Volume 15, Number 2

Printed ISSN: 1544-0036
PDF ISSN: 1544-0044

JOURNAL OF LEGAL, ETHICAL AND REGULATORY ISSUES

John Yeargain, Co-Editor
Southeastern Louisiana University

Evelyn Hume, Co-Editor
Friends University

The *Journal of Legal, Ethical and Regulatory Issues* is owned and published by the DreamCatchers Group, LLC. Editorial content is under the control of the Allied Academies, Inc., a non-profit association of scholars, whose purpose is to support and encourage research and the sharing and exchange of ideas and insights throughout the world.

Authors execute a publication permission agreement and assume all liabilities. Neither the DreamCatchers Group nor Allied Academies is responsible for the content of the individual manuscripts. Any omissions or errors are the sole responsibility of the authors. The Editorial Board is responsible for the selection of manuscripts for publication from among those submitted for consideration. The Publishers accept final manuscripts in digital form and make adjustments solely for the purposes of pagination and organization.

The *Journal of Legal, Ethical and Regulatory Issues* is owned and published by the DreamCatchers Group, LLC, PO Box 1708, Arden, NC 28704, USA. Those interested in communicating with the *Journal,* should contact the Executive Director of the Allied Academies at info@alliedacademies.org.

EDITORIAL REVIEW BOARD

TABLE OF CONTENTS

LETTER FROM THE EDITORS

Welcome to the *Journal of Legal, Ethical and Regulatory Issues*. The *Journal* is owned and published by the DreamCatchers Group, LLC. The Editorial Board and the Editors are appointed by the Allied Academies, Inc., a non profit association of scholars whose purpose is to encourage and support the advancement and exchange of knowledge, understanding and teaching throughout the world. The *JLERI* is a principal vehicle for achieving the objectives of the organization. The editorial mission of this journal is to publish empirical and theoretical manuscripts which advance understanding of business law, ethics and the regulatory environment of business.

Readers should note that our mission goes beyond studies involving business law or the effect of legislation on businesses and organizations. We are also interested in articles involving ethics. In addition, we invite articles exploring the regulatory environment in which we all exist. These include manuscripts exploring accounting regulations, governmental regulations, international trade regulations, etc., and their effect on businesses and organizations. Of course, we continue to be interested in articles exploring issues in business law.

The articles contained in this volume have been double blind refereed. The acceptance rate, 25%, conforms to the Allied Academies' editorial policy.

Please visit the Allied Academies' web page to learn how to submit manuscripts for review as well as to view details of forthcoming conferences. We invite your comments and suggestions at any time. Please send these to info@alliedacademies.org.

John Yeargain
Southeastern Louisiana University

Evelyn Hume
Friends University

CONSUMPTION TAXES ON DIGITAL PRODUCTS IN THE EUROPEAN UNION

Nelson U. Alino, Quinnipiac University
Gary P. Schneider, Quinnipiac University

ABSTRACT

Consumption taxes, such as sales taxes and value-added taxes (VAT) can present complex enforcement and collection issues when they are applied to international transactions. The European Union (EU) is a particularly interesting environment in which to examine consumption tax issues because each country has its own VAT rate and enforcement mechanism, but the multilateral economic structure of the EU exposes companies selling across intra-EU boundaries to extra-national regulations. This paper contrasts the EU position with that of U.S. states on similar consumption taxes and examines a specific tax fairness issue that has arisen for sellers of digital goods who have customers that are located in EU countries. The paper also outlines three strategies for minimizing VAT.

INTRODUCTION

Any VAT is a consumption tax levied on goods and services as they are sold from one stage of production into the subsequent one (Bagby and McCarty, 2002). To the purchaser, a VAT is a tax on the price paid for the good or service. The seller pays VAT to the government on the amount of the value the seller has added. The seller keeps the remaining amount of VAT collected on the entire purchase price from the seller as an offset to the taxes it paid on the goods and services acquired in the process of producing the product or providing the service (Tait, 1988). In 2002, the European Union (EU) issued its first directive requiring sellers to collect VAT on digital goods (De Rato Y Figaredo, 2002). The original directive, which was set to expire in 2008, has been extended (Meller, 2006) and is currently in force. This directive attracted the attention of companies based outside of the EU that sell digital goods to consumers located in one or more EU countries. Non-EU companies that sell into the EU must now register with EU tax authorities and levy, collect and remit VAT if their sales include digital goods delivered into the EU. This paper outlines the provisions of the EU directive, compares them to current sales tax rules on interstate transactions within the United States, and examines the implications for future laws relating to consumption taxes on cross-border commerce in digital goods. The paper outlines three strategies that companies doing business in the EU can use to minimize the VAT. The discussion in this paper has important implications for all companies making online international sales, not just those companies who currently fall under the

jurisdiction of this law, but also companies that might face similar rules enacted in the future by other countries and by organized international markets.

CONSUMPTION TAX ENFORCEMENT ISSUES

The enforcement and collection of consumption taxes, such as the sales tax levied by most U.S. states or the VATs levied by many other countries throughout the world, has always been relatively straightforward. Because the taxes occur at the point of transaction, tracking the occurrences of the economic events that trigger these taxes can be much easier than calculating and collecting income-based taxes (Yang and Poon, 2002).

Consumption Taxes on Transborder Sales of Physical Goods

A taxable transaction that involves a physical good typically results in a clear and visible event. Some form of product is moved from one location to another. In the case of services, an observable activity occurs. International transactions involving physical goods have always been particularly easy to track because the product being sold crosses an international border and most international borders are controlled to some degree.

By monitoring cross-border movements of physical products, countries can enforce the collection of duties and consumption taxes such as VATs. Services provided across borders can also be tracked by monitoring international movements of people traveling with a stated intent of conducting business. In most cases, a person or persons must travel across an international border to perform the service.

Consumption Taxes on Transborder Sales of Digital Goods

A major change occurred when virtual marketplaces opened online, allowing firms and individuals to place orders, confirm orders, and deliver digital goods and services without any movement of a physical product or the performance of a service by human beings in person (Schneider, 2010). The overall visibility of transborder transactions diminished significantly and a lack of clarity regarding where income is earned, products are sold, or value is added became prevalent (IBLS, 2007).

Existing laws and court decisions, which relied largely on the historical language of physical commerce to determine jurisdiction, became unclear and difficult to interpret in the online landscape (Jones and Basu, 2002). Laws and court decisions were highly complex, often including conflicting holdings on multiple legal issues and fact elements. Various courts interpreted facts quite differently in seemingly similar situations. These varying interpretations have created high levels of uncertainty for companies selling goods online (McClure, 2002; Schneider, 2010).

Most consumption taxes were enacted many years ago, when it was reasonable to assume that most transactions would involve a buyer and a seller in the same jurisdiction. As mail order, telephone order, and more recently, online order businesses evolved, this assumption became less and less likely to be true. The inability of one jurisdiction to enforce collection of consumption taxes (at the point of sale) on items sold into its jurisdiction from outside its jurisdiction was, in most cases, nonexistent (Bagby and McCarty, 2003). Difficulty with enforcing collection at the purchaser's side of the transaction was costing jurisdictions (both U.S. states and other countries) large amounts of revenue (Bruce and Fox, 2001).

Consumption Taxes on Digital Goods in the United States

Earlier concerning online sales, there was a general consensus that imposing consumption tax collections on the nascent entities engaging in such sales would tend to stifle the development of online business activities (Barlas, 2003). Yet, in recent years, there has been a growing sentiment that online businesses can stand on their own without additional government subsidies in the form of non-enforcement of existing laws (Thibodeau, 2002; Wingfield, 2003).

Russell (2008) notes that the issue of nexus determination continues for interstate U.S. transactions. Pickart and Pessefall (2008) outline recent developments in the distinction between nontaxable services and taxable personal property in the enforcement of U.S. state sales taxes. Although the nexus issue has not been resolved, a number of major retailers have announced that they will begin to collect U.S. sales taxes voluntarily on sales made online, even when they are not required to do so because they have a physical presence in the customer's jurisdiction (Krebs and Krim, 2003; Tax Notes Today, 2003).

In the United States, federal legislators have been reluctant to take action on creating a national enforcement mechanism (McClure, 2002) and have instead encouraged the individual states to join together in a confederation for the purpose of coordinating sales tax enforcement. Many of the states have done so under the auspices of the National Governors Association as part of its Streamlined Sales Tax Project (SSTP) (Streamlined Sales Tax Governing Board, 2005). This project provides a way for states to participate voluntarily in sales tax enforcement and collection activities. One element of the SSTP that relates to enforcement is its sourcing rule, which specifies that sales tax be collected at the destination or delivery point of the sale instead of at the shipping point. By imposing sales tax where the purchaser takes possession of goods or initially uses the service provided, the SSTP eliminates any incentive to establish businesses in lower-sales-tax states (Wall and Koppel, 2006).

The combination of voluntary state enforcement cooperation and voluntary source collection by large retailers might combine to solve a large part of the problem in the United States. In other parts of the world, however, few initiatives have been undertaken by either government or private enterprise to address the collection of consumption taxes on international

transactions. One exception to this lack of action are the EU rules that have been imposed on companies selling to EU-based purchasers.

EU VAT

The VAT is the most significant contributor to the public coffers in most EU countries. It is a consumption tax that is levied at each stage of production on the value added by that stage of production. Companies track and report the tax on domestic sales to their own national tax authority. The tax varies considerably from country to country within the EU. Countries such as Luxembourg (15%) and Madeira (12%) levy the lowest rates, while Denmark and Sweden levy the highest rate (25%). There are exceptions to each country's rates with specific reductions authorized for particular economic reasons within each country (Ernst & Young, 2007).

In 2002, the European Union Council issued Directive 2002/38/EC (De Rato Y Figaredo, 2002) and accompanying Regulation 792/2002, amending existing EU law to add specific provisions regarding the sale of broadcasting services and electronically supplied services (Hamblen, 2003; Hwang & Klosek, 2003; Tedeschi, 2003). The effective date was July 1, 2003.

Under the law, companies that sell into EU countries must register with EU tax authorities and levy, collect, and remit VAT on digital products. The legislation includes not only digital products, but also "electronically supplied services," which encompasses a wide array of services, including the electronic supply of cultural, artistic, sporting, scientific, distance education, entertainment and similar services (De Rato Y Figaredo, 2002).

Digital Goods and Services Defined

It is important to note that digital products as defined in the law include both digital goods and digital services. Digital products specifically included under the rules are software, software upgrades or updates, computer games, digital music files, rights to access information databases, Internet access provision, Web site hosting, and both subscription and pay-per-download audio and video entertainment services. The list of digital products included in the law is expressly stated to be "illustrative," so the intent of the law is to include virtually all manner of goods and services that are delivered electronically. The only specific exclusion in the list is that the use of electronic mail for communication will not, by itself, create the existence of a digital product or service (De Rato Y Figaredo, 2002). The list is comprehensive and it is reasonable to assume that it will be interpreted broadly in EU courts if challenged (Schneider, 2008).

Transborder Sales of Digital Products

The directive provides that sales of digital products by companies operating outside the EU to users in the EU incur VAT. Under the rules, the location used to determine occurrence of

sale will no longer be the jurisdiction in which the seller is established, but will instead be the jurisdiction in which the buyer is located. In an interesting and asymmetric tack, however, the rules provide that EU sellers are no longer required to levy VAT when selling digital products to customers outside the EU.

Non-EU sellers must register with an EU country authority, but must pay the VAT rate of the country into which the digital product is shipped (Zee, 2008). EU sellers pay the VAT rate in effect in the country from which the digital products are shipped. Since most digital products and all digital services can be provided from almost any physical location, the strategy opportunities are obvious. These strategies are outlined in a later section of this paper.

Hwang and Klosek (2003) argue that these asymmetric changes in the application of VAT to digital sales were motivated by strong EU desires to put EU and non-EU sellers on a more equal footing when they compete with each other. They state that there is a long history of concerns that EU enterprises have been at a disadvantage compared to non-EU businesses in the markets for digital goods and services because the EU enterprises had to levy the VAT and their non-EU competitors did not.

The intent of the rules is to prevent non-EU sellers from avoiding VAT liability on EU sales while relieving EU sellers of the VAT burden on sales they make outside the EU. Europeans in favor of the laws argue that these two changes could help EU suppliers of digital products compete against foreign companies more effectively for EU and non-EU business.

Seller Registration Requirements

EU sellers must register with the tax authority in their home country. Since they will remit VAT to their own tax authority, this allows them to create a fairly simple system for tracking sales and calculating the tax. If an EU seller is already conducting any sales at all, the company will have in place already a system adequate to track, report, and remit the VAT.

Non-EU sellers must register with an EU country tax authority. This authority can be in any EU country, so non-EU sellers do have some choice in the matter. However, this apparent help to non-EU sellers is nullified by provisions in the law that require non-EU sellers, no matter where registered, to assess the VAT at the rate in effect in the destination country.

This de facto imposes a greater burden on non-EU companies because they must track, report, and remit VATs computed using a variety of rates, one for each country into which they ship. Unfortunately, the underlying legal concept of equal protection under the law is not as well defined in the EU as it is in the United States. The law does provide for online registration by non-EU companies, so at least the registration requirement itself is not particularly onerous.

A number of companies have boosted their investment in accounting systems designed to handle the calculation and reporting tasks required by the rules, in some cases by more than a million dollars (Hamblen, 2003). Companies such as Digital River, Taxware, and Vertex offer software that can help companies manage their VAT compliance processes.

STRATEGIES FOR MINIMIZING THE VAT

Non-EU companies that wish to sell digital products into the EU have three basic VAT strategies under the rules. The first strategy requires that the company determine the customer's jurisdiction and calculate the VAT for that country. A second strategy requires that the company create a physical operation in a EU country and charge all EU customers the tax associated with that country. The third strategy involves ignoring the directive and violating the EU directive, which is an illegal evasion of the tax.

Exploit the Customer's Jurisdiction

The first strategy can become an administrative nightmare for companies that sell into many different EU countries (Goth, 2007). Once the physical location of the customer is determined, the company must then calculate the tax and remit it to the right authorities in the right countries. Tedeschi (2003) reports that eBay is planning to follow this approach. With its large number of transactions (eBay collects a fee from the seller each time an auction is completed successfully), eBay will face a monumental record-keeping and disbursement task.

Create a Physical Operation in an EU Country with a Low VAT Rate

Following the second strategy allows companies to create branch operations in a country with low VAT rates and pass along the savings in the form of reduced prices to their customers. Both Amazon.com and Time Warner's AOL International operation have set up operations in Luxembourg, ostensibly to pursue this strategy (Tedeschi, 2003). It is notable that AOL International has stated that it set up its Luxembourg operation to simplify its VAT reporting requirements, not to avoid or reduce the amount of the tax (Hamblen, 2003).

Some firms have come under criticism for using this strategy. HMV, a company based in the United Kingdom, located a subsidiary in Guernsey, an independent island in the British Isles, for the express purpose of shipping CDs and DVDs from a warehouse at that location (Williams, 2007). Parliament held hearings at which Treasury officials testified that such practices were expected to cost the United Kingdom an estimated £200 million per year in lost tax revenue (Williams, 2007). Given the level of revenue losses, it is likely that many EU member countries will attempt to change the directive; however, the process of legislating in the EU can be slow and difficult.

VAT Evasion

Although this is certainly not a recommended strategy, one additional approach is a possible choice of many smaller companies. That strategy is intentional non-compliance. Digital

goods and services are very hard for tax authorities to track and the VAT is largely a self-assessed tax. Most EU countries rely on voluntary compliance for their VAT collections. Compliance levels are very high for larger companies; however, smaller companies have a much lower rate of compliance in many EU countries (Milcheva, 2007).

The difficulty of tracking transactions and enforcing honest reporting may be the biggest weakness in the taxing plan. Some smaller companies based in the United States have argued the reporting and payment burden is overly punishing for them (Hamblen, 2003). This type of sentiment can lead to avoidance behavior by smaller businesses, especially given the difficulty of pursuing cases in extra-national jurisdictions (Liptak, 2003; Podlas, 2000).

Significant deterrents to evasion strategies can be found in the penalties, which vary by country but can be hefty. In addition to back taxes, VAT collectors add interest, filing penalties, and a fine that can exceed 100% of the amount due (*Accountancy*, 2009). A highly punitive throwback and recapture rule adds fines based on the amount of tax the company would have paid in the seven years preceding the new VAT's effective date.

CONCLUSIONS

The timing of the enactment of these tax enforcement measures is open to suspicion. Tedeschi (2003) reports survey results and other data from eMarketer (2003) that show that, at the time the EU directive was enacted, the number of Internet users in the EU exceeded that of the United States for the first time (221 million vs. 196 million). Schneider (2005) noted that the timing of the enactment suggests that Europeans might be untowardly opportunistic in their actions here. International companies based outside the EU do have two viable strategies for dealing with the regulations, although neither is easy or simple. Smaller companies might decide that non-compliance is a reasonable risk, although penalties can be substantial. Companies that do comply with the rules could face costs that would easily exceed a million dollars for an average size company to bring their digital sales operations into compliance with the law. The rules are unfair by design. They discriminate against non-EU companies that want to do business in the European market (Ivinson, 2007; Milchevia, 2007). One possibility that might arise in the future is that countries outside the EU might consider retaliating with similarly punitive tax laws or other regulations on sellers operating out of the EU.

REFERENCES

Accountancy. (2009). Taxman cracks down on VAT dodgers, 144(1392), August, 21.

Bagby, J, & F. McCarty. (2003). *The Legal and Regulatory Environment of E-Business*. Cincinnati: Thomson.

Barlas, P. (2003). "Some states seek internet sales tax law: But at least one study says imposing mandatory taxes would stifle e-commerce," *Investor's Business Daily*, June 24, A6.

Bruce, D., and W. Fox. (2001). State and local sales tax revenue losses from e-commerce: Updated estimates. *Center for Business and Economic Research.* Knoxville, TN: University of Tennessee.

De Rato Y Figaredo, R. (2002). "Council Directive 2002/38/EC," *Official Journal of the European Communities*, May 7, L128/41-L128/44.

Ernst & Young. (2007). VAT: Reduced rates simplification. *EU Tax News*, Issue 21, September-October, 12-14.

Goth, G. (2007). Royalties and taxes: Making Money on the Net, *IEEE Distributed Systems Online*, 8(6), article number 0706-06006.

Hamblen, M. (2003). Regulatory requirements place new burdens on IT: U.S. firms scramble to comply with EU tax, *Computerworld*, June 30, 1.

Hwang, W. & d J. Klosek. (2003). Taxing the sale of digital goods in Europe, *E-Commerce Law & Strategy*, 20(3), July 11, 1.

Internet Business Law Services, Inc. (IBLS). (2007). *Sales tax/VAT and offshore e-commerce*. Irvine, CA: IBLS.

Ivinson, J. (2007). Why the EU VAT and e-commerce directive does not work. *International Tax Review*. 14(9), October, 27-29.

Jones, R. and S. Basu. (2002). Taxation of electronic commerce: A developing problem, *International Review of Law, Computers & Technology*, 16(1), March, 35-51.

Krebs, B. and J. Krim. (2003). "Big stores to charge sales taxes online: Retailers agree to collect for states," *The Washington Post*, February 7, 1.

Liptak, A. (2003). U.S. courts' role in foreign feuds is under fire, The International Herald Tribune, August 5, 1.

McLure, C. (2002). Thinking straight about the taxation of electronic commerce: tax principles, compliance problems, and nexus. *NBER/Tax Policy & the Economy*, 16(1), 115-140.

Meller, P. (2006). E-commerce tax law extended in Europe. *Computerworld*, 40(21), May 22, 18.

Milchevia, B. (2007). Taxation aspects of e-commerce. Proceedings of the April Meeting of the Legal Framework for the Information Society, Vilnius, Lithuania, 4.

Pickart, J. and D. Pessefall. (2008). State of the states, *Journal of State Taxation*, 26(3), March, 13-48.

Podlas, K. (2000). Global commerce or global liability? How E-commerce can lead to suit in foreign courts, *Mid-Atlantic Journal of Business*, 36(2/3), June/September, 89-101.

Russell, R. (2008). The "state" of nexus, *Accounting Today*, 22(10), 10-12.

Schneider, G. (2005). Digital product sales taxes in the European Union, *Proceedings of the Academy of Legal, Ethical, and Regulatory Issues*, April, 99-102.

Schneider, G. (2008). A tax fairness issue: The European Union and digital products. *Proceedings of the 2008 Conference on Trends in Global Business*, October, 144-150.

Schneider, G. (2010). *Electronic Commerce,* Ninth Edition. Boston: Course Technology.

Streamlined Sales Tax Governing Board. (2005. The Streamlined Sales Tax Project. (http://www.streamlinedsalestax.org/index.html)

Tait, A. (1988). *Value added tax: International practice and problems*. Washington, DC: I.M.F..

Tax Notes Today, (2003). Firms' voluntary collection could boost sales tax "streamlining," February 10, 1.

Tedeschi, B. (2003). EU taxman sets his sights on e-commerce, *The International Herald Tribune*, June 23, 1.

Thibodeau, P. (2002). States push to require online sales tax collection. *Computerworld*, 36(45), November 11, 21.

Wall, P. and M. Koppel. (2006). The future of e-commerce tax liability. *Tax Advisor*, 37(12), December, 705-707.

Williams, J. (2007). Forces gather against offshore retailers using tax loophole. *New Media Age*, October 11, 18.

Wingfield, N. (2003). Attention, web shoppers: that'll be 6% extra. *The Wall Street Journal*, February 13, D1.

Yang, J. and Poon, W. (2002). Taxable base of Internet commerce, *Journal of State Taxation*, 20(4), Spring, 70-80.

Zee, H. (2008). Aspects of Interjurisdictional sharing of the value-added tax. *Public Finance Review*, 36(2), March, 147-168.

THE REGULATION OF GENETICALLY MODIFIED FOODS: A CORPORATE ETHICAL AND SOCIAL RESPONSIBILITY CHALLENGE

Anthony J. Daboub, The University of Texas at Brownsville
H. Martin Shane, The University of Texas at Brownsville
Dennis Ortiz, The University of Texas at Brownsville
T. Mark Blakemore, The University of Texas at Brownsville

ABSTRACT

This study reviews some of the major theories regarding the origin of government regulation of business. It then applies these theories to a specific corporate case, the regulation of genetically modified foods, in order to examine how social, political, economic, and business forces combine to shape government and corporate behavior over time. This case illustrates the influence exercised by business on government, the influence of the government on business, and the influence of society, i.e., public opinion, on both. It also shows the effect that bad management decisions can have on even the most effective use of corporate power.

INTRODUCTION

The study focuses on theories regarding the origin of government regulation of business, including conservative, market failure, utilitarian, normative, and corporate power. These theories are then applied to a specific corporate case, the regulation of genetically modified foods, in order to understand how and why this regulation was created. The case supports the contention that business organizations strongly influence the formulation of government regulation of business. However, this case also demonstrates the role of public opinion as a counterweight to business influence over government, when public opinion is focused.

Public opinion is a force that must be taken into consideration by management if an industry is to be successful in the development of new products, especially controversial ones. The issues are made complex because of the variety of interest groups, differing perceptions of risk and reward, and conflicting views regarding the costs and benefits associated with controversial products. Our experience with the evolution of regulation of genetically modified foods has important implications for the development and marketing of new controversial products.

The paper consists of the following research areas: review of theories of regulations, presentation of the relevant regulatory framework of genetically modified foods, conclusion, and recommendations for future research.

THEORIES OF REGULATION

Among the social and legal issues in management, government regulation of business is one of the most controversial. Enforcement of government regulations and compliance by business involve huge costs. There are also questions as to whether regulatory policy is helpful or harmful. In addition to these practical matters, regulation also raises ideological issues, *e.g.*, free markets. Although the public believes in free markets, people also recognize that imperfections of free markets can lead to non-Pareto optimal distributions of resources. The issue then becomes whether the imperfection itself or the regulation designed to correct the imperfection produces the worse result. However, not all disputes over regulation have to do with the effectiveness and efficiency of regulation. Very often involved are different conceptions of the public interest, or the conflicting interests of different groups in society. In many instances, efficiency is consciously sacrificed for the attainment of social goals, such as greater income equality.

There is a surprisingly wide range of explanations of government regulation. For example, government regulation of business is seen by some as persecution of a powerless business community that is incorrectly considered to be hostile to the public interest and is blamed for numerous ills of society. Others, on the opposite side, see government regulation as an effort by an all-powerful alliance of business and politicians to protect the interests of the business community. According to this second perspective, powerful elite controls both government and business, and regulation is enacted at the invitation of, and in the interest of, big business (Kolko, 1967).

According to a third perspective, government regulation is designed to protect the interests of consumers, without regard to the negative effect of such regulation on economic well-being in general or to the well-being of a particular business. Thus, the question, "Why do we regulate?" is answered differently by different groups, depending on their philosophical position regarding the business system, consumers, the effectiveness of market forces, and the effectiveness of government regulation. When we discuss government regulation of business, we generally focus on the behavior of business organizations because we assume that regulation is created to prevent business organizations from behaving in ways that are contrary to the public interest. However, the effectiveness of government regulation depends on the actions of government, as well as those of the business community. Therefore, questions about the performance of government are as valid as questions about the performance of business. At the heart of the matter is the question "Why do we regulate?" Several theories have been proposed

to answer this question: conservative theory, theory of market failure, utilitarian theory, normative theory, and theory of corporate power.

Conservative Theory

The conservative theory suggests that business in fact has little or no political power. Not surprisingly, this theory is championed almost exclusively by business people and those politicians who find themselves allied with a business group or industry. According to this theory, other interest groups have crowded out the business community, leaving it a "whipping boy" that is blamed for society's dysfunctions. Opponents of this view suggest that business has considerable and obvious influence over politicians. Private enterprise struggled in the former Soviet Union and other Communist nations. However, the fall of Communism provided business enterprises and free markets increasing legitimacy around the world. Nations compete for investments by multinational corporations. Large contributions that businesses make to politicians and very large concessions that government makes to business support a theory of business might, not impotence (Rosen, 2001: 123-125). The business community in the United States today enjoys considerable political power that is hard to square with conservative theory. According to conservative theory, government regulation is enacted to control a misunderstood and mistreated business community. This point of view does not receive support from the case of genetically modified foods. It is totally inconsistent with the way Monsanto (a U.S.-based multinational agricultural company) managed the development and marketing of genetically modified food and the company's relationship with the government.

Theory of Market Failure

The second theory, market failure, concludes that free markets do not produce economically efficient or socially just solutions in all instances. This theory has a long history in economic analysis. It concludes that, sometimes, the market fails to produce the required result, in which case economic and social welfare can be improved through government intervention. This theory recommends intervention in the market process in specific instances and for well-defined purposes. It does not imply a rejection of the market system as the most efficient means of allocating goods and services. It holds that if conditions for Pareto optimal distribution of resources were always met, there would be little reason for government intervention.

The required conditions for Pareto optimality are very restrictive. Marginal rates of substitution of all products must be equal to their marginal rates of transformation. (In other words, exchange of all goods must occur where marginal costs equal demand under the assumption of perfect information). The marginal rate of substitution goods must equal the marginal rate of transformation of leisure into goods via working at a rate equal to the wage rate (perfect competition in setting wage rates). The marginal rate of substitution of future for

present consumption must equal the marginal rate of transformation of present into future goods at a competitive market interest rate. In other words, perfect capital markets must provide for efficient investment in capital assets (Musgrave & Musgrave, 1989: 444-445). When these conditions are not met, properly designed regulatory policy may improve the outcome produced in the market by removing or offsetting defects that prevent the market from achieving Pareto optimal outcomes.

The theory of market failure was developed by a large number of economists, including Pigou, (1920:129-130), Keynes (1936: 372), and Baumol (1977: 363-384). Sources of market failure include (a) imperfect information, (b) market power, or (c) the presence of negative externalities (the difference between production costs borne by the firm and total costs of production incurred by both individuals and society). Lack of information or ignorance on the part of the seller or buyer can result in misrepresentation and can negate the benefit of competitive markets. One classic example is the sale of a car tire, where the quality and performance characteristics of the tire are difficult for the buyer to confirm, but easier for the seller to determine. For this reason, government regulation often requires disclosure to buyers of information possessed by sellers. [There are federal labeling laws that apply to tires, 49 CFR 574.5, Tire identification requirements. In general, such regulations take many forms, including rights of legal redress for failure to perform as promised. See *e.g.* Uniform Commercial Code ("UCC"), adopted in one form or another by all states.]

Truth in lending and truth in advertising are examples of regulation that tries to address the problem of imperfect information. Labeling and disclosure requirements are ways of dealing with the problem. Rights of legal redress for goods that are not as advertised are provided by both the Common Law and the Uniform Commercial Code, two extensive systems designed to remove, or at least minimize, defects in the market. [See, *e.g.* U.C.C., at §§2-312 through 2-315 relating to warranties, §§2-601 through 2-616 relating to breach of contract, and §§2-701 through 2-725 relating to remedies for failure to perform as promised at cites.]

The second source of market failure is market power or monopoly. In the case of monopoly, e.g., when a firm secures patent protection for its products, what is good for the firm or business group is not necessarily good for society (Allen, 1959: 196-8). The conditions required for Pareto optimal distribution of goods and services are not met when there is oligopoly or monopoly power (Baumol, 1977: 375-78). Monopoly power is not necessarily bad. Government grants of patents for such things as genetically engineered foods are, in fact, grants of monopoly designed to give inventors the economic benefits derived from their patentable creations. [Efforts to restrict monopoly power of patents have not been successful. See *U.S. v. General Electric Co.*, (1926) (confirming monopoly rights); and failure of attempts to reverse the position, *e.g. U.S. v. Line Material Co.*, (1948: 315); *U.S. v. Huck Mfg. Co.*, (1965).]

Some economists have even argued that monopolies are engines for economic development and growth (Schumpeter, 1962). However monopoly is often harmful. Therefore, the determination of when monopoly will be permitted is itself a regulatory determination.

People are essentially selfish and, if competitors collaborate, they often conspire against the public good. As Adam Smith explained more than 200 years ago,

People of the same trade seldom meet together, even for merriment and diversion, but the conversation ends in a conspiracy against the public, or in some contrivance to raise prices…. But though the law cannot hinder people in the same trade from sometimes assembling together, it ought to do nothing to facilitate such assemblies, nor to render them necessary (Smith, 1937).

As indicated, patents are a regulatory grant of monopoly power. In contrast, regulation, in the form of the anti-trust laws, responds to Smith's concerns about collusion. The Sherman Antitrust Act and the Clayton Act prohibit price-fixing, monopolizing, and other anti-competitive behavior. Government regulation under the antitrust laws has addressed diverse issues, such as price fixing by competing railroads and minimum-fee schedules of lawyers. [See *U.S. v. Trans-Missouri Freight Association*, (1897) (prohibiting agreement on railroad rates); *Goldfarb v. Virginia State Bar Association*, (1975), (prohibiting professionals to agree on minimum prices or price scales).]

The third type of market failure results from externalities, *i.e.*, when costs of production become external to the company producing the good and therefore are not paid by the producer. In effect, the company receives productive inputs without paying for them. The costs of the inputs are imposed on other sectors of society or on society in general. For example, disposing of waste into a river kills fish and reduces the value of the river for recreation and as a scenic attraction. Environmental pollution from industrial smokestacks and from automobiles results in costs imposed on others by polluters who avoid incurring those costs themselves. In each instance, the polluter reaps the benefit of its business activity and society pays the bill for cleaning up the pollution or living with it. These externalities can be internalized in various ways through government regulation. We can modify property rights in some instances to impose the costs directly on the party that benefits. For example, the government can impose taxes on the polluting firm in order to increase the firm's costs to the same level it would incur if the costs were internal to the firm (Rosen, 2001: 80-99). There is an extensive literature on the benefit and the harm to efficiency that result from various types of regulation. The debate centers on whether regulation reduces harm from market defects or makes it worse. Not surprisingly, there are substantial differences of opinion in the literature. For example, Cropper and Oates (1992: 675-740) suggest market solutions have proved to be cheaper than regulatory solutions to environmental problems. Viscusi (1995: 50-54), on the other hand, argues some unregulated chemicals are more dangerous than those regulated.

Utilitarian Theory

According to utilitarian theory, regulations are a response to political demand. Voters' desire legislation that protects their interests and rational politicians take political positions to accommodate that demand. In this way, politicians attempt to take a position as close as possible

to that of their constituents, as or at least closer than that of their political opponents. Regulation, then, is a response to the voters' pursuit of their own interests, as they perceive their interest. However, those interests are often too diffused to have much effect on politicians. However, when the interests are focused and represent views of large numbers of concerned voters, those interests carry substantial weight.

Because regulation creates winners and losers, *i.e.*, creates costs and benefits for various constituents, there is a tension among interests of the public, the politicians, and the business sector. Moreover, relative strengths of the business community, the voters, and the civil service are constantly shifting from issue to issue and over time. When taking a position on a given issue, politicians are concerned about relative sizes of different constituencies and their interests in that issue. They want to please the dominant political constituency, in order to secure the most money for their reelection campaigns and to secure sufficient votes to be reelected.

Politicians assisted by civil servants who often have a vested interest in extensive regulation often emphasize a regulation's benefits rather than its costs (Nisganen, 1971). Moreover, politicians prefer those regulations that offer diffused benefits, which can be pointed out to many constituents, while concentrating costs on relatively few constituents. Examples of this type of regulation are worker safety codes and consumer protection, which benefit large numbers of people while focusing costs on firms and on individuals who are generally not aware of the costs they are paying.

Utilitarian theory, at least in its simplest form, does not look at business as either impotent or as all-powerful. Pluralist theory, which is consistent with the views of Madison, suggests there is a struggle among interest groups, all competing to shape public policy and to achieve power. This struggle creates "countervailing power" that prevents any group from gaining full control. The relevant question becomes how much relative power different groups possess. Business is one of a number of groups whose power is balanced or checked, to a greater or lesser extent, by the power of others. Another factor limiting the political power of business is the fact that the business community is split over many issues, and there is no monolithic consensus among business firms. The pluralist perspective is popular among American historians, sociologists, and political scientists.

According to utilitarian and pluralist thinking, government regulation is enacted to satisfy public demand. Utilitarian theory is subject to the criticism that it is really a form of normative theory, in which the norm is the greatest good for the greatest number. It is also subject to the criticism that it ignores the power of corporations and vested interests. Empirical evidence suggests large corporations with focused interests are often able to persuade politicians to implement the programs they want. In the case of genetically modified foods, Monsanto was able to convince the government to implement a set of regulations favorable to the company's interest, and then to convince the same government to remove the regulations when a new corporate administration preferred a regulation-free approach. To this extent, the case fails to

support the utilitarian theory. On the other hand, the power of the public's response to Monsanto's actions suggests that utilitarian theory is in fact relevant.

Normative Theory

The normative theory assumes that economically efficient outcomes are not always in the public interest and therefore the government must regulate to assure the public interest, rather than economic efficiency, is served. This theory is tied to concepts of rights, justice, and the common good, dating back to Socrates and Plato. According to this perspective, it is the government's responsibility to define the public interest and to pursue it by regulating economic activities. According to normative theory, regulation is enacted to do what is morally correct by protecting rights, justice, and the common good.

In a democracy, preferences need not be economically efficient. A public policy to assist the poor by providing subsidized food for them is economically inefficient. For example, it has been found that food stamps are an economically inefficient means of helping the poor based on differences between quantity of food purchased by persons with food stamps and quantity purchased by persons who were given cash instead (Fraker, Martini, & Ohls, 1995: 633-649). Nonetheless, a combination of the American public and agribusiness has long supported food stamp programs and distributions of surplus food to the poor, rather than providing the poor with money with which to purchase food or other items they consider necessary. Our long-standing policies in favor of distributing food and against providing money to buy food or other goods shows social policy may be based on values unrelated to economic efficiency or welfare maximization. Society seems to have decided that giving food to the poor is desirable and giving them money with which to buy what they would prefer is undesirable, even though giving money instead of food clearly increases the welfare of recipients at no additional cost to those providing the benefit.

