional digital mediums, accessed at: http://skatteverket.se/. Similar full transactional digital access is available tin customs area, accessed at: http://www.tullverket.se/. Thus the whole Swedish tax system is benchmarked at "stage 4" compliance. *Id.* at 520, 526, 531-32, & 536-37.

United Kingdom. *(1) Smart ID Cards*. The e-ID card is controversial in the UK. Initially proposed by the government on November 11, 2003, an e-ID card bill [linking the e-ID database with the e-passport database] was introduced to Parliament in November 2004. The bill passed the House of Commons (February 10, 2005), but was not voted on by the House of Lords. It was re-introduced on May 25, 2005, passed the House of Commons (October 18, 2005), but the House of Lords uncoupled the e-ID from the e-passport database, thereby making significant portions of the e-ID data voluntary. This is unacceptable to the government, and the bill will be reintroduced. The government would prefer e-ID cards with a microchip for storing personal data along with biometric identifiers (facial, fingerprint and iris scan) and an electronic signature. Distribution has been anticipated by 2008. Thus, the current e-ID infrastructure in the UK is based on either a digital certificate issued by an accrediting certification authority or through a user ID issued by the Government Gateway along with a password (chosen by the user). The Government Gateway was launched in February 2001. It is a central registration and authentication engine that enables secure authenticated e-government transactions over the Internet. On June 15, 2004 a biometric iris scan border control system was put in place at key airports to efficiently identify regular travelers and foreign work permit holders. *(2) Electronic Portal*. Launched in March 2004 http://www.Direct.gov.uk is the UK government's citizen portal. It is a single point of entry to government services. Since April 2004 the site is available via digital TV sets (10 million in the UK). *(3) Tax Administration & Technology*. In the tax area, personal income tax [http://www.hmrc.gov.uk/individuals/tmaself-assessment.html] and corporate income tax [http://www.hmrc.gov.uk/ctsa/index.html], VAT [http://customs.hmrc.gov.uk] and customs [http://www.hmrc.gov.uk/online] obligations can be satisfied though a full transactional digital interface with the government over the Internet. The U.K. tax system is benchmarked at "stage 4" compliance. *Id.* at 541, 543-44, 554, 561, 563, & 567-68.

APPENDIX B

Alabama: *Tax Administration & Technology.* Alabama is a "stage 3" benchmarked jurisdiction. (1) Comprehensive web-based tax information is provided. (2) Forms documents and instructions are available on the web and can be downloaded at http://www.ador.state.al.us. (3) All sales and use tax returns are required to be filed electronically (ALA. ADMIN. CODE r. 810-1-6-.12(2)). Persons who are unable to utilize the electronic filing system must use the Department's telephone voice response system (ALA. ADMIN. CODE r. 810-1-6-.12(3)). In certain circumstances, a waiver is available from the Commissioner to file in another approved manner. Alabama uses an internet based system for filing returns and accepting tax payments. All taxpayers may pay electronically, but those with over $25,000 in liability are required to pay electronically (ALA. ADMIN. CODE r. 810-13-1-.01; ALA. ADMIN. CODE r 810-13-1-.20). (4) All ruling requests must be submitted in writing. No provision is made for electronic filing of these requests (ALA. CODE § 40-2A-5.(e)(1975)). In addition, because there is no provision for digital case handling, decision, and delivery functions, the system is not fully transactional.

Arizona: *Tax Administration & Technology.* Arizona is a "stage 3" benchmarked jurisdiction. (1) Comprehensive web-based tax information is provided. (2) Forms documents and instructions are available on the web and can be downloaded at http://www.revenue.state.az.us. (3) Taxpayers may voluntarily file returns on line but must first register at http://www.AZTaxes.gov and are required to supply the state with a signature card (on paper) (ARIZ. ADMIN. CODE § R 15-10-504(A)(2); ARIZ. ADMIN. CODE § R 15-10-502). An electronic funds transfer system is in place, requiring registration and use of ACH debit (and in certain circumstances allowing ACH credit (ARIZ. ADMIN. CODE § R 15-10-301-07). Electronic return preparers must maintain paper documents (ARIZ. REV. STAT. § 42-1105(F)) that would otherwise be sent to the Department of Revenue for six years following the later of the return's due date or filing date. (ARIZ. ADMIN. CODE § R 15-10-502(B)). (4) All ruling requests must be submitted in writing. No provision is made for electronic filing of these requests (ARIZ. REV. STAT. § 42-2101). In addition, because there is no provision for digital case handling, decision, and delivery functions, the system is not fully transactional.

Arkansas. *Tax Administration & Technology.* Arkansas is a "stage 2" benchmarked jurisdiction. (1) Comprehensive web-based tax information is provided. (2) Forms documents and instructions are available on the web and can be downloaded at http://www.arkansas.gov/dfa/excise_tax_v2/et_su_forms.html. (3) The Commissioner is authorized to allow electronic filing of returns (ARK. CODE ANN. § 26-18-301), and has done so. These returns can be filed at https://www.ark.org/dfa/artax/salestax/index.php. There are significant signature requirements in Arkansas that have paper-based requirements. Form AR8453OL needs to be filed with the Arkansas Department of Revenue to support electronic filings. (ARK. Reg. 2000-2(1) (E) & (F) & 5(A)). An electronic funds transfer system is in place and is required for all taxpayer with liabilities in excess of $20,000 (ARK. CODE ANN. § 26-19-104 & 105(a)(1); ARK. Reg. 2000-5). (4) All ruling requests must be submitted in writing. No provision is made for electronic filing of these requests, and all correspondence outside of the prescribed ruling request format are not binding (ARK. REG. § GR-75 & 76) *available at* http://www.arkansas.gov/dfa/rules/et1992_4.pdf. The Arkansas system is neither fully transactional, nor is it two-way interactional due to the paper-based signature requirements.

California. *Tax Administration & Technology.* California is a "stage 2" benchmarked jurisdiction. (1) Comprehensive web-based tax information is provided. (2) Forms documents and instructions are available on the web and can be downloaded at http://www.boe.ca.gov. (3) The California State Board of Equalization (SBE) launched its free electronic filing or "BOE-File" service for California sales and use tax returns of eligible taxpayers in 2005. It can be accessed under "E-file" at www.boe.ca.gov. Electronic filing of sales and use tax returns has been available since 2001 through third party service providers that charged fees ranging from $4.95 to $9.95. (CAL. REV. & TAX CODE § 6452; *News Release*, No. 63-C, Cal. State Board of Equalization, Sept. 20, 2005). An electronic funds transfer system is available, and is mandatory for taxpayers with an estimated tax liability of $10,000 per month (CAL. REV. & TAX CODE § 6479.3). There are some unusual aspects to e-filing in California which make it not a "stage 3" jurisdiction: (a) e-filing is limited to taxpayers who file Form BOE-401-A, with Schedule A only; or Form BOE-401-EZ, and who conduct business at a single location, and (b) e-filing is not allowed for taxpayers required to make prepayments or to pay taxes by electronic funds transfer (EFT). (CA. SBE TAX INFO. BULL. No. 12-1-05 (Dec. 1, 2005). (4) A person can request an opinion on the application of sales or use tax. These opinions are not rulings and are not issued or allowed to be requested electronically (CAL. REV. & TAX CODE § 6596; CAL. CODE REGS. REV. & TAX 1705(B)(1)). In addition, because there is no provision for digital case handling, decision, and delivery functions, the system is not fully transactional.

Colorado. *Tax Administration & Technology.* Colorado is a "stage 2" benchmarked jurisdiction. (1) Comprehensive web-based tax information is provided. (2) Forms documents and instructions are available on the web and can be downloaded at http://www.revenue.state.co.us/main/home.asp. (3) The executive director is authorized to prescribe (through rules and regulations) voluntary alternative methods for the making, filing, signing, subscribing, verifying, transmitting, receiving, or storing of returns (COLO. REV. STAT. § 39-21-120(1) & (3)). Although there are provisions for electronic filing of personal income tax and fuel tax, the is no authorization for e-filing sales and use taxes (COLO. REV. STAT. §§ 39-22-604960; 39-27-105). An exception is available for "zero" returns, sales and use tax returns where no tax is due. These returns may be filed electronically at http://www.taxview.state.co.us/zero/. Colorado has provisions for electronic payments on the main web site, and has a mandatory EFT program for taxpayers owing more than $75,000 that was put in place January 1, 2002 (COLO. REV. STAT. § 39-26-105(5); COLO. CODE REGS. § 39-26-105.5; COLO. PUB. DRP-5782). (4) There is currently no private letter ruling process in Colorado, although one had bee considered in 1999. Technically, the statutes only allows for an administrative hearing before the Director to produce a "ruling by the Director". (COLO. DEP'T. REV. ANNUAL LIAISON MEETING WITH CPA SOC., BAR ASSOC. ENROLLED AGENTS & PUBLIC

ACCOUNTANTS (Nov. 18, 1999). There is no provision for digital case handling, decision, and delivery functions. Thus, the Colorado system is neither fully transactional, nor is it two-way interactional.

Connecticut. *Tax Administration & Technology.* Connecticut is a "stage 3" benchmarked jurisdiction. (1) Comprehensive web-based tax information is provided. (2) Forms documents and instructions are available on the web and can be downloaded at http://www.ct.gov/DRS/site/default.asp. (3) The Commissioner is authorized (by providing notice in the return instructions) to allow the filing on any tax return through any technology on an ongoing basis as that technology develops (CONN. AGENCIES REGS. § 12-690-1; CONN. GEN. STAT. § 12-690). This notice has been provided for the sales and use tax through the Department of Revenue's web site. EFT is available for persons who file sales or use tax return on a monthly or quarterly basis, and can be required by the Commissioner in instances where the prior year's liability exceeded $10,000 (CONN. GEN. STAT. § 12-686(a)(1)). (4) All ruling requests must be submitted in writing. No provision is made for electronic filing of these requests (CONN. GEN. STAT. § 12-2(a)(2); CONN. POLICY. STAT. 2000(7) PROCEDURES IN HANDLING REQUESTS FOR ISSUANCE OF RULINGS). In addition, because there is no provision for digital case handling, decision, and delivery functions, the Connecticut system is not fully transactional.

District of Columbia. *Tax Administration & Technology.* The District of Columbia is "almost a stage 3" benchmarked jurisdiction. (1) Comprehensive web-based tax information is provided. (2) Forms documents and instructions are available on the web and can be downloaded at http://otr.cfo.dc.gov/otr/site/default.asp. (3) Any registered taxpayer is allowed to file electronically (D.C. MUN. REGS. 105.11). This is a requirement for bulk filers, and taxpayers whose liability exceeds $25,000. Any tax payment may be made electronically (D.C. Code Ann. § 47-4402(c); D.C. MUN. REGS. 105.11). This system is not fully digital as the registration process requires a form to be downloaded at http://www.taxpayerservicecenter.com/GetStarted.jsp, and the completed form mailed to the address indicated. The tax office will then mail the taxpayer a user ID and password providing access to the eTSC site. After this process is completed, the site can be used to view the taxpayer's accounts, file monthly sales and use tax returns, and make monthly payments (OFFICE OF TAX & REV., NOTICE REGARDING ELECTRONIC FILING REQUIREMENTS (Jan. 15, 2004)). (4) All ruling requests must be submitted in writing. No provision is made for electronic filing of these requests on the D.C. web site. In addition, because there is no provision for digital case handling, decision, and delivery functions, the District of Columbia system is not fully transactional.

Florida. *Tax Administration & Technology.* Florida is "almost a stage 3" benchmarked jurisdiction. (1) Comprehensive web-based tax information is provided. (2) Forms documents and instructions are available on the web and can be downloaded at http://www.myflorida.com/dor/gta.html. (3) Any registered taxpayer is allowed to file electronically (FLA. STAT. ANN. §§ 212.11(1)(f)(1) & 202.30; FLA. ADMIN. CODE ANN. r. 12-24.003) but those filing a zero return, or a combined return, or who have multiple business locations in the state, or who have a liability exceeding $30,000 are required to file and pay electronically. All taxpayers may pay electronically, but those required to file electronically are also required to pay electronically through EFT (FLA. STAT. ANN. §§ 213.755; FLA. TAX INFO. PUB. No. O1A01-14 (Oct. 8, 2001)). This system is not fully digital. To begin filing electronically, taxpayers must complete (signature required) the Registration/Authorization Form (Form DR-600F) and the Electronic Filing Agreement (Form DR-653) and mail them to the Department. (4) All ruling requests must be submitted in writing (FLA. ADMIN. CODE ANN. r. 12-11.003(1)). No provision is made for electronic filing of these requests on the Florida web site. In addition, because there is no provision for digital case handling, decision, and delivery functions, the Florida system is not fully transactional.

Georgia. *Tax Administration & Technology.* Georgia is "almost a stage 3" benchmarked jurisdiction. (1) Comprehensive web-based tax information is provided. (2) Forms documents and instructions are available on the web and can be downloaded at http://www.etax.dor.ga.gov/salestax/st3forms/st3_indx.shtml. (3) In July 2006, Georgia expanded its e-File and e-Pay Program to include sales and use taxes (GA. IMPORTANT BULLETINS, May 2006). Taxpayers are required to file electronically if they are required to pay sales and use tax by electronic funds transfer (EFT). The e-File and e-Pay Program will also be available if taxpayers want to voluntarily file and pay electronically (GA. COMP. R. & REGS. r. 560-3-2-.26(5)). Electronic funds transfer must be used when the liability in connection with any return, report, or document exceeds $10,000 (GA. CODE ANN. § 48-2-32; GA. COMP. R. & REGS. r. 560-3-2-.26). This system is not fully digital. Payments are made through ACH debit or ACH credit after submission of paper forms (GA. FORM EFT 001; GA. FORM EFT 002) to the tax authority (GA. COMP. R. & REGS. r. 560-3-2-.26(3)(b) & (c)). (4) All ruling requests must be submitted in writing (GA. COMP. R. & REGS. r. 560-3-1-.04). No provision is made for electronic filing of these requests on the Florida web site. In addition, because there is no provision for digital case handling, decision, and delivery functions, the Florida system is not fully transactional.