Theory of Corporate Power

Economists, political scientists, and lawyers have developed the theory of corporate power to explain how special interests can be so effective in securing legislation that favors their particular economic and commercial interests. Although some confuse this theory with Marxist theory, the differences are fundamental. Marxist theory predicts increased concentration and centralization of capital, followed by forced cartelization and monopolization. The process ends with the state as a virtual guarantor of monopoly profits and a fusion between the state and those monopolies (Mandel, 1962: 485-517). See also Baran (1957: 44-134) and Baran & Sweezy (1966). Collapse of the capitalist system follows.

The mainstream economic and political science analysis of business influence over government does not presume collapse of the system. On the contrary, in this theory, an

equilibrium outcome shifting wealth from the public and labor to business is a stable and sustainable state. The theory is attributable to work dating back at least to Gabriel Kolko's (1967) *Triumph of Conservatism.* According to this theory, business is a "power elite," to use a term from John Stuart Mill, and is effective in shaping government policy. Corporate power controls society and government through political contributions and support for politicians, in exchange for politicians' support for corporate interests. This process results in policies favorable to businesses organizations that participate in the process.

The model has its weaknesses. First, business organizations sometimes have conflicting interests, which prevent concerted effort to support a given issue. Second, if the public takes an interest in an issue, politicians are not able to support interests of large donors who deliver few votes. Government and government regulation can be used to further interests of the wealthy only if those interests can be furthered without offending the majority of voters. However, the iron triangle of civil servants, politicians, and interest groups are a major force in the formulation of policy. The case of genetically modified foods demonstrates the power of business interests. However, it also shows how that power, if not used effectively, can be completely undermined by voter coalitions.

THE REGULATION OF GENETICALLY MODIFIED FOODS

Advances in plant biotechnology have produced a stunning array of hardy plants. In some cases, plants have been genetically modified so they will grow in inhospitable climates and produce crops that have attractive qualities (such as resistance to insects) or grow in greater quantity. Genetically modified foods could improve the health and welfare of millions of malnourished people. At the same time they provide billions of dollars in profits for biotechnology firms. However, it is argued the technological and economic benefits may be more than outweighed by the social costs, in the form of potential threats to the well-being of mankind. There are legitimate concerns about dangers to those who consume genetically modified foods. Such concerns were unleashed when genetically modified corn was found in taco shells in the fall of 2000 (Raeburn, Forster, & Magnusson, 2000). The discovery resulted in nationwide recalls of food products and embarrassment of the biotechnology industry and the taco manufacturers.

There are also concerns about damage to the environment, for example the threat to biodiversity. Critics of genetically modified foods also point to dangers of creating new microbes or modified bacteria that could threaten human and animal forms of life. Problems that have arisen in the development and sale of genetically modified food provide abundant insights into how firms must manage public opinion when dealing with new technologies and products. The role of firms in shaping government regulation and the interaction between public perceptions and regulation both affect the success or failure of new products.

There has been considerable turmoil regarding genetically modified foods. In the United States, groups like the Friends of the Earth, the Sierra Club, and the Natural Resources Defense Council have demanded the government keep genetically engineered foods off the market. A lawsuit was filed against the U.S. Environmental Protection Agency by a coalition of environmentalists and organic farmers, accusing the agency of disregarding the law and its own regulations in its approval of farming genetically engineered crops (Singh, 2010: 9-10). Although genetically modified ingredients can be found in many American foods, there is considerable opposition to those foods. In Europe, there has been even greater opposition to genetically modified foods (Levidow & Carr, 1997).

Europeans have protested against these foods and the European Union has refused to import them. In spite of new European regulation on commercialization and labeling of genetically modified foods, most recent surveys of public opinion reveal the concern of the European public regarding agricultural biotechnology, (Ferretti & Lener, 20087). The responses of the European public to an opinion survey reflect an intense opposition to genetically modified foods. The following two responses serve as examples. "I strongly object to Europe's standards of health and environment being compromised for the sake of profits for multinationals who have no regards for morality or justice" (Ferretti & Lener, 2008: 516). "The companies involved have disregarded morality, human and environmental justice, scientific truth, environmental issues, animal rights, health, cleanliness and purity of our food and water supplies. To me it is an act against humanity that cannot be justified." (Ferretti & Lener, 2008: 519).

The anxiety expressed by the European public regarding biotechnology is often shared by European scientists. For example, according to Greek researchers, most studies indicate genetically modified foods may cause some common toxic effects such as hematological, biochemical, and immunological parameters, in addition to reproductive effects (Dona & Arvanitoyannis, 2009). On March 13, 2003, Austria announced a draft law of Upper Austria (*Oberösterreich*) banning genetic engineering. (European Commission, 2003). The draft law prohibited the cultivation of seeds and planting material composed of or containing genetically modified organisms *Id*. at 36. However, in response, the European Food Safety Authority, on July 4, 2003, issued its conclusion that the information provided by Austria did not contain any new scientific evidence to justify banning of genetically modified organisms (Scientific Panel on Genetically Modified Organisms, 2003). In spite of appeals from Austria, the European Court of Justice ruled Austria's plea was not well-founded and the appeal was dismissed *Land Oberösterreich & Austria v Commission*, (2005).

However, given the strong opposition to genetically altered crops, it is not surprising in February 2009, the European Commission failed in its effort to force France and Greece to allow the planting of Monsanto's genetically modified corn (EU fails to overturn bans on Monsanto GM corn, February 16, 2009). Concern regarding biotechnology extends to developing nations. For example, in Kenya, consumers are worried about safety and risk issues resulting from use of biotechnology and its products, such as effects of biotechnology on food biodiversity and the

environment, and they lament the lack of biotechnology policy and failure to label biotechnology products (Gathaara *et al*., 2008).

A CORPORATE ETHICAL AND SOCIAL RESPONSIBILITY CHALLEGE: THE MONSANTO COMPANY CASE

In view of the current controversy regarding biotechnology, the story of how government regulation of genetically modified foods developed is an unexpected one. The U.S. regulatory policy concerning genetically modified foods began to develop during the administration of President Ronald Reagan. The policy of the Reagan administration had been to support deregulation across many industries. However, in 1986, executives of the Monsanto Company visited Vice President George Bush at the White House with an unusual request. Some major agrochemical and biotechnology companies led by Monsanto wanted more restrictive regulation, especially from the Environmental Protection Agency. They wanted the Federal government to issue rules regarding genetically modified foods, even though there were no such products at the time (Eichenwald, Kolata, & Petersen, 2001). They disputed the view of the international scientific community that new biotechnology is only an extension of earlier techniques and poses no danger, while offering substantial benefits. They argued, contrarly, genetically engineered crops are fundamentally different and a reason for government concern and involvement (Miller, 1998). These executives made this unusual request for regulation because they felt the public would be more likely to accept genetically modified foods as safe if they were produced and marketed under government guidelines. A second motive may have been the desire to use regulation as an entry barrier to keep competitors from entering the market (Miller, 1998).

Smaller firms, such as seed companies and biotech startups, would not be able to bear the costs of the regulation. The administration complied, providing whatever regulation Monsanto wanted. The Department of Agriculture, the Food and Drug Administration, and the Environmental Protection Agency developed policies against garden plants and micro-organisms created with gene-splicing techniques. As a result of these policies, many small businesses and academic institutions were eliminated by the cost of regulation. However, when these regulations proved to be inconvenient to Monsanto Company, the administration quickly rolled back the regulation in favor of self-policing (Eichenwald, et al., 2001).

The Monsanto Company had also attempted to co-opt groups opposing genetically engineered crops. Prior to 1990, Monsanto's senior executives felt bioengineering of food would meet tremendous opposition from environmentalist and consumer groups. As a precaution, the company brought in representatives from these groups as "consultants" in the hope that involvement in the process of developing these foods would give opponents a better understanding of the technology and would mollify their opposition to it. However, in the early 1990s, new management of Monsanto decided scientific findings had disproved any reasonable objections to bio-engineered foods. For this reason, they abandoned the strategy of gradually

winning over opponents of the new technology. Under Robert Shapiro, who was named head of the agricultural division in 1990, Monsanto abandoned its effort to nurture the support of interested groups and the public, and opted instead to use its power in Washington to ram through its policies (Eichenwald, et al., 2001).

Monsanto embarked on a policy of removing regulatory obstacles and pushing the technology past its opponents. In the process, Monsanto lost support it had earned among groups such as agricultural universities and farmers. In 1992, Vice President Dan Quayle announced reforms that would "speed up and simplify" the process of bringing biotechnology food products to market. The new policy seriously limited the regulatory authority of the FDA over these foods. However, despite the assurances of Mr. Quayle, scientists at the FDA feared toxins might be created when new genes are introduced into plants. Monsanto and administration officials dismissed these worries as groundless, even though these were the problems Monsanto expected in the 1980s. Under the policies of the administration, the FDA proposed testing only if conducted by the companies themselves (Eichenwald, et al., 2001). The FDA also refused to require labeling because labels might mislead consumers into thinking the food is not safe. The policy against testing and labeling was all that was needed to invigorate opposition against genetically modified foods (Miller, 1998).

The resulting torrent of opposition to genetically modified foods dealt a severe blow to the biotechnology industry. Ironically, Monsanto and the industry have now shifted to a new strategy resembling the original one, i.e., to revive consultation with outside groups. However, damage to the biotech industry has already been done.

IMPACT OF THE MONSANTO COMPANY CASE

In this case, we have seen how political and economic forces combined to produce governmental guidelines regarding genetically modified foods. The Monsanto case is fascinating because government action, which proved to be so disastrous to Monsanto and to the biotechnology industry, was dictated by the industry itself. The case raises questions about performance both of business and of government, and gives support to the idea that business is a major factor in the development of government regulation. It also shows how public opinion and public interest groups can shape public policy. Public opinion is a force that must be shaped by management if an industry is to be successful in development of new products, especially controversial ones. These issues are made complex because of the variety of interest groups, differing perceptions of risk and reward, and conflicting views regarding costs and benefits associated with controversial products. Our experience with regulation of genetically modified foods has important implications for development and marketing of new controversial products.

This major business case supports the counter-intuitive view that government regulation of business has often been legislated at the request of corporations to be regulated. The case also demonstrates the influence of government on business, e.g., the sway of the European Union on

the biotechnology industry. Thirdly, the case reveals the influence of society, i.e., public opinion on business and government, for example, the pressure exerted by public opinion from France and Kenya on their biotechnology industry and on governments. Finally, the case illustrates consequences bad management decisions can have on even the most effective use of corporate power. Monsanto managed to dictate the regulatory policies of the U.S. Administration, only to be bitten by the regulation that it sought.

In the developing field of biotechnology/bioengineering, social trust can assist in promulgating regulations offering acceptable standards for exploring innovations in light of uncertain scientific knowledge. It may be premature to accurately assess long-term risk when immediate decisions are required to respond to perceived societal needs, as in the need for increased food supply for a growing global population. If all stakeholders are not included in the decision-making, distrust leading to polar arguments arises. By deliberately structuring a regulatory decision process to engage all affected parties, or at least offer the opportunity for engagement, trust in the process is built and thusly trust for the decision (Bratspies, 2009).
Monsanto, during its initial move seeking governmental regulation with invitations to environmental and consumer groups to consult, was on a course of building social trust. However, it later changed course to a unilateral approach for deregulation. Due to differing views within the scientific community of the outcome of bioengineered food, Monsanto suffered a setback in marketing its innovations.

In an article from The Economist (print edition, 2009), debate is still divided on "whether Monsanto is a corporate sinner or saint" There are two sides to the debate, one that sees Monsanto as "using science to create foods that threaten the health of both people and the planet, and intellectual-property laws to squeeze every last penny out of the world's poor." Another view considers Monsanto quite differently for its innovations in seeds pioneering as the "world's best hope of tackling a looming global food crisis."

Monsanto's genetically modified foods impacted significantly on Europe's position toward these products. As a result of Monsanto's export of genetically modified soybeans mixed with non-genetically modified soybeans in 1996 that received large media coverage, there was a public outcry in Europe (Scholderer, 2005). This incident led to regulation by the EU. Another international impact was felt in Mexico (2004). Monsanto and another company were given planting permits to experiment with planting genetically modified corn. This situation has created opposition from farm groups and environmentalists. Appeals were filed with the International Human Rights Commission, said Pedro Torres, President of the Democratic Farm Workers Front (Stevens, 2010). "We have had to take this to an international tribunal to demonstrate the lack of action on the part of the Mexican government in the face of the illegal introduction and planting of genetically modified corn," (Stevens, 2010). The Monsanto case has attracted wide spread attention and led to the passage of regulations on a global scale.

Many commentators, scientists, public awareness groups, consumer advocates, environmental activists and both domestic and global government regulators suggest labeling is

necessary to allay the public's fear and ally the public's support for bioengineered food. Monsanto's opposite position is evidenced by years of litigation to thwart any labeling on the basis that bioengineered food is no different than conventionally produced food. Monsanto's litigious approach was countered by a public group coordinated by the Alliance for Bio-Integrity supported by the International Center for Technology Assessment with legal demands of the Food and Drug Administration for mandatory testing and labeling. While the FDA has no current power to mandate labeling, protection of the public by assuring genetically engineered foods are nutritionally equivalent to non-genetically engineered foods is its mission, and education of the public in the sincerity of its dedication to that mission is a suggested resolution (Singh, 2010).

Monsanto's entrance into the milk industry with its recombinant bovine growth hormone to enhance dairy production was challenged by the Center for Food Safety and other consumer groups (*Stauber v. Shalala,* 1995). With the support of the FDA, Monsanto remained a hormone supplement provider to the milk production market without its customer dairies being required to disclose use of the altered hormones in their labeling. Subsequent legal actions met with mixed results for Monsanto to prevent organic dairy farmers from labeling their own products as free from artificial growth hormones (*Ben & Jerry's Homemade, Inc. v. Lumpkin,* 1996). More recently the focus centers on a public relations campaign from the Center for Global Food Issues to convince the public and grocers that "Milk is Milk" (Milk Is Milk Campaign Launches Billboard Campaign in California, n.d.). Monsanto sold its interest in the dairy hormone business to Eli Lily's Elanco in 2008 for the unstated reason to concentrate on its biotech seed markets (Monsanto News Release, 2008a).

Perhaps the most aggressive approach to fostering its interests in genetically engineered crops is seen in Monsanto's zealous protection of its intellectual property rights in its patented biotechnologies. United States Supreme Court Justice Clarence Thomas (Monsanto News Release, 2008b) wrote the majority opinion in *J.E.M. Ag Supply, Inc. v. Pioneer Hi-Bred International, Inc.* (2001) holding that utility patents are valid for newly developed plant breeds created through genetic engineering. Monsanto currently holds over 5,000 patents (United States Patent and Trademark Office Search, n.d.) and supports its research and development efforts at a cost of over $2.7 Million per day (Monsanto Pipeline Technology Highlights, n.d.), an investment no company can afford to lose by failing to protect against infringement violations. Aoki (2009) concludes that

> . . . As private companies move into the seed and agricultural sector, they avail themselves of different types of intellectual-property protection to secure their investment. . . . The point is that the presence of intellectual-property protection encourages certain types of activity and investments that, while not antagonistic to biodiversity, may give rise to patterns that erode biodiversity.

Monsanto's aggressive and unyielding enforcement of its intellectual property rights is fed by fragmented authority among the U.S, Department of Agriculture, the FDA and the Environmental Protection Agency resulting in a problematic regulatory disparity (Aoki, 2009). Hundreds of farmers across the United States and Canada have been forced to defend against law suits brought by Monsanto and other biotech companies for patent infringement upon discovery that their crops contain produce from unlicensed seeds, whether the infringement occurred by using holdover seeds or from natural pollination by insect or wind (Beingessner, 2003). Mexican farmers may be next (Stevens, 2010).

IMPLICATIONS FOR FUTURE RESEARCH

In this study, we reviewed some of the major theories regarding the origin of government regulation of business, and we looked at a specific corporate case: the regulation of genetically modified foods. As stated above, this preliminary study provides new insights into how government regulation may be influenced by business, the impact of society on government/business decision making, and the consequences of producing products of a controversial nature. Also, this study raises many other research questions for scholars and practitioners to address. Further research on the issues presented in the study would be useful in exploring how government and business can cooperate in a way beneficial for business while also safeguarding the interest of society.

The following recommendations for future research will advance knowledge on corporate ethical practices in the biotechnical industry to ensure product safety, and improve the management decision-making process and promote the interest of both business and society:

- The relationship between government regulation of the biotechnical industry and corporate power.
- An investigation of the development of the government regulation process, including dates and content of the laws related to regulation.
- An examination of the interaction of different actors, the reaction of the European Union countries, and the debate at the World Trade Organization in relation to the biotechnology industry.
- Implications of the Monsanto case on current business and government practices in terms of biotechnology products.
- An analysis of the theories of regulation and corporate power.
- The regulation of genetically modified foods and society's concerns: in whose interest does government regulate?
- A study of the biotechnology/bioengineering business practices and government regulation of genetically modified foods.
- Genetically modified organisms and the need for a coordinated global effort to study the long-term impact on humans, animals, plants, and the environment.
- Corporate power and decision making in the biotechnology/bioengineering industry: a comparative study of business practices in the U.S. and Europe.

- Government regulation of biotechnology products: managerial decision-making and consequences for the global society.
- Using enforcement of intellectual property rights as an anti-competition tool.

REFERENCES

Allen, R.G.D. (1959). *Mathematical economics (Second Edition)*. London: Macmillan.

Aoki, K. (2009). Farming and Food: How We Grow What We Eat: Article: Seeds Of Dispute: Intellectual-Property Rights and Agricultural Biodiversity, *Golden Gate University Environmental Law Journal*, 3(1), 79, 159. Available at http://digitalcommons.law.ggu.edu/gguelj/vol3/iss1/6

Baran, P.A. (1957). *The political economy of growth*. New York: Modern Reader.

Baran, P.A. & Sweezy, P.M. (1966). *Monopoly capital*. New York: Modern Reader.

Baumol, W.J. (1977). *Economic theory and operations analysis*. Englewood Cliffs: Prentice Hall, Inc.

Beingessner, P. (2003). *Maine food co-ops unite*. (n.d.) Retrieved May 17, 2011, from http://www.keepmainefree.org/suesuesue.html

Ben & Jerry's Homemade, Inc. v. Lumpkin, No. 96-C-2748, 1996 U.S. Dist. LEXIS 12469 (N.D. Ill. 8/28/1996).

Bratspies, R. M. (2009). Biotechnology, sustainability & trust. *Kansas Journal of Law & Public Policy*, 18, 273.

Cropper, M. & Oates, W.E. (June, 1992). Environmental economics: A survey. *Journal of Economic Literature*, 30.

Dona, A. and Arvanitoyannis, I. (February, 2009). Health Risks of Genetically Modified Foods. *Critical Reviews in Food Science and Nutrition*, 49(2), 164-175.

Eichenwald, K., Kolata G., and Petersen M. (January 25, 2001). Biotechnology food: From the lab to a debacle. *New York Times*. http://www.nytimes.com/2001/01/25/business/25FOOD.html?scp=1&sq=biotechnology eichenwald&st=cse&pagewanted=1 Retrieved May 21, 2011.

EU fails to overturn bans on Monsanto GM corn (February 16, 2009). *Chemical Week*, 171(5), 5-5, 1.

European Commission Decision No. 2003/653/EC, O.J. L 230/34 (2003).

Ferretti, M. P. and Lener, M. (2008). Lay public or experts? e-participation in authorization for GMO products in the European Union. *Review of Policy Research*, 25(6), 507-525. DOI: 10.1111/j.1541-1338.2008.00359.x

Fraker, T.M., Martini, A.P., and Ohls, J.C. (Fall 1995). The effects of food stamp cashout on food expenditures: An assessment of the findings from four demonstrations. *Journal of Human Resources*, 30(4), 633-649.

Gathaara, V. N., Ngugi, J.N., Kilambya, D. W., and Gichuki, T. S. (2008). Consumer's perception of biotechnology in Kenya. *Journal of Agricultural and Food Information*, 9(4), 354-361. DOI: 10.1080/10496500802446210

Goldfarb v. Virginia State Bar Association, 421 U.S. 773 (1975).

J.E.M. Ag Supply, Inc. v. Pioneer Hi-Bred International, Inc., 534 U.S. 124 (2001).

Kanter, J. (March 3, 2009). Europe to allow two bans on genetically altered crops. *New York Times*, 1.

Keynes, J.M. (1936). General theory of employment, interest and money. London: Macmillan.

Kolko, G. (1967). The triumph of conservatism: A reinterpretation of American history, 1900-1916. Chicago: Quadrangle Books.

Land Oberösterreich & Austria v Commission, (2005) ECR II-4005 106.

Levidow, L. and Carr, S. (1997). European biotechnology regulation: Framing the risk assessment of an herbicide-tolerant crop. *Science, Technology, & Human Values*, 22(4), 472-506. DOI: 10.1177/016224399702200403

Mandel, E. (1962). *Marxist economic theory*. London: Merlin Press.

Milk Is Milk Campaign Launches Billboard Campaign in California. (n.d.). At *Center for Global Food Issues*. Retrieved May 18, 2011 from http://www.cgfi.org/2006/08/milk-is-milk-campaign-launches-billboard-campaign-in-california/

Miller, H.I. (December 16, 1998). Biotech scare is industry's fault. *Wall Street Journal*, A22.

Monsanto News Release (2008a). Monsanto Company completes sale of POSILAC bovine somatotropin and related business. (n.d.) Retrieved 5/17/2011, from http://monsanto.mediaroom.com/index.php?s=43&item=647

Monsanto News Release (2008b), Eli Lilly and Company to acquire Monsanto's POSILAC brand Dairy product and related business. (n.d.) Retrieved 5/17/2011 http://monsanto.mediaroom.com/index.php?s=43&item=629

Monsanto Pipeline Technology Highlights. (n.d.). At *Monsanto*. Retrieved on May 17, 2011 from http://www.monsanto.com/products/pipeline/default.asp

Musgrave, R. A. & Musgrave, P.B. (1989). *Public Finance in Theory and Practice (Fifth Edition)*. New York: McGraw Hill.

Nature. (February 25, 1999). U.S. groups sue over approval of biotechnology crops. 397(6721), 636.

Nisganen, W. (1971). *Bureaucracy and Representative Government*. Chicago: Aldine Atherton.

Pigou, A.C. (1920). *Economics of Welfare*. London: MacMillan.

Raeburn, P., Forster, J., & Magnusson, P. (November 6, 2000). After Taco Bell: Can biotech learn its lesson? *Business Week*, 3706, 54.

Rosen, H.S. (2001). *Public Finance (Sixth Edition).* San Francisco: Irwin/McGraw Hill.

Schneiberg, M. & T. Bartley (December, 2008). Organizations, regulation, and economic behavior: Regulatory dynamics and forms from the nineteenth to twenty-first century. *Annual Review of Law and Social Studies*, 4, 31-61. DOI: 10.1146/annurev.lawsocsci.4.110707.172338

Scholderer, J. (February 5, 2005). The genetically modified foods debate in Europe: History, regulatory solutions, and consumer research. *Journal of Public Affairs*. 5(3/4), 263-274. DOI: 10.1002/pa.27

Schumpeter, J. A. (1962). *Capitalism, Socialism and Democracy (Third Edition)*. New York: Harper Torchbooks.

Scientific Panel on Genetically Modified Organisms. (2003). Opinion of the Scientific Panel on Genetically Modified Organisms on a question from the Commission related to the Austrian notification of national legislation governing GMOs under Article 95(5) of the Treaty, *The EFSA Journal* (2003) 1, 1-5. doi:10.2903/j.efsa.2004

Singh, Om V. (2010). Regulation and safety assessment of genetically engineered food. *Studies in Ethics, Law, and Technology*, 4(1) Article 2. DOI: 10.2202/1941-6008.

Smith, A. & Cannan, E., ed. & Lerner, M., (1937). In *An inquiry into the nature and causes of the wealth of nations*. New York: The Modern Library

Stauber v. Shalala, 895 F. Supp. 1178 (W.D.Wis., 1995).

Stevens, M. (February 4, 2010). Mexico starts planting genetically modified corn. (n.d.) *U.S. News and World Report*. Retrieved May 17, 2011 from http://www.usnews.com/science/articles/2010/02/04/mexico-starts-planting-genetically-modified-corn.html

The parable of the sower: The debate over whether Monsanto is a corporate sinner or saint. (November 19, 2009). *The Economist*. Retrieved 5/17/ 2011 from http://www.economist.com/node/14904184?story_id=14904184

United States Patent and Trademark Office Search. (n.d.). At *USPTO*. Retrieved on May 18, 2011 from http://patft.uspto.gov/netacgi/nphparser?Sect1=PTO2&Sect2=HITOFF&p=1&u=%2Fnetahtml%2FPTO%2Fsearchool.html&r=0&f=S&l=50&TERM1=monsanto&FIELD1=ASNM&co1=AND&TERM2=&FIELD2=&d=PTXT

U.S. v. General Electric Co., 272 U.S. 476 (1926)

U.S. v. Huck Mfg. Co., 382 U.S. 197 (1965)

U.S. v. Line Material Co., 333 U.S. 287 (1948)

U.S. v. Trans-Missouri Freight Association, 166 U.S. 290 (1897)

Viscusi, K. (May, 1995). Carcinogen regulation: Risk characteristics and the synthetic risk bias. *American Economics Review*, 85.

DEVELOPMENT OF A MACRO-MODEL OF CROSS CULTURAL ETHICS

David Strubler, Champlain College
Sung-Hee Park, Dalton State University
Atul Agarwal, University of Illinois at Springfield
Karen Cayo, Kettering University

ABSTRACT

The purpose of this research is to identify and integrate philosophies, theories and frameworks to propose a more comprehensive model that directs research and global companies toward ethically-enabling philosophies, perceptions, and practices across cultures. This study is the second study in a series to develop a cross-cultural ethics macro model based on a 25-year literature review by Strubler, Park, and Agarwal (2009). From the first study, we concluded that cross-cultural ethics is a multivariable process. We proposed a systems model for the stages of corporate ethical development. We now propose one new macro-model and further define and integrate a previously created Global Ethics Acculturation model with the macro model. Moreover, we propose research hypotheses for testing. These hypotheses establish a means to provide a prescription for practitioners and corporations to manage cross-cultural ethical dilemmas along with adding knowledge to the body of cross-cultural ethics literature. Plans for future research to define, operationalize, and test elements of the macro and micro models are proposed.

INTRODUCTION

Cross-border ethical dilemmas at all levels pose a significant challenge to those who engage in global business. While law is a baseline for ethics (the lowest common denominator), even legal requirements vary from country to country. This places global managers in the difficult position of learning and complying with laws of all the countries involved in a business transaction or operation, e.g., Toyota's industry-shattering recall in the U.S.

However, above and beyond the law is an emerging field of cross-cultural ethics. For example, at the organizational level, consider Nike's self-correction to provide a safe environment for its overseas-workers or Patagonia's initiative to foster sustainability through their global supply chain, absent of any legal requirements to do so. Nor are there legal requirements for American medical teams in foreign countries to maintain safety standards for patients. Nor is a sales manager's decision to inform a construction contractor of a defect-rate

for bolts used to build a bridge in a country where earthquake potential is high but where no construction standards exist (Ferrell & Fraedrich, 1997). For this reason, Strubler et al (2009) proposed a corporate ethical development model which assumes that organizations should embrace the "law-above-the-law" with a commitment toward ethical practices that sustain society, the organization, its suppliers and customer base for the long-term (see Appendix I, Cross-Cultural Ethics Maturity Model).

As already observed, there are many philosophies, theories and micro models which have been proposed, many of which are useful for testing hypotheses (Strubler et al, 2009). Out of this literature review came twenty models ranging from the macro to micro level. Therefore, we propose two interacting macro-models as a framework for cross-cultural ethics.

The first of the two models proposed in this research assumes that synergistic variables from national/environmental, organizational and personal subsystems lead to a cumulative, if not exponential, interaction effect producing (un)ethical decisions and associated behaviors in a given cultural context (Owen, 1983; Brommer et al, 1987; Hunt & Vitell, 1986; Wines & Napier, 1992; Stajkovic & Luthans, 1997; Robertson & Fadill, 1999; McDevitt et al, 2007; Tsalikis, 2008; Svennson & Wood, 2008). However, as the literature and this macro model suggests, ethical decision-making and behavior is complicated even within a single culture. Therefore, the second model (based on Schramm's 1999 model of shared experience) was introduced in the Strubler et al (2009) study and is integrated here with the macro model as a means of explaining and predicting ethical decision-making and behaviors across cultures.

So for the first macro model (see Figure 1, Appendix 1), we identified eight major national/environmental factors from the literature which were shown to influence or interact with ethical decision-making and outcome behaviors. These include geography (climate, topography, population diversity and density and the availability of resources) (Lingenfelter, 1992), Social institutions (media, family, religion, government, education) (Ferrell & Gresham, 1985; Wines & Napier, 1992; Svennson &Wood, 2008), dominant cultural values (Hofstede, 1980; Vitell et al, 1993; Husted & Allen, 2008), economy and economic systems (Tsalikis, 2008), political and legal systems (Owen, 1983;), language (Alves et al, 2006; Connor, 2006; Zhang et al, 2007), public opinion (Owen, 1983; Wines & Napier, 1992), and industry norms (McDevitt et al, 2007). These factors were found to contribute directly or indirectly to ethical decisions and behaviors. For example, Lingenfelter (1992) notes that native Pacific islanders form cultural values (collectivism) based on the availability of food, land, and the eminent danger of storms. Cultures may become collectivistic out of necessity, thus creating social obligations of sharing which, in that context, are considered to be moral imperatives. In a similar way, resource rich geographies such as the United States, interacting with religious and political values (Protestant work ethic and independence) may favor individualism. Among the strongest values in the U.S. are individual rights. In short, we argue that cultural norms such as collectivism or individualism are influenced in part by environmental factors and, once established, become moral imperatives

(Husted & Allen, 2008; Stajkovic & Luthans, 1985; Wines & Napier, 1992). These imperatives strongly influence ethical decision making and behaviors within a cultural context.

Second, organizational factors were also identified from the literature, all of which create a powerful context that influences ethical decisions and outcomes. These include the moral development level of the company (Reidenbach & Robin, 1991; Rossouw & van Vuuren, 2003), the demonstrated ethics and management styles of an organization's leadership (Connor, 2006; McDevitt et al, 2007), the culture, history and climate of the organization (Wines & Napier, 1992, McDevitt et al, 2007), the presence/absence, type, and enforcement of ethics codes (Owen, 1983; Stajkovic & Luthans, 1997; Connor, 2006;), the influence of significant others (Ferrell & Gresham, 1985; McDevitt et al, 2007), access to technology (Rittenberg et al, 2007), and opportunity to act in (un)ethical ways (Zimbardo, 2006).

Third, beginning with Kohlberg's (1976) and Gilligan & Attanucci (1995) models of moral development, eight personal/individual factors were identified from the literature: education, language, and religion (Ferrell & Gresham, 1985; Wines & Napier, 1992; McDevitt et al, 2007), cross-cultural ethical/social intelligence (Elmer, 1986; Ascalon et al, 2008; Strubler et al, 2009); personal experience and background (Ferrell & Gresham, 1985; Hunt & Vitell, 1986; Brommer et al, 1987; Wines & Napier, 1992; McDevitt et al, 2007), interaction with significant others (Sanchez et al, 2008), and field dependence, ego strength, and locus of control (Trevino, 1986; McDevitt, 2007).

The second model is based on Schramm's (1999) shared experience framework and is useful in explaining and predicting ethical decisions and behaviors as actors moving across cultures (see Figure 2- Global Ethics Acculturation Model). "From a cross-cultural perspective, individuals, groups, organizations, and even societies, develop a common field of experience as they interact over time. This common field of experience increases each party's abilities to more accurately interpret messages from parties of other cultures, thereby increasing effectiveness in responding to cross-cultural ethical dilemmas. As a foundation for an integrative and prescriptive model for cross-cultural ethics, we propose an early general theory of communication to explain the interaction effect among individuals, groups, organizations, and cultures. As mentioned earlier, most of the theories, frameworks and models failed to address ethics across cultures. Schramm (1999) defined communication as 'the process of establishing a commonness or oneness of thought between a sender and a receiver.' Central to this definition is the idea that, for communication to occur, there must be a transfer of information from one party - the sender - which is received and understood by the other party - the receiver. To achieve this, information must be encoded and decoded and both sender and receiver must be linked by a channel of communication. Schramm then introduced the concept of "field of experience" which he theorized would determine whether a message was correctly interpreted. Without common fields of experience including common language, common backgrounds, or common culture, there is little opportunity to correctly interpret a message. This theory is consistent with, and even parallels, social learning theory (Bandura, 1986). As individuals, groups, organizations, or

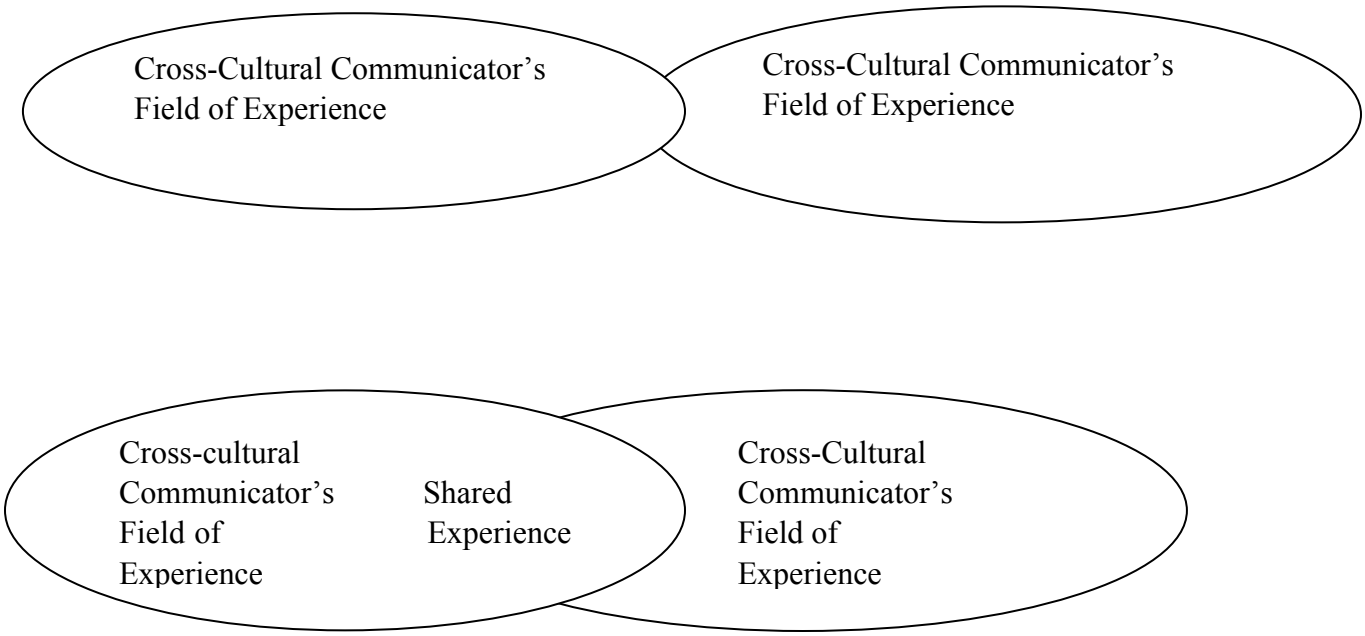
societies increase their field of experience with one another, social ethics learning also increases (Strubler et al, 2009, p. 6-7).