Hawaii. *Tax Administration & Technology.* Hawaii is a "stage 3" benchmarked jurisdiction. (1) Comprehensive web-based tax information is provided. (2) Forms documents and instructions are available on the web and can be downloaded at http://www.ehawaiigov.org/efile. (3) As of 2002 the Internet filing program of the Hawaii Department of Taxation was expanded to the general excise (sales) and use tax return and reconciliation. HAW. TAX NEWS, 6:1 (Haw. Dept. of Taxation, Spring 2002). Statute authorizes the filing of tax returns and other tax-related documents by electronic, telephonic, or optical means (HAW. REV. STAT. § 231-8.5). Tax payments are accepted through various electronic media (HAW. REV. STAT. § 231-9.9). The program is mandatory for anyone with an annual tax liability exceeding $100,000. Persons not required to pay tax electronically may request permission to do so (HAW. ADMIN. CODE, No 18-231-9.9-03). Upon the issuance of regulations, the Department of Taxation will be able to accept tax payments by credit card or debit card (HAW. REV. STAT. § 231-9.4). (4) Written rulings are issued to taxpayers (HAW. REV. STAT. § 231-19.5) only on written request (HAW. ADMIN. CODE, No 18-231-19.5-08). No provision is made for electronic filing of these requests. In addition, because there is no provision for digital case handling, decision, and delivery functions, the Hawaii system is not fully transactional.

Idaho. *Tax Administration & Technology*. Idaho is a "stage 3" benchmarked jurisdiction. (1) Comprehensive web-based tax information is provided. (2) Forms documents and instructions are available on the web and can be downloaded at http://www.tax.idaho.gov/. (3) The State Tax Commission established rules for the filing of tax returns and other documents via electronic transmission (IDAHO CODE § 63-113). The system is voluntary, and available for anyone filing an Idaho return (IDAHO CODE § 63-115). Filing and payment of taxes must be made by electronic funds transfer when the amount due is $100,000 or greater (IDAHO CODE § 67-2026). The method of electronic funds transfer must be made through the automated clearing house system (ACH) operated by the federal reserve by the ACH debit or ACH credit method (IDAHO CODE § 67-2026). (4) Written rulings are issued to taxpayers (IDAHO CODE § 67-5255) only on written request (IDAHO CODE § 63-105). No provision is made for electronic filing of these requests. In addition, because there is no provision for digital case handling, decision, and delivery functions, the Idaho system is not fully transactional.

Illinois. *Tax Administration & Technology.* Illinois is a "stage 2" benchmarked jurisdiction. (1) Comprehensive web-based tax information is provided. (2) Even though forms documents and instructions are available on the web and can be downloaded at http://www.revenue.state.il.us/, their electronic use is limited. (3) E-filing is voluntary in Illinois, and limited to two sales and use tax forms, Form ST-1 (Sales and Use Tax Return) and Form ST-2 (Multiple Site attachment for Form ST-1). Illinois intends to eventually allow more extensive filing of returns and other documents (20 ILL. COMP. STAT. ANN. 2505/39c-1a; ILL. ADMIN. CODE tit. 86, § 760.100). Participation in the e-filing program results in a requirement that all associated payments must be made through electronic means (ILL. ADMIN. CODE tit. 86, § 760.220). Taxpayers with an annual tax liability of $200,000 or more must make all payments by electronic funds transfer. An annual tax liability is the sum of the taxpayer's liabilities reported on Form ST-1, Sales and Use Tax Return (20 ILL. COMP. STAT. ANN. 2505/2505-210; 35 ILL. COMP. STAT. ANN. 120/3; 35 ILL. COMP. STAT. ANN. 115/9; 35 ILL. COMP. STAT. ANN. 110/9). Not all taxpayers may pay electronically. Currently, the Department of Revenue is accepting voluntary electronic funds transfer payments of the following: ART-1, Automobile Rental Occupation and Use Tax Return (payment only); PST-1, Prepaid Sales Tax Return (payment only); PST-3, Prepaid Sales Tax Quarter-Monthly Payment (for accelerated sales tax filers); RR-3, Sales and Use Tax Quarter-Monthly Payment (for accelerated sales and use tax filers). (ILL. ADMIN. CODE tit. 86, § 750.500(e)). (4) Written rulings are issued to taxpayers only on written request (20 ILL. COMP. STAT. ANN. 2515/3; 5 ILL. COMP. STAT. ANN. 100/5-145; ILL. ADMIN. CODE tit. 86, § 1200). No provision is made for electronic filing of these requests. In addition, because there is no provision for digital case handling, decision, and delivery functions, the Illinois system is not fully transactional.

Indiana. *Tax Administration & Technology.* Indiana is a "stage 3" benchmarked jurisdiction. (1) Comprehensive web-based tax information is provided. (2) Forms documents and instructions are available on the web and can be downloaded at http://www.in.gov/dor/. (3)

Since 1998 the Indiana Department of Revenue has offered an electronic tax-filing program for retail sales and use taxes. Taxpayers are able to send tax returns and payments in a single transaction by using a compatible personal computer with a modem and a computer program named IN-S.I.T.E. The computer program and filing service are provided free of charge and are available to single return taxpayers or service providers (IND. TAX DISPATCH, Ind. Dept of Rev., 1:3 (Aug., Sept., Oct. 1998). E-payments are mandatory if estimated monthly sales and use tax liability exceeds $10,000 (IND. CODE § 6-2.5-6-1(g)). However, if a sales and use tax payment is made by electronic funds transfer, the taxpayer is not required to file a monthly return (IND. CODE § 6-2.5-6-1(h)). (4) Written rulings are issued to taxpayers, but only on written request. Even though the Commissioner has authority to do so through regulation (IND. CODE § 6-8.1-6-7), no provision is made for electronic filing of these requests. In addition, because there is no provision for digital case handling, decision, and delivery functions, the Indiana system is not fully transactional.

Iowa. *Tax Administration & Technology.* Iowa is a "stage 3" benchmarked jurisdiction. (1) Comprehensive web-based tax information is provided. (2) Forms documents and instructions are available on the web and can be downloaded at http://www.state.ia.us/tax/. (3) Businesses that are registered to collect Iowa sales or use tax must use the e-File & Pay system. Iowa sales and retailer's use taxes became available on e-File & Pay in July 2005, and consumer's use tax was added on October 1, 2005. The e File & Pay system allows taxpayers to file their return information by telephone or via the Internet. Paper returns will no longer be available. Tax payments are remitted electronically through e File & Pay. (IOWA TAX E-NEWS, Iowa Dept. of Rev., Mar. & June 2005). (4) Written rulings are issued to taxpayers, but only on written request (IOWA ADMIN. CODE r. 701-7.56(421). No provision is made for electronic filing of these requests. In addition, because there is no provision for digital case handling, decision, and delivery functions, the Iowa system is not fully transactional.

Kansas. *Tax Administration & Technology.* Kansas is a "stage 3" benchmarked jurisdiction. (1) Comprehensive web-based tax information is provided. (2) Forms documents and instructions are available on the web and can be downloaded at http://www.ksrevenue.org/. (3) All Kansas sales and use tax returns can be filed through this web site. A taxpayer whose total sales tax liability exceeds $100,000 in any calendar year must remit tax payments by electronic funds transfer by the due date (KAN. STAT. ANN. § 75-5151). All remittances required under the retailers' sales tax act and the compensating (use) tax act, may be made to the Department of Revenue utilizing either ACH (Automated Clearing House) Credit or Debit procedures (KAN. REV. DEP'T. PUB. NOTICE No. 04-11 (Nov. 2, 2004). (4) Any person required to collect sales tax as a retailer may request a letter ruling seeking clarification of a tax issue (KAN. STAT. ANN. § 79-3646; KAN. ADMIN. REGS. 92-19-59). No provision is made for electronic filing of ruling requests. In addition, because there is no provision for digital case handling, decision, and delivery functions, the Kansas system is not fully transactional.

Kentucky. *Tax Administration & Technology.* Kentucky is a "stage 2" benchmarked jurisdiction. (1) Comprehensive web-based tax information is provided. (2) Forms,

documents and instructions are available on the web and can be downloaded at http://revenue.ky.gov/.
(3) Kentucky has allowance for electronic filing and payment, but the provisions are not comprehensive. Taxpayers holding a valid sales and use tax permit may file Kentucky sales tax returns electronically, but not use tax returns. Payments may also be made using E-check or credit card, in addition to debit card, electronic funds transfer (EFT), and regular check. Once a taxpayer begins filing electronically, paper returns will no longer be sent to the taxpayer. The filing system is not completely digital as amended returns must be filed on paper with "Amended" printed or stamped at the top of the return. (KY. REV. STAT. ANN. § 45.345; KY. SALES TAX FACTS, 5:1 (Dec. 2003); KY E-TAX FAQ'S, Ky. Rev. Cabinet. (Jan. 2004). EFT is required when payments exceed $10,000, or when aggregate filings are for 100 or more taxpayers. (KY. REV. STAT. ANN. § 131.155). (4) Kentucky does not have a provision for ruling requests in sales and use tax. No provision is made for electronic ruling requests. In addition, because there is no provision for digital case handling, decision, and delivery functions, the Kentucky system is not fully transactional.

Louisiana. *Tax Administration & Technology.* Louisiana is a "stage 3" benchmarked jurisdiction. (1) Comprehensive web-based tax information is provided. (2) Forms, documents and instructions are available on the web and can be downloaded at http://www.rev.state.la.us/. (3) Louisiana permits electronic returns and e-payments on voluntary basis and requires e-returns and e-payments for amounts over $10,000 (reduced to $5,000 after 2007) (LA. REV. STAT. ANN. § 47:1519; LA. ADMIN. CODE tit. 61, § 4910). (4) Any person required to collect sales tax as a retailer may request a letter ruling seeking clarification of a tax issue (LA. ADMIN. CODE tit. 10, § 101). No provision is made for electronic filing of ruling requests. In addition, because there is no provision for digital case handling, decision, and delivery functions, the Louisiana system is not fully transactional.

Maine. *Tax Administration & Technology.* Maine is a "stage 3" benchmarked jurisdiction. (1) Comprehensive web-based tax information is provided. (2) Forms, documents and instructions are available on the web and can be downloaded at http://www.maine.gov/revenue/. (3) Maine permits electronic returns and e-payments on voluntary basis of all returns through the Maine Automated Tax System (MATS) (ME. TAX ALERT, Bureau of Taxation, Oct. 1993) and requires e-returns and e-payments for amounts over $400,000 (CODE ME. R. § 102). (4) Any person required to collect sales tax as a retailer may request a letter ruling seeking clarification of a tax issue (ME. REV. STAT. ANN. tit. 36, § 112). No provision is made for electronic filing of ruling requests. In addition, because there is no provision for digital case handling, decision, and delivery functions, the Maine system is not fully transactional.

Maryland. *Tax Administration & Technology.* Maryland is a "stage 3" benchmarked jurisdiction. (1) Comprehensive web-based tax information is provided. (2) Forms, documents and instructions are available on the web and can be downloaded at http://www.comp.state.md.us/. (3) E-filing is generally available in Maryland to businesses collecting sales and use taxes. EFT is also voluntary, but required for businesses with a tax liability in excess of $10,000 MD. CODE ANN. §13-104(A)(1); MD. CODE ANN. §2-105(3)). E-returns and e-payments are linked. A person making tax payments using the ACH credit, ACH debit, direct debit, or wire transfer method cannot file a corresponding (paper) return or report if the payment was for a Sales and Use Tax Report (COM/RAD-098), (MD. REGS. CODE § 03.01.02.05(B)(4). (4) The Comptroller is authorized to adopt reasonable regulations for the administration of the sales and use taxes (including letter rulings) (MD. CODE ANN. §2-103; MD. REGS. CODE 03.01.01.03). No provision is made for electronic filing of ruling requests. In addition, because there is no provision for digital case handling, decision, and delivery functions, the Maryland system is not fully transactional.

Massachusetts *Tax Administration & Technology.* Massachusetts is a "stage 3" benchmarked jurisdiction. (1) Comprehensive web-based tax information is provided. (2) Forms, documents and instructions are available on the web and can be downloaded at http://www.dor.state.ma.us/. (3) The Commissioner is authorized to establish procedures providing for the payment, refund, or abatement of taxes, interest, or penalties by the electronic transfer of funds (MASS GEN. LAWS ch. 62C, § 78; MASS GEN. LAWS ch. 62C, § 5) and has done so. These voluntary options are mandatory if tax liabilities (including income, excise, room occupancy meals and telecommunications) exceed $10,000 in the preceding calendar year. Other thresholds apply. Once the taxpayer is required to file and pay electronically for one year all subsequent returns must also be filed and payments made electronically (MA. TECH. INFO. REL. Nos. 04-30 (Oct. 26, 2004); 03-11 (July 1, 2003); 02-22 Nov. 25, 2002)). All new businesses that are required to register with the Massachusetts Department of Revenue on or after September 1, 2003, must use electronic means to file certain returns and make tax payments (MA. TECH. INFO. REL. Nos. 04-30 (Oct. 26, 2004). (4) Any person required to collect sales tax as a retailer may request a letter ruling seeking clarification of a tax issue (MASS. REGS. CODE tit. 830, § 62C.3.2). No provision is made for electronic filing of ruling requests. In addition, because there is no provision for digital case handling, decision, and delivery functions, the Massachusetts system is not fully transactional.

Michigan. *Tax Administration & Technology.* Michigan is a "stage 2" benchmarked jurisdiction. (1) Comprehensive web-based tax information is provided. (2) Forms, documents and instructions are available on the web and can be downloaded at http://www.michigan.gov/treasury. (3) There is currently no provision for the Michigan sales and use tax return to be filed electronically, although there is authority for electronic funds transmission of taxes due. EFT payment obligations vary. For example, a retailer or other business that had a total Michigan sales and use tax liability (after certain subtractions) in the previous calendar year of $720,000 or more must remit to the Department, by electronic funds transfer (EFT) an amount equal to 50% of the tax liability (MICH. COMP. LAWS §§ 205.56(3); 205.96(3)). (4) Any person required to collect the sales tax as a retailer may request a letter ruling seeking clarification of a tax issue (MICH. ADMIN. BUL. 1989-34). No provision is made for electronic filing of ruling requests. In addition, because there is no provision for digital case handling, decision, and delivery functions, the Michigan system is not fully transactional.