Strubler et al (2009) "propose a modification of this theory by first asserting the following: to the extent that communicators share a common field of experience, they can correctly interpret the meaning and intentions of one another's messages. Second, as communicators interact to a greater extent, both in intensity and over a longer period of time, so is there an increase in their ability to correctly interpret each others' messages. Third, as communicators share more common experiences, they more accurately interpret ethical dilemmas, allowing each to acculturate, act effectively, and make ethical decisions. At this stage, the communicating parties do not necessarily agree with or accept as good and true, the other party's interpretation of the ethical dilemma. Rather, they correctly interpret and adapt their behavior, thus either withdrawing from the relationship on ethical grounds or creatively resolving the dilemma and continuing the relationship. Creative resolution is a win-win approach, i.e., hopefully parties collaborate to find a mutually acceptable resolution to the ethical dilemma without compromising either party's ethical convictions. As mentioned earlier, we propose that acculturation (rather than assimilation) will be the norm for most individuals who choose or are required to interact with other cultures for business purposes. Most individuals will not surrender their ethical values and beliefs to the point of assimilating, i.e., completely accepting another culture and its values as their own. However, with an increase in the field of experience between parties, mutually satisfying and ethically sound solutions are likely to be produced. It should be noted, that in many cases, miscommunication between cross-cultural parties may be a major source of cross-cultural ethical conflict (Strubler et al, 2009, p. 7-8).

RESULTS

Cross cultural ethics is a highly complex phenomenon involving a large number of synergistic variables. Therefore, efforts need to be made to reduce the complexity with macro models such that research hypotheses can be posed and tested. Then, the interaction effect of the variables needs to be measured so that the models can predict, explain, and even prescribe solutions to cross-cultural ethical dilemmas for organizations. By integrating the two macro models, we propose that over time and through shared experience, organizational actors from different cultures can increase awareness and understanding of cultural and ethical similarities and differences and establish new organizing rules for resolving ethical dilemmas. They need also to have the ability to sort out and decide whether an ethical dilemma involves "absolute" values which cannot be compromised or whether there is a win-win solution in which both cultures' values can be respected and maintained.

Figure 2 – Global Ethics Acculturation Model



At the individual and organizational level, we argue that such an effort will require intercultural competency, time and patience, the reduction of ethnocentrism and prejudice, empathy for the other culture, consistent goodwill to establish trust over time, and the courage and wisdom to sort out reasonable from unreasonable risk-taking in cross-cultural ventures (Elmer, 1986; Ascalon et al, 2008). It also means that organizations must assess their own ethical and technical/managerial competence for engaging in international ventures. The following framework is an attempt to integrate the models in a four step process. Phase I (Initiation) involves actors initiating and enacting a new cultural environment, establishing contact and purpose, and setting new ground rules, e.g., problem solving methods that provide direction and build understanding, trust, and respect (Weick, 1979). Phase II involves continued culture learning, the identification of major conflicts, and employing Phase I ground rules to resolve conflict. Phase Three is the establishment of collective norms and goals. Phase IV is the establishment of a common identity and implementation of the venture or task. The four step cycle repeats itself. With each new and successful experience, group understanding and collective norms result in a greater overlap and there is an increased ability to communicate and effectively resolve ethical dilemmas (Kreitner & Kinicki, 2010; Schein, 1980). Note Castro's (1986) description of this process.

"After a month of training in Mazda's factory methods, whipping their new Japanese buddies at softball and sampling local watering holes, the Americans were fired up… [A

maintenance manager] even faintly praised the Japanese practice of holding group calisthenics at the start of each working day (in Kreitner & Kinicki, 2010).

Assuming that Stajkovic and Luthans (1997) are correct in their assumption that ethical values are largely culturally-based, time and shared experience can improve understanding, communication, and appreciation of another culture's ethics and, we argue, will serve to either reduce conflict or create a pathway for ethics-related conflict resolution. Even when culturally-bound ethics are violated by another cultural party, depending on the severity of the breach, interculturally-competent individuals or groups can generally work to creatively resolve an ethical dilemma without dissolving the relationship or compromising one's own ethical values. Therefore, combining the concepts of intercultural competency, cross-cultural social intelligence and the Cross-Cultural Ethics Maturity Model (see Appendix 1) for organizations, we propose the idea of cross-cultural ethical intelligence (Elmer, 1986; Ascalon et al, 2008; Strubler et al, 2008). By understanding and taking into account culturally-specific factors as well as utilizing cross-culture general knowledge and skills, organizations and their actors can successfully establish organizing rules with organizations from other cultures and normally resolve ethical dilemmas without compromising their own values. Ethically intelligent individuals and organizations are grounded in their own ethical values, are respectful, mature, and continual learners of other cultures and their values, are empathic, avoid ethnocentrism, and effectively "read between the lines" when they encounter ethical dilemmas.

HYPOTHESES

H1 *National/environmental factors interact with one another to influence ethical decision making within and across cultures*

H2 *Organizational factors interact with one another to influence ethical decision making within and across cultures*

H3 *Individual/personal factors interact with one another to influence ethical decision making within and across cultures*

H4 *National/environmental and organizational factors interact with one another within and across cultures*

H5 *Organizational and individual/personal factors interact with one another within and across cultures*

H6 *National/environmental and individual/personal factors interact with one another within and across cultures*

H7: Individual actors and groups (e.g., Chinese negotiating teams) embedded in a national environment and organizational setting and who have unique personal backgrounds will effectively resolve ethical dilemmas involving actors from other cultures to the extent that they share common experience over time with those actors.

DISCUSSION AND CONCLUSION

In this second study of a series to develop a prescriptive macro cross cultural ethics model, we propose a macro model which includes national environmental, organizational and individual/personal factors as interactive influences on cross cultural ethical decisions. We propose six hypotheses to test the model to determine the extent to which various interact and influence one another. In our first study, we proposed a Global Ethics Acculturation Model which we now integrate with the macro model along with one major hypothesis to test the relationship between the three major groups of macro factors and the influence of shared experience over time as a means to prevent, resolve or respectfully disengage interactions with organizations and their actors where ethical decision making and behaviors are involved across cultures. We also acknowledge the significance of organizational ethics development in reference to a previously introduced Cross Cultural Ethics Maturity Model.

FUTURE RESEARCH

A field study is currently underway, involving working professionals affiliated with a mid-western corporate university. "A survey method is utilized to measure research variables. A series of Web-based surveys are administrated via the Internet due to the better accessibility for the subjects. Some organizational and country level variables will be measured by contacting key informants (i.e., managers of organization and researchers). The research models and hypotheses derived from the integrative framework will be tested using various research techniques including a structure equation modeling (SEM) and a hierarchical linear modeling (HLM; a specific type of Random Coefficient Model) approach, which is specifically designed to examine multilevel data structures. Based on the findings from the field study, the subsequent studies will be modified and conducted at international organizational settings involving cross-cultural situations. The findings from the planned studies are expected to provide important insights into the dynamic interplay among the research variables in cross-cultural ethics" (Strubler et al, 2009).

REFERENCES

Alves, J.C., K.J. Lovelace, C.C. Manz, & D. Matsypura (2006). A cross-cultural perspective of self leadership. *Journal of Managerial Psychology*, 21(4), 338.

Ascalon, Ma. E., D.J. Schleicher, & M.P. Born (2008). Cross-cultural social intelligence: An Assessment for employees working in cross-cultural contexts. *Cross Cultural Management,* 15(2), 109-130.

Bandura, A.(1986). *Social Foundations of Thought and Action*. Englewood Cliffs: NJ.

Brommer, M., C. Gratto, J. Gravender, & M. Tuttle (1987). A behavioral model of ethical and unethical decision making. *Journal of Business Ethics*, 6, 265-280.

Castro, J. (1986, October 20). Mazda U. *Time*, 65.

Conner, K.T. (2006). Assessing organizational ethics: Measuring the gaps. *Industrial and Commercial Training*, 38(3), 148-157.

Gilligan, C., & J. Attanucci (1995). Two moral orientations: Gender differences and similarities. *Merrill Palmer Quarterly*, 34, 223-237.

Elmer, M. (1986). *Intercultural Effectiveness: Development of an Intercultural Competency Scale.* Unpublished doctoral dissertation, Michigan State University.

Ferrell, O.C. & J. Fraedrich (1997). *Business Ethics: Ethical Decision Making and Cases*. Houghton Mifflin Company, Boston, MA.

Ferrell, O.C. & L.G. Gresham (1985). A contingency framework for understanding ethical decision making in marketing. *Journal of Marketing*, 49, 87-96.

Hofestede, G. (1980). Cultures Consequences: International Differences in Work- Related Values, Sage Publications: Beverly Hills, CA.

Hunt, S.D., & S. Vitell (1986). A general theory of marketing ethics. *Journal of Macromarketing*, 6(1), 5-16.

Husted, B.W. & D.B. Allen (2008). Toward a model of cross-cultural business ethics: The impact of individualism and collectivism on the ethical decision- making process. *Journal of Business Ethics*, 82. 293-305.

Kohlberg, L. (1976). Moral stages and moralization: The cognitive-development approach, pp. 31-53 in T. Lickona (Ed.), Moral Development and Behavior. Holt, Rinehard, & Winston: New York.

Kreitner, R. & A. Kinicki, A. (2010). *Organizational Behavior*. McGraw Hill Irwin, New York.

Lingenfelter, S. (1992). *Transforming Culture*. Baker Book House: Grand Rapids, Michigan.

McDevitt, R., C. Giapponi, & C. Tromley (2007). *A model of ethical decision making: The integration of process and content.* Journal of Business Ethics, 73, 219-229.

Owen, J. (1983). Business ethics in the college classroom. *Journal of Business Education*, 258- 262.

Reidenbach, R.E. & D. Robin (1991). A conceptual model of corporate moral development. *Journal of Business Ethics,* 10, 273-284.

Rittenberg, T.L., S.R. Valentine, & J.B. Faircloth (2006). An ethical decision -making framework for competitor intelligence gathering. *Journal of Business Ethics*, 70, 235-245.

Robertson, C. & P.A. Fadil (1999). Ethical decision making in multinational organizations: A culture-based model. *Journal of Business Ethics*, 19, 385-392.

Rossouw, G.J., & L.J. van Vuuren (2003). Modes of managing morality: A descriptive model of strategies for managing ethics. *Journal of Business Ethics*, 46(4), 389-402.

Sanchez, J.I., C. Gomez, & G. Wated (2008). A value-based framework for understanding managerial tolerance of bribery in Latin America. *Journal of Business Ethics*, 83, 341-352.

Schein, E.H.(1980). *Organizational Psychology.* Prentice Hall.

Kreitner, R. & A. Kinicki (2009). *Organizational Behavior.* McGraw Hill Irwin, New York.

Schramm, W. (1999). *The Process and Effects of Mass Communication*. University of Illinois Press, Illinois.

Stajkovic, A.D. & F. Luthans (1985). Business ethics across cultures: A social cognitive model. *Journal of World Business*, 32(1), 17-34.

Strubler, D.C., S. Park, & A. Agarwal (2009). Toward a Prescriptive Model of Cross-Cultural Ethics: An Integrated Approach. *International Journal of Global Business and Economics*, l(2), 83-92.

Svennson, G. & G. Wood (2008). A model of business ethics. *Journal of Business Ethics*, 77, 303-322.

Tsalikis, J., B. Seaton, & T. Li (2007). The international business ethics index: Asian emerging Economies. *Journal of Business Ethics,* 80, 643-651.

Trevino, L.K. (1986). Ethical decision making in organizations: A person-situation interactionist Model. *Academy of Management Review*, 11, 601-617.

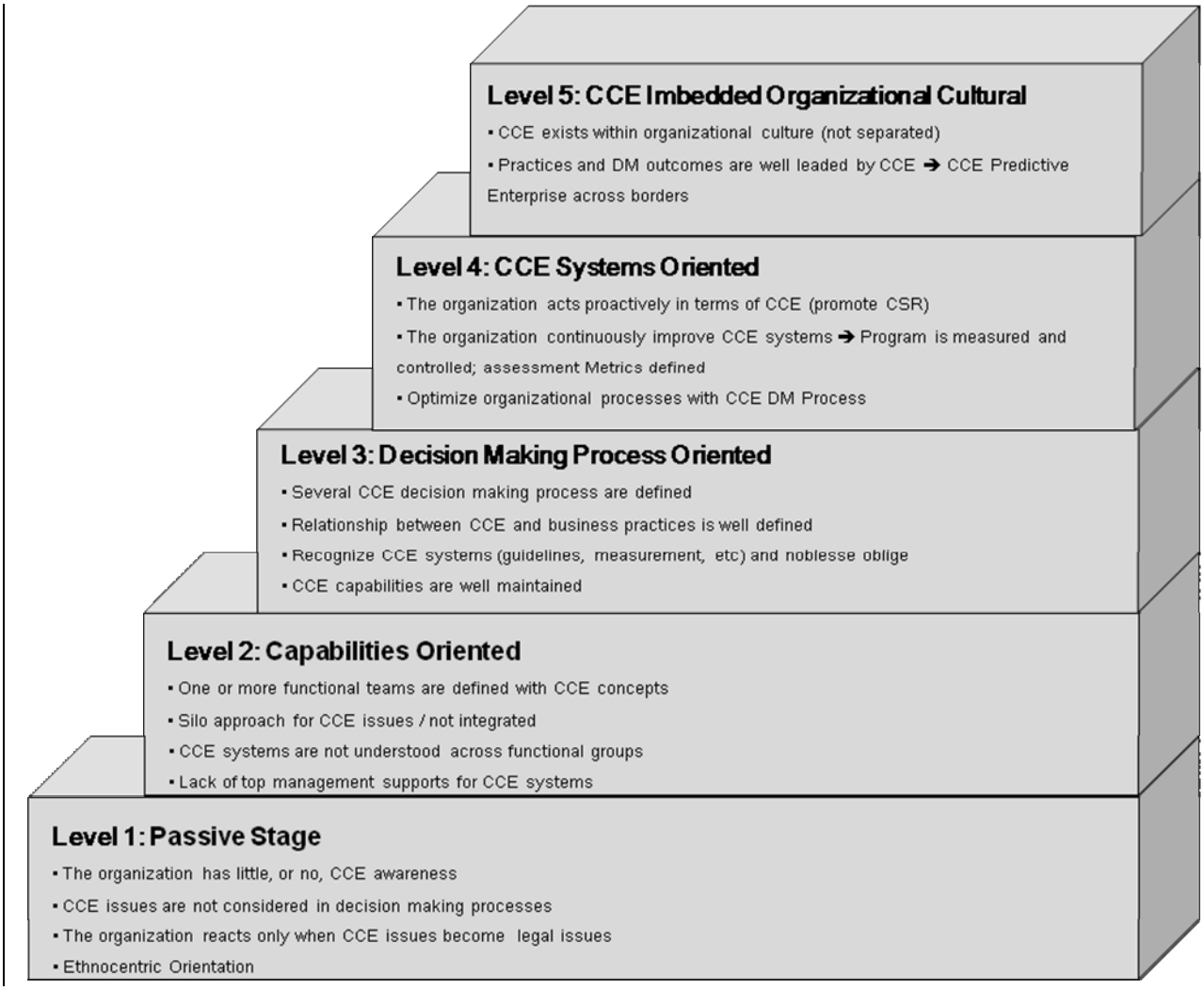
Vitell, S., S. Nwachukwu, & J. Barnes (1993). The effects of culture on ethical decision making: An application of Hofstede's Typology. *Journal of Business Ethics*, 12, 753-760.

Weick, K (1969). *The Social Psychology of Organizing.* Addison-Wesley: Reading, MA.

Zhang, Y., C. Straub, & S. Kusyk (2007). Making a life or a living? Cross-cultural comparisons of business students work and life values in Canada and France. *Cross Cultural Management*, 14(3).

Zimbardo, P (2006). The psychology of power: To the person? To the situation? To the system?. *In Rhode, D.L., Moral Leadership: The Theory and Practice of Power, Judgment, and Policy,* Jossey-Bass: San Francisco.

APPENDIX 1: Cross-Cultural Ethics Maturity Model



CORPORATE SOCIAL RESPONSIBILITY (CSR) REPORTING BY BP: REVEALING OR OBSCURING RISKS?

Janet Luft Mobus, Pacific Lutheran University

ABSTRACT

This paper explores the links between Corporate Social Responsibility (CSR) reporting and actual performance by a multinational corporation engaged in energy exploration and development at a time of crisis. CSR reporting relies on careful contextualization and definition in this industry because of 1) the ecologically unsustainable nature of its base in non-renewable natural resource extraction, and 2) the negative impact on climate change resulting from the production and final use of its end products.

Prior research suggests, generally, that CSR reporting benefits organizations in a number of ways including garnering social legitimacy, influencing the broad environmental agenda, and showing that voluntary means of reporting provide sufficient transparency to obviate any need for mandatory reporting regimes (see, for example: Gray, et al, 1995; Deegan et al, 2002; and Brown and Fraser,2006).

The success of garnering legitimacy from an activity like CSR reporting depends importantly on a loose coupling between what is represented publicly and what actually transpires behaviorally (Suchman,1995). The currently voluntary nature of CSR reporting leads to opportunities of 'green wash' as organizations are able to, for example, present their best CSR profiles while withholding less favorable performances. In an effort to add a degree of credibility, and thus enhance the legitimacy, of the reporting independent third parties assurance provisions (often by large auditing firms) are becoming a common feature of CSR reports. In all cases, however, events of a public nature, like an environmental crisis, dissolve the desired loose coupling between public face and private behavior, and invite close scrutiny of actual performance against CSR reporting representations.

The purpose of this study is to make such a scrutiny of the CSR report published by BP plc on April 15, 2010, just five days before the Macondo well blowout crisis resulting in leaking an estimated 4.9 million barrels of crude oil into the Gulf of Mexico. This CSR report includes an attestation statement by Ernest & Young LLP, one of the Big Four audit firms, and this assurance statement is also examined. In addition to examining the CSR report and its attestation statement, broad news media coverage during the first ten days of the crisis are examined. This examination intends to evaluate whether the themes of economic, environmental and social performance, themes around which CSR reports are organized, appear relevant to the

general social discourse that media reporting represents. Lastly, the final report of the National Commission on the BP Deepwater Horizon Oil Spill and Offshore Drilling (Commission Report, or CR), formed by Presidential Executive Order in May 2010 to investigate root causes of the disaster, is also examined . Collectively these documents provide a view of a) disclosures made by BP about its environmental and safety performance, goals, and achievements just prior to the crisis, b) major themes of concern raised in the public discourse contemporaneously with the crisis via news reports across a spectrum of newspaper outlets, and c) after-the-fact findings of conditions contributing to the crisis.

The study provides several insights into the value and relevance of CSR reporting. In particular, issues raised in the public media forum demonstrate that the focal points of triple-bottom-line reporting are responsive to societal concerns surrounding impacts of corporate activity, particularly during crisis events, suggesting that these reports address relevant issues. This finding supports continued CSR reporting and development efforts. Further, third party assurance of CSR reports offer tantalizing hints of areas of increased risk when read after a crisis event, signifying that the desired transparency of CSR reports are potentially enhanced by more robust independent evaluation than currently found. Finally, the study shows that CSR reports find their way into the hands of important constituents like Presidential Commissions, thereby illustrating an attentive audience for them.

INTRODUCTION AND LITERATURE REVIEW

CSR reports are assumed to serve the information needs and desires of a broad array of stakeholder audiences including governments, community members, investors, employees, suppliers and customers. Investors are an assumed target audience for CSR reporting and sending signals indicating risk management strategies, goals, and actions are considered a positive motivation for firms to engage in this voluntary reporting activity (Spence and Gray, 2007; Bebbington et al, 2005; Miles et al, 2002; Neu et al, 1998). While investors are an important target audience for CSR, appeals to them via this venue must be indirect due to Securities laws prescribing strict information disclosure requirements for firms soliciting investment funds. Indeed, each major section of BP's CSR report includes the following disclaimer: "No part of the … Sustainability Reporting 2009 constitutes, or shall be taken to constitute, an invitation or inducement to invest in BP p.l.c. or any other entity and must not be relied upon in any way in connection with any investment decisions".

Employees represent another target audience as firms strive to disseminate messages about who they want to be throughout their employee ranks via CSR reporting (Spence, 2009). This research shows that CSR reports highlighting achievements, cultivating positive values, and articulating aspirational goals contribute to cultivating employee pride in the organization.

While there are clear advantages for corporations to produce CSR reports, there are also concerns about the credibility of these reports as something other than public relations and image

management tools. Greenwashing, or "disinformation disseminated by an organization so as to present an environmentally responsible public image" is understood as deception by means of positive emphases in reporting corporate social responsibility (Vos 2009, 674). In the absence of verifiable measures of actual performance these reports are intended to, and actually do, improve positive public perceptions about a corporation. While falling short of fraud, greenwashing is the result of an effort to mislead. Using BP as an example, Vos recounts that the firm was actively lobbying Congress to authorize drilling in the Arctic National Wildlife Refuge it simultaneously worked with the National Wildlife Federation to arrange selling stuffed animals of endangered species through its retail gas stations (ibid., 677).

Others are concerned that in the absence of meaningful regulation CSR reporting will become nothing more than "puffery". Puffery is a legal defense that can be used against charges of false advertising or charges of investment fraud. Because speech that misleads consumers or investors is illegal, firms must be careful of the public representations they make. But puffery is a protection against such charges if the firm can convince a court that the statements were nothing more than "vague statements of corporate optimism" that a reasonable consumer or investor could not take literally (Hoffman 2006, 1406).

It is widely acknowledged that there are firms undertaking credible CSR reporting. But these important efforts at increasing corporate transparency may be undermined by substantial greenwashing. "Without some form of verification, the "free riders" who take advantage of CSR will result in a public weary of hearing about CSR and skeptical of or even cynical about its benefits" (Cherry and Sneirson 2011, 1037).

U.S. capital markets have long been recognized for the financial transparency that underlies and supports their functioning. The Securities and Exchange Commission, in the first instance of specifying regulations requiring this transparency, was concerned not only with providing investors with information on which to base their investment decisions, but was also concerned with providing the public ("social investors") with information on which to judge the public responsibility of corporate managers (Williams 1999, 1199). Using disclosure regulations as a primary means of controlling corporate behavior in the public interest is fundamental to our financial disclosure requirements. This study is concerned with examining whether the voluntary nature of CSR is sufficient to deliver on the promise of greater corporate transparency.

FINDINGS

The Commission Report (CR)

The Commission Report on the root causes of the Macondo well blowout benefited from extensive interviews and discussions with a broad spectrum of management and operating personnel in the organizations involved in the Macondo well, as well as experts from the industry and relevant regulatory agencies. As such, it provides information on actual operating

conditions, procedures and decision-making context unavailable in the CSR report. This kind of detailed view of actual operating performance eliminates the loose coupling between public representations of operations and actual operating methods, and provides an opportunity for reflection on the goodness of fit between the two views. Following is a description of some specific instances the CR found of poor decision making, failed communication, and failure to recognize, and respond to, indications of significantly increased risks of losing control of the well. The discussion is a very brief overview of an exceedingly complex process and is taken from the CR.

The well blowout was neither inevitable nor a fluke that cannot happen again. Rather, the blowout was due to "underlying failures of management and communication" (CR 2011, 122). These failures occurred subsequent to engineering and regulatory approval of the initial well design. Subsequent decisions that changed parts of the drilling design, and execution of final drilling and 'temporary abandonment' processes revealed operational expediencies that ran contrary to BP guidelines and/or known industry best practice. Further, communications between BP and contractors undertaking critical parts of the drilling operation (i.e., Transocean and Halliburton) left fatal gaps in information flows that significantly increased the likelihood of a blowout.

The Deepwater Horizon rig was drilling an exploration well – designed to locate, and connect to, oil reservoirs but not extract the crude oil from them. Upon completion of the exploration phase, a well is closed and temporarily abandoned ('temporary abandonment') until a production rig arrives, reconnects to the wellhead (on the sea floor), and begins extracting the crude oil for actual production. At the time of the blowout the project was six weeks behind schedule and $58 million over budget (CR 2011, 2).

Maintaining control of the well during drilling requires balancing the substantial upward pressure exerted by the oil with equal downward pressure created by filling the drill pipe with drilling 'mud'. The drill pipe sits inside of the well borehole, and is separated from the sides of the well by space (annular space, or the annulus). The mud that is pumped down the drill pipe during active drilling is pushed into the annulus through holes in the drill bit, and circulates back up the well sides to the rig. The mud travels in this closed loop, and one of the many measures of what is actively happening inside the well is monitoring the pressure necessary to push the mud down the drill pipe and comparing that to the pressure that the mud exerts as it returns up the annulus to the rig.

The well walls are reinforced with casing lining – tubes of steel lowered in and attached to the well walls. The casings reinforce the well walls as drilling gets deeper, and the casings lowered into the lower reaches of the well slide into, and are attached to, the casings in the upper reaches of the well. A well hole that begins as three feet in diameter at the well head can eventually narrow to ten inches as successive strings of casing shore up the well walls. Casing strings are ultimately cemented into place to bond them to the well walls, and centralizing 'screws' have to be set around the casings prior to cementing in order to maintain uniform

distances between the well walls and successive strings of casing. This uniformity helps assure an even distribution of cement, resulting in the strongest bond between casing strings. An uneven distribution of cement can leave channels of weak or missing cement in the annulus through which uncontrolled pressurized hydrocarbons can flow up the well – a blowout.

By April 14, 2010 the Macondo well was being prepared to lower the final casing and cement it in place. Once that stage was complete the well would be prepared for temporary abandonment, the Deepwater Horizon rig would depart and the well would await the arrival of a production rig. The well had reached a depth of more than 18.000 feet below sea level, and more than 13,000 feet below the wellhead on the sea floor. The original well design plan called for 16 centralizing screws to be placed on this final casing string, however, only six were available from BP's supplier at the point that the crew was scheduled to install it. Halliburton engineers (contracted to do the cementing work on the well) ran simulations of the cementing job and the results indicated that more than six centralizing screws would be needed. BP engineers considered using a different design of screw that was available in sufficient quantity, but noted that the design of these alternate screws would further complicate an already complex casing cement job and would require an additional 10 hours to install. In the end, BP installed only the six centralizing screws on the final casing string.

By the afternoon of April 19, 2010 the final casing had been seated in its position at the bottom of the well. The final cementing operation would pump cement down the casing, out the bottom of the casing, and onto the rock formation into which the well had been drilled. This cementing attaches the borehole to the geological structure and also seals any open spaces through which hydrocarbons could escape. A preliminary step to pumping cement down the well casings is to pump drilling mud down to insure there is a clear path (free of any debris from casing installments and drilling) and to set a series of valves that will shut off the two-way flow path (so that mud, and later cement, can no longer circulate back up to the rig), thereby establishing a one-way, downward flow path for the cement. The design specifications for converting the valves from two-way flow to one-way flow called for a flow rate of six barrels of mud per minute and a pressure of 600 pounds per square inch (psi). The crew on the rig began pumping mud into the well but could not get the mud to flow. They continued increasing pressure to 1,800 psi without getting a flow of mud. Engineering and management personnel conferred and decided to continue to increase the pressure on the fluid in small increments. After the ninth step in this incremental process, the pressure reached 3,142 psi and suddenly mud flow was established. However, the *rate* of the flow never exceed four barrels per minute – less than the design specifications indicated for converting two-way flow valves to one-way flow valves. In addition, engineering estimates had predicted that 570 psi would be required to move the mud once the valves had converted, but the pressure on the mud after flow was established never exceeded 340 psi. BP and Transocean personnel switched equipment, using different circulation pumps, and finally concluded that the pressure gauge they had used was faulty. They noted the anomaly, and concluded that the path down the casing for pumping cement was clear.

The final cementing job on a well serves two purposes. Like prior cementing operations this process bonds the bottom casing string to the well wall and creates a strong barrier against hydrocarbons entering the annular space. In addition, this final cementing operation creates an isolation barricade at the bottom of the well between the hydrocarbon reservoir and the well itself, sealing the well until production begins at a later time. Final cementing comes with additional technical complexities and risks, and a 2007 study by a U.S. regulatory agency found cementing to be one of the "most significant factors" causing well blowouts during the 1992 – 2006 study period (CR 2011, 99). Because of the depths at which the actual cementing operation takes places, rig crews are not directly observing the job. Rather, a number of process measurements serve to execute and evaluate the process. Among these are "full returns" measures (i.e., the volume of cement going down the well should equal the amount of mud being displaced and coming out of the well), both positive and negative pressure tests, and cement evaluation log tests.

The Macondo well had been stopped at 18,000 feet depth because of evidence that the geological rock formation into which the well drilled might be beginning to fracture. Drilling to greater depths, thereby increasing even more the pressure on the rock formations, would risk rupturing the formation with accompanying free flow of hydrocarbons. Fragility of the geology was, therefore, a clear concern going into the final cementing operation, and it led to several modifications to Halliburton's initial cementing plan that were intended to protect the rock formation from excessive pressure. One of these modifications was to reduce the overall volume of cement pumped into the well, because greater volumes of cement exert greater pressure. More cement is standard industry practice because it reduces the risk that the cement will be contaminated by remaining drilling mud (which had been pumped down the well to clear the path for the cement), and contaminated cement increases the risk of weak cement or empty channels in the annular space. Regulatory requirements specify that the column of cement in the annular space must extend at least 500 feet above the uppermost hydrocarbon zone tapped by the well. BP's internal guidelines specify that the annular cement column in a deepwater well should extend 1,000 feet above the uppermost hydrocarbon zone. BP personnel modified Halliburton's design for the Macondo well, in light of evidence of fragility of the geology, to meet the regulatory requirement of 500 feet of cement, even while recognizing that this modified design left little margin for error in the integrity of the cementing job.

BP and Halliburton collaborated on the type of cement mixture to use in the well, choosing'nitrogen foam cement'. Infusing the mixture with nitrogen lightens the cement, thereby reducing the pressure exerted. Laboratory tests of specific cement mixtures done just prior to the cementing process are standard operating procedure, and they evaluate the likely performance of the cement under the conditions existing in the well at the time of the pour. On February 10, 2010 BP personnel asked Halliburton labs to run 'pilot tests' on the mixture expected to be used, and currently stored on the Deepwater Horizon rig. The lab tests were attached to a March 8, 2010 email, in which the cementing plans were discussed, sent by BP

personnel on the rig to BP onshore administration. The tests showed that the foam slurry was unstable, but there is no evidence that anyone from BP (including the personnel sending the test results) examined this data. Halliburton personnel had also conducted another foam stability test in early February, and this test showed even greater instability. There is no evidence that Halliburton reported these test results to BP. Another round of tests on the intended mixture started in mid-April, by Halliburton, just prior to the cementing job. The first test showed again that the cement would be unstable under the conditions specified. A second test was started on April 18 after adjusting some of the test parameters. The tests themselves require 48 hours to complete, but at the point that 48 hours from beginning this second test had elapsed the cement job on the well had been completed. The second test results "arguably" suggested the cement mixture would be stable, but no evidence exists that the test results were in hand before actually doing the cementing; and these last test results were not sent to BP until Aril 26, 2010 – six days after the blowout – long after the results could have influenced the actual cementing job plan. Furthermore, there is no evidence that Halliburton adjusted the parameters of this last test based on rigorous technical analysis of the conditions present at the Macondo well. The evidence available during Commission hearings indicate that the only test results in hand prior to beginning the cementing operation pointed to an unstable cement mixture.

Pumping cement into the well finished by 12:40 am on April 20, 2010; at 5:45 am, after tests concluded that the cement was holding, Halliburton personnel on the rig informed BP administrators on shore that the cement job had been successfully completed. Once a cement job is completed, additional tests may be undertaken to test the integrity of the cement at the annular space around a casing. Personnel from another contractor – Schlumberger – were on the rig on the morning of April 20, 2010 to undertake these tests. However, having decided the cement pour was successful, BP decided to send these people home without conducting the tests – tests which would cost $128,000. It isn't clear that anyone on the rig or in the onshore administration was cognizant, on the morning of April 20, of the cumulative potential for significantly increased risk of losing control of the well presented by the design changes, anomalous operational events, and cautionary test results experienced thus far.

The next, and final phase, of Deepwater Horizon's work on the Macondo well was undertaking the temporary abandonment of the well. Some of the steps in this process are described as they reveal the signals of possible loss of control of the well that were missed, or dismissed, during this final phase.

At the wellhead, 5,000 feet below sea level on the sea floor, sat a blowout preventer valve system. Below this system lies the well itself, including the series of casing strings; and above this system was a riser pipe connecting the drilling rig to the well. As described earlier, during drilling the riser and well contain heavy drilling mud – one of the purposes of which is to counter weight with downward pressure the substantial upward pressure of the hydrocarbons at the bottom of the well. During the temporary abandonment period the riser will be removed as the rig itself leaves and the well will be 'unbalanced' – there will be no counter weight pressure from

above on the hydrocarbon reservoir. Also running from the rig to the blowout preventer system are three additional pipes – 'kill' pipes – that allow fluids to be circulated from the rig to the well without going down the main drill pipe. During the period of temporary abandonment there will be three barriers between the hydrocarbon reservoir and the open sea: the primary cement seal at the bottom of the well the one that had presumably already been placed successfully; a second 300-foot long cement plug located in the well itself – a 'surface cement plug' - which is placed as part of the temporary abandonment preparations; and a lockdown sleeve that sits at the wellhead under the blowout preventer system (which will be removed) also placed as part of the temporary abandonment preparations. The plan for getting the well to this final state involved, among other things, removing drilling mud below the surface cement plug and replacing it with lighter seawater, placing the surface cement plug, testing the well integrity in an unbalanced state by means of a 'negative pressure test', and removing drilling mud from the riser and replacing it with seawater.

BP's final plan for temporary abandonment preparations underwent a number of design changes in the two weeks prior to implementation, and the rig crew obtained the final plan only on the morning of April 20. Firstly, the depth in the well at which the surface cement plug was to be placed was unusually deep at 3,300 feet into the well (8,300 feet below sea level). Regulations of deepwater drilling specify placing a plug this deep requires special approval, and BP engineering personnel had originally recommended placing the plug 1,300 feet into the well to provide a greater margin of safety for the well. Secondly, replacing the drilling mud below the surface cement plug with lighter seawater would put more strain on the primary cement job at the bottom of the well, as the primary cement job would not have the additional weight of 3,300 feet of heavier mud to help counterweight the pressurized hydrocarbons. Given the decision to forgo tests of the primary cement job, it would have been prudent to evaluate the added strain on this barrier of substituting seawater for drilling mud. There is no evidence that BP formally undertook any such analysis, but instead proceeded with the substitution because setting the surface cement plug in water is easier than setting it in mud. Finally, the plan called for displacing the drilling mud in the riser pipe and replacing it with seawater *before* setting the surface cement plug. Because the blowout preventer valve system was open during the time the mud was being pumped out of the riser the *only* barrier to the hydrocarbon reservoir during this process was the primary cement job – which had not been tested for integrity. Between the separate steps of replacing the mud in the well with seawater and replacing the mud in the riser with seawater, a negative pressure test was undertaken to test the integrity of the unbalanced well. Unfortunately, the test appears not to have been understood or properly interpreted while being undertaken.

The negative pressure test involves removing pressure from inside the well to see if fluids leak into the well - by going past or through the primary cement job at the bottom of the well and/or by seeping into the casings. If the casings and primary cement plug are strong they will prevent the intrusion of the pressurized hydrocarbons from below, even though there is no

counterweight pressure from drilling mud in the well. The rig crew first simulates, within the well, the amount of pressure that will be exerted by the hydrocarbon reservoir when the well is abandoned. This pressure is then bled off until pressure inside the well reaches 0 psi. The negative pressure test is successful if: 1) no fluids leak into the well 'for a substantial period of time' while in the zero pressure state, and 2) if there is no pressure buildup inside the well when it is closed off as part of the test. Observing both of these conditions infers that the casing and bottom cement plug have sealed off the well from leaks and from fluid flows. The rig crew began the negative pressure test at 5:00 pm on April 20. They isolated the drill pipe from the pressure of the mud in the riser, opened the top of the drill pipe on the rig and began to bleed off the pressure in the drill pipe. Although the test calls for bleeding the pressure down to zero psi, they could not get it below 266 psi. When the drill pipe was closed the pressure jumped back up to 1,262 psi. At about 6:00 pm a second test was done. This time they were able to bleed the drill pipe pressure down to zero, but when it was closed the pressure jumped back to 773 psi. A third test was done, successfully bleeding down to zero psi but pressure building up to 1,400 psi when the drill pipe was closed. BP supervisory personnel called for a second negative pressure test to be done on the kill line – one of the pipes that run from the rig to the blowout preventer valve system. The pressure on this line should be exactly the same as that on the drill pipe, which also runs to the blowout preventer system. Pressure was successfully bled from the kill line down to zero psi, there was no buildup of pressure when it was closed off, and no flow of fluids was observed for a 30-minute period. It appears that the test was repeated on the kill line because BP had specified that the test would be run on the kill line in its drilling permit application. The crew concluded that the negative pressure test on the drill pipe was successful *even though* pressure on the drill pipe remained at 1,400 psi during the entire test of the kill line. There is no evidence of any attempt to reconcile the discrepancy between the states of the two pipes. Contrariwise, the only explanation for the high pressure in the drill pipe is a leak of fluids into the well. At 8:00 pm on April 20, BP site supervisors concluded that the negative pressure test had confirmed the integrity of the well.

Replacing mud in the riser with seawater was the next step, and this began at 8:02 pm by pumping seawater into the drill pipe, thereby evacuating the mud to the rig 'mud pits' system. Rig personnel are assigned to watch for 'kicks' – gas escaping into the well and rising, with increasing speed, and pushing mud upward. As the gas rises it expands, moving the drilling mud up at a faster rate – which, in turn, reduces the impeding pressure on the gas and increases the speed of the kick. A barrel of gas rising from the wellhead of the Macondo well could expand over one hundred fold in the 5,000 feet it would travel to reach the rig platform located at sea level. Monitoring rates and volumes of flows are primary means of detecting kicks. In the absence of a kick the amount and rate of flow of fluids being pumped into the well should equal that of fluids coming out of the well. A faster rate or greater volume of fluids coming out than that of fluids going in signals high likelihood of a kick. Another kick indicator is drill pipe pressure, although kicks are not as unambiguously indicated by changes in drill pipe pressure.

When pumping rates are constant, a decrease in drill pipe pressure could indicate that hydrocarbons have entered the well and are moving upward in the annular space outside of the drill pipe. Because hydrocarbons are lighter than mud, they will exert less downward pressure and the rig pumps will not have to work as hard to pump fluids into the well. When pumping rates are constant, an increase in drill pipe pressure could indicate that the heavier mud is being pushed upward by rising hydrocarbons that have entered the drill pipe itself, requiring the pumps to work harder to fluids into the well against this upward movement.

Until 9:00 pm, events proceeded as expected. Drill pipe pressure was decreasing slowly as lighter seawater replaced heavier mud in the riser. At approximately 9:01 pm, drill pipe pressure began slowly *increasing* from 1,250 psi to 1,500 psi over seven minutes. This should have been a puzzle with constant pumping rates, but there is no evidence that anyone noticed the change in the direction of the pressure. At 9:08 pm the crew shut down the pumps to perform tests on the fluids returning from the well to determine whether they could be safely disposed of by overboard dumping. If they were contaminated this disposal option would not be allowed. From 9:08 to 9:14 the pumps were off, yet drill pipe pressure increased by 250 psi. It isn't clear that anyone noticed this increase in pressure, and at 9:14 the pumps were turned back on. Pressure increased, but so did pumping rates so the increase in pressure after turning pumps on again would be expected. At 9:18 a pressure relief valve on one of the pumps blew and a group of crewmembers were sent to the pump room to fix it. Shortly before 9:30 one of the crew noticed an unexpected pressure difference between the kill line and the drill pipe, and the pumps were shut off as a result. Initially the drill pipe pressure decreased when pumping stopped, but over the next five and a half minutes it increased by over 555 psi. At 9:36 the crew bled off the drill pipe pressure; it initially dropped but then began climbing. At 9:39 drill pipe pressure began *decreasing* – a fairly clear sign that a kick was underway. Between 9:40 pm and 9:43 pm drilling mud began spewing onto the rig floor; at 9:45 pm the crew recognized the well was blowing and undertook to shut the blowout preventer valves. However, the hydrocarbons were already past that point, well into the riser pipe, rising and expanding very fast. At 9:49 pm, April 20, 2010, the first explosion rocked the Deepwater Horizon. After the explosion the crew tried to activate the rig's 'emergency disconnect system' which should have sealed the well and separated the rig from the blowout preventer system. The disconnect system did not activate, nor did the blowout preventer's automatic 'deadman' system respond. While conclusive evidence was not available when the CR was published, it was revealed that post-incident tests of controls of the 'deadman' systems showed low battery charges and defective solenoid valves.

Recounting events leading up to the blowout serves to reveal the actual operating climate and procedures in place at the site of this tragic crisis. Comparing public representations made in CSR reports about operating safety should facilitate evaluating these reports as tools of increased transparency. However, before examining BP's CSR report representations, news media reports show the topics and themes of primary concern to the national and regional publics as they initially learned of the blowout incident.

News Media Coverage

Seven newspapers were searched for coverage of the rig disaster, including two international outlets based in England, three national outlets, and two outlets with other perspectives. The international outlets include The Times of London and The Guardian; national outlets include New York Times, Wall St. Journal, and Washington Post; and other perspectives come from Christian Science Monitor and Houston Chronicle. BP is headquartered in the U.K. giving the Times of London and The Guardian unique interest in the incident. The three U.S. national outlets provide coverage from a general slant (New York Times), a financial slant (Wall St. Journal), and a political slant (Washington Post). The Christian Science Monitor is noted for objective and informative coverage, while the Houston Chronicle is the largest regional newspaper in the area in which the incident occurred. Taken together, these outlets should report public concerns with the incident from a broad set of perspectives.

The search for media coverage of the blowout included the days April 21, 2010 through April 28, 2010 – the first eight days following the blowout. Media coverage during this period contains primary responses to the incident, whereas by April 29 coverage was shifting to the response activities of various organizations and agencies. Also, at this later time the scope of the incident began expanding as the amount of oil flowing unchecked into the Gulf of Mexico was revised upward fivefold from original reports and this began an additional trajectory of media coverage. Therefore, many themes beyond primary reactions to the incident became part of media coverage from here on. Examining whether the major themes motivating CSR reporting are relevant to public concerns about greater transparency from business activity is the aim of the media examination for this study, and so only these first eight days media coverage are included.

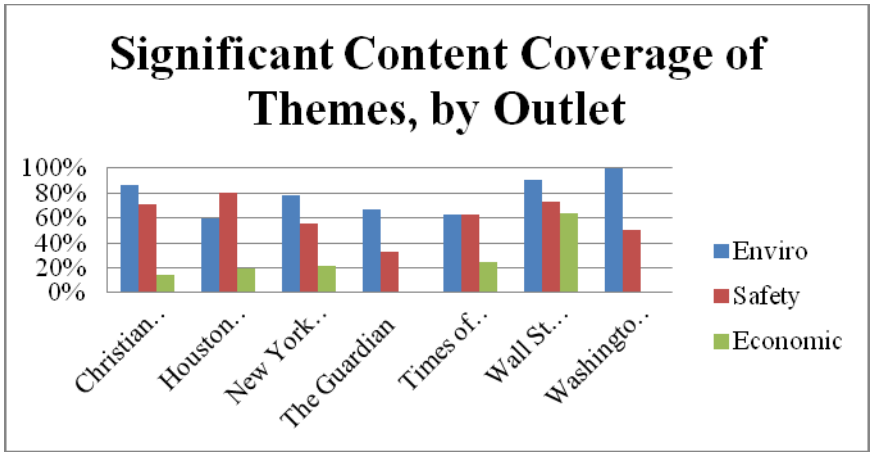
Forty five articles were published during the first eight days following the well blowout. Each of these articles was coded to indicate which, if any, of the focal themes of CSR reporting represented a significant theme in the article. The focal points of CSR reporting are environmental impacts, social impacts (including safety of employees and communities), and economic impacts. The first article appeared on April 21 in the Christian Science Monitor, and this is the only article appearing that day. The article was 664 words long and included significant focus on safety issues surrounding the BP incident. Seven articles appeared on April 22, with coverage from all outlets except The Guardian and Washington Post. Both the Wall St. Journal and Times of London carried two articles each. The average length of articles on this date was 740 words; 43% had significant focus on environmental issues, 100% had significant focus on safety issues, and 43% has significant coverage on economic issues relating to the incident.

Table 1 below provides a descriptive overview of news coverage during the first eight days of the crisis, by outlet. Figure 1 below shows the percentage of articles from each outlet including significant coverage of each CSR theme during the first eight days of the crisis.

Table 1: Volume of Coverage, by Outlet			
Outlet	# of articles – first 8 days	Average length of article - # of words	Low-Hi range of article word count
Christian Science Monitor	7	717	645-829
Houston Chronicle	5	917	593-1272
New York Times	9	803	402-1206
Guardian	3	591	110-869
Times of London	8	251	47-734
Wall St. Journal	11	869	606-1291
Washington Post	2	763	747-778

The disaster captured considerably more coverage in the U.S. than in the U.K. The Times of London devoted a higher number of articles, but much lower coverage as measured by length of the articles. While the Guardian published just three articles on the incident, their coverage was reasonably in depth. Each of the U.S. papers provided nearly daily coverage of the spill, save the Washington Post which published two articles during the first eight days. Nevertheless, all U.S. outlets devoted significant space to the incident in the articles they published.

Figure 1



Environmental issues and safety issues dominated initial responses during the first eight days of the crisis in all news outlets both domestically and internationally. Economic issues related to the disaster were considerably less important as focal points during these early days, save for the Wall St. Journal which had relatively robust coverage of this theme.

Examining coverage over time is another way of evaluating this data. Table 2 below gives a descriptive overview of the news coverage by date. Figure 2 below presents the percentage of articles published each day that included significant coverage of CSR themes.

Table 2: Volume of Coverage, by Date

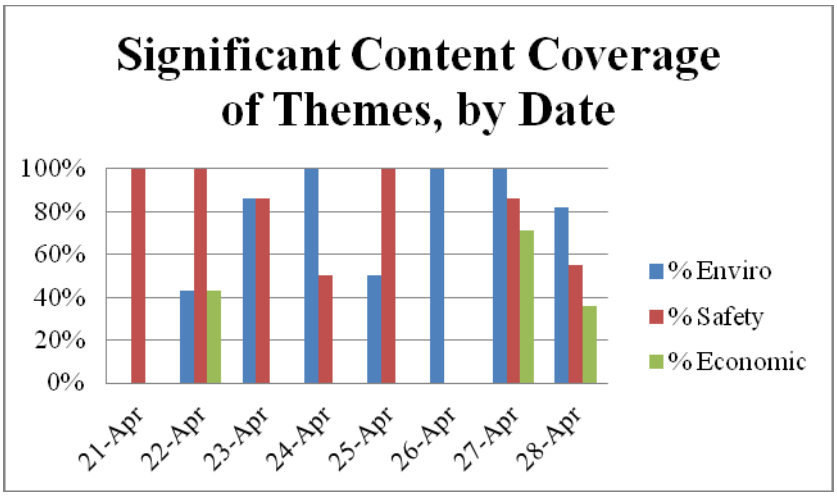
Date	# of articles	Average length of article - # of words	Low-Hi range of article word count
Wednesday, April 21	1	664	664
Thursday, April 22	7	740	305-1272
Friday, April 23	7	603	47-1120
Saturday, April 24	4	700	407-845
Sunday, April 25	2	660	498-822
Monday, April 26	6	581	55-929
Tuesday, April 27	7	834	593-1206
Wednesday, April 28	11	744	179-1291

There was relatively significant coverage of the incident every day, with weekend days considerably lighter in number of articles published. However, including even weekend days the depth of coverage was substantial on all days as measured by average length of the articles. This data suggests that the incident was a major event in our broad public discourse.

Safety issues dominated coverage of the incident during the first two days and remained an important focus of discussion during the first eight days, while early coverage of environmental impacts was relatively sanguine. Examples of early environmental reports include: "As the intense fire burned the spewing oil off on Wednesday [April 21], early indications were that the rig fire didn't present significant danger to the coastal ecosystem" (Jonsson 2010); and "Remote-controlled underwater surveillance units indicated that there was no crude pouring out of the well beneath the ocean's surface. The possibility of such leaks and their potentially devastating impact on local fisheries had been a major concern since the first explosion [April 20 on the Deepwater Horizon oil rig], only 50 miles from the Louisiana coast" (Kaufman 2010).

As the drama unfolded and it became evident that oil was still leaking from the well the potential environmental impacts became an additional significant focus. Examples of reports reflecting this increasing concern include: "A slow-motion environmental disaster may be in the making with the discovery Saturday [April 24] that 42,000 gallons a day of crude oil is spewing from a well on the bottom of the Gulf of Mexico" (Clanton 2010); and "University of California Santa Barbara Prof. Keith Clarke, who studied a 1969 oil spill off the Southern California coast, said 'Worst-case scenario would be loss of sea life, especially sea birds and marine mammals. Fishing could be significantly impacted. A great deal depends on how long the site leaks" (Gold et al. 2010a).

Figure 2



On April 22 both the Wall St. Journal and Times of London published articles which included a focus on the economic impacts to BP of the rig disaster. Save for these articles, economic issues were not important aspects in the earliest coverage of the disaster. Only during the latter part of this period of time, as the oil slick approached the Gulf shores, did economic issues become important. While this later coverage included the economic consequences to BP, coverage also included the economic impact on the communities affected.

Beyond the aforementioned themes of triple-bottom line reporting, early reports on the crisis covered additional issues and topics. Some of these other significant threads included debate on mandatory versus voluntary approaches to industry regulation; the technological complexities of deepwater drilling, and remedies involved in attempts to close the leak; implications for, and commentary on, energy/oil exploration, energy independence, and energy policy; and the regulatory integrity of the Mineral Management Service (MMS) agency responsible for regulating deepwater drilling activities.

Of interest to this study are reports coming out in the latter part of the media coverage revealing 1) industry claims that voluntary safety protocols were up-to-date, functioning well, and showed no need for additional regulatory standards and/or oversight; and 2) the possibility of undue industry influence on the federal agency charged with its regulation. Examples of these reports include: "The explosion, ensuing fire, and continuing spill raise serious concerns about the industry's claims that their operations and technology are safe enough to put in areas that are environmentally sensitive or are critical to tourism or fishing industries" (Jonson 2010b).

Coverage also reported that in June, 2009 the Minerals Management Service (MMS), the agency responsible for regulating offshore drilling, had proposed mandatory safety rules to replace the voluntary system in place. The proposed rules were based on guidelines developed by the American Petroleum Institute (an industry trade group), and were prompted by MMS

review of over 1,400 offshore incidents which had collectively killed 41 people, and found that most incidents were due to human error or faulty safety procedures. "According to the MMS, all of the biggest oil companies, including BP, have already adopted the API's guidelines. But many of them, including BP, ExxonMobil Corp. and Royal Dutch Shell, objected to an MMS proposal that companies' safety programs be audited every three years, at the companies' cost. In a letter published in September on the federal government web site regulations.gov, Richard Morrison, BP's vice president for Gulf of Mexico production, wrote that while the company 'is supportive of companies having a system in place to reduce risk, accidents, injuries and spills, we are not supportive of the extensive, prescriptive regulations as proposed in this rule. We believe the industry's current safety and environmental statistics demonstrate that the voluntary programs have been and continue to be very successful" (Casselman et al, 2010). Regulatory requirements for safety program audits were not implemented.

From the review of media coverage during the eight days immediately following the well blowout it appears clear that triple-bottom line themes of environmental impacts, social impacts, and economic impacts of corporate actions reflect major themes in the early public responses to the unfolding disaster. The intense focus on these focal points demonstrate the relevance of CSR reporting in providing a degree of transparency and a forum for engagement between corporate operations and the broader social setting in which these organizations operate. CSR reporting has the potential to provide sought-after transparency, and it is worthwhile to examine the content and tone of BP's CSR report in comparison to the actual behaviors leading up to the blowout of the Macondo well from this perspective. CSR reporting is currently a voluntary process, and in light of industry insistence that increased regulation of safety procedures was unnecessary because voluntary procedures were adequate it is worth noting parallel insistence that CSR reporting remain voluntary and free from regulatory oversight.

BP's 2009 Sustainability Report (CSR Report)

BP published its 2009 Sustainability report on April 15, 2010 – just five days before the Macondo well blowout. The online report consists of a 40-page report providing an overview of sustainability and references a set of additional online reports: "Our website, *www.bp.com/ sustainability*, is an integral part of our group sustainability reporting, covering a wide set of issues and reporting on them in more depth." (BP 2010a, 36) Of interest in this study are the additional reports on safety (BP 2010c), environmental impacts (BP 2010b), and operations (BP 2010d) that report more depth on these areas of concern. Collectively these reports are referred to as BP's CSR report.

Sustainability is carefully construed throughout BP's CSR report in terms of continuous process improvement, making little connection to issues of environmental or ecological sustainability. Terms used to describe BP's operating management system (OMS) exemplify this careful contextualization of 'sustainability' as follows: "The (OMS) system elements …

create a platform for sustainable improvement, allowing BP to capture additional value through efficiency. Ultimately, this delivers sustainable excellence in operating" (BP 2010c). And, '[o]ur performance improvement cycle is at the heart of OMS, driving and sustaining change and improvement in local business processes (ibid)". What is sustainable is 'change and improvement' of business operations.

Continuous improvement was also the centerpiece of BP's approach to safety: "the group chief executive [Tony Hayward] and his executive team were instrumental in establishing the concept of continuous improvement to help drive systematic safety and reliability in our operations. Continuous improvement is a means of empowering our operations managers and supervisors, who are closest to our operational problems, to develop the necessary solutions" (BP 2010c, 3).

In environmental disclosures the continuous improvement approach places an emphasis on compliance with regulatory frameworks. For example, "[a] number of our businesses have used an ecosystems service approach to help assess potential impacts from projects and operations, typically as a regulatory requirement" (BP 2010b). What the CSR report does not reveal is the lobbying efforts by BP to constrain regulatory developments.

Safety disclosures highlight BP's progress toward increasing safety of refinery operations after a 2005 fire at their Texas City refinery killed 15 workers and injured 170 more. One of the results of that accident was establishment of an Independent Safety Review Panel (the Panel) and appointment of an Independent Expert to monitor progress in implementing recommendations of the Panel in improving process safety at BP's refineries. One of the reported findings of the Independent Expert was that "there is an opportunity to encourage a more proactive and self-critical approach towards identifying and addressing process safety issues and risks" (BP 2010c). While focused primarily on refinery operations, this finding foreshadows comments that would equally apply to exploration operations in the Gulf of Mexico.

Taken as a whole BP's CSR report addresses important issues – recognizing its own troubled safety record and its participation in activities with actual and potential material ecological impacts. The current voluntary nature of CSR reporting, however, allows this important reporting too much leeway for self-promotion rather than self-reflection.

The Commission Report references BP's CSR report commitment to continuous improvement in safe operations, but concludes that the approach toward safety has been on individual worker safety and not on safety of processes. The report chronicles the refinery and exploration accidents that have plagued BP for a decade, and concludes "[t]hese incidents and subsequent analyses indicate that the company does not have consistent and reliable risk-management processes – and thus has been unable to meet its professed [CSR report] commitment to safety. BP's safety lapses have been chronic" (CR 2011, 218).

CONCLUSIONS AND IMPLICATIONS

Voluntary CSR reporting allows natural resource dependent industries to use language of 'continuous improvement' as an environmentally and socially responsible operating approach (Ihlen, 2009), while bypassing addressing any real reforms or transformations that look beyond the current business model. Importantly, this business model in the U.S. includes using strong industry trade/advocacy organizations that play a dominant role in developing safety standards that are adopted as formal regulatory standards.

CSR reports utilizing a triple-bottom-line framework do address issues and concerns that society harbors with respect to corporate behavior and impact, as repeatedly reflected in media coverage of this catastrophic environmental event. CSR reporting, with its goal of greater transparency to organizational behaviors, is relevant to a very broad social audience.

Finally, crisis events are regrettable instances wherein the legitimacy of an organization is challenged and/or damaged as the loose coupling between 'what you say and what you do' is eliminated. In this crisis event, small seeds of safety concerns were evident in the CSR report in the form of Independent Expert judgments and assurance provider comments for improvements. Regrettably, these small seeds were sewn among voluminous 'sustainable continuous improvement' language that did little to increase transparency and allow anticipation or understanding of the significant operating risks actually in place in BP's exploration activity at the Macondo well.

Is the Macondo well disaster an isolated case that should not be overemphasized? On the contrary, it provides a bright example of the risks involved in relying on information voluntarily provided by interests with powerful incentives to exaggerate positive performance and understate, or exclude, unflattering information. It provides a dramatic example of how biased, even unintentionally, self-perceptions can be, and why independent verification of material representations are so valuable. It provides a cogent example of how industry can capture regulatory agencies, and highlights the importance of strong, independent regulatory standards and enforcement. It provides a lucid case in point for developing regulated standards of CSR reporting and related standards for attestation on such reports.

REFERENCES

Bebbington KJ, Larrinaga C, Moneva JM. 2005. Social and environmental reporting and reputation risk management. Paper presented at the European Accounting Association Conference.

BP. 2010a. Sustainability Review 2009. http://www.bp.com/liveassets/bp_internet /globalbp/STAGING/ global_assets/e_s_assets/e_s_assets_2009/downloads_pdfs/bp_ sustainability_ review_2009.pdf. Accessed online December 27, 2010.

BP. 2010b. Sustainability Reporting 2009: Environmental management. http://www.bp.com/subsection.do? categoryId =2318&contentId=7060029. Accessed online December 27, 2010.

BP. 2010c. Sustainability Reporting 2009: Safety. http://www.bp.com/subsection.do?categoryId =2317&content Id=7060028. Accessed online December 27, 2010.

BP. 2010d. Sustainability Reporting 2009: How we operate. http://www.bp.com/sectionbodycopy.do?categoryId=2311&contentId=7060022. Accessed online December 27, 2010.

Brown J, Fraser M, 2006. Approaches and perspectives in social and environmental accounting: an overview of the conceptual landscape. Business Strategy and the Environment 15 (3): 103-117.

Casselman B, Gonzalez A, Chazan G. 2010. Efforts to contain slick falter – Officials consider setting fire to spilled oil to minimize impact on coastline. The Wall Street Journal: April 28, 2010: p. A3.

Cherry, Miriam A. and Judd F. Sneirson. 2011. Beyond Profit: Rethinking Corporate Social Responsibility and Greenwashing After the BP Oil Disaster. Tulane Law Review 85:983-1037.

Clanton B. 2010. Gulf Oil Spill Now Called 'Very Serious'. Houston Chronicle: April 25, 2010: p. A1.

Deegan C, Rankin M, Tobin J. 2002. An examination of the corporate social and envir4onmental disclosures of BHP from 1983-1997. Accounting, Auditing and Accountability Journal 15(3):312-343.

Gray R, Kouthy R, Lavers S. 1995. Corporate social and environmental reporting: a review of the literature and a longitudinal study of UK disclosure. Accounting, Auditing and Accountability Journal 8(2): 47-77.

Gold R, Chazan G, and Casselman B. 2010a. Oil spills into gulf after rig disaster. The Wall Street Journal: April 26, 2010: p. A4.

Gold, R., Chazan G, and Casselman B.. 2010b. Oil well lacked safeguard device – officials say leak grows fivefold. The Wall Street Journal: April 29, 2010: p.A1.

Hoffman, David A. 2006. The Best Puffery Article Ever. Iowa Law Review, 91:1395-1446.

Hopwood B, Mellor M, O'Brien G. 2005. Sustainable development: mapping different approaches. Sustainable Development 13:38-52.

Ihlen O. 2009. The oxymoron of 'sustainable oil production': The case of the Norwegian oil industry. Business Strategy and the Environment, 18: 52-63.

Jonsson P. 2010a. Ecological risk grows as Deepwater Horizon oil rig sinks in Gulf. The Christian Science Monitor: April 22, 2010: p.2.

Jonsson P. 2010b. Gulf of Mexico disaster growing by the moment. The Christian Science Monitor. April 27, 2010: p.3

Kaufman L. 2010. Search Ends for 11 Oil Rig Workers, but Spill Seems Contained for Now. The New York Times: April 24, 2010: p. A8.

National Commission on the BP Deepwater Horizon Oil Spill and Offshore Drilling (Commission Report, or CR). 2011. Deep Water: The Gulf Oil Disaster and the Future of Offshore Drilling. http://www.oilspillcommission.gov/ Accessed January 19, 2011.

Spence C. 2009. Social and environmental reporting and the corporate ego. Business Strategy and the Environment 18:254-265.

Spence C, Gray RH. 2007. Social and Environmental Reporting and the Business Case. ACCA Research Report 98. ACCA: London.

Suchman, M. C. 1995. Managing Legitimacy: Strategic and Institutional Approaches. Academy of Management Review, 20 (3): 571-610.

Vos, Jacob. 2009. Actions Speak Louder Than Words: Greenwashing in Corporate America. Notre Dame Journal of Law, Ethics & Public Policy, 23: 673-697

Williams, Cynthia A. 1999. The Securities and Exchange Commission and Corporate Social Transparency. Harvard Law Review,112(6), 1197-1311.

PENALTIES FOR FEDERAL TAX CRIMES: THE IRS ARSENAL

Meyer Drucker, Coastal Carolina University
Karen A. Maguire, Coastal Carolina University
Kristin M. Wolf, PricewaterhouseCoopers.

ABSTRACT

When a Civil Investigation Division agent knocks on your door, engage counsel right away — there are severe criminal penalties for tax crimes. This article discusses how criminal tax investigations are triggered, the criminal statutes employed by the IRS, and the associated penalties for these tax crimes. It then demonstrates how the IRS proves its cases, taxpayers' rights and defenses, and management accountants' responsibilities with respect to federal tax crimes. Relevant court rulings provide examples of the IRS' effectiveness in prosecuting offenders.

INTRODUCTION

> When a Civil Investigation Division agent knocks on your door, engage counsel right away — there are severe criminal penalties for tax crimes.

Two of President Obama's high-profile nominees were inclined to pull out of the running for office in 2008 due to tax evasion (Rampell, 2009). If Obama's picks are troubled with evading taxes, what is there to say about management accountants, and the normal individual? The Sarbanes Oxley legislation passed in 2002 aims to improve the integrity of financial reporting and enhance disclosures. Yet, in a study done in 2005 the impact of Sarbanes Oxley was much less significant for smaller financial service firms with less separation of duties (Akhigbe, 2005). Management accountants who are faced with pressure to manipulate financial records have the AICPA's Code of Conduct to turn to for support. There is an even stronger deterrent—under new penalties for federal tax crimes judges can assess up to five years in prison and fines of $500,000 for corporations and employees who assist in a tax crime. The IRS has an extremely high sentencing rate in the cases it chooses to bring to court (Enforcement, 2008).

Despite these stringent penalties, tax evasion is a massive problem. For example, the Internal Revenue Service estimated that in 2007 it lost $345 billion in revenues alone from noncompliance, and $222 million in corporate fraud penalties, a sum that would substantially decrease the budget deficit (Kaufman, 2009 & Hibschweiler, 2009). These lost revenues result

from efforts on behalf of taxpayers to evade the payment of taxes on income from both legal and illegal sources.

The IRS is increasing its authority, with Obama hiring 800 new agents in 2008 to help detect and pursue offenders (Obama, 2009). Random tax audits are being conducted by the IRS to learn how to collect the lost revenues. 13,000 out of the approximated 160 million taxpayers will be chosen for the thorough audit (Kaufman, 2009). The government is stepping up its efforts to identify tax evaders. For example, the IRS has access to information on Treasury bill interest, broker transactions, barter exchanges, and IRAs to match against tax returns. Additionally the agency has initiated a special project to zero in on the more common areas of tax abuse, such as tax shelters. Table 1 below presents the breakout of IRS audit statistics (How, 1997).

Table 1: IRS Audit Statistics

Income for Tax Returns	Tax Returns Filed	Tax Returns Examined	Percent Examined
Less Than $25,000	59,211,700	1,076,945	.81%
$25,000 to $50,000	27,263,000	259,794	.58%
$50,000 to $100,000	17,019,200	196,582	.62%
Greater Than 100,000	4,540,800	129,320	1.66%

Once the tax evader is identified, the Code provisions, containing civil and criminal penalties, constitute the government's principal means of punishing the offender. The government occasionally will choose to prosecute potential violators under the general criminal statutes to obtain stiffer sentences. In 1997, the IRS made an example of Peter Hendrickson, the author of the popular book *Cracking the Code*, when he bragged about the refunds his followers had received on his website. Hendrickson pled guilty to one willful act of failure to file a tax return and received 21 months in prison [1]. Below are the origins of criminal tax cases, the use of general criminal statutes, the major criminal tax statutes, the methods of proof, and rights and defenses of taxpayers in order to make management accountants aware of potential problems.

DETECTING TAX CRIMES

A criminal tax investigation is usually triggered when the taxpayer's activities violate some statutory law or procedure established within the Internal Revenue Service. Activities that might provoke suspicion include:

- Informants' tips coming from parties such as a rejected suitor, and angry ex-spouse, or a terminated or disgruntled employee;
- Discrepancies noticed upon audit by a revenue agent;

- Criminal activity coming to the Service's attention;
- Information filed with the IRS of a suspicious nature; and
- Deductions taken by another taxpayer involving the taxpayer in question.

An investigation by the Criminal Investigation Division (CID) is much more serious than a review by a revenue agent—it should not be taken lightly by a taxpayer. While a taxpayer or an accountant not familiar with IRS procedures may not realize the difference, the potential damage to the taxpayer is much greater, especially because their expertise includes money laundering and Bank Secrecy Act laws (Criminal, 2008). Therefore, the client should seriously consider engaging experienced counsel as soon as possible—preferably immediately after the CID agent shows his identification.

An investigation by a revenue agent, whose primary responsibility is to uncover civil violations, also can lead to a criminal tax case. While revenue agents are supposed to turn cases over to the CID when they suspect criminal fraud, the agents are given considerable leeway to determine whether the facts will subsequently develop into either a civil or criminal tax violation. If the client feels there is a possibility of the case developing into a criminal violation, he also should engage tax counsel.

CATCHING CRIMINALS WITH GENERAL STATUTES

The government has an arsenal of general criminal statutes, which it sometimes uses to prosecute violators of the federal tax laws. The major general statutes used include:

1. 18 USC 2. Under this statute, the government can prosecute either the principal who commits a tax fraud or those who provide assistance or counsel; in other words, the latter parties also could be treated as principals. Most of the convictions under this provision have been under the jurisdiction of the SEC. Accountants should be aware of potential criminal violations involving advice on tax matters.

2. 18 USC 371. In the crime of conspiracy, the government needs to find an agreement which is followed up with an overt act to implement the conspiracy. The crime usually takes the form of supplying false statements, either written or orally. A conviction under this provision was obtained in the 11th Circuit in 2005 when the IRS found a conspiracy committed by Greater Ministries International Church (GMIC). In *Whitfeild*[2] the Supreme Court found the defendant and others operated a "gifting" program that took in $400 million between 1996 and 1999. The purpose of this too-clever sham was to generate revenues with the investors' money through overseas investments such as gold, diamond mining and other commodities. GMIC promised to give the investors double their investment in a year and a half. These claims proved to be false. GMIC kept no

promises, had zero assets and kept $1.2 million for themselves. The sham not only failed, but resulted in severe criminal convictions of over ten years in prison for all five defendants involved.

3. 18 USC 1001. Convictions under this statute provide penalties for making oral or written false statements. This statute is so broad that prosecutions brought under this provision must be approved by high officials in the Justice Department. In fact, the government has lost most of the prosecutions brought under 1001 for one reason or another. However, in *Stewart*[3], the celebrity style setter, Martha Stewart, was convicted of lying to a government official about a stock sale. The 2nd Circuit Court of Appeals ruled that 1001 would still be applied and her five month sentence withstands. "The experience of the last five months ... has been life altering and life affirming," said Stewart upon her release in March of 2005 (Hancock, 2005).

The crimes discussed above are felonies, all of which can carry prison sentences of up to five years and/or fines of up to $250,000 per individual and $500,000 for corporations (Related, 2008). There are not too many convictions under these provisions, because the government usually chooses to proceed under the more specific Internal Revenue Code provisions. Taxpayers and advisors should, however, take notice of the stiff prison sentences. In appropriate cases, the IRS has chosen to proceed under these provisions.

THE MAJOR CRIMINAL TAX STATUTES

The most utilized Internal Revenue Code sections in order of importance to the government in prosecuting tax crimes are sections 7201, 7203, and 7206(1). The penalties and major elements of these crimes are summarized in Table 2.

As a deterrent to these tax crimes, the Tax Equity and Fiscal Responsibility Act of 1982 (TEFRA) significantly increased the maximum potential fines, and these were further enhanced by the Sarbanes Oxley Act in 2002. Before TEFRA, a separate fine for corporations did not exist. Before Sarbanes Oxley, the maximum fines were $100,000 under 7201 and 7206(1); and only $25,000 under 7203). As noted in Table 2, fines now can run as high as $500,000 for corporate violations (Related, 2008).

Willfulness is considered the most important element in any of the major tax crimes; it is also common to all of these crimes. Willfulness is the element which distinguishes criminal from civil tax crimes. Willfulness is often proven circumstantially through such omissions as a pattern of not filing or understating income. The commission of tax crimes includes such activities as keeping a double set of books, preparing false entries or invoices, giving false explanations during audit, using fictitious nominees in bank accounts or the destructions of books and records. Statute 7206(2) deals with aiding and assisting other taxpayers; while this section is not often

used, management accountants should be aware of its existence. It carries the same penalties as Statutes 7206(1). Activities such as covering up for employers by backdating records or altering documents should be avoided at all costs.

Table 2: Summary of Major Tax Crimes

	7201	7203	7206
Type of Crime	Felony	Misdemeanor	Felony
Proscribed activity	Tax Evasion	Failure to File	False Statements
Maximum Penalties			
Prison Term	5 years	1 year	3 years
Fines			
Individuals	$250,000	$100,000	$250,000
Corporations	$500,000	$100,000	$500,000
Elements of the Crime	Tax deficiency Attempt to evade Willful	Deficiency not an element Need gross income Willful	Deficiency not an element Perjured and material item with knowledge Willful

In the early development of the criminal tax laws the Supreme Court indicated that one had to have "a motive" to run afoul of the willfulness element. However, the current standard does not require proof of "motive." A willful act is done "voluntarily and intentionally and with the specific intent to do something which the law forbids." [4] All that is needed is an intentional violation, done voluntarily, of a known legal duty.

Proving the Case

The courts accept various methods in establishing the underpayment of a tax. The burden of proof is on the government with all these methods; this proof must be beyond reasonable doubt. The most often used methods are:

1. Specific Item. If the government can establish that specific items have been left off the return, it has a relatively easy case to present to the jury. This evidence must therefore be direct, and not be based on inferences. The government usually establishes this proof through the taxpayer's own records or through third party records and/or testimony.

2. Net Worth. The courts have defined net worth as the excess of the actual cost of the acquisition of a taxpayer's assets over liabilities on any given date. If the increases in net worth are not due to loans, inheritances, or other nontax items, the court will infer that the increase came from omitted income. The biggest problem the government has in proving

increase in net worth is determining the amount of the beginning cash on hand—often referred to as the cash hoard. This method, along with the remainder of the methods discussed in this section, is based on circumstantial evidence, and is therefore more difficult to prove than the specific item approach.

3. Bank Deposits. In this method the government examines bank deposits and cancelled checks. The taxpayer's deposits, which are reasonably determined to be included in income, must exceed expenses; then the remainder is assumed to be the taxpayer's income. The government needs to show there is the appearance of business activity with regular and periodic deposits. The IRS must also analyze deposits in order to eliminate loans, redeposit, transfers, and other non-income items. Once the government has established a lucrative activity, the assumption is that there is income with the burden shifting to the taxpayer to explain any differences.

4. Expenditures. This variation of the net worth method often occurs when expenditures exceed reported income. The taxpayer usually lives lavishly with large amounts spent on such items as travel, clothes, and entertainment.

TAXPAYER RIGHTS AND DEFENSES

While the government should be given the proper tools to enforce the tax collection process, taxpayers' rights also should be respected. One of the big concerns is whether the accused's constitutional rights were violated, especially his Fifth Amendment rights dealing with self-incrimination.