Minnesota. *Tax Administration & Technology.* Minnesota is a "stage 3" benchmarked jurisdiction. (1) Comprehensive web-based tax information is provided. (2) Forms, documents and instructions are available on the web and can be downloaded at http://www.taxes.state.mn.us/. (3) Sales and use tax returns and most other business tax return information must be filed electronically via the Internet, computer-to-computer, telephone, and other electronic methods. (MINN. SALES TAX NEWSLETTER, Minnesota Department of Revenue (Dec. 1999)). Payment through EFT is voluntary, however, taxpayers with $20,000 or more of sales and use tax liability in the state's fiscal year ending June 30, 2005, must pay their tax electronically for payments due in calendar year 2006. Taxpayers with $10,000 or more of sales and use tax liability in the state's fiscal year ending June 30, 2006, must pay their tax electronically beginning with payments due in calendar year 2007 (MINN. STAT. § 289A.20(4)). (4) Minnesota has no provision for letter rulings either in paper or electronic form. In addition, because there is no provision for digital case handling, decision, and delivery functions, the Minnesota system is not fully transactional.

Mississippi. *Tax Administration & Technology.* Mississippi is a "stage 3" benchmarked jurisdiction. (1) Comprehensive web-based tax information is provided. (2) Forms, documents and instructions are available on the web and can be downloaded at http://www.mstc.state.ms.us/. (3) The Tax Commission requires sales and use taxpayers to who have liabilities over $20,000 or more to wire transfer funds through the Federal Reserve System or another approved electronic payment medium (MISS. CODE ANN. §§ 27-3-81 & 27-3-83; MISS. RULE 4). Through Rule 4 the Commission notifies in writing certain taxpayers and their agents (180 days in advance) that they are required to e-file and e-pay. Although the e-file and e-pay option is open to all taxpayers the Commission has determined that this approach would provide a gradual shift to full digital filing. (4) Any person required to collect sales tax as a retailer may request a letter ruling from the Department of Revenue requesting clarification of a tax issue (MISS. TAX COMM. ADMIN. PRACTICES & PROCEDURES Pt. 1, §108.03; MISS RULE 1). No provision is made for electronic filing of ruling requests. In addition, because there is no provision for digital case handling, decision, and delivery functions, the Mississippi system is not fully transactional.

Missouri. *Tax Administration & Technology*. Missouri is a "stage 2" benchmarked jurisdiction. (1) Comprehensive web-based tax information is provided. (2) Forms, documents and instructions are available on the web and can be downloaded at http://www.mstc.state.ms.us/. (3) Missouri provides a limited means for electronic filing of sales and use tax returns. It also facilitates the payment of sales and use taxes through electronic means. Because e-filing is limited to zero-returns (returns with zero gross receipts and zero tax liability) a full paper returns is still required for all taxpayers paying electronically. (MO. FORM 4789 INSTRUCTIONS – SALES TAX DETAILED INSTRUCTIONS AND INFORMATION BOOK (REV. 11-2005)). In addition, the Missouri web site provides that,

> Monthly, quarterly, or annual filers of sales and use tax returns can pay the amount due of a *currently filed* return by using this payment option. The Missouri Department of Revenue will still require a paper form of the tax

return. This payment option is only available to sales and use tax filers with an open account. Filers must enter the following information:

Missouri Tax ID

File period

Amount due for the *currently filed period*

This payment does *not* constitute filing of a Sales Tax Return (voucher form or Form 53-1) or a Use Tax Return (Form 53U-1). A paper filing of your sales and/or use tax returns are still required. (http://www.dor.mo.gov/tax/business/payonline.htm)

(4) Any person required to collect sales tax as a retailer may request a letter ruling from the Department of Revenue requesting clarification of a tax issue (MO. CODE REGS. ANN. tit. 12, §1-1.020). No provision is made for electronic filing of ruling requests. In addition, because there is no provision for digital case handling, decision, and delivery functions, the Missouri system is not fully transactional.

Nebraska. *Tax Administration & Technology.* Nebraska is a "stage 3" benchmarked jurisdiction. (1) Comprehensive web-based tax information is provided. (2) Forms, documents and instructions are available on the web and can be downloaded at http://www.revenue.state.ne.us/. (3) The Tax Commissioner has authority to accept electronically filed applications, returns, and other documents (NEB. REV. STAT. § 77-1784(1)), and has the authority to require payment through electronic means (NEB. REV. STAT. § 77-1784(2)). Through its web site, the Commissioner has set out the rules for e-filing and e-payment of sales and use taxes. All taxpayers may use electronic processing. Electronically filed returns are given the same legal status as paper returns (NEB. REV. STAT. § 77-1784(6)). E-filing and e-payment are mandatory if tax amounts due exceed $20,000 (NEB. REV. STAT. § 77-1784). (4) Nebraska has no provision for taxpayer to request a letter ruling seeking clarification of a sales and use tax issue. No provision is made for electronic filing of such a request. In addition, because there is no provision for digital case handling, decision, and delivery functions, the Missouri system is not fully transactional.

Nevada. *Tax Administration & Technology.* Nevada is a "stage 2" benchmarked jurisdiction. (1) Comprehensive web-based tax information is provided. (2) Forms, documents and instructions are available on the web and can be downloaded at http://www.revenue.state.ne.us/. (3) Nevada is in the process of adding e-filing capabilities on its web site (July 7-27, 2006), but currently has functionality only for e-payments (NEV. UNCODIFIED REG., LCB File No. R062-05). When completed, all taxpayers will be able to file on-line by affixing the taxpayer's electronic signature to an e-return. E-payments may be submitted only by ACH debit or ACH credit. If a return is submitted electronically but payment is mailed, a copy of the printout of the electronic return confirmation page must be submitted with the payment and must be postmarked by the return due date (NEV. ADMIN. CODE § 360.22 (R062-05); NEV. ADMIN. CODE § 360.23 (R062-05). (4) Nevada provides that taxpayers seeking advice may request a letter ruling clarifying a sales and use tax issue (NEV. REV. STAT. ANN. §§ 372.725: 374.725). No provision is made for electronic filing of such a request. In addition, because there is no provision for digital case handling, decision, and delivery functions, the Nebraska system is not fully transactional.