The Supreme Court in *Bellis*[5] indicated that the records of a collective entity, such as a corporation, must be produced, even though their contents might be incriminating. However, the court indicated the Fifth Amendment rights would protect purely personal papers of taxpayers and the records of their sole proprietorships. This latter protection seems to be eroding in some circuits in view of some of the recent lower court decisions. For example, in *Fox*[6], Dr. Fox, a New York physician, was required to produce the records of his proprietorship because these documents were required to be maintained by law. It is not known why the lawyers did not argue the notions enunciated in *Bellis*. The 2nd Circuit Court of Appeals concurred with the original ruling in *Fox*, stating that they saw no need to consider the matter further.

In *O'Henry's*[8] the government recognized the fact that even in a routine investigation an IRS agent might incriminate the taxpayer and therefore have violated their fifth amendment right. Therefore, the taxpayer should be weary of answering questions by government officials and giving up documents flippantly. Taxpayers also have to be careful about procedures in responding to an IRS summons. In *Rylander*[7], a corporate president failed to appear at the initial summons hearing to assert his Fifth Amendment self-incrimination rights and his inability to

produce the corporate records. The Supreme Court indicated it was too late to complain about such matters at the contempt hearing.

The taxpayer also may be able to establish a strong defense in a particular case. Probably one of the main defenses would be the failure of the government to establish a strong case on willfulness. If the taxpayer can show his actions were based upon a reasonable construction of the law, that would go a long way to establishing a lack of willfulness.

MANAGEMENTS ACCOUNTANTS' RESPONSIBILITIES

Internal accountants need to be mindful of the tax crimes discussed here primarily because of implications for their employers. Management accountants, however, should make sure they do not intentionally or willfully involve themselves in criminal activities.

Management accountants should not only discourage their employers from illegal acts, but also should avoid criminal violations themselves. Covering for employers by backdating records or altering documents, among other dubious acts, should be avoided at all costs.

ENDNOTES

1 *U.S. v. Hendrickson*, No. 2:1991cr80930 (U.S.D.C. E.D. Mich.).
2 *U.S. v. Whitfield,* (03-1293) 543 U.S. 209 (2005) 349 F.3d 1320, affirmed.
3 *U.S. v. Stewart* ,287 F. Supp. 2d 461 (S.D.N.Y. 2003)
4 *U.S. v. Pomponio,* 429 U.S. 10 (1976).
5 *Bellis v. U.S.,* 417 U.S. 85 (1974).
6 *U.S. v. Fox,* 83-1 USTC #9196 (S.D.N.Y-1983).
7 *U.S. v. Rylander,* 83-1 USTC #9300 (U.S. Supreme Court -1983).
8 *U.S. v. O'Henry's,* Film Works, Inc., 598 F.2d 313, 317 (2d Cir.1979)

REFERENCES

(1997). How to Avoid an IRS Audit? Retrieved September 26, 2008 from the WorldWideWeb Tax Web site: http://www.wwwebtax.com/audits/audit_avoiding.htm

(2005) Martha Ends 5-Month Prison Stay. Retrieved October 23, 2009 from CBSNews Web site:http://www.cbsnews.com/stories/2005/03/04/national/main678022.shtml

(2008). Enforcement Statistics. Retrieved September 26, 2008 from the Internal Revenue Service Web site: http://www.irs.gov/compliance/enforcement/article/0,,id=108792,00.html

(2008). Criminal Investigation (CI) At-a-glance. Retrieved September 26, 2008 from the Internal Revenue Service Web site: http://www.irs.gov/irs/article/0,,id=98398,00.html

(2008). Related Statutes and Penalties-General Tax Fraud. Retrieved September 26, 2008 from the Internal Revenue Service Web site: http://www.irs.gov/compliance/enforcement/article/0,,id=106790,00.html

(2009) Obama: Govt. is hiring nearly 800 new IRS Agents to Enforce Tax Code. Retrieved October 23, 2009 from The Washington Examiner Web site: http://www.washingtonexaminer.com/politics/Obama-Govt-is-hiring-nearly-800-new-IRS-agents-to-enforce-tax-code-44305177.html

Akhigbe, A., & Martin, A. (2005) Valuation impact of Sarbanes-Oxley: Evidence from disclosure and governance within the financial services industry. *Journal of Banking and Finance,* 30(3) 989-1006. doi:10.1016/j.jbankfin.2005.06.002

Kaufman, Wendy. (2007) Random Tax Audits Return to the IRS. Retrieved September 26, 2009 from National Public Radio Web site: http://www.npr.org/templates/story/story.php?storyId=15111003

Rampell, Catherine. (2009) How Common is Tax Evasion? Retrieved September 26, 2009. from the New York Times Web site: http://economix.blogs.nytimes.com/2009/02/03/how-common-is-tax-evasion/

HOW "CYBERSAFE" ARE THE BRICS?

Christopher A. Buscaglia, Suffolk University
Miriam F. Weismann, Suffolk University

ABSTRACT

In 2001 a chief economist at Goldman Sachs, Jim O'Neill, theorized that by 2035, the combined GDP of the BRIC economies, Brazil, Russia, India and China, would exceed the combined GDP of the G7 countries (Canada, France, Germany, Italy, Japan, U.K., and the U.S.). It was further predicted that by at least 2050, the BRIC bloc of emerging markets will dominate the global economy. Accepting the validity of these economic predictions, this article considers the implications of BRIC market dominance for the global private business sector in the field of cybersecurity. Specifically, based upon a demonstrable lag in the development of the respective BRIC domestic legal infrastructures in the fields of cybersecurity and the protection of intellectual property, how should business assess the degree of asset risk exposure attendant to a market entry strategy aimed at increased BRIC penetration? Simply put, how cybersafe are the BRICs for global business?

KEY WORDS: BRIC economies, cybercrime, intellectual property, Convention Against Cybercrime, asset risk assessment, asset risk management

INTRODUCTION

In 2001 a chief economist at Goldman Sachs, Jim O'Neill, theorized that by 2035, the combined GDP of the BRIC economies, Brazil, Russia, India and China, would exceed the combined GDP of the G7 countries (Canada, France, Germany, Italy, Japan, U.K., and the U.S.) (O'Neill, 2001). It was further predicted that by at least 2050, the BRIC bloc of emerging markets will dominate the global economy (Wilson and Purushothaman, 2003). Accepting the validity of these economic predictions, this article considers the implications of BRIC market dominance for the global private business sector in the field of cybersecurity. Specifically, based upon a demonstrable lag in the development of the respective BRIC domestic legal infrastructures in the fields of cybersecurity and the protection of intellectual property, how should business assess the degree of asset risk exposure attendant to a market entry strategy aimed at increased BRIC penetration? Simply put, how cybersafe are the BRICs for global business?

In order to gauge asset risk exposure due to unauthorized cyber-penetration of intellectual property, a species of global theft, the article examines the magnitude of the global economic

threat posed by cybercrime and the existing international and domestic legal intellectual property (IP) protections afforded foreign private sector companies doing business in each respective BRIC country. The article concludes that intellectual property is not cybersecure because BRIC countries do not offer concise and meaningful legal protections in the form of enforceable legal rights nor do these countries demonstrate a present or future commitment to multilateral treaty initiatives aimed at minimizing economic risk. Thus, any business contemplating increased market penetration into the BRIC bloc should factor in both the risk to its internal systems security and/or the possibility of conversion of its trade secret and copyright assets through unauthorized cyber-penetration. The weight to be accorded to this cybersecurity risk assessment factor will depend upon several variables, including but not limited to: the type of intellectual property, the measures required to adequately protect the interest given the choice of market entry strategy, and the asset value of the interest to the company.

Generally, risk assessment is undertaken to achieve efficient risk management. Indeed, the management of international business is frequently characterized as the management of risk (Schaffer, Earle and Agusti, 2008). This article contributes to the assessment of risk in three ways. First, it provides increased awareness of a particular global economic threat to enable the private sector to engage in a smarter cost/benefit analysis about competing market entry strategies. Second, it provides a dialogue helpful to the analysis of the choice of the appropriate market entry strategy given the nature and complexity of the risk. Finally, the private sector, as a crucial stakeholder, can assume a more efficient participatory role in the development of economic and legal policies given a greater understanding of this global business problem. Just as O'Neill prognosticated that "it is time for the world to build better global economic BRICs," it follows that it is time for the world to build better global cybersafe BRICs in the interest of global commerce.

This article is also intended to expand the prior research of Bird and Cahoy which focuses upon the failure of BRIC nations to enforce internal domestic laws prohibiting the unlawful conversion of intellectual property rights in the pharmaceutical industry. The research concludes that the failure of enforcement of patent protections by BRIC nations undermines global competitiveness (Bird, 2006; Bird and Cahoy, 2007). The more recent research of Kapczynski revisits India's pharmaceutical sector concluding that India has managed to side step the plain intent of the TRIPS treaty (Agreement on Trade Related Aspects of Intellectual Property Rights)[1] which is to afford the foreign private business sector adequate intellectual property protection (Kapczynski, 2009). Kapczynski likewise addresses the same enforcement problem but from the perspective of India's failure to implement mandatory domestic treaty harmonization under TRIPS to achieve multilateral goals.

This article expands the analysis beyond the failure of BRIC countries to enforce domestic laws *after* the occurrence of unauthorized access to intellectual property, to the larger perspective of the kind and quality of legal protections offered by the BRICs, as part of an existing legal infrastructure, at the point of market entry. The prior scholarship well describes the

absence of a private sector global or domestic legal remedy to redress economic harm based upon an implicit, albeit unexamined assumption that BRIC countries have enacted enforceable legal rights in the first instance. However, the inability of the private sector to redress economic harms may be merely symptomatic of a deeper systemic problem. That problem is the absence of a concise and meaningful legal infrastructure that creates protectable legal rights, the absence of which negates any real prospect of enforcement of a remedy. Without an enforceable legal right, there is no legal remedy. The consequences of these gaps in infrastructure have led to increased cybercrime, which the U.N. Crime Congress has blamed for "damaged economies and State credibility impeding national development" (UN Press Report, 2010). Thus, the harm is shared alike by private and public sector stakeholders.

The current ambiguities and omissions in the respective BRIC legislative profiles demonstrate an intentional strategy, common to lesser developing countries (LDCs), to side step global initiatives designed to protect foreign private sector business operations (Kapczynski, 2009). The wisdom of that LDC strategy is not subject to debate in this article. Instead, this article provides an in-depth review of the current BRIC domestic legal infrastructures and how those legislative paradigms may impact business economic risk given the anticipated increase in BRIC market penetration and the current unwillingness of BRIC countries to revise the strategy of non-conformity with global multilateral initiatives.

The article is organized in six sections. The first section briefly summarizes the economic "dream theory" that first envisioned the BRIC bloc. The second section illustrates the serious economic consequences to the global private business sector of unauthorized cyber-penetration of particularly vulnerable IP assets, including trade secrets. Here, violators can situate themselves in "data safe havens," like the BRICs that do not offer meaningful cyber security prohibitions or in lesser developing countries that have no unlawful access prohibitions at all, and merely by the press of a button steal business trade secrets with impunity. Because the ease of cyber-penetration will only be facilitated by increased entry into local BRIC markets, the third section examines the value of incorporating a cybersecurity risk assessment factor in the global risk management decision making process. The fourth section provides an explanation of the salient features of the Convention Against Cybercrime ["Convention"], and a corresponding BRIC country by country assessment of the current level of multilateral cyber-protection offered in the domestic legal infrastructure, if any, by each BRIC country relative to the goals of the Convention. The fifth section provides a second tier BRIC country by country assessment of the current level of domestic trade secret protection offered in the current legal infrastructure, if any, by each BRIC country and how the absence of meaningful intellectual property protection can magnify cybersecurity risk. Simply, violators can both "hack and steal" with impunity. Finally, the article provides a recommendation urging BRIC accession to the Convention and compliance with the mandate of treaty harmonization through internal domestic legislative revision.

The article's research methodology provides a quantitative framework through the collection and synthesis of data contained in several global cybersecurity studies. It also

examines the Council of Europe (CoE) country by country assessment surveys comparing the existing domestic legal infrastructure in each BRIC country with the requirements of the Convention. Because none of the BRICs satisfy the treaty mandates, the second tier analysis addresses the quality of existing laws and regulations by profiling the respective domestic trade secret legislation in each BRIC country. This in-depth study surveying the content of current domestic trade secret protections afforded to the private business sector by the BRICs adds unique insight into the available global data analysis and facilitates the process of asset risk management. Given that business risk can neither be wholly eradicated nor ignored when making investment decisions, the article provides a useful understanding of both law and policy in the risk management process.

In conclusion, the article underscores the importance of the rapid accession by each of the BRIC member states to the Convention as a means of minimizing the cybersecurity risks attendant to foreign companies doing business in the BRICs. Nation state accession to the Convention is critical because it is the only binding multilateral treaty addressing the threat of international cybercrime and criminal offenses related to theft of intellectual property and the breach of internal company systems security in the global marketplace (CoE, 2001). Here, multilateral cooperation is necessary to the future success of global trade and future global economic integration, a task too formidable for the private sector to undertake in isolation. Parenthetically, the Kapczynski research documents the failure of treaty harmonization under the earlier TRIPS agreement in India's pharmaceutical sector concluding that India's IP laws do not match the requirements of TRIPS. Whether the implementation of the Convention through harmonization will be more successful than the TRIPS experience in the BRICs is addressed briefly in this article relative to recent UN multilateral negotiations in 2010. However, it remains the topic of future research should the BRIC bloc ever accede to the Convention. An old English proverb perhaps best describes the current global multilateral environment: "A man maie well bring a horse to the water, But he can not make him drinke without he will (Heywood, 1546; Folcroft Library Edition, 1972).

"DREAMING WITH BRICS"

In 2001, Jim O'Neill, a global economist, dreamed up an interesting prediction. He coined the acronym, BRIC, and provided an economic snapshot of the global economy in 2050 (O'Neill, 2001). His economic model postulated that in approximately 2035, the combined GDP of the BRIC countries would become bigger than that of the G7. The basic tenet was that if the four BRIC countries "embrace the productivity that accompanies global trade and globalization, given that they have such a large number of people, they're likely to become big" (Fortune, 2009). In 2003, the theory was released to the public in a second report, "Dreaming with BRICs: The Path to 2050" (Wilson and Purushothaman, 2003), setting off what O'Neill characterizes as an "explosion" of interest in the international corporate community.

The BRIC countries quickly acknowledged their new found global identity and convened their first joint economic summit on June 16, 2009 in Ekaterinburg, Russia. By the time of the summit, the economic figures were in. Between 2002 and 2007, annual GDP growth averaged 3.7 percent in Brazil, 6.9 percent in Russia, 7.9 percent in India, and 10.4 percent in China (Hult, 2009). The economists interpreted these figures as proof of their "dream theory," that the combined growth trends were developing to outpace the GDP growth of the G7 in the coming decades as predicted.

The Joint Statement issued by the BRIC members after the close of the first summit focused on the need for global reform of business and financial institutions in the international trade and investment environment grounded in a developed legal and economic infrastructure:

> We are convinced that a reformed financial and economic architecture should be based, *inter alia*, on the following principles: democratic and transparent decision-making and implementation process at the international financial organizations; solid legal basis; compatibility of activities of effective national regulatory institutions and international standard-setting bodies… strengthening of risk management and supervisory practices. We recognize the important role played by international trade and foreign direct investments in the world economic recovery. We call upon all parties to work together to improve the international trade and investment environment. We urge the international community to keep the multilateral trading system stable… (Joint Statement, 2009).

While BRIC rhetoric calls for multilateral legal and economic co-operation and more democratic transparency in the global markets, the bloc's actions both before and after the summit tend to reveal its real intentions. None of the four countries has yet to sign or ratify the Convention Against Cybercrime of the Council of Europe (CoE).

Moreover, an examination of each BRIC country's current internal legislative profile reveals a less than enthusiastic effort to enact domestic laws to strengthen risk management and intellectual property protection. This lack of developed legal infrastructure in the BRIC countries is discussed in greater detail below. It is the absence of a developed legal infrastructure to detect and prevent unauthorized cyber-penetration which amplifies the economic consequences to global business and should be accounted for in a risk factor analysis.

UNDERSTANDING THE THREAT: THE ECONOMIC CONSEQUENCES OF CYBER-PENETRATION AND CYBERCRIME

Defining the Contours of Cybercrime

As with most substantive crimes, there is no internationally recognized legal definition of cybercrime. Instead, the Convention uses functional definitions identifying general offense categories as the accepted norms (United Nations Manual, 1995). The targeted unlawful conduct under the treaty falls into several generally recognized categories: fraud by computer manipulation, computer forgery, unauthorized access to computer systems and services, unauthorized reproduction of legally protected computer programs, child pornography, and the use of computers by members of organized crime and terrorist groups to commit traditionally defined offense conduct. This article focuses specifically on the business problem of unauthorized access to computer systems and services and the resulting theft of intellectual property including trade secrets and other forms of intellectual property.

The Council of Europe views cybercrime as a species of organized crime that "is a threat to human rights, democracy and the rule of law." The report observes that cybercrime represents the "fastest growing" category of crimes in many countries (CoE Report, 2004).

There can be no doubt that cybercrime is broad based and must be addressed at the global level due to increasing network dependency in the global marketplace and the proven inability of the private sector to control that security threat in isolation. The U.S. Department of Justice sums up the expansive nature of the threat and its own concerns for the future integrity of the Internet as continuing means of conducting business and communication:

> The United States is heavily dependent on computers that are networked, and it offers many targets across every sector of society. Attacks on computer systems supporting the military, satellite networks, transportation and communications systems, and large utilities pose a constant threat to our critical infrastructures and hence our national security. Criminals in foreign countries also have penetrated computer systems of major U.S. financial institutions and stolen large sums. Numerous cases of credit, debit and ATM card fraud, telemarketing fraud, and copyright piracy have caused significant losses for U.S. individual and corporate victims. Finally, the Internet has greatly facilitated communications among criminal and terrorist organizations and physical-world crimes such as murder, stalking, bomb threats, extortion, and narcotics trafficking. In short, if left unchallenged, computer crime poses a serious threat to the health and safety of our citizens, and may stifle the Internet's power as a tool to communicate, engage

in commerce, and expand people's educational opportunities around the globe. (DOJ, 2010).

The "Cost" of Doing Business

To put the global economic threat to business in perspective, an advisor to the United States Treasury Department estimated in 2004 that the financial damages associated with global cybercrime incidences exceeded the estimated profits of $105 billion from illicit global drug sales for the same period (Reuters, 2005). The problem has worsened over time.

On a global scale, who is a target? Country size is clearly not a determinative factor. Even businesses operating in small countries are not safe. Almost universally, studies show a high incidence of cybercrime infiltration in the international business community. Consider the statistics offered by various country law enforcement studies. In 2006, the Information Systems Security Association, ISSA, along with the UCD School of Computer Science, conducted an Irish Cybercrime Survey to determine the impact of Cybercrime on Irish business organizations (ISAA/UCD Survey, 2006). Was there truly a risk? Ninety-eight percent of the survey respondents reported cybercrime penetration in their respective business environments. The report concluded that the incidences of cybercrime in the Irish business community were "virtually universal." In terms of dollars and cents or pounds and euros, how does the problem affect the bottom line? In other words, how significant is the problem in terms of profitability? In the survey response, 76% reported single incidents that cost in excess of £5000 to remedy, while costs of over £100,000 were incurred by 22% of the responding business organizations. There are other ways to impact the bottom line. In fact, 89% of the responding companies reported loss of productivity as a result, 56% reported loss of data. An additional 44% reported the departure of employees through termination or resignation as a result of the offending conduct. So, what can we conclude about Ireland? At least two things: the problem is pervasive and it is expensive.

A similar annual survey conducted by the Department of Trade and Industry in the UK corporate business community in 2006 disclosed that 62% of the business survey respondents reported incidences of cybercrime penetration. Of those reported, 87% of the incidences were reported by large companies. The aggregate incidence cost figures, prepared by PricewaterhouseCoopers, were in excess of ten billion pounds per annum (Department of Trade and Industry UK, 2006).

In a report prepared by the Belgian Federal Judicial Police, the statistics for 2007 reflect an increase of 725% in offenses on the Internet when compared to 2002 (Belgian Cybercrime, 2008). Finally, the 2005 FBI Computer Crime and Security Survey reported that 87% of company survey respondents reported various types of cybercrime incidences in American companies. Based on the per incidence losses reported in response to the survey, the FBI estimated a total annual loss of approximately $67.2 billion per year or $7.6 million per hour.

The FBI was careful to point out that these are conservative estimates (FBI Computer Crime Survey, 2005).

Source Data: Tracking the Perpetrators

The FBI study also sought to trace the countries that were the most common source of the intrusion attempts. Here, the report disclaims the accuracy of these particular statistics because identification of a particular country source may not be conclusive since computer hackers often use proxies and Trojanized computers in other countries to mask their identity and make detection difficult. The report notes that an example of this type of "stepping-stone attack" would be a Romanian hacker who uses a proxy computer in China to access a compromised computer in the United States. The U.S. based computer would then be used to perform the computer intrusion and that U.S. based computer would then appear to be the country source of origin. Thus, a company investigating the incident may falsely conclude that the source was within the United States when the attack actually originated in China.

In any case, while 36 countries of origin appear on the FBI list compiled from the survey responses, eight of the countries appeared to be the source for approximately 80% of the U.S. company intrusions, including: China, Russia-Romania, Brazil, the United States, Nigeria, Korea, and Germany. Parenthetically, only three of those countries, the U.S., Germany, and Romania, are Convention signatories. Two of the countries, the U.S. and China, appear to be the source of over 50% of the reported company intrusions. Again, the FBI report points out that "difficulty tracking IP addresses and prosecution in China combined with other economic, military, and political concerns make this an unusually troubling statistic, especially when considering the potential impact of industrial espionage and state sponsored cyber warfare efforts" (FBI Computer Crime Survey, 2005). Three of the BRICs combined, China, Russia-Romania, and Brazil, appear to account for over 30% of the reported U.S. company intrusions. Thus, these statistics establish that three of the countries in the BRIC bloc are currently operating as "data safe havens." They may also operate as steeping-stone intermediaries to distort U.S. country source of origin statistics for cyber-penetration masking the magnitude of the global threat to U.S. cyber security. Parenthetically, it is unlikely that the converse is true because the U.S. is not a data safe haven and therefore, would not be conducive to stepping-stone operations.

One of the most dramatic recent studies illustrating the technique of steeping-stone cyber penetration appeared in Canada in a joint report issued by the University of Toronto, Citizen Lab, Munk School of Global Affairs and an Ottawa based operational consultancy company, SecDev Group in 2009 (University of Toronto & SecDev Group, 2009). The report outlines a ten-month investigation that focused on allegations of Chinese cyber espionage against the Tibetan community, including the Dalai Lama. The report documents a vast network of compromised computers, including at least 1,295 spread across 103 countries. Thirty percent of the compromised computers were classified as "high value" targets, including ministries of

foreign affairs, embassies, international organizations, and a computer located at NATO headquarters.

This report was quickly followed by another from the same group focusing on the misuse of social networking and cloud computing platforms, including Google, Baidu, Yahoo!, Twitter and several traditional command and control servers (University of Toronto & SecDev Group, 2010). The stepping stones were revealed to the researchers who were able to piece together some evidence of the location and possible associations of the hackers. However, the actual identities and motivations remain unknown. In short, the investigation located the "shadow of attribution in the cloud" but no positive identification. The main findings of the second survey: 1) disclosed evidence of a cyber-espionage network that compromised government, business, and academic computer systems in India, the Office of the Dalai Lama, the United Nations and other still unidentified computer networks; 2) recovered "restricted" and "top secret" documents generated by the Indian government; 3) recovered data submitted to Indian diplomatic missions in Afghanistan; 4) disclosed evidence of compromised security systems that made use of freely available social media system that include Twitter, Google groups, Yahoo! and others; and, 5) produced evidence linking the hackers to a massive underground network in Chengdu, China.

BRIC Perpetrators

In 2009, researchers at the University of Brighton published a report concluding that "Russia, China and Brazil are world leaders in cybercrime, with groups and individuals in India powering up to compete" (Rush, Smith, Kraemer-Mbula, Tang, 2009). Studies show that China has the most Internet users in the world which has facilitated an exponential expansion of cybercrime. The China Internet Network Information Center reports that as of December 2009, the number of Chinese Internet user reached 384 million, an increase from the previous year by 28.9% (CINIC, 2010). The existing Chinese legal infrastructure, which is largely modeled on a system of reactive legislation, is insufficient to address the magnitude of the problem (Qi, Wang, and Xu, 2009).

The Brighton Report likewise identifies China as a major player in the cybercrime network relying upon the statistics compiled by the University of Toronto, Citizen Lab, Munk School of Global Affairs and the SecDev Group in 2009 (University of Toronto & SecDev Group, 2009). However, the Report adds significant data regarding Brazil, Russia and India.

The Brighton Report states that more recently, Brazil has emerged as a "significant player on the global cybercrime stage and can be best described as a 'cesspool of fraud.' The main cause is attributed to the fact that "Brazil lacks any form of effective legislative framework to combat cybercrime." The statistics are palpable: the number of cyber-attacks has continued to escalate in Brazil, according to the country's Computer Emergency Response Team (CERT), from 68,000 in 2005 to 222,528 in 2008. Moreover, from January to March 2009 the attacks reached 220,000 almost the total accumulated figure for 2008. The majority of the cyber-attacks are fraud-related

(80 per cent of the attacks), and most are originated locally (93 per cent originated in Brazil) (Rush, Smith, Kraemer-Mbula, Tang, 2009:34).

Further, dubbed "the mother of cybercrime," the Russian Business Network (RBN) has been linked by security firms to child pornography, corporate blackmail, spam attacks and online identity theft, although most Russian cybercrime is directed to financial fraud, particularly through botnets (collections of compromised computers) and phishing. The Report notes that according to VeriSign, one of the world's largest Internet security companies, RBN, an Internet company based in St Petersburg, is "the baddest of the bad." RBN (Russian Business Network) is not easily detected. It has no legal identity; it is not registered as a company; its senior figures are anonymous, known only by their nicknames. Its websites are registered at anonymous addresses with dummy e-mails. It does not advertise for customers. Those who want to use its services contact it using Internet messaging services and pay with anonymous electronic cash. VeriSign estimates that a single scam, called Rock Phish (where Internet users were defrauded into entering personal financial information such as bank account details) made $150 million in a year.

In India, the Brighton Report notes there has been a leap in cybercrime in recent years – reported cases of spam, hacking and fraud have multiplied 50-fold from 2004 to 2007.
The Report voices real concern about the security of companies in Europe and the U.S. that are increasingly outsourcing IT functions and software development tasks to India, Brazil, Russia and Eastern Europe in order to take advantage of good IT skills and lower wages. "Yet this phenomena (offshore outsourcing), has raised new concerns about the security risks involved, where access to valuable financial information can provide an opportunity for different actors to enter the cybercrime business" (Rush, Smith, Kraemer-Mbula, Tang, 2009:35).

EVALUATING THE QUALITY OF STUDIES AND DATA REPORTS

Despite the global consensus that cybercrime is a serious epidemic with demonstrable economic damage to the private and public sectors, the data still remains difficult to compile and compare. For example, the Brighton Report observes that cybercrime data is far from straightforward. No reliable 'official' statistics exist yet. Although many associations and groups regularly publish their own estimates, they are impossible to compare. Moreover, the reliability of these figures is regularly criticized as over or under estimating the true picture, depending upon the vested interests of the organization responsible (Rush, Smith, Kraemer-Mbula, Tang, 2009).

However, the difficulty of accurate data collection has much to do with the private sector itself. Many of the studies generally represent only the tip of the proverbial iceberg because many businesses refuse to acknowledge infiltration and a security breach. Simply put, cybercrime has become businesses' best kept secret (Weismann, 2010). It is not surprising that companies don't like to publicly disclose either that some unidentified hacker obtained

confidential information about their customers or that their most valued trade secrets are floating around in the public domain (Parliamentary Office of Science and Technology, 2006). These kinds of disclosures harm business reputation and, where publicly traded, stock values can suffer adverse consequences.

The problem takes on a wholly unique dimension when considered against the backdrop of transborder incidences. Here, the cybercriminal has the real advantage over the private sector. Cybercrime does not require an actual commercial transaction or theft of tangible goods. Cyber-penetration may be likened to a disease epidemic that can transcend borders without detection. It can happen electronically through the mere touch of a button and without triggering a single alarm. Ironically, the Canadian report remarks that "documents and data are probably safer in a file cabinet, behind the bureaucrat's careful watch, than they are on the PC today" (University of Toronto & SecDev Group, 2010).

Data safe havens add to the ease of business interruption and the inability to collect data due to the absence of legal infrastructure and no formal governmental mechanism to track incidences of cybercrime. In fact, the studies show that most incidences of cybercrime in the business environment are discovered purely by accident. Most businesses do not have internal security able to detect technologically advanced intrusions (ISAA/UCD Survey, 2006). Indeed, with the advent of technological development, the experts consider the cybercriminals well ahead of legitimate businesses in terms of developing global strategies (Sieber, 1997). Numerous high profile cases of attacks on Google and other American companies documented in 2009 confirm the uniformly accepted conclusion that "these attacks are becoming the norm rather than an exception" (University of Toronto & SecDev Group, 2010).

Not surprisingly, the most common data safe havens are situated in developing nations. The reasons are fairly straightforward. Many developing nations lack stable political and legal infrastructures. The absence of infrastructure significantly contributes to the inability of developing nations to legislate such complex legislation in the first instance, much less engage in meaningful enforcement efforts. The result is that individual corporate strategies are relatively impotent in resolving transborder criminal activity (Weismann, 2010). Public institutions contribute to the problem as well by adopting new technologies faster than the procedures needed to deal with the transparency and accompanying vulnerabilities they introduce (University of Toronto & SecDev Group, 2010).

These studies illustrate the real difficulty faced by the private sector in adequately policing and self-protecting against global IP cyber theft. For that reason, multilateral co-operation assumes greater importance in the effort to minimize commercial risk. An example where multilateral efforts have succeeded in market risk management was the accession to the Convention for the Sale of International Goods (CISG). The CISG provides a code of international sales law designed to protect the integrity of international sales and financing arrangements and provides stable trade relations in the global marketplace. As of 2010, 76

countries have signed the treaty. The Convention Against Cybercrime offers a similar solution to commercial instability created by increased incidences of cybercrime.

THE VALUE OF CYBERSECURITY RISK ASSESSMENT

Given the relative inability of the private sector to combat the problem in isolation, two questions arise. First, how does the cybersecurity risk assessment factor differ from other types of economic risk assessments attendant to global investment decisions? Second, can cybersecurity risk assessment ameliorate the risk of cybercrime in the private sector?

Regarding the first question, the difference lies in the depth of understanding the problem. Whereas the private sector may be well informed as to certain risks attendant to trade and foreign investment such as public corruption, terrorism, currency fluctuation, risk of expropriation and nationalization and the like, it is less well informed when it comes to the intricacies of global regulation, or absence thereof, in the areas of cybersecurity and intellectual property. Certainly, the perils of many known economic risks were learned more through experience in the global "school of hard knocks" than through advanced measures or planning. In such instances, risk assessment did not always precede entry into the market.

Indeed, hard learned experience through palpable economic harm has to a certain degree forced the private sector to rethink its market entry strategies. It is certainly no coincidence that by 2008, 52% or 1.63 trillion of U.S. foreign direct investment was tied up in the European Union as compared to approximately 500 billion invested in China, India, Mexico, Brazil and other LDCs combined for the same period (UNCTAD's World Investment Report, 2009). This has been the historical trend since the late 1980's (Hackmann, 1997).

Of the three most common market entry strategies, trade, licensing and direct foreign investment, trade continues to be the most prevalent form of market entry strategy for the private sector. On the risk continuum, trade carries the least amount of risk exposure which increases with licensing and is the most prominent with direct foreign investment. As to the second question, risk assessment requires, at a minimum, an understanding of the problems attendant to the particular market entry strategy and can provide a means to ameliorate the threat. In the case of cybersecurity, a company may conclude that the absence of BRIC block protection is a risk that it is willing to accept. On the other hand, knowing that BRIC protection is practically non-existent, the company may select a more risk averse market entry strategy better suited to its own capabilities in controlling the use of its intellectual properties. For example, in the case of pharmaceuticals, the absence of patent protection and enforcement has forced a hasty retreat by the U.S. pharmaceutical industry from licensing strategies in the higher risk LDC markets (Kapczsynski, 2009).

It does not follow that the private sector will ignore risk assessment where the problem seems relatively uncontrollable and simply invest in LDC markets to maximize opportunity and growth. Where companies are publicly traded, board accountability to investors remains a

powerful force in the assessment process, particularly where asset value depends in part on asset protection.

Additionally, a non-assessment strategy is belied by the constant pressure that the United States is already placing on the BRICs and other LDCs through the WTO to conform to IP regulations provided for in the TRIPS agreement as evidenced in the pharmaceutical industry. Additionally, global pressure on the BRIC countries to join the Convention at the recent UN 2010 conference in Brazil has increased although without much success.

At the same time, because of the speed of technology and the fast paced development of economic opportunity, arguably the private sector does not have the luxury to wait out the development of BRIC infrastructure and forego lucrative global investment opportunities. Yet, it does not follow that participation in the BRIC market under these circumstances means that the private sector is ignoring the problem or is exhibiting a general willingness to invest despite known risk. Competition and innovation operate on a time clock that is not in lockstep with treaty developments. The logical corollary is not that business should, therefore, ignore the problem. Instead, the threat to intellectual property through cybercrime should be assessed in terms of potential economic harm. Business needs to be aware of the stages of multilateral developments that may impact investment decisions. In this way, the private sector can assume its role as a better informed global stakeholder and participate in global policy development.

Finally, the private sector may find that a less risky market entry strategy such as trade, as opposed to a more intrusive strategy of DFI, will on balance produce acceptable levels of profits while limiting the risk of IP conversion. Concededly, no treaty or law will ever provide full proof risk prevention. However, the cost/benefit analysis attendant to different market entry strategies may ameliorate the anticipated consequences of increased BRIC bloc penetration through more efficient risk management.

Complexity in the global marketplace should not signal retreat. It does, however, require better informed business decisions leading to more efficient risk management until such time as the problem can be resolved through multilateral efforts.

THE CONVENTION AGAINST CYBERCRIME

Many skeptics complain that global regulation through multilateral treaty may be relatively ineffective at eradicating unauthorized cyber-penetration due to the relative ease of committing the crime from undetected source locations. There is no question that laws and regulations seldom eradicate all unlawful behavior. Most countries have laws against bank robberies. Obviously, there are still bank robbers. However, the criticism misses the mark. It is a question of assessing risk not a question of assessing the probability of absolute eradication of the problem. The importance of multilateral legal cooperation is to provide deterrence and a formal mechanism for international transborder cooperation in the investigation and prosecution of cybercrime. In countries where there is no prohibition and/or enforcement infrastructure

against unauthorized systems access, hackers may operate openly and notoriously and without fear of retribution. Without legal deterrence and the ability to engage in unobstructed cross border investigations, the risk assessment is greater. The United States Department of Justice explains the value of the Convention in that "the United States has much to gain from a strong, well-crafted multilateral instrument that removes or minimizes the many procedural and jurisdictional obstacles that can delay or endanger international investigations and prosecutions of computer-related crimes" (DOJ, 2010).

Explanation of Provisions

From the perspective of international relations, the Convention is unquestionably unique, signaling a new direction in global legal relations: global regulation designed to promote security of global business operations through the vehicle of criminal law enforcement. The Convention also changes the scholarly dialogue by providing a compelling case study in terms of the impact of multilateral accession to international criminal law on the domestic business and commercial affairs of its member and non-member signatories (Weismann, 2010).

The Convention provides a treaty-based framework that imposes three necessary obligations on the participating nations to: enact legislation criminalizing certain conduct related to computer systems; create investigative procedures and ensure their availability to domestic law enforcement authorities to investigate cybercrime offenses, including procedures to obtain electronic evidence in all of its forms; and, create a regime of broad international cooperation, including assistance in extradition of fugitives sought for crimes identified under the Convention. As a caveat, the Convention contains significant restrictive language in the areas of transborder search and seizure and data interception, deferring authority to domestic laws and territorial considerations.

The Convention also addresses the complicated problem of guaranteeing the protection of the civil rights of citizens living in different cultures and political systems. It does so through the use of the sovereignty-based model of legal harmonization as a feature of treaty implementation in two ways. First, recognizing that it was not possible to specify in detail all of the conditions and safeguards necessary to circumscribe each power and procedure provided for in the Convention, Article 15 of the treaty was drafted to provide "the common standards or minimum safeguards to which Parties to the Convention must adhere." These standards or minimum safeguards arise pursuant to the obligations that a party has undertaken under applicable human rights instruments. These instruments include the 1950 European Convention for the Protection of Human Rights and Fundamental Freedoms and its additional Protocols No.1, 4, 6, 7 and 12; the 1966 United Nations International Covenant on Civil and Political Rights; and "other international human rights instruments, and which shall incorporate the principle of mandates that a power or procedure implemented under the Convention shall be proportional to the nature and circumstances of the offense" (Convention, 2001).

Second, the treaty expressly leaves it to domestic laws to provide reasonableness requirements for searches and seizures and minimize governmental intrusion regarding wiretap and other methods of interception taken with respect to the wide variety of offenses. The accompanying CoE Explanatory Report specifies the mandatory procedural privacy safeguards "as [those] appropriate in view of the nature of the power or procedure, judicial or independent supervision, ground justifying the application of the power or procedure and the limitation on the scope or duration thereof." The bottom line is that "[n]ational legislatures will have to determine, in applying binding international obligations and established domestic principles, which of the powers and procedures are sufficiently intrusive in nature to require implementation of particular conditions and safeguards" (Explanatory Report, 2001).

Implementation Through Harmonization

A concrete example illustrating the mechanics of domestic harmonization is found in the UK. The UK passed the Police and Justice Bill 2006 which contained amendments to its existing anti-cybercrime legislation, The Computer Misuse Act of 1990. The amendments were intended to bring UK law in lockstep with the Convention and the adoption of the European Council Framework Decision on Attacks against Information Systems. The European Council Decision required multilateral integration into the legal systems of the participating signatory countries by March 2007. The UK amendments re-defined domestic penalties and offense conduct in accordance with the broad requirements of the treaty and the council decision (Parliamentary Office of Science and Technology, 2006).

Domestic harmonization is the key to assuring the future effectiveness of the treaty. Harmonization is the process of domestic adaptation by a sovereign nation of an international agreement into the domestic legal system through legislation or policy (Weismann, 2006). It is a process by which international law is placed into lockstep with the unique characteristics of the domestic legal and political systems existing in each respective nation state and not the other way around. In any particular country, the absence of domestic harmonization of the treaty or treaty-like provisions increases the risk to the private sector and should be factored into the choice of market entry strategy. In short, a less intrusive strategy such as trade might best be employed in the absence of domestic harmonization.

PROSPECTS FOR BRIC CONVENTION ACCESSION

Some critics of a multilateral resolution to the problem through accession to the Convention suggest that non-western nations such as the BRICs and other lesser developing countries have not acceded to the Convention because of political, social and/or cultural differences in perceiving the issues. However, the historical experiment of the World Trade Organization's (WTO) mandatory accession requirement to TRIPS provides a different reason

that may be attributed to the intense desire for internal economic growth. China, Brazil and India as members of the WTO were required to accede to the TRIPS treaty as a condition precedent to membership. This requirement for treaty accession is an implicit, if not explicit recognition that in the global marketplace intellectual property is a valuable balance sheet asset that warrants legal protection to encourage commercial stability. Notwithstanding that recognition, the country by country assessments of the respective internal legislative profiles provided below, demonstrate that the accessions of China, Brazil and India to the WTO have not resulted in compliance with TRIPS by these countries.

From an LDC cost/benefit viewpoint, membership in the WTO is sought for more beneficial economic treatment in trading arrangements in the global market place, whereas other ancillary WTO agreements are typically given short shrift. For example, India has not enacted any law to protect trade secrets as required by TRIPS. (As for Russia, it is not even a member of the WTO and therefore, has no obligation to comply with TRIPS at all). Thus, membership in the WTO does little to provide IP protection in the private global business sector. Likewise, the WTO does not entertain private sector grievances as it is a forum reserved only for member country grievances.

Since accession, China, Brazil and India have engaged in an intentional strategy to side step TRIPS requirements, not because of political and social differences but because of the desire to develop internal economic growth, albeit at the expense of the world community. The limitations and inadequacies of the TRIPS agreement are explained in-depth in the Kapczynski research (Kapczynski, 2009). Arguably, the failed TRIPS experiment underscores the need for accession to the more robust requirements of the Convention.

However, BRIC accession, in light of recent United Nations multilateral negotiations at the 12th pentennial UN Crime Congress in Salvador, Brazil in April 2010, is stalled. While there was uniform sentiment expressed that "[c]ybercrime damaged economies and State credibility, impeding national development," member nations remained undecided over the required response. The debate centered upon accession to the "gold standard" Convention or the need to negotiate a "fresh" UN negotiated multilateral agreement. Russia introduced a new multilateral treaty version supported by China and Brazil to control global cybercrime (UN Press Report, 2010). Russia has been joined by other lesser developing countries who favor a UN negotiated treaty, one which they can help draft, as opposed to the Convention fashioned by the CoE.

The real sticking point harkens back to protection of national sovereignty and a disagreement about the ability of foreign nations to penetrate domestic borders to obtain evidence through unbridled access to hacker computers. For example, Russia firmly opposes the Convention provision that offers law enforcement agencies the power to access computers in other countries with owner permission but without the approval of national authorities. In 2000, FBI agents hacked the computers of two Russians who had been defrauding American banks leading to their prosecution and conviction in U.S. courts. Russia expressed public offense at the intrusion over Russian borders (ThinQ, 2010).

The increasing tension between national sovereignty and multilateral accession in the context of the Convention, as an impediment to implementation of the treaty, delays the curative process and magnifies the problem (Weismann, 2010). Data safe havens continue to flourish for potential offenders. The existence of these data safe havens which undermine the effectiveness of global enforcement serves to drive a bigger wedge between participating and non-participating countries. In any case, after 10 days of negotiations, the UN rejected the Russian backed proposal continuing the deadlock over a multilateral consensus.

One reason for rejecting the Russian backed proposal involved the dilution of the enforcement mechanisms of the Convention. The Russian proposal omitted treaty provisions authorizing cross-border investigative authority for member nations, without which there is almost no chance of acquiring evidence of unauthorized cyber-penetration.

There may be ways, however, to incentivize multilateral participation in cyber intellectual property initiatives. In formulating his dream theory, O'Neill argued that opening up G7 membership to the BRIC nations would lead to increased engagement by the BRICs in multilateral negotiations. To some, the current exclusivity of the G7 may cause resentment and foment an unwillingness to participate in multilateral activity where nations are excluded from participation in formulating policy.

COE BRIC COUNTRY ASSESSMENTS

While BRICs are not Convention signatories, the CoE still conducts non-member country assessments to determine domestic legislative compatibility with the contents of the Convention. Between 2007 and 2008, the CoE issued individual country assessments for Brazil, Russia and China as part of the Council of Europe Project on Cybercrime. The assessments focus on the three principal treaty requirements: enacted legislation criminalizing certain conduct related to computer systems; enacted investigative procedures available to domestic law enforcement authorities to investigate cybercrime offenses, including procedures to obtain electronic evidence in all of its forms; and, an enacted regime of broad international cooperation. The results reflect an absence of legal infrastructure in BRICs sufficient to meet the Convention's requirements. Likewise, the absence of legal infrastructure is in lockstep with the statistical data showing an exponential rise in cybercrime.

Brazil country assessment

Brazil reports that the main obstacles in preventing both accession and ratification of the treaty are "the natural delay of legislative process and multiple laws about specific crimes" (Brazil country profile, 2007). Specifically, Title 4 of the Convention addresses offenses related to infringements of copyrights and related intellectual property rights. Brazil has failed to implement Article 12 which imposes corporate criminal liability for copyright and related

infringements. The reason is interesting in both legal and cultural terms. The country reports that "Brazilian corporate law does not address corporate liability unless in the case of offenses against the environment." Id. Thus, cyber-penetration by the corporate private sector is systematically excluded from criminal legislative coverage. This demonstrates a palpable systemic problem in the legal infrastructure where there are no legally enforceable criminal laws against offending corporate perpetrators at the point of business market entry in the first instance. Thus, where there is no legal right to prevent corporate criminal misconduct in the form of cyber-penetration, there is no enforcement remedy. It makes sense then that Bird and Cahoy concluded, in their study of the anti-competitive effects of infringement in the pharmaceutical industry, that global businesses experience considerable frustration due to the lack of enforcement efforts by the BRICs (Bird and Cahoy, 2007). The frustration, however, is traceable to Brazil's differing legal and cultural assessment about the value of criminalizing corporate conduct as a means to minimize recidivism. In short, the problem is not really enforcement; the problem is the absence of laws to enforce.

In terms of copyright infringement, Brazil does not adopt article 10 of the treaty which creates certain generic criminal offense conduct. Instead, it relies on domestic civil legislation passed in 1998 to protect copyright infringement and protect computer programs. Brazil does have criminal offense conduct related to infringements of copyrights under its "Anti-Piracy" Act passed in 2003.

In terms of a regime for international co-operation, the Convention mandates under Articles 24-35 expedited disclosure of preserved computer traffic data, mutual assistance on an international level regarding access of stored computer data, transborder access to stored computer data with consent or where publicly available, mutual assistance at the international level in real-time collection of traffic data, mutual assistance at the international level regarding the interception of content data and other network protections. Brazil reports that these treaty measures are "not adopted" (Brazil country profile, 2007). There is no internal legal infrastructure creating a regime for international cooperation at all. Thus, even if intellectual property is protected domestically, there is no mechanism to facilitate international co-operation to provide disclosure of or investigative assistance in connection with data theft from foreign business. The significance to foreign business of the absence of multilateral assistance is that companies are on their own to seek domestic civil redress for conversion of valuable corporate assets, an often cumbersome, time consuming, and costly process in an unpredictable court system favorable to domestic litigants. The availability of civil remedies for unauthorized access to foreign companies doing business in Brazil is discussed in the country by country assessments of domestic trade secret protection below.

Russian Federation country assessment

The Criminal Code of the Russian Federation prohibits illegal access and data interference. There are no provisions prohibiting illegal interception or computer related fraud. Infringement of copyright is criminalized but not if a Russian citizen or a permanent resident of Russia commits the unlawful conversion from outside of Russia in a data safe haven where the conduct is not unlawful. Article 12 of the Criminal Code provides that: "Citizens of the Russian Federation and stateless persons who permanently reside in the Russian Federation and who have committed crimes outside the boundaries of the Russian Federation shall be brought to criminal responsibility under this Code, *if their deeds have been recognized as crimes in the State on whose territory they were committed…"* (Emphasis added), (Russian Federation country profile, Appendix, 2008).

Significantly, there is no provision for imposing corporate criminal liability. Like Brazil, Russia offers no regime for multilateral cooperation in foreign investigations in accordance with the articles of the Convention (Russian Federation country profile, 2008).

People's Republic of China country assessment

Like Brazil and Russia, China offers no regime for multilateral cooperation in accordance with the articles of the Convention (People's Republic of China country profile, 2008). China does criminalize illegal access, data interference, and system interference under the Criminal Law of the People's Republic of China. As explained in the trade secret country assessment below these provisions are ill-defined and limited in coverage.

However, there are no provisions outlawing the misuse of devices. Computer related forgery and computer related fraud are not prohibited per se but may fit under generic Chinese law that prohibits "other crimes" offense conduct. While the criminal code provides for corporate liability, it remains unclear whether and to what extent liability can be imposed on the mostly state owned and operated corporations or state controlled corporations.

India country assessment

The CoE has not released a separate country profile for India. However, in 2009 the CoE issued its Final Report (Project on Cybercrime, Final Report, 2009) which contains a summary of India's progress on enacting domestic legislation that parallels treaty provisions. As of 2008, India's Parliament adopted amendments to the Information Technology Act 2000 (IT) in an effort to parallel some of the treaty provisions. However, the Final Report observes that the amendments will need to be implemented by a range of secondary regulations to be issued by the government. The regulatory infrastructure has not yet been implemented so the legislation is only on paper.

Indian cyber law experts describe the amendments as a "giant leap forward" in dealing with cyber-terrorism, but observe that the new law has "gone soft" on cybercriminals because the amendments actually lessen the punishment for cybercrime, making it a bailable offence. This was not the case under the original IT Act (The Hindu Business Line, 2009).

As of February 2009, accession to the Convention remained under consideration by the Government of India. The Final Report again notes: "Accession to the treaty would be of great benefit for India as well as for other parties to the Convention. Further activities may focus on the question of law enforcement – service provider cooperation, and the training of judges and law enforcement" Id. Thus, the current profile demonstrates an absence of legal infrastructure and the need to train and educate law enforcement and the courts once the regulations are put in place. In short, there is no meaningful legal infrastructure in place to regulate or deter cybercrime in India.

DOMESTIC TRADE SECRET PROTECTION: BRIC COUNTRY ASSESSMENTS

Having established the failure of the BRICs to legislate internal domestic IP legislation that parallels the protections afforded the private sector by the Convention, this paper provides a second tier country by country assessment profiling the actual domestic legislative trade secret protections, if any, afforded the foreign private sector by the BRICs. The purpose is to determine whether the BRICs' non-accession to the Convention creates an actual gap in enforcement of the basic initiative outlined in the treaty or whether each respective BRIC provides some other form of domestic IP protection that achieves the same or similar enforcement goals. The analysis utilizes the area of trade secret protection to answer the question. The data demonstrates that the BRICs have not enacted domestic legislation to adequately protect trade secrets from unauthorized cyber-penetration in the respective BRIC markets.

Trade secrets were selected from the pool of intellectual property assets for two reasons: they are typically the most valuable balance sheet assets and the most susceptible form of IP to unauthorized cyber access. (The chart in Appendix I provides a short hand summary, for use in the risk assessment process, of the conclusions derived from analyzing the legal infrastructure of each respective BRIC).

A trade secret is defined as any information that has economic value to its owner because it is not known by others (usually competitors), and which the owner has taken reasonable measures to keep secret (Beckerman-Rodau, 2002). Trade secrets include such things as customer lists, business practices, formulas, devices, methods, etc. In other words, any information or knowledge that gives a business an economic advantage because it is not known by competitors.

Trade secrets are unique among the various forms of intellectual property in that they are especially vulnerable to cyber-attack. While patents, copyrights and trademarks all exist in the

public realm and are open to public view, trade secrets are valuable precisely because they are secret. In an increasingly computerized world, trade secrets are less frequently stored in locked file cabinets or vaults. They are digitized on computer media so that they can be shared and manipulated by managers and employees for ongoing business purposes. Add email and the Internet to the computer network, and suddenly these trade secrets are subject to unauthorized viewing, dissemination, and outright theft by outsiders.

The need to assess risk attendant to the three principle market entry strategies when attempting to minimize exposure of trade secret information is critical to preserving asset value. Here, licensing, as an entry strategy offers the biggest threat to the private sector. Typically, the payment of a royalty entitles the licensee to fairly unfettered access to trade secret information to facilitate operations. Once in the foreign venue, use by the licensee, even in violation of the license agreement, is not uncommon. Without domestic protection afforded in the licensee's country, the restrictions of the contract may be unenforceable. Parenthetically, this same problem contributed the multilateral accession to the Convention for the International Sale of Goods (CISG) to protect the integrity of trade agreements and international financing negotiated by private sector participants which contracts later proved to be unenforceable in foreign venues.

In terms of best practices aimed at preserving the protection of intellectual property from cyber-penetration and unauthorized use, a legal infrastructure designed to protect the economic value of trade secrets should begin with a criminal statute, modeled on the requirements of the Convention, intended to deter and punish unauthorized access to computer systems and protected information by both individuals *and* corporations (Schjolberg, 2003). As the Convention requires, where unauthorized access occurs, the legal system should separately criminalize and punish the act of acquiring trade secrets. The final component of a robust intellectual property regime should include codification of a civil cause of action for trade secret misappropriation, including a description of the full range of remedies---damages, injunctive relief, and civil penalties.

In sum, a paradigm trade secret legal infrastructure should include: (1) the crime of unauthorized access to a computer system; (2) the crime of misappropriation of trade secrets; (3) individual and corporate criminal liability for the above; and, (4) a civil cause of action for trade secret misappropriation resulting in the award of damages, injunctive relief, and civil penalties.

Brazil country assessment

Brazil's legal infrastructure falls well short of the requirements for effectively protecting business trade secrets. It does not criminalize unauthorized access to computer systems, nor does it effectively criminalize all forms of trade secret misappropriation. It does not provide for corporate criminal liability. Likewise, civil remedies are not available for some forms of trade secret misappropriation.

First, under Brazil's present intellectual property regime, unauthorized access to a computer system is not a crime. Accordingly, a person who accesses a computer without authorization is not subject to criminal prosecution for that conduct. Only if the computer or its software is damaged, altered, or modified may a person face criminal prosecution prosecuted (Brazilian Criminal Code, Art. 13-A, 13-B).

However, Brazil does provide for the criminal prosecution of certain individuals who misappropriate trade secrets (Brazilian Industrial Property Law, Art. 195). This crime is only limited to individuals who disclose or use trade secrets in violation of an employment contract or non-disclosure agreement (Art 195 IX), or who obtain the trade secrets by illicit means or fraud. Unfortunately, the statute is silent as to the meaning of "illicit." Consequently, if business trade secrets are misappropriated through unauthorized computer access, there is a real question whether the unauthorized access, which is not a crime, is nevertheless "illicit." If the unauthorized access is deemed not "illicit," then the conduct cannot be prosecuted or punished.

Second and most significant, criminal liability extends only to individuals. In Brazil there is no criminal liability for corporations. If a corporation accesses the computer of another business and thereby obtains trade secrets, the perpetrator corporation cannot be criminally prosecuted. The implication is clear for a foreign business considering a market entry strategy in Brazil: regardless of the consequences for an *individual* who unlawfully accesses a computer system and steals its trade secrets, a corporate perpetrator will *never* be prosecuted and punished. There are simply no criminal consequences for a corporation that steals trade secrets and no corresponding deterrent to stealing trade secrets in the future. Business trade secrets are at extreme risk in Brazil.

Third, the only possible remedies available to a private sector victim of the misappropriation of business trade secrets are in the civil courts. A plaintiff business may seek damages to compensate for the loss of trade secrets, or it may seek an injunction to prevent use of the trade secret. However, the right to proceed in civil court is limited. Certain kinds of trade secrets are not protected at all. Primary among these involve pharmaceutical test data. If a foreign drug company provides pharmaceutical test data to government regulators in the hope of obtaining market approval for the drug, the government has no legal duty to keep that data secret. Often, the government shares that data with domestic competitors who are developing competing drugs or generic versions of the same drug. When the government does so, the foreign company cannot sue to prevent the unauthorized disclosure of its proprietary trade secret test data or its use by competitors. For businesses operating in the pharmaceutical industry in Brazil, trade secret information submitted to government regulators cannot be protected from dissemination into the public domain.

Consequently, Brazil remains on the Office of the United States Trade Representative's 2010 Watch List for intellectual property protection and enforcement (USTR Special 301 Report, 2010).[2] In particular, the United States encourages Brazil to strengthen its intellectual property

legislation and to bring expeditious enforcement actions in instances of clear violation of its criminal statutes (USTR Special 301 Report, 2010).

People's Republic of China country assessment

China's legal infrastructure also fails to provide effective business trade secret protection. First, it provides for only limited prosecution of acts of unauthorized access to a computer system. Specifically, it is a crime to misappropriate trade secrets only if it causes "heavy losses" to the victim business. Although both individuals and corporations are subject to limited prosecution, a victim business may bring a civil lawsuit for misappropriation of trade secrets but, in the words of a Chinese judge: "Chinese intellectual property laws exist to protect *Chinese* intellectual property from the rest of the world [Emphasis added] (Crane, 2008). A similar conclusion was drawn by a U.S. IP expert: "If U.S. businesses export "proprietary technology [to China] that can be misappropriated, expect it to be misappropriated" Id.

Second, unauthorized access to a computer system in China may, under some limited circumstances, result in criminal prosecution. Under Articles 30 and 285 of the Criminal Laws of the People's Republic of China, a person or a corporation is guilty of a crime when they intrude "into computer systems containing information concerning state affairs, construction of defense facilities, and *sophisticated science and technology*…." [Emphasis added]. However, the statute does not define any of its operative terms including "state affair" and "sophisticated" science and technology. Accordingly, a private enterprise that is *not* engaged in work concerning state affairs or defense facilities is protected from hackers only to the extent that its computers contain science or technology, and only to the extent that its scientific or technological data is deemed "sophisticated" by the court presiding over a criminal prosecution. From the point of view of the victim business, there is little certainty that the unauthorized intrusion will be punished, and even less certainty that the present criminal provisions will deter future hackers from cyber intrusions. For example, a hacker who gains access to a computer system and obtains a company's secret customer list faces no criminal consequences. The list is certainly not sophisticated science of technology and, therefore, falls outside of the rights accorded under Article 285.

The next issue is whether the unauthorized acquisition of the secret customer list, which is clearly a trade secret, is itself a crime. In China, the answer is uncertain. Under its present domestic law, it is a crime to obtain trade secrets by "theft, promising of gain, coercion, or other improper means" (Criminal Law of the People's Republic of China, Ch. VII, Art. 219). Even assuming that an unauthorized entry into a computer system is an "improper means," successful prosecution of the perpetrator requires proof that the victim suffered "heavy losses." Nowhere does the statute define the term "heavy losses." Consequently, where a victim business' secret customer list is misappropriated by a hacker, the government prosecutor must show that the

conduct resulted in heavy losses to the business. Failing that, the crime has not been proven, and the defendant must be acquitted.

In sum, China provides uncertain protection in its criminal law against unauthorized access and misappropriation of trade secrets. The relevant statutes contained poorly defined terms that are subject to various and differing interpretations. Successful prosecution under these statutes is not a foregone conclusion. Indeed, when assessing the risk to a company's trade secrets, it is fair to conclude that the statutes lack any significant deterrent effect, and that trade secrets held in China are subject to misappropriation by hackers who likely face neither criminal prosecution nor punishment.

Thus, the only private sector remedy for trade secret misappropriation lies in the civil courts and it is a very limited one. Under China's "Law Against Unfair Competition," an individual or business may seek compensation for the loss of trade secrets. There, a business victim, assuming the perpetrator can be identified, may seek compensatory damages and an injunction against further infringement. However, the Chinese statute has an unconventional definition of "trade secret" that limits it to "technical information and operational information" (Chinese Law Against Unfair Competition, Art. 10). It is unclear whether the statute covers information like customer lists or other non-technical data that it valuable to the business but does not directly impact its day-to-day operations. The statute itself is unhelpful in providing a definition of these terms. Consequently, a victim business may be unable to bring a lawsuit seeking compensation or an injunction for the misappropriation of information that is neither technical nor operational.

The Office of the United States Trade Representative has concluded that China's intellectual property enforcement regime remains largely ineffective and non-deterrent: "It appears that additional measures, including criminal sanctions will be necessary to bring this problem under control (USTR Special 301 Report, 2010). Accordingly, China remains on the Priority Watch List for its poor record of intellectual property enforcement.

India country assessment

Under India's Information Technology Act of 2000, hacking into a computer system is a criminal offense under certain circumstances. To be guilty of hacking, a perpetrator must (1) gain access to a computer system by any means; and (2) act with the intent to cause damage (or know that he will likely cause damage); and (3) destroy, delete, or alter information residing in the system, or diminish the value or utility of the computer system. In other words, the crime requires that the perpetrator intend to cause damage (or know that damage will be caused) and actually cause damage to the system. Only then is the offense is punishable by up to three years in prison (India Information Technology Act, Ch. XI, Art 66).

However, a hacker who accesses a computer system without the requisite intent, or who does not actually damage the system, is *not* guilty of hacking. Aside from the difficulty of

establishing the nature of the perpetrator's intent, the real question may often come down to whether damage has been done. In the context of trade secret misappropriation, for example, the issue is even more acute: if a hacker enters a system and misappropriates a trade secret, has he "damaged" the system or diminished "the value or utility" of the computer? Put another way, because the *copying* of trade secret information does not appear to damage the computer system, such conduct would probably not amount to hacking under present Indian law.

Remarkably, Indian law does not criminalize the misappropriation of trade secrets. From the point of view of a company doing business in India, its computer system is open to unauthorized attack (so long as no information is altered, destroyed or deleted and the system is not damaged) and its trade secrets are subject to copying and there is no law in India that makes any of that conduct criminal[3].

A victim business, however, may bring a civil lawsuit for misappropriation of trade secrets. Surprisingly, however, India has not codified the right to bring such a suit despite the express requirement to do so under the TRIPS agreement. Where China, for example, has a specific statute granting victims the limited right to sue, India has none. In India, the right to sue is strictly a common law right; that is, one which the courts in India have developed over time through a body of court decisions in which judges have developed limited theories of recovery for trade secret misappropriation. Those legal theories are based primarily on breach of contract or breach of confidentiality and involve situations where present or former employees divulged trade secrets to others. The area of trade secret misappropriation through cyber intrusion is essentially untested in Indian law. The likelihood of success is such a lawsuit is questionable to say the least.

Not surprisingly, India has remained on the Office of the U.S. Trade Representative's Priority Watch List for 2009. Its 2009 report stated that: "India's criminal [intellectual property] enforcement regime remains weak. The Unites States urges India to strengthen its [intellectual property] regime and stands ready to work with India on these issues during the coming year" (USTR Special 301 Report, 2010).

Russian Federation country assessment

The Criminal Code of the Russian Federation prescribes criminal penalties, including a term of imprisonment, for the unauthorized accessing of a computer system that results in the "destruction, blocking, modification, or copying of information" (Criminal Code of the Russian Federation, Ch. 28, Art. 272). However, criminal liability runs only to the individual---there is no criminal liability for hacking by a corporation (Ch. 28 Art. 272). Also, there is no separate crime involving the misappropriation of trade secrets.

In the context of trade secrets, the deterrent value of the anti-hacking statute is greatly diminished by the peculiar requirements in the Russian Civil Code and the Russian Commercial Secrecy Law for identifying and protecting trade secrets. According to the latter, a trade secret is

only protected if: (1) it is listed by the holder as a trade secret; (2) access to the information is severely limited to protect its secrecy; (3) persons with access are registered as such; (4) there are contracts in place with employees and commercial partners that protect the secrecy of the information; and, (5) all documented trade secrets are physically marked with a stamp "Commercial Secret of [Holder]" (Budylin and Osipova, 2007). The statute requires, therefore, that any trade secrets must be reduced to paper form (or some other physical form like photographs) and physically stamped as "confidential." The statute contains no provision for digitally "stamping" trade secret information contained on computer systems. Not only is this identification process daunting, if not impossible, for a trade secret holder whose information is primarily in digital form, but the failure to properly stamp all trade secrets will result in the complete loss of intellectual property protection.

Although Russia is not presently a member of the WTO and is not required to accede to the requirements of TRIPS, these domestic trade secret identification requirements seriously conflict with TRIPS provisions for the protection of trade secrets (Maggs, 2008)). Moreover, even if a trade secret holder successfully navigates the identification process, the Russian Civil Code nonetheless grants broad authority to the government to demand trade secret information from businesses. Id.

In the final analysis, a business operating in Russia may take some solace in the criminal deterrent effect of the anti-hacking statute, but will find the process of protecting its trade secrets difficult to accomplish. Even if the business can meet the identification requirements, its remedy is purely civil---the misappropriation of trade secrets is not a criminal offense in Russia. Most important, the holder of a trade secret who can meet the requirements of the Commercial Secrecy Law may nevertheless be required to disclose that secret to the government.

Again, not surprisingly, Russia is on the Office of the U.S. Trade Representative's Priority Watch list for 2010. In its 2010 report, it indicated that although Russia has taken steps to protect intellectual property, much remains to be done, especially in the area of protecting trade secrets in the pharmaceutical industry. If Russia wishes to become a WTO member, it must also accede to TRIPS. However, its present domestic law on trade secrets makes accession to TRIPS impossible.

CONCLUSION: BEST PRACTICES

How cybersafe are the BRICs? In terms of risk management, "not very." The global data studies quantifying the magnitude of the economic threat to the private sector may not be completely accurate but the numbers are nonetheless convincing; namely, that the BRIC bloc presents a formidable economic risk to any business whose asset value relies principally on the use and development of its IP. The domestic legislative profile of each respective BRIC demonstrates a lack of real enthusiasm to provide protection to the foreign private sector particularly at the cost of internal economic growth. Perhaps the best illustration of this is the

promulgation of IP protection and the concomitant exclusion of domestic corporations from its coverage. Domestic corporations are thus free to steal with impunity. The message is clear that the foreign private sector should not expect legal rights and protection at the expense of the economic development of lesser developing countries.

The data demonstrating explosive cyber-attacks could be predicted from the lack of legal infrastructure designed to deter and provide an official global mechanism providing foreign investigative assistance in the prosecution of cybercrime. Cybercrime and unauthorized cyber access to the intellectual property of the private sector is a daunting problem that will only be amplified by increased market entry presence by the U.S. in the BRICs.

The critical problem of the lack of enforcement identified in the Bird and Cahoy and Kapczynski research is merely symptomatic of a larger infrastructure problem; namely, an absence of legal rights provided by internal domestic legislation. Consequently, the impact of global crime on domestic business requires increased cooperation between countries. Unfortunately, that cooperation has not been forthcoming from the BRICs as illustrated by the respective country assessments. Further, as demonstrated by Russian demands for a fresh UN negotiated treaty in lieu of accession to the "gold standard" Convention, the debate prognosticates further delay in resolving the problem.

Predictably, the present delay in implementation of international safeguards will result in business' least cost-effective long term strategy. It is fair to predict that business losses resulting from cybercrime in its various forms, added to the costs of investigation and remediation, already substantial by most accounts, will escalate when nations are unable to respond with the same speed of efficiency as the criminals who perpetrate the infiltration. Cybercrime is more than just a cost of doing business; it is becoming an international pandemic that will be magnified assuming increased BRIC penetration in accordance with economic theory. Individual corporate strategies are and will continue to be singularly impotent in resolving transborder criminal activity and so, multilateral action is the preferred solution.

The Convention Against Cybercrime offers a list of best practices to be implemented through domestic harmonization of treaty directives. While harmonization of treaty directives provides challenges to participating nations, the challenges are not insurmountable as evidenced by the nations that have joined the Convention as signatories. However, the real challenge is in bringing nation states together to agree to multilateral action to stem the tide of instability in global trade relations caused by increased reliance on global business networks.

As noted above, the economists may have a workable solution. O'Neill suggests that the world can build better global economic BRICs by engaging in inclusive behavior designed to open up the G7 to BRIC membership. The theory is one of increased engagement as opposed to developed nation exclusivity in resolving global economic challenges. If nations expect to continue to engage in a stable global market environment, increased engagement between developed and lesser developed nations is required in order for the world to build better global cybersafe BRICs in the interest of global commerce.

Finally, in terms of risk management, while the effort to reach multilateral solutions continues, the private sector should formulate internal market entry strategies designed to minimize IP exposure in the BRICs given the real threat of unauthorized cyber-penetration. Careful consideration should be given to the choice of market entry, albeit, trade, licensing or DFI. How much consideration a company gives to the IP risk assessment factor depends on several variables including, but not limited to: the type of IP, the security required to protect the interest, and the asset value.

Externalities such as industry associations, global business organizations and NGOs should become more proactive in their roles as critical stakeholders in the development of global business economic and legal policy. As the studies show, external global constituencies in the public and private sectors direct impact profitability and transactional risk. Historically, when businesses recognized the problem in the context of the sale of goods, the CISG was created as the "gold standard" for global mercantile transactions and to govern trade. The same need to protect IP in the global marketplace from unauthorized cyber-penetration calls for global reforms and accession to the Convention Against Cybercrime.

ENDNOTES

[1] The TRIPS Agreement is Annex 1C of the Marrakesh Agreement Establishing the World Trade Organization, signed in Marrakesh, Morocco on 15 April 1994.

[2] The report may designate countries to the Priority Watch List and the Watch List "if their intellectual property laws or enforcement practices are of major concern to the United States." Section 1303 of Omnibus Trade and Competitiveness Act of 1988.

[3] There is a *civil* penalty for copying information on a computer system without permission. It is capped by statute at the equivalent of approx. $250,000 (India Information Technology Act, Ch. IX, Art. 43).

BIBLIOGRAPHY

Beckerman-Rodau, Andrew: 2002: "Trade Secrets---The New Risks to Trade Secrets Posed by Computerization," Rutgers Computer and Technology Law Journal, Vol. 28, 227-73.

Bird, Robert C.: 2006, "Defending Intellectual Property Rights in BRIC Economies," American Business Law Journal, 43(2), 317-63.

Bird, R. C. & D. R. Cahoy: 2007: "The Emerging BRIC Economies: Lessons from Intellectual Property Negotiation and Enforcement," *Northwestern Journal of Technology and Intellectual Property,* 5(3), 400-25.

Brazil country assessment: CoE Project on Cybercrime: 2007 http://www.coe.int/t/dghl/cooperation/economiccrime/cybercrime/Documents/CountryProfiles/567-LEG-country%20profile%20Brazil%20_30%20May%2007_En.pdf

Brazilian Criminal Code, Law no. 9,983 of July 14, 2000. http://www.planalto.gov.br/ccivil_03/Decreto-Lei/Del2848compilado.htm

Brazilian Industrial Property Law, Law no. 9,279 of May 15, 1996. http://www.embaixada-americana.org.br/index.php?action=materia&id=4328&submenu=1&itemmenu=10

Budylin, Sergey and Osipove, Yulia: 2007: Total Upgrade: Intellectual Property Law Reform in Russia," *Columbia Journal of East European Law*, Vol. 1, No.1, 1-39.

China Internet Network Information Center, 25th Statistical Report of Internet Development in China: 2010 http://www.cnnic.cn/uploadfiles/pdf/2010/3/15/142705.pdf

Chinese Law Against Unfair Competition, Art. 10. http://www.wipo.int/clea/en/text_html.jsp?lang=en&id=849#P68_9185

CoE- Council of Europe Convention Against Cybercrime (2001) http://conventions.coe.int/Treaty/en/Treaties/html/185.htm

Council of Europe, Convention on Cybercrime, ETS 185, Explanatory Report, (2001) [Explanatory Report] at 28 ¶ 18. http://conventions.coe.int/Treaty/en?Treaties/Html/185.htm

Council of Europe, Summary of the Organized Crime Situation Report 2004: Focus on the threat of Cybercrime [CoE Report, 2004]. http://www.coe.int/t/dg1/legalcooperation/economiccrime/organisedcrime/Organised Crime Situation Report 2004.pdf

Crane, Jennifer A.: 2008: "Riding the Tiger: A Comparison of Intellectual Property Rights in the United States and the People's Republic of China," *Chicago-Kent Journal of Intellectual Property Law*, Vol. 7, 95-120.

Criminal Code of the Russian Federation, Ch. 28, Art. 272. http://www.russian-criminal-code.com/

Criminal Law of the People's Republic of China, Ch. V, Art. 285. http://www.colaw.cn/findlaw/crime/criminallaw1.html

Criminal Law of the People's Republic of China, Ch. VII, Art. 219. http://www.lehmanlaw.com/resource-centre/laws-and-regulations/criminal-law/criminal-law-of-the-peoples-republic-of-china-1997-page1.html

Department of Justice Computer Crime and Intellectual Property Section (DOJ, 2010) http://www.justice.gov/criminal/cybercrime/COEFAQs.htm

Department of Trade and Industry UK, (2006). Information Security Breaches Survey 2006 PricewaterhouseCoopers. http://www.enisa.europa.eu/doc/pdf/studies/dtiisbs2006.pdf

FBI Computer Crime Survey, (2005). http://www.digitalriver.com/v2.0-img/operations/naievigi/site/media/pdf/FBIccs2005.pdf

FBI 2007 Internet Crime Report http://www.ic3.gov/media/annualreport/2007_IC3Report.pdf

Fortune: 2009, Goldman Sachs chief economist Jim O'Neill coined the term, but couldn't have imagined its impact, http://money.cnn.com/2009/06/17/news/economy/goldman_sachs_jim_oneill_interview.fortune/index.htm

Hackmann, Rolf: 1997, *US Trade, Foreign Direct Investment and Global Competitiveness* (The Haworth Press, New York).