New Jersey. *Tax Administration & Technology.* New Jersey is a "stage 3" benchmarked jurisdiction. (1) Comprehensive web-based tax information is provided. (2) Forms, documents and instructions are available on the web and can be downloaded at http://www.state.nj.us/treasury/taxation/. (3) E-filing is voluntary and mandatory. A registered sales and use taxpayer whose gross receipts for a quarter are zero may voluntarily e-file, as well as taxpayers whose gross receipts for a quarter is greater than zero, but in this instance only if the taxpayer is authorized for the electronic funds transfer program. The Director must give written approval (a) to the taxpayer with respect to payment by EFT and (b) to the method chosen for making its EFT payments (N.J. ADMIN. CODE §18:2-3.10(a)). Taxpayers that no longer desire to participate in the voluntary EFT program must give the Director written notice at least 30 days in advance of the date on which they wish to withdraw from participation in the program (N.J. ADMIN. CODE §18:2-3.10(a)). E-filing is mandatory when sales and use tax payments must be made by electronic funds transfer. EFT is mandatory when the taxpayer has a prior year liability of $10,000 or more. (N.J. STAT. ANN. § 54:48-4.1) (4) Any person required to collect sales tax as a retailer may request a letter ruling from the Regulatory Services branch of the New Jersey Division of Taxation seeking clarification of a tax issue. No provision is made for electronic filing of ruling requests. In addition, because there is no provision for digital case handling, decision, and delivery functions, the New Jersey system is not fully transactional.

New Mexico. *Tax Administration & Technology*. New Mexico is a "stage 2" benchmarked jurisdiction. (1) Comprehensive web-based tax information is provided. (2) Forms, documents and instructions are available on the web and can be downloaded at http://www.state.nm.us/tax/eser.htm. (3) Most businesses subject to the gross receipts tax may use electronic returns and payment options, but not 13th month returns, those using special rates, and all amended returns. These returns must be filed on paper forms. (*See*, "Who can use this system" at https://ec3.state.nm.us/crs-net/help/WhoUse.htm). (4) Any person required to collect sales tax as a retailer may request a letter ruling seeking clarification of a tax issue (N.M. STAT. ANN. § 9-11-6.2). No provision is made for electronic filing of ruling requests. In addition, because there is no provision for digital case handling, decision, and delivery functions, the New Mexico system is not fully transactional.

New York. *Tax Administration & Technology.* New York is a "stage 3" benchmarked jurisdiction. (1) Comprehensive web-based tax information is provided. (2) Forms, documents and instructions are available on the web and can be downloaded at http://www.tax.state.ny.us/. (3) All businesses may be voluntary participants in sales tax e-file and e-payment options. Taxpayers whose annual sales tax liability is more than $500,000.00 are required to participate. The tax is to be remitted either via electronic funds transfer or certified check (N.Y. DEP'T. OF TAX AND FINANCE., PRESS RELEASE (Nov. 20, 2001)). (4) Any person required to collect sales tax as a retailer may request an advisory opinion seeking clarification of a tax issue (N.Y. COMP. CODES R. & REGS. tit.

20 § 2376.2). No provision is made for electronic filing of ruling requests. In addition, because there is no provision for digital case handling, decision, and delivery functions, the New York system is not fully transactional. Although, through a new electronic service for sales taxes taxpayers can request a password to view or pay open assessments.

North Carolina. *Tax Administration & Technology.* North Carolina is a "stage 3" benchmarked jurisdiction. (1) Comprehensive web-based tax information is provided. (2) Forms, documents and instructions are available on the web and can be downloaded at http://www.dor.state.nc.us/. (3) All businesses may voluntarily participant in sales tax e-file and e-payment options. (N.C. DEP'T. OF REV., ONLINE FILING AND PAYMENTS, SALES AND USE TAX (Nov. 18, 2002)). (4) Any person required to collect sales tax as a retailer may request an advisory opinion seeking clarification of a tax issue (N.C. GEN. STAT. § 105-264.43). No provision is made for electronic filing of ruling requests. In addition, because there is no provision for digital case handling, decision, and delivery functions, the North Carolina system is not fully transactional.

North Dakota. *Tax Administration & Technology.* North Dakota is a "stage 3" benchmarked jurisdiction. (1) Comprehensive web-based tax information is provided. (2) Forms, documents and instructions are available on the web and can be downloaded at http://www.nd.gov/tax/. (3) North Dakota sales tax returns may be filed on the Internet using Sales Tax Webfile. Webfile is accessible on the Office of the State Tax Commissioner's website. Sales and use tax permit holders may pay the tax over the Internet using a secure WebFile system. WebFile payments are submitted by check, automated clearinghouse (ACH) debit, ACH credit (N.D. OFFICE OF THE STATE TAX COMM., SALES TAX NEWSLETTER (Mar. 2006)). (4) Any person required to collect sales tax as a retailer may request an advisory opinion from the Research and Statistics Section seeking clarification of a tax issue (N.D. CENT. CODE §§ 57-39.2-19 & 57-40.2-13). No provision is made for electronic filing of ruling requests. In addition, because there is no provision for digital case handling, decision, and delivery functions, the North Dakota system is not fully transactional.

Ohio. *Tax Administration & Technology.* Ohio is a "stage 3" benchmarked jurisdiction. (1) Comprehensive web-based tax information is provided. (2) Forms, documents and instructions are available on the web and can be downloaded at http://tax.ohio.gov/. (3) Ohio provides for both electronic payment and electronic filing of returns. The system is voluntary unless amounts exceed $75,000 (OHIO REV. CODE ANN. §§ 5739.02; 5739.122; 5739.12; 5741.12; 5741.121). (4) Any person required to collect sales tax as a retailer may request an advisory opinion seeking clarification of a tax issue (OHIO REV. CODE ANN. § 5703.53). No provision is made for electronic filing of ruling requests. In addition, because there is no provision for digital case handling, decision, and delivery functions, the Ohio system is not fully transactional.

Oklahoma. *Tax Administration & Technology.* Oklahoma is a "stage 3" benchmarked jurisdiction. (1) Comprehensive web-based tax information is provided. (2) Forms, documents and instructions are available on the web and can be downloaded at http://www.oktax.state.ok.us/. (3) The Oklahoma QuickTax System accepts e-returns from all taxpayers. In its voluntary aspect, taxpayers electing to file and remit under the EFT program must follow the same schedules described above for businesses that are required to participate based on tax amounts due (OKLA. STAT. tit. 68 § 1365(C)). The mandatory aspect of the program requires every person owing an average of $2,500 or more per month in total sales or use taxes in the previous fiscal year to remit the tax due and participate in the electronic funds transfer and electronic data interchange program (OKLA. STAT. tit. 68 § 1365(D); OKLA. ADMIN. CODE tit. 710, § 65-21-7(b)). They must remit the tax due and participate in the Tax Commission's e-funds and e-data exchange program, according to a prescribed schedule. (4) Any person required to collect sales tax as a retailer may request an advisory opinion seeking clarification of a tax issue (OKLA. ADMIN. CODE tit. 710, § 1-3-73). No provision is made for electronic filing of ruling requests. In addition, because there is no provision for digital case handling, decision, and delivery functions, the Oklahoma system is not fully transactional.