Heywood, John, 1546, Dialogue conteinyng the number in effect of all the prouerbes in the Englishe tongue, Folcroft Library Editions (Folcroft, Pa, 1972)

Hindu Business Line: 2009 http://www.thehindubusinessline.com/2009/10/30/stories/2009103050520400.htm

Hult, T.: 2009, "The BRIC Countries," *Global Edge Business Review*, http://globaledge.msu.edu/newsandviews/businessreviews/gbr%203-4.pdf

India Information Technology Act, Ch. XI, Art. 66. http://www.legalserviceindia.com/cyber/itact.html

ISSA/UCD Irish Cybercrime Survey 2006: The Impact of Cybercrime on Irish Organizations http://www.issaireland.org/ISSA%20UCD%20Irish%20Cybercrime%20Survey%202006.pdf

Joint Statement of the BRIC Countries' Leaders, Ekaterinburg, Russia, 16 June 2009 http://www2.mre.gov.br/dibas/BRIC_Joint_Statement_I_Summit.pdf

Kapczynski, Amy: 2009, "Harmonization and Its Discontents: A Case Study of TRIPS Implementation in India's Pharmaceutical Sector," *California Law Review* 97:1571.

Maggs, Peter B.: 2008: "Russian IP Laws and Commercialization: The New Part IV of the Civil Code," Presentation to ABA Russia Eurasia Committee, International Law Section. http://meetings.abanet.org/webupload/commupload/IC855000/otherlinks_files/Copyright.ppt

Office of the United States Trade Representative: 2010 Special 301 Report http://www.ustr.gov/webfm_send/1906

O'Neill, Jim: 2001, "Building Better Economic BRICs," *Global Economics Paper No.66*, http://www2.goldmansachs.com/ideas/brics/building-better-doc.pdf

Parliamentary Office of Science and Technology, 2006, Computer Crime. Postnote, No. 271:1-4. www.parliamenr.uk/parliamentary_offices/post/pubs2006.cfm

People's Republic of China country assessment: CoE Project on Cybercrime, 2008 http://www.coe.int/t/dghl/cooperation/economiccrime/cybercrime/Documents/CountryProfiles/567-LEG-country%20profile%20China%20PR%20_28%20Mar%2008_.pdf

Project on Cybercrime: Final Report, 2006-2009 http://www.coe.int/t/dghl/cooperation/economiccrime/cybercrime/Documents/Reports-Presentations/567-d-final%20report1h%20provisional%20_14%20may%2009_%20+footnote.pdf

Qi, Man, Yongquan Wang, and Rongsheng Xu: 2009. "Fighting Cybercrime: Legislation in China," *International Journal of Electronic Security and Digital Forensics*, 2(2), 219-227.

Results 2007 Economic and Financial Crime Directorate of the Federal Police [Belgian Cybercrime, 2008] http://translate.google.com/translate?u=http%3A%2F%2Fwww.polfed-fedpol.be%2Fpresse_detail_nl.php%3FrecordID%3D17328&hl=en&ieUTF8&sl=nl&tl=en

Reuters, 2005. Interview: Cybercrime Yields More Cash than Drugs-Expert. www.crn.com.au/ews/21233,interview-cybercrime-yields-more-cash-than-drugs--expert.aspx

Rush, Howard, Chris Smith, Erika Kraemer-Mbula, Puay Tang: 2009, "Crime online: Cybercrime and illegal innovation," Project Report*, NESTA, London, UK*. http://eprints.brighton.ac.uk/5800/01/Crime_Online.pdf

Russian Federation country assessment: CoE Project on Cybercrime, 2008 http://www.coe.int/t/dghl/cooperation/economiccrime/cybercrime/Documents/CountryProfiles/567-LEG-country%20profile%20Russia%20_april%202008_.pdf

Schjolberg, Stein: 2003. "The Legal Framework-Unauthorized Access to Computer Systems: Penal Legislation in 44 Countries." http://www.mosstingrett.no/info/legal.html#foot

Schaffer, Earle & Agusti: 2008. *International Business Law & Its Environment*, New York, West/Thomson.

Sieber, U.:1997. Memorandum on a European penal code, *Juristenzeitung, 52:369*-381.

ThinQ, 2010. "UN rejects Russian cyber-crime treaty." http://www.thinq.co.uk/news/2010/4/21/un-rejects-russian-cyber-crime-treaty/

TRIPS: 1994. Agreement on Trade Related Aspects of Intellectual Property Rights, April 15, 1994, 33 I.L.M. 81(1994).

UNCTAD's World Investment Report 2009 http://unctad.org/en/docs/wir2009_en.pdf

United Nations Crime and Justice Information Network- International Review of Criminal Policy, United Nations Manual on the Prevention and Control of Computer Related Crime [Manual] 7, http://www.uncjin.org/Documents?EighthCongress.html

United Nations Press Report, 12th Pentennial Congress on Crime Prevention and Criminal Justice: 2010, Salvatore, Brazil

University of Toronto, Citizen Lab, Munk School of Global Affairs & SecDev Group Joint Report (2009) "Tacking GhostNet: Investigating a Cyber Espionage Network,"http://www.scribd.com/doc/13731776/Tracking-GhostNet-Investigating-a-Cyber-Espionage-Network

University of Toronto, Citizen Lab, Munk School of Global Affairs & SecDev Group Joint Report (2010) "Shadows in the Cloud: Investigating Cyber Espionage 2.0," http://www.scribd.com/doc/29435784/SHADOWS-IN-THE-CLOUD-Investigating-Cyber-Espionage-2-0

Weismann, Miriam (2010), "Regulating Unlawful Behavior in the Global Business Environment: The Functional Integration of Sovereignty and Multilateralism," *Journal of World Business*, 45(1), 1-10.

Weismann, M.F.M. (2006). International cybercrime: Recent developments in the law. In Clifford, R. (ed), *Cybercrime: The Investigation, Prosecution and Defense of A Computer Related Crime:* 243-277 North Carolina: Carolina Academic Press.

Wilson, D. and R. Purushothaman: 2003, "Dreaming With BRICs: The Path to 2050," *Global Economics Paper No.99,* http://www2.goldmansachs.com/ideas/brics/book/99-dreaming.pdf

APPENDIX 1

Summary Chart: Bric Trade Secret Country Assessments				
	Crime of Unauthorized access to Computer System	Crime of Misappropriation of Trade Secrets by Unauthorized Computer Access	Corporate Criminal Liability	Civil remedy for Trade Secret Misappropriation
Brazil	No	Unclear	No	Limited
China	Limited	Limited	Yes	Limited
India	Limited	No	Yes	Limited
Russia	Yes	No	No	Limited

EDUCATION LEVEL AND ETHICAL ATTITUDE TOWARD TAX EVASION: A SIX-COUNTRY STUDY

Adriana M. Ross, Florida International University
Robert W. McGee, Florida International University

ABSTRACT

The purpose of this study is twofold – to review and summarize the findings of more than 30 prior studies that surveyed student opinions on the ethics of tax evasion, and to expand on that literature by examining the relationship between level of education and views on the ethics of tax evasion using a larger, more heterogeneous demographic. A number of surveys of student opinion have been conducted, both in the United States and elsewhere, soliciting the opinions of various student groups on the ethics of tax evasion. Students in various disciplines and students at various levels of education (graduate and undergraduate) were asked their opinions regarding when tax evasion could be justified on ethical grounds. The present study summarizes and analyzes those findings for the first time. The second part of the paper uses the Human Values data that was gathered by social scientists in Brazil, Russia, India, China, the USA and Germany and examines the relationship between level of education and attitude toward tax evasion, using a 10-point Likert Scale. An analysis of the data found that education level does make a difference in attitude toward tax evasion, as do gender and age, in some cases.

INTRODUCTION

Most studies on tax evasion have taken an economics or public finance perspective. They have focused on technical issues such as optimum tax rates, optimum evasion, reasons for suboptimum compliance, and so forth (Hyman, 1999; Marlow, 1995; Musgrave, 1959, 1986; Musgrave & Musgrave, 1976; Musgrave & Peacock, 1958; Rosen, 1999). Accounting journals have published articles that focus on practitioner issues, including professional ethics, but those studies have emphasized professional codes of ethics and how to conduct a tax practice that complies with the law and with the rules of professional conduct (Armstrong & Robison, 1998; Oliva, 1998). Some studies have appeared in the psychology literature that examine the psychological issues involved in tax evasion (Alm & Torgler, 2006; Kirchler, 2007; Kirchler, Muehlbacher, Kastlunger & Wahl, 2010; Torgler & Schneider, 2009).

In recent years, a number of studies have addressed ethical issues in tax evasion. Some of those studies have been theoretical in nature while others have been empirical. The present study

begins with a review of the main ethical literature, then proceeds to examine prior student survey literature in more depth to determine what student opinion has been on the ethics of tax evasion.

We then use the Human Values data for Brazil, Russia, India, China, the USA and Germany to determine whether the level of education is related to views on tax evasion. The total sample size for the six countries in this study is 10, 034.

REVIEW OF THE LITERATURE

Perhaps the most comprehensive theoretical study of tax evasion in the twentieth century was done by Martin Crowe (1944), who surveyed 500 years of mostly Catholic literature on tax evasion, much of which was in Latin. Torgler (2003a) wrote a more recent dissertation on the topic. McGee has written several books (McGee, 1998a; 2004; 2012) and theoretical articles (McGee, 1994; 2001; 2006a) on the ethics of tax evasion. Alm, Torgler and others have done empirical studies on various aspects of the ethics of tax evasion in various accounting (McGee, 2006b; McGee & Tyler, 2007; McGee, 2008a), business ethics (McGee, Ho & Li, 2008) economics (Frey & Torgler, 2007; Martinez-Vazquez & Torgler, 2009; McGee & López, 2007; Torgler, 2006a; Torgler & Valev, 2010; Torgler, Demir, Macintyre & Schaffner, 2008), management (McGee, Noronha & Tyler, 2007; McGee & Noronha, 2008), public finance (Alm & Torgler, 2004; Alm, Martinez-Vazquez & Torgler, 2005; McGee, 2006c&d, 2007, 2009; Torgler, 2006b), public policy (Torgler, 2005), legal (Gupta & McGee, 2010a&b; McGee & Gelman, 2009), criminology (Torgler, 2010), tax (Bird, Martinez-Vazquez & Torgler, 2004), social science (Torgler & Schneider, 2007) and sociological (Alm, Martinez-Vazquez & Torgler, 2006) journals. Jackson and Milliron (1986) wrote a classic study summarizing a number of pre-1986 empirical studies on tax evasion. However, those studies mostly involved U.S. participants. Not much has been done on non-U.S. sample populations. One purpose of the present study is to partially fill that gap in the literature.

Several studies have been done from various religious perspectives (Cohn, 1998; DeMoville, 1998; McGee, 1998d, 1999; Smith & Kimball, 1998; Tamari, 1998). As was previously mentioned, Crowe (1944) summarized 500 years of mostly Catholic literature on the topic. That literature included a number of arguments to justify tax evasion in certain cases, such as when the king or other government is corrupt or evil, when the tax system is unfair, when there is inability to pay or when the tax funds are used to support an unjust war.

Other scholars have also written on the moral obligation not to pay taxes based on just war theory (Pennock, 1998). Schansberg (1998) discussed the Biblical passage about the duty to render unto Caesar what is Caesar from a Christian perspective. Gronbacher (1998) discusses the duty to pay taxes from the perspective of Catholic social thought and classical liberalism.

A few articles have discussed tax evasion from a Jewish perspective (Cohn, 1998; McGee, 1998e; McGee & Cohn, 2008; Tamari, 1998). The Jewish literature is strongly against tax evasion in general, although there are some escape clauses, such as when the ruler is evil or

excessively corrupt. Their rationale for being strongly against tax evasion in general is that God commands us to pay taxes, or that "the law is the law," or that there is a duty to the community, especially the Jewish community to pay taxes. One strain within Jewish thought says that a Jew must never do anything to disparage another Jew. Cheating on taxes makes all Jews look bad. Therefore, a Jew must not cheat on taxes. Another rationale for not cheating on taxes is because Jews are required to perform good works (mitzvos). Evading taxes might lead to jail. Jews cannot perform good works if they are in jail. Therefore, Jews must not evade taxes.

Space does not permit a full analysis of these arguments, but one question is worth raising. Is it unethical for a Jew living in Nazi Germany to evade taxes? This question was raised in several student surveys mentioned below. It seems like this argument should be one of the strongest arguments to justify tax evasion. One of those surveys asked this question to a group of Orthodox Jewish students (McGee & Cohn, 2008). Students listed this argument as the strongest reason to justify tax evasion, although even the Orthodox Jewish students believed that there is some duty to pay taxes, even if the tax collector is Hitler. Their reasons were basically the same as the reasons given above that are in the Jewish literature.

The religion that is most strongly opposed to tax evasion is the Church of Jesus Christ of Latter-Day Saints (Mormon). There is absolutely nothing in their literature that would justify tax evasion under any circumstances, although there are passages that strongly condemn it (Smith & Kimball, 1998). The Baha'i literature is almost as strict, although it does make an exception in cases where members of the Baha'i faith are being persecuted by government.

The Muslim view on tax evasion is unclear (McGee, 1997, 1998b&c, 1999). Two Muslim scholars who wrote on this topic in business ethics (Ahmad, 1995) and economic justice (Yusuf, 1971) books took the position that there is no duty to pay taxes based on income, taxes that raise prices, such as the sales tax or tariffs, or death taxes. But another Muslim scholar disagrees with their position (Jalili, 2012). According to Jalili, if the government follows Sharia (Muslim) law, there is an absolute duty to pay whatever taxes the government demands without question. But where the government is not sufficiently Islamic, or when it is secular, the duty to pay taxes is less than absolute.

Some scholars have written on the ethics of tax evasion from a secular perspective (Block, 1989, 1993; Leiker, 1998; McGee, 1994, 1998a, 2004, 2012). McGee (2006a) discusses the three basic views on tax evasion that have evolved over the centuries – tax evasion is never ethical, sometimes ethical or always ethical. Walter Block (1989, 1993) examined the public finance literature and failed to find a single justification for taxation in the literature, perhaps because justification is assumed. Johnston (2003, 2007) believes that the rich do not pay their fair share.

The relationship between education and attitude toward tax evasion is unclear. Prior studies using mostly U.S. samples have had mixed results. Ability or inability to comprehend the tax laws might have an effect on compliance (Hotaling & Arnold, 1981). Many adults in the United States lack the literary skills to properly comply with the tax laws (Jackson & Milliron,

1986). On the other hand, people who are more knowledgeable in general, and who are more knowledgeable about the tax law in particular, are in a better position to evade taxes than are people having a lower degree of knowledge. Thus, it is unclear what the relationship is between level of education and attitude toward evasion. One purpose of the present study is to shed some light on this demographic variable.

Some prior studies that examined the relationship between the level of education and the degree of tax compliance found the relationship to be positive, meaning that as the level of education increased, the level of compliance also increased (Friedland, Maital & Rutenberg, 1978; Schwartz & Orleans, 1967; Song & Yarbrough, 1978; Wallschutzky, 1984). Other studies found that as the level of education increased, the level of compliance decreased (Tittle, 1980; Groenland & van Veldhoven, 1983; Vogel, 1974; Warneryd & Walerud, 1982). A third group of studies found no relationship between the level of education and the extent of tax compliance (Hotaling & Arnold, 1981; Milliron, 1985; Spicer & Lundstedt, 1976).

PRIOR STUDENT SURVEYS

In recent years, a number of studies have solicited the opinions of university students for their views on tax evasion. McGee, sometimes with co-authors, constructed a survey instrument containing a number of statements beginning with the phrase, "Tax evasion is ethical if …". Students were asked to select a number from 1 to 7 to indicate the extent of their agreement or disagreement with each statement. The statements were based on the reasons given to justify tax evasion over the past 500 years (Crowe, 1944), based on a literature review, plus three more recent issues dealing with human rights abuses. Most surveys included 18 statements. The Chinese surveys omitted the three human rights statements in order not to cause problems for the Chinese co-author.

To date, the results of those studies have not been complied and analyzed in one place. The present study does that. Table 1 summarizes the results of more than 30 of those studies. In all cases, some arguments justifying tax evasion were stronger than others. In most cases, the strongest arguments to justify tax evasion involved cases where the government was corrupt or engaged in human rights abuses or where the tax system was perceived to be unfair.

Table 1: Summary of Prior Studies
Student Views on the Ethics of Tax Evasion

Study	Sample	Findings
McGee & Rossi, 2008	Argentina – business, economics & law students, and faculty	• Students and faculty were equally opposed to tax evasion. • Men and women were equally opposed to tax evasion. • Business and economics students were more opposed to tax evasion in 16/18 cases; law students were more opposed in 1/18 cases.

Table 1: Summary of Prior Studies Student Views on the Ethics of Tax Evasion		
Study	**Sample**	**Findings**
McGee & Maranjyan, 2008	Armenia – business, economics & theology students	• Business and economics students were more strongly opposed to tax evasion than were theology students, although neither group was strongly opposed to tax evasion.
McGee & Bose, 2009	Australia – business, philosophy & seminary students, and faculty	• Females were more opposed to tax evasion in 12/18 cases; opposition was significant in 2/18 cases; males were significantly more opposed in 2/18 cases. • Overall, undergraduate students were least opposed to tax evasion and faculty were most opposed. • Business and economics students were least opposed to tax evasion; seminary students were most opposed. • Accounting students were significantly more opposed to tax evasion than were business & economics and information technology students and were significantly less opposed to tax evasion than were seminary and health services students. • Muslims had the least opposition to tax evasion; Catholics had the strongest opposition. • Asians were least opposed to tax evasion; Anglos were most opposed.
McGee, Basic & Tyler, 2009	Bosnia & Herzegovina – undergraduate business & economics students	• Students were generally opposed to tax evasion, but opposition was weaker in cases where politicians are seen as corrupt, where the government engages in human rights abuses or where the system is perceived as unfair.
McGee, Basic & Tyler, 2008	Bosnia & Romania – business students	• Bosnian students were more opposed to tax evasion in 14/18 cases; opposition was significant in 10/18 cases; Romanians were significantly more opposed in 2/18 cases.
McGee & Guo, 2007	China – graduate and advanced undergraduate business & economics, law and philosophy students	• Women were significantly more opposed to tax evasion. • Business & economics students were significantly less opposed to tax evasion; law and philosophy students were equally opposed to tax evasion.
McGee & An, 2008	China – graduate and advanced undergraduate business & economics students	• Men and women were equally opposed to tax evasion. • Opposition was strongest when the government was perceived as being corrupt or wasteful or where the system was perceived as being unfair.

Table 1: Summary of Prior Studies Student Views on the Ethics of Tax Evasion		
Study	**Sample**	**Findings**
McGee & Noronha, 2008	Southern China & Macau – social science, business & economics graduate and undergraduate students	• Mainland and Macau students were equally opposed to tax evasion. • Men and women were equally opposed to tax evasion.
McGee, López & Yepes, 2009	Colombia – business students	• Females were more opposed to tax evasion in all 18 cases; opposition was significant in 6/18 cases. • Opposition was strongest in cases where the government is corrupt or where the government engages in human rights abuses.
McGee, Alver & Alver, 2008	Estonia – graduate and undergraduate business students, faculty and practitioners	• Women were significantly more opposed to tax evasion. • Overall, undergraduate students were least opposed to tax evasion; faculty and practitioners were most opposed to tax evasion. • People under age 25 were significantly less opposed to tax evasion than were people in the 25-40 age group. • Accounting students and business & economics students were equally opposed to tax evasion.
McGee & M'Zali, 2009	France – executive MBA students	• Men and women were equally opposed to tax evasion. • The three strongest arguments to justify tax evasion all had to do with human rights issues.
McGee, Nickerson & Fees, 2009	Germany – graduate and upper division undergraduate business students	• The strongest arguments to justify tax evasion were in cases where the government engaged in human rights abuses, where the government is perceived as corrupt or wasteful.
McGee, Nickerson & Fees, 2006	Germany & USA – graduate and undergraduate business students	• American students were significantly more opposed to tax evasion in 11/18 cases; German students were significantly more opposed in 1/18 cases. • American women were more opposed to tax evasion than were American men. Gender data was not compiled for the German sample.
McGee & Lingle, 2008	Guatemala – business & economics and law students	• Women were more opposed to tax evasion. Business & economics students were more opposed to tax evasion than were law students.
McGee, Ho & Li, 2008	Hong Kong & USA – advanced undergraduate business students	• There were often significant differences when comparing mean scores for individual statements but the overall difference in mean scores was not significant.
McGee & Butt, 2008	Hong Kong – business students	• Males and females were equally opposed to tax evasion.

Table 1: Summary of Prior Studies Student Views on the Ethics of Tax Evasion		
Study	**Sample**	**Findings**
McGee, 2006b	USA-international business academics	• Females were more opposed to tax evasion in all 18 cases.
McGee & Cohn, 2008	USA – Orthodox Jewish students	• Women were significantly more opposed to tax evasion. • Some arguments for tax evasion were stronger than others. The strongest arguments to support tax evasion were in cases involving human rights abuses.
McGee & Preobragenskaya, 2008	Kazakhstan – accounting and business students	• Men and women were equally opposed to tax evasion. • Accounting students and business & economics students were equally opposed to tax evasion.
McGee, Noronha & Tyler, 2007	Macau – graduate and undergraduate business & economics students	• Men and women were equally opposed to tax evasion, overall. Although the overall mean scores were not significantly different, male mean scores were significantly higher [men were more opposed] for 3 of 15 statements.
McGee & M'Zali, 2008	Mali – executive MBA students	• There was widespread support for tax evasion. • The strongest arguments to justify tax evasion were in cases where the government wasted the money, where the tax system is perceived as unfair and in cases where the government engages in human rights abuses.
Gupta & McGee, 2010a	New Zealand – graduate and undergraduate accounting, business & economics and law students	• Women were more opposed to tax evasion. • Older people were more opposed to tax evasion than were young people. • Graduate students were more opposed to tax evasion than were undergraduate students. • Accounting and business & economics students were equally opposed to tax evasion; law students were somewhat less opposed to tax evasion than were the other two groups. • The European group was significantly more opposed to tax evasion than were the other two ethnic groups; the Asian and Pasifika groups were equally opposed to tax evasion. • Catholics were most opposed to tax evasion; Buddhists were least opposed.
McGee & López, 2007	Puerto Rico – accounting and law students	• Women were more opposed to tax evasion in 16/18 cases; women were significantly more opposed in 3/18 cases. • Accounting students and law students were equally opposed to tax evasion, generally. The only case where accounting students were significantly more opposed to tax evasion was the case where tax funds are spent on projects that do not benefit the taxpayer.

Table 1: Summary of Prior Studies Student Views on the Ethics of Tax Evasion		
Study	**Sample**	**Findings**
McGee, 2006c	Romania – graduate and upper division undergraduate business students	• Males were more opposed to tax evasion in 12/18 cases. • The strongest arguments to justify tax evasion were in cases where the tax system is considered unfair, where the government engages in human rights abuses, where the taxpayer is unable to pay or where tax rates are too high.
McGee & Tusan, 2008	Slovakia – business & economics, philosophy and theology students	• Men were significantly more opposed to tax evasion. • The older group was slightly more opposed to tax evasion than was the younger group. • Philosophy/theology students were more opposed to tax evasion than were business/economics students.
McGee & Andres, 2009	Taiwan – students	• Women were more opposed to tax evasion. • The strongest argument supporting tax evasion was the case where a significant portion of the money collected winds up in the pockets of corrupt politicians or their families and friends. [The 3 human rights issues were not included in this study.]
McGee, 2008b	Thailand – advanced undergraduate accounting students	• Females were more opposed to tax evasion. • The strongest argument supporting tax evasion was the case where a significant portion of the money collected winds up in the pockets of corrupt politicians or their families and friends. Other strong arguments were in cases where the tax system is perceived as being unfair, where the tax funds are wasted and where the taxpayer is unable to pay.
McGee & Benk, 2011	Turkey – undergraduate business & economics students	• Men were significantly more opposed to tax evasion. Older people were more opposed to tax evasion than were younger people.
Nasadyuk & McGee, 2008	Ukraine – graduate and advanced undergraduate accounting and economics students	• The strongest argument supporting tax evasion was the case where a significant portion of the money collected winds up in the pockets of corrupt politicians or their families and friends. Other strong arguments were in cases where the government engages in human rights abuses or where the tax system is perceived as unfair.
McGee & López, 2008	USA, Colombia, Ecuador, Puerto Rico & the Dominican Republic – accounting, business & economics students	• Students in the USA were more opposed to tax evasion than were students in the Latin American sample in total, but Colombian students were more opposed to tax evasion than were students in any of the other countries. • U.S. Hispanic students were more opposed to tax evasion than was the total U.S. sample. • Scores for the Dominican Republic were substantially and consistently lower than for the other countries, indicating that tax evasion was less of a moral problem for the average Dominican than for the other four groups sampled.

Table 1: Summary of Prior Studies Student Views on the Ethics of Tax Evasion		
Study	**Sample**	**Findings**
		• Women were more opposed to tax evasion in 17/18 cases; opposition was significant in 5/18 cases. • Gender differences were most significant for the three human rights arguments. • Business students were more opposed to tax evasion than were accounting students in 17/18 cases; the difference was significant in 14/18 cases.
McGee & Smith, 2009	Utah & Florida – accounting students	• Utah students were more opposed to tax evasion in 17/18 cases; the difference in mean scores was significant in 4/18 cases.

The findings of the above-mentioned studies might be summarized as follows:

Gender

- Women were more opposed to tax evasion in Australia, China, Colombia, Estonia, Guatemala, Latin America, New Zealand, Puerto Rico, Taiwan, Thailand, and the USA (2 studies). Female Orthodox Jewish students are also more strongly opposed to tax evasion.
- Men were more opposed to tax evasion in Romania, Slovakia and Turkey
- Men and women were equally opposed to tax evasion in Argentina, China, France, Hong Kong, Kazakhstan and Macau

Age

- Older people were more opposed to tax evasion than younger people in Estonia, New Zealand, Slovakia and Turkey.

Major

- Accounting students were more opposed to tax evasion than business/economics students in Australia.
- Accounting students were more opposed to tax evasion than law students in New Zealand.
- Accounting and law students were equally opposed to tax evasion in Puerto Rico.
- Accounting and business/economics students were equally opposed to tax evasion in Estonia, Kazakhstan and New Zealand.

- Business/economics students were more opposed to tax evasion than accounting students in Latin America.
- Business/Economics students were more opposed to tax evasion than law students in Argentina, Guatemala and New Zealand.
- Business/Economics students were more opposed to tax evasion than theology students in Armenia.
- Law/philosophy students were more opposed to tax evasion than business students in China.
- Philosophy/theology students were more opposed to tax evasion than business/economics students in Slovakia.
- Seminary students were more opposed to tax evasion than accounting students in Australia.
- Seminary students were most opposed and business/economics students were least opposed to tax evasion in Australia.

Student Status

- Students and faculty were equally opposed to tax evasion in Argentina
- Faculty were most opposed and undergraduates were least opposed to tax evasion in Australia and Estonia.
- Graduate students were more opposed to tax evasion than undergraduate students in Estonia and New Zealand.

Religion

- Catholics were more opposed to tax evasion than Muslims in Australia.
- Catholics were most opposed to tax evasion and Buddhists were least opposed in New Zealand.

Ethnicity

- Anglos were more opposed to tax evasion than Asians in Australia and New Zealand.
- U.S. Hispanics were more opposed to tax evasion than U.S. non-Hispanics.

Country Comparisons

- Americans were more opposed to tax evasion than were Germans and Latin Americans.
- Bosnians were more opposed to tax evasion than Romanians.
- Colombians were more opposed to tax evasion than students in the USA, Ecuador, Puerto Rico and the Dominican Republic.

- Students in the Dominican Republic were significantly less opposed to tax evasion than were students from the U.S.A., Colombia, Ecuador and Puerto Rico.
- Students in Utah were more opposed to tax evasion than students in Florida.

It would be premature to attempt to make any definitive conclusions, given the small number of studies in some demographic categories, but some comments can be made. The most frequently examined demographic is gender. In most cases, women were more opposed to tax evasion. The next most frequent category was where men and women were equally opposed to tax evasion. In three cases, men were more opposed to tax evasion. It would take another study to attempt to determine why the results differ by country. Culture, religion and numerous other factors all play a role. One interesting result is that women in one part of China were more opposed to tax evasion, while men and women in another part of China were equally opposed to tax evasion, which might lead one to tentatively conclude that there might be regional differences in attitudes toward tax evasion, at least in China. It is a reasonable view. People in different parts of the United States think differently about economic and political issues. It is reasonable to expect that regional differences exist in other countries as well.

Prior studies on gender and ethics have offered several reasons for the various outcomes. Where women were found to be more ethical than men, one reason given is because women in some cultures are taught from an early age to respect authority, and that upbringing might carry over to views on tax evasion. In studies where men and women were equally ethical, one reason given to explain why there were no gender differences was that women's opinions and values become more like men's opinions and values as they become liberated. Reasons why men were sometimes more opposed to tax evasion were unclear.

The results in the age category were not a surprise. Several prior studies that examined age and ethical issues found that older people have more respect for authority and the law than do younger people (Barnett & Karson, 1987, 1989; Harris, 1990; Kelley et al., 1990; Longenecker et al., 1989; Ruegger & King, 1992; Wood et al., 1988). The studies listed above confirm the findings in those earlier studies. However, not all studies found that ethical behavior increases with age (Babakus et al., 2004; Browning & Zabriskie, 1983; Callan, 1992; Izraeli, 1988), so it cannot be said definitively that people become more ethical as they get older.

One might think that accounting majors would be more opposed to tax evasion than other majors because accounting students are taught from the very first accounting class what the rules are and why they need to be obeyed. Some studies confirmed this initial, a priori belief but other studies did not.

Another a priori assumption one might make is that theology and seminary students would be more opposed to tax evasion than other majors. Some of the studies listed above confirmed that assumption, but others did not. The explanation for why Armenian theology students were less opposed to tax evasion than business and economics students was that theology in Armenia is a business, not a calling (McGee & Maranjyan, 2008).

The relative position of law students was difficult to determine a priori. If one guessed that law students would be more opposed to tax evasion than other groups, one could speculate that the reason was because law students have a strong respect for authority and the rule of law. But on the other hand, law students are trained to circumvent the law or to manipulate the law for the benefit of their clients, which might reasonably lead one to conclude that law students had less aversion to tax evasion than other groups. The studies listed above showed mixed results, which lends credence to the view that both a priori reasons might be partially, but not totally accurate.

The results in the student status category seemed to indicate that graduate students were more opposed to tax evasion than undergraduate students, but the reason for the difference in opinion was unclear. One possible explanation is that graduate students generally are older than undergraduate students, and since older people tend to be more opposed to breaking the rules in general, and are more opposed to tax evasion in particular, it would be reasonable to expect that graduate students might be more opposed to tax evasion than undergraduate students. However, the age difference between graduate and undergraduate students is not that great, so perhaps age is not the determining factor.

Another possible explanation might be that people who are more educated tend to be more averse to tax evasion than people who are less educated. Other studies that examined the relationship between education and views on ethical issues have found that education makes a difference, but it is not always clear what that difference is. Some of those studies are cited below.

Religion was examined in just two studies, so it is not possible to arrive at any strong conclusions. If one were to arrive at a conclusion based solely on the theological and philosophical literature, one might reasonably conclude that Catholics would be less opposed to tax evasion than other religions, since most of the reasons given in the literature to justify tax evasion have come from Catholic sources (Crowe, 1944). Yet the two studies listed above both found that Catholics were more opposed to tax evasion than other religions. One possible explanation is that the rank and file Catholic has not read the literature on tax evasion that was written by Catholic scholars. Another possible explanation is that the Catholic church is hierarchical, and since members are taught from an early age to respect authority, this general attitude carries over to tax evasion.

The results on ethnicity found that Anglos were more opposed to tax evasion in Australia and New Zealand. However, these findings cannot be extrapolated to say that Anglos are generally more opposed to tax evasion than are Asians because the Anglos in Australia and New Zealand are only a subset of Anglos and the Asian who live in those two countries might not be representative of all Asians, not to mention the possibility that Asians in China might be different than Asians in India or any number of other Asian countries. However, the findings in those two studies are not totally valueless either, because they establish the basis for further studies.

Some of the findings in the country comparison studies were predictable while others were somewhat surprising. American students were more opposed to tax evasion than were German or Latin American students. One might expect Americans to be more opposed to tax evasion than Latin Americans, since the United States has a stronger rule of law than do most Latin American countries, and presumably the strong rule of law has a carryover effect on values and attitudes. But that does not explain why the American sample had more aversion to tax evasion than the German sample. One possible explanation might be because respect for the rule of law in Germany has declined since its drift toward social democracy, which requires higher tax rates.

The finding that Colombian students are more strongly opposed to tax evasion than other countries, including the United States, came as a surprise. Apparently there is something different about Colombia but what it is could not be determined without further study.

It is unclear why Bosnians were more strongly opposed to tax evasion than Romanians. Both are former communist countries. Both are located in Eastern Europe. One possible explanation is religion. The students who participated in the Bosnian survey were predominantly Muslim whereas the Romanians were mostly Roman Catholic. Another possible explanation might be that many Romanians hated their communist government, whereas many Yugoslavs, Bosnians included, were less hateful of the Yugoslav dictatorship. Attitude toward a person's government has an effect on other attitudes, including respect for authority and law.

It was not surprising that students in Utah were more opposed to tax evasion than students in Florida. The Utah group was overwhelmingly Mormon. In fact, there were so many Mormons in the study that it was not feasible to do a comparison based on religion. A study of the Mormon theological literature found that Mormons are strongly opposed to tax evasion under any and all conditions. The Mormon literature does not allow a single exception to the rule that tax evasion is impermissible (Smith & Kimball, 1998).

The Florida sample was collected in Miami, a part of the country with a large Hispanic population. Some of the studies listed above found that some Latin American countries were less opposed to tax evasion than Americans (McGee & López, 2008), although one of those studies also found that Hispanics who live in the United States were more opposed to tax evasion than non-Hispanics who live in the United States. The Mormon theological literature is stronger in its opposition to tax evasion than the literature of any other religion, so it is reasonable to expect that Mormons would be more opposed to tax evasion than people of other religions.

METHODOLOGY

Groups of social scientists all over the world have been conducting coordinated surveys of the world's population since the 1980s. Some surveys have solicited the opinions of more than 200,000 people in more than 80 countries. The surveys included hundreds of questions on a wide

range of subjects. One question in the most recent surveys addressed attitudes toward tax evasion:

> Please tell me for each of the following statements whether you think it can always be justified, never be justified, or something in between: Cheating on taxes if you have a chance.

The range of responses used a 10-point Likert Scale where 1 = never justifiable and 10 = always justifiable. The surveys collected data on a number of demographic variables, including level of education, gender and age. The present study uses the data gathered in the most recent surveys.

Countries chosen for analysis in the present study included Brazil, Russia, India and China because they are classified as the BRIC countries. All are large in terms of population and have relatively large economies. Brazil is the largest country in South America. Russia is a large and important country in Eurasia that spans eleven time zones. India and China are the two largest countries in Asia in terms of population. Both also have large economies. The United States was chosen so that the study would include a country from North America. The USA is also the largest country in North America in terms of population and economy. Germany was chosen so that the sample would include a country from Western Europe. Germany has a relatively large population and has the largest economy in Western Europe.

Table 2 shows the sample size and population (CIA World Fact Book 2011) for each country included in the survey. The sample size was slightly more than 10,000. The countries included in the study have a combined population of more than 3.2 billion people.