Pennsylvania. *Tax Administration & Technology.* Pennsylvania is a "stage 3" benchmarked jurisdiction. (1) Comprehensive web-based tax information is provided. (2) Forms, documents and instructions are available on the web and can be downloaded at http://www.revenue.state.pa.us/. (3) The Pennsylvania Department of Revenue is authorized to allow the electronic filing of any tax return or document (72 PA. CONS. STAT. § 10003.8). The department has done so by allowing all taxpayers to file their sales and use tax returns electronically using the PA. TIDES program. A sales and use tax payment of $20,000 or more must be remitted by electronic funds transfer (EFT) (PA. DEP'T. OF REV. REG. § 5.3). EFT payments may be either ACH debit or ACH credit. (4) Any person required to collect sales tax as a retailer may request an advisory opinion seeking clarification of a tax issue (72 PA. CONS. STAT. § 6 & 61 PA. CONS. STAT. § 3.3). No provision is made for electronic filing of ruling requests. In addition, because there is no provision for digital case handling, decision, and delivery functions, the Pennsylvania system is not fully transactional.

Rhode Island. *Tax Administration & Technology.* Rhode Island is a "stage 3" benchmarked jurisdiction. (1) Comprehensive web-based tax information is provided. (2) Forms, documents and instructions are available on the web and can be downloaded at http://www.tax.ri.gov/. (3) The Rhode Island e-filing system is voluntary (R.I. REG. EFT 00-01(II), but it is also tied to the federal system. In order for the e-filing and e-payment system to work a taxpayer must e-file both a federal and state return. If a taxpayer has already filed a federal return using another electronic filing service, state returns cannot be filed electronically. (R.I. DIV. OF TAXES, FEDERAL/STATE ONLINE FILING, *at* http://www.tax.state.ri.us/elf/on-line.htm). If any tax liability exceeds $10,000, both the return and payment must be made by electronic means (R.I. GEN. LAWS § 44-1-31; R.I. Reg. EFT 00-01). Taxpayers that are required to pay employment taxes to the IRS by electronic funds transfer also are required to file returns electronically with Rhode Island (R.I. GEN. LAWS § 44-1-31). (4) Any person required to collect sales tax as a retailer may request an advisory opinion seeking clarification of a tax issue (R.I. GEN. LAWS § 42-35-8). No provision is made for electronic filing of ruling requests. In addition, because there is no provision for digital case handling, decision, and delivery functions, the Rhode Island system is not fully transactional.

South Carolina. *Tax Administration & Technology.* South Carolina is a “stage 3” benchmarked jurisdiction. (1) Comprehensive web-based tax information is provided. (2) Forms, documents and instructions are available on the web and can be downloaded at http://www.sctax.org/default.htm. (3) The Department of Revenue is authorized by the State Treasurer to accept electronic returns and electronic forms of tax payment (S.C. CODE ANN. § 12-54-75). South Carolina has added e-file and e-payment functionality to its web site for all taxpayers (Sales EDI/EFT; Esales; Business TelFile). (4) Any person required to collect sales tax as a retailer may request an advisory opinion seeking clarification of a tax issue (S.C. CODE ANN. §§ 12-4-320 & 1-23-10(4); S.C. REV. PROC. #05-2). No provision is made for electronic filing of ruling requests. In addition, because there is no provision for digital case handling, decision, and delivery functions, the South Carolina system is not fully transactional.

South Dakota. *Tax Administration & Technology.* South Dakota is a “stage 3” benchmarked jurisdiction. (1) Comprehensive web-based tax information is provided. (2) Forms, documents and instructions are available on the web and can be downloaded at http://www.state.sd.us/drr2/Revenue.html. (3) South Dakota has allowed for e-filing and e-payment of sales and use tax returns since 1999 (S.D. SALES TAX NEWSLETTER, S.D. DEP’T. OF REV. (June 1999)). Recent legislation links e-payment and e-filing by requiring taxpayers to e-file a return by the 23rd day of the month following each monthly period if they e-pay the tax by the second to the last day of the month following each monthly period (2006 S.D. LAWS H1048, §1; S.D. CODIFIED LAWS § 10-46E-7; S.D. CODIFIED LAWS § 10-59-39). (4) Any person required to collect sales tax as a retailer may request an advisory opinion seeking clarification of a tax issue (S.D. CODIFIED LAWS § 10-59-27; S.D. ADMIN. R. 64:06:01:01:08 - 10). No provision is made for electronic filing of ruling requests. In addition, because there is no provision for digital case handling, decision, and delivery functions, the South Dakota system is not fully transactional.

Tennessee. *Tax Administration & Technology.* Tennessee is a “stage 3” benchmarked jurisdiction. (1) Comprehensive web-based tax information is provided. (2) Forms, documents and instructions are available on the web and can be downloaded at http://www.state.tn.us/revenue/. (3) Taxpayers whose sales and use tax payments exceed $5,000 must e-file and e-pay (TENN. CODE ANN. § 67-1-703(b)), and must continue to do so until the Commissioner of Revenue advises the taxpayer to file by another method. Taxpayers designated for e-filing are notified by the Commissioner of Revenue and advised of the requirements that must be met. Those who have not been notified by the Department of Revenue are not required to e-file and e-pay, but may volunteer to do so (TENN. CODE ANN. § 67-1-703(b)). (4) Any person required to collect sales tax as a retailer may request an advisory opinion seeking clarification of a tax issue (TENN. CODE ANN. § 67-1-109). No provision is made for electronic filing of ruling requests. In addition, because there is no provision for digital case handling, decision, and delivery functions, the Tennessee system is not fully transactional.

Texas. *Tax Administration & Technology*. Texas is a "stage 3" benchmarked jurisdiction. (1) Comprehensive web-based tax information is provided. (2) Forms, documents and instructions are available on the web and can be downloaded at http://www.window.state.tx.us/m23taxes.html. (3) The Comptroller of Public Accounts is authorized to allow any taxpayer to file sales and use tax returns by means of electronic transmission if (a) the taxpayer enters into a written agreement with the Comptroller, and (b) the method of electronic transmission is compatible. Certain taxpayers are required to file any returns and reports electronically (TEXAS ADMIN. CODE ANN. tit. 34 § 3.9). The Government Code requires certain persons to transfer funds to the Comptroller by electronic funds transfer (TEX. GOV'T CODE ANN. tit. § 404, § 95). Mandatory e-filing is linked to mandatory e-payment. The e-filing of a sales and use tax return is required of the tax payments are required under EFT. (TEX. TAX CODE ANN. tit. 111, § 626). (4) Any person required to collect sales tax as a retailer may request an advisory opinion seeking clarification of a tax issue (TEX. ADMIN. CODE tit. 34, §1.28). No provision is made for electronic filing of ruling requests. In addition, because there is no provision for digital case handling, decision, and delivery functions, the Texas system is not fully transactional.

Utah. *Tax Administration & Technology*. Utah is a "stage 2" benchmarked jurisdiction. (1) Comprehensive web-based tax information is provided. (2) Forms, documents and instructions are available on the web and can be downloaded at http://tax.utah.gov/. (3) Utah law requires that the Tax Commission must allow internet-based sales and use tax filings (UTAH CODE ANN. § 63D-1-105(1)(d)), however this capacity is being phased in. At the present time some, but not all Utah sales and use tax returns can be filed on line. Returns that must be filed on paper include TC-61F, TC-61FV, TC-61T, and TC-61W. In addition amended returns and late-filed returns remain paper-based. Similarly, most but not all sales and use taxpayers are able to make payments on line. (UTAH STATE TAX COMMISSION, ONLINE SALES AND USE TAX FILING *at* http://tax.utah.gov/sales/salestaxonline.html). Sellers whose state and local sales and use tax liability totaled $96,000 or more for the previously calendar year must transmit monthly tax payments by electronic funds transfer (UTAH CODE ANN. § 59-12-108(2)). Sellers who are not required to pay taxes electronically may elect to do so by contacting the Commission within 30 days before the beginning of a new fiscal year. Such sellers are subject to the same requirements and penalties as mandatory filers (UTAH ADMIN. CODE R. § R865-19S-86(E)(2)). (4) Any person required to collect sales tax as a retailer may request an advisory opinion seeking clarification of a tax issue (Utah Code Ann. § 59-1-210; Utah Tax RULE 861-1A-34). No provision is made for electronic filing of ruling requests. In addition, because there is no provision for digital case handling, decision, and delivery functions, the Utah system is not fully transactional.

Vermont. *Tax Administration & Technology*. Vermont is a "stage 3" benchmarked jurisdiction. (1) Comprehensive web-based tax information is provided. (2) Forms, documents and instructions are available on the web and can be downloaded at http://www.state.vt.us/tax/. (3) Filing of sales and use tax returns and payment of taxes may be performed electronically on a voluntary basis. The Commissioner is authorized to require payments by EFT from certain taxpayers (those who pay federal taxes electronically, and those who have previously submitted two or more uncollected checks) (VT. STAT. ANN. tit. 32, §§ 9243; 9776 & 5842(a)(4)(D)). (4) Any person required to collect sales tax as a retailer may request an advisory opinion seeking clarification of a tax issue (VT. STAT. ANN. tit. 3, § 808). No provision is made for electronic filing of ruling requests. In addition, because there is no provision for digital case handling, decision, and delivery functions, the Vermont system is not fully transactional.

Virginia. *Tax Administration & Technology.* Virginia is a "stage 3" benchmarked jurisdiction. (1) Comprehensive web-based tax information is provided. (2) Forms, documents and instructions are available on the web and can be downloaded at http://www.tax.virginia.gov/. (3) Sales and use tax returns can be filed electronically, and payments may be made through EFT (VA. CODE ANN. § 58.1-9(C)). If a taxpayer's monthly sales and use tax liability exceeds $20,000, the taxpayer may be required to make the payments by electronic funds transfer (EFT) (VA. CODE ANN. § 58.1-202.1). (4) Any person required to collect sales tax as a retailer may request an advisory opinion seeking clarification of a tax issue (VA. CODE ANN. § 58.1-204). No provision is made for electronic filing of ruling requests. In addition, because there is no provision for digital case handling, decision, and delivery functions, the Virginia system is not fully transactional.

Washington. *Tax Administration & Technology.* Washington is a "stage 3" benchmarked jurisdiction. (1) Comprehensive web-based tax information is provided. (2) Forms, documents and instructions are available on the web and can be downloaded at http://dor.wa.gov/. (3) Payment may be made to the Department of Revenue by cash, check, cashier's check, money order, and in certain cases by electronic funds transfers or other electronic means approved by the Department (WASH. REV. CODE § 82.32.080; WASH. ADMIN. CODE §458-20-228 (Rule 228)). The e-filing program (ELF) is not open to all tax types, but includes the consumption tax administered by the Department of Revenue (WASH. REV. CODE § 82.32.080; WASH. ADMIN. CODE §458-20-22802(4)). For taxpayers participating in the ELF program paper returns are not needed, and payments must be electronic (through the ACH debit method). Taxpayers who have taxes due of $240,000 or more in a calendar year are required to pay by electronic funds transfer (WASH. REV. CODE § 82.32.080; WASH. ADMIN. CODE §458-20-22802). Filing of sales and use tax returns and payment of taxes may be performed electronically. (4) Any person required to collect sales tax as a retailer may request an advisory opinion seeking clarification of a tax issue (WASH. REV. CODE § 458-20-100(9)). No provision is made for electronic filing of ruling requests. In addition, because there is no provision for digital case handling, decision, and delivery functions, the Washington system is not fully transactional.

West Virginia. *Tax Administration & Technology.* West Virginia is a "stage 3" benchmarked jurisdiction. (1) Comprehensive web-based tax information is provided. (2) Forms, documents and instructions are available on the web and can be downloaded at http://www.wvrevenue.gov/. (3) West Virginia accepts electronic returns for sales and use tax (WV/CST-200 and WV/CST-220). An electronic signature will be accepted in lieu of an original handwritten signature when filing electronic records (W. VA. CODE ST.

R. §§ 110-10D-2.6 & 110-10D-5). While the Department's EFT program is available to all taxpayers, the Department may require the use of EFT by taxpayers whose aggregate state, county, special district, or stadium sales and use tax liability exceeded $10,000 for the prior calendar year. (W. VA. DEP'T. REV, SALES AND USE TAX REPORT, No. 2-20 (June 2000)). (4) Any person required to collect sales tax as a retailer may request an advisory opinion seeking clarification of a tax issue (W.VA. CODE ANN. § 11-10-5R). No provision is made for electronic filing of ruling requests. In addition, because there is no provision for digital case handling, decision, and delivery functions, the West Virginia system is not fully transactional.

Wisconsin. *Tax Administration & Technology.* Wisconsin is a "stage 3" benchmarked jurisdiction. (1) Comprehensive web-based tax information is provided. (2) Forms, documents and instructions are available on the web and can be downloaded at http://www.dor.state.wi.us/. (3) Wisconsin Department of Revenue has sales and use tax electronic filing and payment options available for all taxpayers (Sales Telefile, Sales Internet Process, file transmission, and electronic funds transfer) (WIS. DEP'T, REV., SALES AND USE TAX REPORT, No. 1-06 (Mar. 2006); WIS. DEP'T, REV., TAX BULL. No. 146 (Feb. 2006)). Administrative rules require certain sales and use tax returns to file electronically. Sales and use tax registrants are given 90 days notice before the due date of the first period where they are required to file electronically. (4) Any person required to collect sales tax as a retailer may request an advisory opinion seeking clarification of a tax issue (WIS. STAT. ANN. § 73.035). No provision is made for electronic filing of ruling requests. In addition, because there is no provision for digital case handling, decision, and delivery functions, the Wisconsin system is not fully transactional.

Wyoming. *Tax Administration & Technology.* Wyoming is a "stage 3" benchmarked jurisdiction. (1) Comprehensive web-based tax information is provided. (2) Forms, documents and instructions are available on the web and can be downloaded at http://www.dor.state.wi.us/. (3) Taxpayers may report and pay sales and use taxes electronically by using the Wyoming Internet Filing Service (WIFS). Taxpayers must first enter an electronic filing agreement with WIFS (WYO. DEP'T. REV, TAXING ISSUES, 6:3 (Oct. 1, 2003). (4) Any person required to collect sales tax as a retailer may request an advisory opinion seeking clarification of a tax issue (WYO. STAT. ANN. § 39-11-102(a)(i)(D). No provision is made for electronic filing of ruling requests. In addition, because there is no provision for digital case handling, decision, and delivery functions, the Wyoming system is not fully transactional.