Table 2: Sample Size and Population

Country	Population (million)	Sample Size
Brazil	201	1483
Russia	139	1901
India	1173	1677
China	1330	1763
USA	310	1182
Germany	82	2028
Totals	3235	10,034

Some prior tax evasion studies tested for gender differences. Some of those studies found that women are more opposed to tax evasion (McGee, Alver & Alver, 2008; McGee & Bose, 2009; McGee & Guo, 2007; McGee, López & Yepes, 2009; McGee, Nickerson & Fees, 2006) while others found that men are more opposed to tax evasion (McGee, 2006c; McGee & Tusan,

2008; McGee & Benk, 2011). A third group of studies found that both genders were equally opposed to tax evasion (McGee & Butt, 2008; McGee, Noronha & Tyler, 2007; McGee & M'Zali, 2009; McGee & Preobragenskaya, 2008). The present study examines gender differences to determine whether gender makes a difference in attitude toward tax evasion for the countries included in the study.

Some prior studies examined the relationship between age and various ethical issues. Some of those studies found that people become more ethical as they become older. A few studies examined the relationship between age and attitudes toward tax evasion. Those studies generally found that older people are more opposed to tax evasion than are younger people. The present study tests this relationship to determine whether the older participants were more opposed to tax evasion than the younger participants.

FINDINGS

Table 3a shows the overall mean scores, standard deviations and sample sizes by country. China was most opposed to tax evasion, as indicated by the low mean score. The USA mean score was only slightly higher. The difference in the China and USA means scores was statistically insignificant.

The German sample ranked third. Russia and India tied for fourth place. Brazil was least opposed to tax evasion. T-tests were made to compare some of the differences in mean scores. Some of the differences were found to be statistically significant. The p values are listed in Table 3a.

H1: All countries in the sample are equally opposed to cheating on taxes.

H1: Rejected. Some countries were significantly more opposed to tax evasion than others.

Table 3a: Ranking By Country
(Cheating on taxes: 1=never justifiable;10=always justifiable)

Rank	Country	Mean	Std. Dev.	n
1	China	2.0	1.85	1763
2	USA	2.1	1.86	1182
3	Germany	2.2	1.79	2028
4	Russia	3.0	2.70	1901
4	India	3.0	3.02	1677
6	Brazil	3.6	3.01	1483
SIGNIFICANT DIFFERENCES IN MEAN SCORES				
		p value		
China v. Germany		0.0007		

Table 3a: Ranking By Country (Cheating on taxes: 1=never justifiable;10=always justifiable)			
China v. Russia	0.0001		
China v. India	0.0001		
China v. Brazil	0.0001		
USA v. Russia	0.0001		
USA v. India	0.0001		
USA v. Brazil	0.0001		
Germany v. Russia	0.0001		
Germany v. India	0.0001		
Germany v. Brazil	0.0001		
Russia v. Brazil	0.0001		
India v. Brazil	0.0001		

Table 3b shows the results of the ANOVA test. The difference between groups was significant at the one percent level ($p < 0.0001$).

Table 3b: Country and Attitudes toward Tax Evasion ANOVA Analysis					
	Σ Squares	Df	Mean Squares	Fisher F-value	p value
Between Groups	3,289.580	5	657.916	111.493	<0.001
Within Groups	59,174.802	10,028	5.901		
Total	62,464.382	10,033			

The next few sections examine the data on a country-by-country basis. The ANOVA tests show the overall significance between groups. T-tests were also done for some of the cases where the mean scores between two groups varied widely so that readers could see which comparisons resulted in significant differences.

Individual tests of significance were not reported for some possible comparisons because of small sample size or because some differences were not significant. In other cases, individual tests of significance were not reported for all possible permutations and combinations due to space constraints

Brazil

Table 4a ranks the mean scores for Brazil, based on education level. The group that was most strongly opposed to tax evasion was the group that had inadequately completed elementary school. The group having the least aversion to tax evasion was the group with incomplete secondary: technical education. The ANOVA reported in Table 4b shows that the difference

between groups is significant at the 1 percent level ($p < 0.0001$) but it is difficult to determine a pattern. Those with university educations and those with no formal education had mean scores that were not very far apart. All that can be said with certainty is that education level does make a difference and the relationship between education level and attitude toward tax evasion is not linear. The t-tests reported in Table 4a show some of the significant differences when two groups are compared.

H2: There is no relationship between education level and attitude toward tax evasion.
H2: Rejected. The difference is significant.

Table 4a: Ranking By Educational Level (Brazil)
(Cheating on taxes: 1=never justifiable;10=always justifiable)

Rank	Education	Mean	Std. Dev.	n
1	Inadequately Completed Elementary Education	3.4	3.04	490
2	Completed Secondary: Technical	3.5	2.80	378
2	University Degree	3.5	2.91	133
4	No Formal Education	3.7	2.48	20
5	Completed Elementary Education	3.8	3.09	206
5	Some University	3.8	3.13	102
7	Incomplete Secondary: Technical	4.2	3.22	148
SIGNIFICANT DIFFERENCES IN MEAN SCORES				
		p value		
Inadequately Completed Elementary Education v. Incomplete Secondary: Technical		.00580		
Completed Secondary: Technical v. University Degree		0.0139		

Table 4b: Educational Level and Attitudes toward Tax Evasion
ANOVA Analysis

	Σ Squares	Df	Mean Squares	Fisher F-value	p value
Between Groups	282.423	6	47.070	4.622	<0.0001
Within Groups	14,843.041	1,470	10.097		
Total	15,125.464	1,476			

Table 5 ranks the overall mean scores based on gender. Men were more opposed to tax evasion than women but a t-test revealed that the difference in overall mean scores was not significant.

H3: Attitude toward tax evasion does not differ by gender.

H3: Cannot be rejected. The difference in overall mean score between males and females is not significant.

Table 5: Ranking By Gender (Brazil) (Cheating on taxes: 1=never justifiable;10=always justifiable)				
Rank	**Gender**	**Mean**	**Std. Dev.**	**n**
1	Male	3.4	2.96	710
2	Female	3.5	3.04	773
SIGNIFICANT DIFFERENCES IN MEAN SCORES				
		P value		
	Male v. Female	0.5217	No	

Table 6 shows the relationship between education level and gender on the issue of tax evasion. Some of the inter-group sample sizes were too small to make valid comparisons. Other sample sizes were sufficiently large to make mean score comparisons. T-test comparison of mean scores of males and females for each level of education showed that some differences are significant at the 1 percent and 5 percent level. Males were significantly more opposed to tax evasion for the categories of incomplete secondary school: technical ($p = 0.0148$) and university degree ($p = 0.0099$). No explanation for why this significant difference exists is readily apparent. More research is needed.

H4: Attitude toward tax evasion does not differ by gender at any education level.

H4: Rejected. Men are significantly more opposed to tax evasion for at least two levels of education.

Table 6: Relationship Between Educational Level And Gender (Brazil) (Cheating on taxes: 1=never justifiable;10=always justifiable)			
	Mean	Std. Dev.	n
No Formal Education	3.7	2.48	20
Female	4.6	2.69	11
Male	2.8	1.89	9
Inadequately Completed Elementary Education	3.4	3.04	490
Female	3.5	3.03	245
Male	3.3	3.06	245

Table 6: Relationship Between Educational Level And Gender (Brazil) (Cheating on taxes: 1=never justifiable;10=always justifiable)			
	Mean	Std. Dev.	n
Completed Elementary Education	3.8	3.09	206
Female	3.6	3.02	102
Male	3.9	3.17	104
Incomplete Secondary School: Technical	4.2	3.22	148
Female	4.7	3.28	83
Male	3.4	3.02	64
Complete Secondary: Technical	3.5	2.8	378
Female	3.7	2.81	206
Male	3.3	2.79	172
Some University	3.8	3.13	102
Female	3.3	2.96	49
Male	4.2	3.25	53
University Degree	3.5	2.91	133
Female	4.1	3.02	67
Male	2.8	2.67	65
SIGNIFICANT DIFFERENCES IN MEAN SCORES			
	p value		
Incomplete Secondary School: Technical: Female v. Male	0.0148		
University Degree: Female v. Male	0.0099		

Tables 7a and 7b show the Brazilian results for age. An ANOVA found that the difference between groups is highly significant ($p < 0.0001$). The t-tests showed that some differences between individual groups were also highly significant.

The group most opposed to tax evasion was the 65+ group. The tendency was that the older people get, the more averse they were to tax evasion, a finding that confirms the findings in some other studies (McGee, Alver & Alver, 2008; Gupta & McGee, 2010; McGee & Tusan, 2008; McGee & Benk, 2011)

H5: Attitude toward tax evasion does not differ by age.
H5: Rejected.

Table 7a: Ranking By Age (Brazil) (Cheating on taxes is: 1 = never justifiable; 10 = always justifiable)				
Rank	**Age**	**Mean**	**Std. Dev.**	**n**
1	65 +	2.9	2.69	122
2	45-54	3.0	2.59	255
3	35-44	3.6	3.13	311
4	55-64	3.7	3.10	164
5	25-34	3.9	3.16	332
6	15-24	4.1	3.01	298
SIGNIFICANT DIFFERENCES IN MEAN SCORES				
		p value		
15-24 v. 65+		0.0002		
15-24 v. 45-54		0.0001		
15-24 v. 35-44		0.0451		
25-34 v. 65+		0.0020		
25-34 v. 45-54		0.0002		
35-44 v. 65+		0.0302		
35-44 v. 45-54		0.0146		
45-54 v. 55-64		0.0129		
55-64 v. 65+		0.0232		

Table 7b: Age and Attitudes toward Tax Evasion ANOVA Analysis					
	Σ Squares	Df	Mean Squares	Fisher F-value	p value
Between Groups	257.123	5	51.425	5.759	<0.0001
Within Groups	13,178.978	1,476	8.929		
Total	13,436.100	1,481			

Russia

Tables 8a and 8b show the results for the Russian sample. The ANOVA showed the differences between groups to be significant at the 10 percent level (p = 0.1000). Some of the t-tests listed at the bottom of Table 8a found comparisons between individual groups to be significant at the 5 percent level. The group most opposed to tax evasion was the group with incomplete elementary education. The ranking found that the relationship between level of

education and attitude toward tax evasion was mostly linear. The more education, the less aversion to tax evasion, in general.

H6: There is no relationship between education level and attitude toward tax evasion.
H6: Rejected. As the level of education increases, aversion to tax evasion decreases.

Table 8a: Ranking By Education Level (Russia)
(Cheating on taxes is: 1 = never justifiable; 10 = always justifiable)

Rank	Education	Mean	Std. Dev.	n
1	Incomplete Elementary Education	1.7	1.30	20
2	Complete Elementary Education	2.5	1.77	32
3	Incomplete Secondary: Technical	2.8	2.83	150
4	Complete Secondary: Technical	2.9	2.66	732
4	Incomplete Secondary: University Preparatory	2.9	2.47	77
6	Complete Secondary: University Preparatory	3.1	2.71	315
7	University Degree	3.2	2.77	446
8	Some University	3.3	2.69	107
SIGNIFICANT DIFFERENCES IN MEAN SCORES				
		p value		
Incomplete Elementary Education v. University Degree		0.0164		
Incomplete Elementary Education v. Some University		0.0105		
Incomplete Elementary Education v. Complete Secondary: Univ. Preparatory		0.0226		
Incomplete Elementary Education v. Incomplete Secondary: Univ. Preparatory		0.0390		
Incomplete Elementary Education v. Complete Secondary: Technical		0.0448		

Table 8b: Educational Level and Attitudes toward Tax Evasion
ANOVA Analysis

	Σ Squares	Df	Mean Squares	Fisher F-value	p value
Between Groups	86.510	7	12.359	1.720	0.100
Within Groups	13,446.003	1,871	7.187		
Total	13,532.512	1,878			

Table 9 shows the results of the t-test for gender differences. Women were more strongly opposed to tax evasion, but the difference in mean scores was not significant at the 5 percent level ($p = 0.1084$). The difference was significant at the 11 percent level, a level that generally is not considered in statistical research.

H7: Attitude toward tax evasion does not differ by gender.
H7: Cannot be rejected.

Table 9: Gender Differences (Russia) (Cheating on taxes: 1=never justifiable;10=always justifiable)				
Rank	**Gender**	**Mean**	**Std. Dev.**	**N**
1	Female	2.9	2.68	1038
2	Male	3.1	2.73	863
		p value	**Significant?**	
Female v. Male		0.1084	No	

Table 10 shows the gender comparisons for each individual group. Although women were generally more opposed to tax evasion, none of the mean scores were significantly different at the 5 percent level.

H8: Attitude toward tax evasion does not differ by gender at any education level.
H8: Cannot be rejected.

Table 10: Relationship Between Educational Level And Gender (Russia) (Cheating on taxes: 1=never justifiable;10=always justifiable)			
Education Level	**Mean**	**Std. Dev.**	**N**
Incomplete Elementary Education	1.7	1.30	20
Female	2.0	1.49	14
Male	1	-	7
Completed Elementary Education	2.5	1.77	32
Female	2.9	1.92	19
Male	2.1	1.47	13
Incomplete Secondary Technical	2.8	2.83	150
Female	2.5	2.68	75
Male	3.0	2.97	75
Incomplete Secondary: University Preparatory	2.9	2.47	77
Female	2.4	2.10	36
Male	3.3	2.70	42
Complete Secondary: Technical	2.9	2.66	732
Female	2.9	2.73	410
Male	2.9	2.59	322

Table 10: Relationship Between Educational Level And Gender (Russia) (Cheating on taxes: 1=never justifiable;10=always justifiable)			
Education Level	**Mean**	**Std. Dev.**	**N**
Complete Secondary: University Preparatory	3.1	2.71	315
Female	2.9	2.59	168
Male	3.3	2.83	147
Some University	3.3	2.69	107
Female	3.2	2.75	54
Male	3.3	2.66	53
University Degree	3.2	2.77	446
Female	3.0	2.73	249
Male	3.4	2.82	197
No significant differences at 5%			

Tables 11a and 11b show the data for age for the Russian group. Age was a highly significant variable overall ($p < 0.0001$). It was also highly significant for some of the comparisons between two individual groups. The 65+ group was most opposed to tax evasion. The relationship was linear. The older the group, the more opposed they were to tax evasion.

H9: Attitude toward tax evasion does not differ by age.
H9: Rejected.

Table 11a: Ranking By Age (Russia) (Cheating on taxes: 1=never justifiable;10=always justifiable)				
Rank	**Age**	**Mean**	**Std. Dev.**	**n**
1	65+	2.2	2.23	295
2	55-64	2.6	2.54	217
3	45-54	2.8	2.47	369
4	35-44	3.2	2.76	338
5	25-34	3.5	2.93	309
6	15-24	3.6	2.91	373
SIGNIFICANT DIFFERENCES IN MEAN SCORES				
		p value		
15-24 v. 65 +		0.0001		
15-24 v. 55-64		0.0001		
15-24 v. 45-54		0.0001		
15-24 v. 35-44		0.0611		
25-34 v. 65+		0.0001		

Table 11a: Ranking By Age (Russia) (Cheating on taxes: 1=never justifiable;10=always justifiable)			
25-34 v. 55-64	0.0003		
25-34 v. 45-54	0.0008		
35-44 v. 65+	0.0001		
35-44 v. 55-64	0.0102		
35-44 v. 45-54	0.0424		
45-54 v. 65+	0.0012		

Table 11b: Age and Attitudes toward Tax Evasion ANOVA Analysis					
	Σ Squares	Df	Mean Squares	Fisher F-value	p value
Between Groups	462.051	5	92.410	13.008	<0.0001
Within Groups	13,462.123	1,895	7.104		
Total	13,924.174	1,900			

India

Tables 12a and 12b show the relationship between educational level and attitude toward tax evasion for the India sample. The group most opposed to tax evasion was the group with university level education. The next most strongly opposed groups were those who had completed elementary or secondary education. Those who had no formal education or who had incomplete education had a tendency to be less opposed to tax evasion. However, the ANOVA showed that the difference between groups was not significant ($p = 0.516$). However, a comparison of mean scores of the incomplete secondary: university preparatory and university degree groups found university degree group was significantly more opposed to tax evasion at the 5 percent level ($p = 0.0322$).

H10: There is no relationship between education level and attitude toward tax evasion.

H10: Rejected. Although the relationship is weak, one comparison found a significant different, which is all that is needed to reject a hypothesis.

Table 12a: Ranking Educational Level (India) (Cheating on taxes: 1=never justifiable;10=always justifiable)				
Rank	**Education Level**	**Mean**	**Std. Dev.**	**n**
1	University Degree	2.7	2.90	226
2	Completed Elementary Education	3.0	2.91	199
2	Complete Secondary: University Preparatory	3.0	3.03	272
2	Some University	3.0	3.13	187
5	No Formal Education	3.1	2.97	429
6	Incomplete Elementary Education	3.2	3.19	125
7	Incomplete Secondary: University Preparatory	3.3	3.04	227
SIGNIFICANT DIFFERENCES IN MEAN SCORES				
		p value		
Incomplete Secondary: University Preparatory v. University Degree		0.0322		

Table 12b: Educational Level and Attitudes toward Tax Evasion ANOVA Analysis					
	Σ Squares	Df	Mean Squares	Fisher F-value	p value
Between Groups	47.266	6	7.878	0.870	0.516
Within Groups	15,004.964	1,658	9.050		
Total	15,052.231	1,664			

Table 13 shows the results for gender for the India sample. Although women were more opposed to tax evasion, the difference in mean scores was not significant (p = 0.1821).

H11: Attitude toward tax evasion does not differ by gender.
H11: Cannot be rejected.

Table 13: Ranking By Gender (India) (Cheating on taxes: 1=never justifiable;10=always justifiable)				
Rank	**Gender**	**Mean**	**Std. Dev.**	**N**
1	Female	2.9	2.99	691
2	Male	3.1	3.04	985
	p value	**Significant?**		
Female v. Male	0.1821	No		

Table 14 shows the gender comparisons for individual categories. Although women were almost always more opposed to tax evasion, regardless of education level, none of the mean scores were significantly different.

H12: Attitude toward tax evasion does not differ by gender at any education level.
H12: Cannot be rejected.

Table 14: Relationship Between Educational Level And Gender (India)
(Cheating on taxes: 1=never justifiable;10=always justifiable)

	N	Mean	Std. Dev.
No Formal Education	428	**3.1**	2.97
Female	255	2.9	2.84
Male	173	3.4	3.14
Incomplete Elementary Education	125	3.2	3.19
Female	52	3.0	3.12
Male	73	3.4	3.25
Completed Elementary Education	199	3.0	2.91
Female	73	2.9	2.85
Male	126	3.1	2.96
Incomplete Secondary: University Preparatory	227	3.3	3.04
Female	97	3.5	3.20
Male	130	3.1	2.92
Complete Secondary: University Preparatory	272	3.0	3.03
Female	105	2.8	3.06
Male	167	3.0	3.02
Some University	187	3.0	3.13
Female	42	2.5	3.13
Male	145	3.1	3.13
University Degree	226	2.7	2.90
Female	60	2.4	2.80
Male	166	2.8	2.93
No significant p values			

Tables 15a and 15b show the age data for the India group. The ranking pattern in Table 15a is especially interesting. For most other countries, the degree of opposition to tax evasion increases with age, but in the case of India, the youngest age group is most opposed to tax evasion and the second youngest age group is least opposed. The mean scores are very close to each other for all groups, ranging from 2.8 to 3.2. None of the individual differences in mean

score were significant. The ANOVA found that the differences between groups were not significant, either (p = 0.752).

H13: Attitude toward tax evasion does not differ by age.
H13: Cannot be rejected.

Table 15a: Ranking By Age (India) (1 = never justifiable; 10 = always justifiable)				
Rank	**Age**	**Mean**	**Std. Dev.**	**N**
1	15-24	2.8	2.85	189
2	45-54	3.0	3.00	302
2	55-64	3.0	3.06	168
2	65 +	3.0	2.95	146
5	35-44	3.1	3.05	432
6	25-34	3.2	3.08	440
No significant p values				

Table 15b Age and Attitudes toward Tax Evasion ANOVA Analysis					
	Σ Squares	Df	Mean Squares	Fisher F-value	p value
Between Groups	24.278	5	4.856	0.533	0.752
Within Groups	15,235.521	1,671	9.118		
Total	15,259.799	1,676			

China

Tables 16a and 16b show the ranking by educational level for the China sample. The group most opposed to tax evasion was the group with no formal education. The relationship between attitude toward tax evasion and level of education was linear. The higher the education level, the less resistance to tax evasion. However, the ANOVA found the differences between groups not to be significant at the 5 percent level (p = 0.120), although a t-test comparing the no formal education group to the complete secondary: university preparation group found the difference in mean scores to be significant at the 5 percent level (p = 0.0136).

H14: There is no relationship between education level and attitude toward tax evasion.

H14: Rejected. Although the ANOVA showed no significant difference in mean scores, one of the individual comparisons did show a significant difference.

Table 16a: Ranking By Educational Level (China) (Cheating on taxes: 1=never justifiable;10=always justifiable)				
Rank	**Educational Level**	**Mean**	**Std. Dev.**	**N**
1	No Formal Education	1.8	1.54	405
2	Completed Elementary Education	1.9	1.80	450
3	Complete Secondary: Technical	2.0	1.97	238
4	Complete Secondary: University Preparatory	2.1	2.03	522
4	University Degree	2.1	1.87	125
SIGNIFICANT DIFFERENCES IN MEAN SCORES				
		p value		
No Formal Education v. Complete Secondary: University Preparatory		0.0136		

Table 16b: Educational Level and Attitudes toward Tax Evasion ANOVA Analysis					
	Σ Squares	Df	Mean Squares	Fisher F-value	p value
Between Groups	25.010	4	6.253	1.835	0.120
Within Groups	5,913.264	1,735	3.408		
Total	5,938.275	1,739			

Table 17 shows the results for gender. Although women were more opposed to tax evasion, the difference was not significant (p = 0.2566).

H15: Attitude toward tax evasion does not differ by gender.

H15: Cannot be rejected.

Table 17: Ranking By Gender (China) (Cheating on taxes: 1=never justifiable;10=always justifiable)				
Rank	**Gender**	**Mean**	**Std. Dev.**	**N**
1	Female	1.9	1.80	909
2	Male	2.0	1.90	854
		p value		
Female v. Male	0.2566	No		

Table 18 shows the data for the gender comparisons for each level of education. In some cases women were more opposed; in other cases men were more opposed; in some cases both genders were equally opposed. None of the differences were significant.

H16: Attitude toward tax evasion does not differ by gender at any education level.
H16: Cannot be rejected.

Table 18: Relationship Between Educational Level And Gender (China)
(Cheating on taxes: 1=never justifiable;10=always justifiable)

	Mean	Std. Dev.	N
No Formal Education	1.8	1.54	405
Female	1.8	1.49	280
Male	1.8	1.54	125
Completed Elementary Education	1.9	1.80	450
Female	2.0	1.90	229
Male	1.8	1.69	221
Complete Secondary: Technical	2.0	1.97	238
Female	2.0	1.89	104
Male	2.0	2.03	134
Complete Secondary: University Preparatory	2.1	2.03	522
Female	2.0	1.94	223
Male	2.1	2.10	299
University Degree	2.1	1.87	125
Female	2.0	1.90	60
Male	2.2	1.84	65
No significant p values			

Tables 19a and 19b show the age data for the China sample. The two groups most opposed to tax evasion were the two oldest groups. The youngest group was least opposed. However, the relationship between education level and attitude toward tax evasion was not completely linear because the sequence was not precisely oldest to youngest or youngest to oldest. The ANOVA found that the difference between groups was highly significant ($p = 0.005$). Some of the comparisons between individual groups were also highly significant.

H17: Attitude toward tax evasion does not differ by age.
H17: Rejected.

Table 19a: Ranking By Age (China) (Cheating on taxes: 1=never justifiable;10=always justifiable)				
Rank	**Age**	**Mean**	**Std. Dev.**	**N**
1	55-64	1.7	1.55	317
2	65 +	1.8	1.65	130
3	25-34	1.9	1.71	281
4	35-44	2.0	1.83	491
4	45-54	2.0	1.87	386
6	15-24	2.4	2.57	158
SIGNIFICANT DIFFERENCES IN MEAN SCORES				
		p value		
15-24 v. 65+		0.0222		
15-24 v. 55-64		0.0003		
15-24 v. 45-54		0.0439		
15-24 v. 35-44		0.0320		
15-24 v. 25-34		0.0151		
35-44 v. 55-64		0.0160		
45-54 v. 55-64		0.0227		

Table 19b: Age and Attitudes toward Tax Evasion ANOVA Analysis					
	Σ Squares	Df	Mean Squares	Fisher F-value	p value
Between Groups	57.625	5	11.525	3.401	0.005
Within Groups	5,953.377	1,757	3.388		
Total	6,011.002	1,762			

United States

Tables 20a and 20b show the data for the United States. The group most opposed to tax evasion was the most educated group. The group least opposed to tax evasion was the group incomplete secondary: technical. The relationship between opposition to tax evasion and level of education was not linear. There was no clear pattern. The ANOVA found the differences between groups to be insignificant ($p = 0.135$). However, t-tests comparing two particular groups were sometimes significant at the 1 percent or 5 percent level.

H18: There is no relationship between education level and attitude toward tax evasion.

H18: Rejected. Some groups were significantly more opposed to tax evasion than other groups.

Table 20a: Ranking By Educational Level (United States) (Cheating on taxes: 1=never justifiable;10=always justifiable)				
Rank	**Educational Level**	**Mean**	**Std. Dev.**	**N**
1	University Degree	1.8	1.32	21
2	Incomplete Secondary: University Preparatory	1.9	1.69	244
3	Complete Secondary: Technical	2.0	1.88	384
3	Complete Secondary: University Preparatory	2.0	1.82	259
5	Completed Elementary Education	2.1	2.31	40
5	Some University	2.1	1.43	110
7	Incomplete Secondary: Technical	2.5	2.33	123
SIGNIFICANT DIFFERENCES IN MEAN SCORES				
		p value		
Incomplete Secondary: Technical v. Complete Secondary: Univ. Preparatory		0.0228		
Incomplete Secondary: Technical v. Complete Secondary: Technical		0.0161		
Incomplete Secondary: Technical v. Incomplete Secondary: Univ. Preparatory		0.0051		

Table 20b: Educational Level and Attitudes toward Tax Evasion ANOVA Analysis					
	Σ Squares	Df	Mean Squares	Fisher F-value	p value
Between Groups	33.587	6	5.598	1.631	0.135
Within Groups	4,030.483	1,174	3.433		
Total	4,064.070	1,180			

Table 21 shows the data by gender for the United States sample. Women were significantly more opposed to tax evasion (p = 0.0002).

H19: Attitude toward tax evasion does not differ by gender.

H19: Rejected.

Table 21: Ranking By Gender (United States) (Cheating on taxes is: 1 = never justifiable; 10 = always justifiable)				
Rank	**Gender**	**Mean**	**Std. Dev.**	**n**
1	Female	1.9	1.69	609
2	Male	2.3	2.0	573
		p value		
Female v. Male	0.0002			

Table 22 shows the gender data by educational level. Surprisingly, the pattern was not consistent. In some cases, women were more opposed to tax evasion; in other cases men were more opposed; in some cases opposition was equal. T-tests comparing two specific groups found that the differences were sometimes significant.

H20: Attitude toward tax evasion does not differ by gender at any education level.
H20: Rejected.

Table 22: Ranking By Educational Level (United States) (Cheating on taxes is: 1 = never justifiable; 10 = always justifiable)			
Educational Level	**Mean**	**Std. Dev.**	**n**
Completed Elementary Education	2.1	2.31	40
Female	2.6	3.19	18
Male	1.7	1.17	22
Incomplete Secondary Technical	2.5	2.33	123
Female	2.5	2.35	70
Male	2.5	2.31	53
Incomplete Secondary: University Preparatory	1.9	1.69	244
Female	1.6	1.52	129
Male	2.3	1.82	115
Complete Secondary: Technical	2.0	1.88	384
Female	1.8	1.70	197
Male	2.3	2.03	187
Complete Secondary: University Preparatory	2.0	1.82	259
Female	1.6	1.05	132
Male	2.4	2.30	127
Some University	2.1	1.43	110
Female	2.1	1.38	56
Male	2.0	1.49	55

University Degree	1.8	1.32	21
Female	1.5	1.15	7
Male	2.0	1.41	14
SIGNIFICANT DIFFERENCES IN MEAN SCORES			
		p value	
Incomplete Secondary: University Preparatory: Female v. Male		0.0012	
Complete Secondary: Technical: Female v. Male		0.0091	
Complete Secondary: University Preparatory: Female v. Male		0.0004	

Tables 23a and 23b show the results by age group for the U.S. sample. The two oldest age groups tied for first place in the rankings. The youngest group had the least opposition to tax evasion. The middle groups tied for third place in the rankings. The relationship was linear. Opposition generally increased with age. The ANOVA between groups found that the difference was highly significant ($p < 0.0001$). T-test comparisons of particular groups also found high degrees of significance.

H21: Attitude toward tax evasion does not differ by age.
H21: Rejected.

Table 23a: Ranking By Age (United States)
(Cheating on taxes is: 1 = never justifiable; 10 = always justifiable)

Rank	Age	Mean	Std. Dev.	n
1	55-64	1.7	1.46	175
1	65 +	1.7	1.76	195
3	25-34	2.1	1.79	236
3	35-44	2.1	1.89	232
3	45-54	2.1	1.85	230
6	15-24	2.8	2.35	114
SIGNIFICANT DIFFERENCES IN MEAN SCORES				
		p value		
15-24 v. 65 +		0.0001		
15-24 v. 55-64		0.0001		
15-24 v. 45-54		0.0028		
15-24 v. 35-44		0.0031		
15-24 v. 25-34		0.0022		
25-34 v. 65 +		0.0204		
25-34v. 55-64		0.0160		
35-44 v. 65 +		0.0251		

Table 23a: Ranking By Age (United States) (Cheating on taxes is: 1 = never justifiable; 10 = always justifiable)			
35-44 v. 55-64	0.0206		
45-54v. 65 +	0.0236		
45-54 v. 55-64	0.0190		

Table 23b: Age and Attitudes toward Tax Evasion ANOVA Analysis					
	Σ Squares	Df	Mean Squares	Fisher F-value	p value
Between Groups	111.125	5	22.225	6.604	<0.0001
Within Groups	3,957.746	1,176	3.365		
Total	4,068.871	1,181			

Germany

Tables 24a and 24b show the data for the German sample. The groups with incomplete elementary education and university degrees were the two groups most opposed to tax evasion, which was an interesting result. There was no clear pattern. The relationship between level of education and attitude toward tax evasion was not clear. All that can be said is that the ANOVA found the differences between groups to be highly significant (p= 0.001). T-tests comparing particular education levels were sometimes highly significant as well.

H22: There is no relationship between education level and attitude toward tax evasion.

H22: Rejected.

Table 24a: Ranking By Education Level (Germany) (Cheating on taxes is: 1 = never justifiable; 10 = always justifiable)				
Rank	**Education Level**	**Mean**	**Std. Dev.**	**n**
1	Incomplete Elementary Education	1.9	1.53	193
1	University Degree	1.9	1.49	295
3	Completed Elementary Education	2.2	1.81	445
3	Complete Secondary: Technical	2.2	1.78	708
5	Complete Secondary: University Preparatory	2.3	1.70	213
6	Incomplete Secondary: University Preparatory	2.4	1.84	27
7	No Formal Education	2.6	2.39	26
7	Some University	2.6	2.25	43
9	Incomplete Secondary: Technical	2.9	2.44	57

Table 24a: Ranking By Education Level (Germany) (Cheating on taxes is: 1 = never justifiable; 10 = always justifiable)			
SIGNIFICANT DIFFERENCES IN MEAN SCORES			
	p value		
No Formal Education v. University Degree	0.0310		
No Formal Education v. Incomplete Elementary Education	0.0438		
Incomplete Elementary Education v. Some University	0.0143		
Incomplete Elementary Education v. Complete Secondary: Univ.Preparatory	0.0135		
Incomplete Elementary Education v. Complete Secondary: Technical	0.0330		
Incomplete Elementary Education v. Incomplete Secondary: Technical	0.0002		
Incomplete Elementary Education v. Completed Elementary Education	0.0447		
Completed Elementary Education v. University Degree	0.0183		
Completed Elementary Education v. Incomplete Secondary: Technical	0.0088		
Incomplete Secondary: Technical v. University Degree	0.0001		
Incomplete Secondary: Technical v. Complete Secondary: Univ. Preparatory	0.0331		
Incomplete Secondary: Technical v. Complete Secondary: Technical	0.0058		
Complete Secondary: Technical v. University Degree	0.0110		
Complete Secondary: University Preparatory v. University Degree	0.0051		
Some University v. University Degree	0.0079		

Table 24b: Educational Level and Attitudes toward Tax Evasion ANOVA Analysis					
	Σ Squares	Df	Mean Squares	Fisher F-value	p value
Between Groups	79.962	7	11.423	3.729	0.001
Within Groups	6,043.542	1.973	3.063		
Total	6,123.503	1.980			

Table 25 shows the gender data for the German sample. Males and females were equally opposed to tax evasion.

H23: Attitude toward tax evasion does not differ by gender.
H23: Cannot be rejected.

Table 25: Ranking By Gender (Germany) (Cheating on taxes is: 1 = never justifiable; 10 = always justifiable)				
Rank	**Gender**	**Mean**	**Std. Dev.**	**n**
1	Female	2.2	1.71	1043
1	Male	2.2	1.88	985
		p value		
Female v. Male	1.0000			

Table 26 shows the gender data for each education level. In some cases women were more opposed; in other cases men were more opposed; sometimes both genders were equally opposed. The only case where the difference was significant was for those who held university degrees. In that case, men were significantly more opposed to tax evasion ($p = 0.0220$).

H24: Attitude toward tax evasion does not differ by gender at any education level.

H24: Rejected. The mean scores were significantly different for those with university degrees.

Table 26: Relationship Between Educational Level And Gender (Germany) (Cheating on taxes is: 1 = never justifiable; 10 = always justifiable)			
	Mean	**Std. Dev.**	**n**
Completed Elementary Education	2.6	2.39	26
Female	2.6	2.39	15
Male	2.6	2.51	11
Incomplete Elementary Education	1.9	1.53	193
Female	2.0	1.67	120
Male	1.7	1.26	73
Completed Elementary Education	2.2	1.81	445
Female	2.1	1.59	206
Male	2.4	1.97	238
Incomplete Secondary Technical	2.9	2.44	57
Female	2.1	1.44	28
Male	3.7	2.95	29
Incomplete Secondary: University Preparatory	2.4	1.84	27
Female	1.8	1.29	15
Male	3.2	2.22	11
Complete Secondary: Technical	2.2	1.78	708
Female	2.2	1.75	394
Male	2.2	1.82	314

Table 26: Relationship Between Educational Level And Gender (Germany) (Cheating on taxes is: 1 = never justifiable; 10 = always justifiable)			
	Mean	**Std. Dev.**	**n**
Complete Secondary: University Preparatory	2.3	1.70	213
Female	2.5	1.76	115
Male	2.1	1.62	98
Some University	2.6	2.25	43
Female	2.4	1.99	15
Male	2.7	2.40	28
University Degree	1.9	1.49	295
Female	2.1	1.64	126
Male	1.7	1.34	169
SIGNIFICANT DIFFERENCES IN MEAN SCORES			
		p value	
University Degree: Female v. Male		0.0220	

Tables 27a and 27b show the date based on age group. The oldest group was most opposed to tax evasion, the second oldest group ranked second, the third oldest group ranked third. The next two younger age groups had equal mean scores. The youngest group had the least opposition to tax evasion. Overall, it was a linear relationship. Opposition increased as age increased. The ANOVA found that the difference between groups was highly significant ($p < 0.0001$). Some of the t-test comparisons of particular groups also showed a high level of significance.

H25: Attitude toward tax evasion does not differ by age.
H25: Rejected.

Table 27a: Ranking By Age (Germany) (Cheating on taxes is: 1 = never justifiable; 10 = always justifiable)				
Rank	**Age**	**Mean**	**Std. Dev.**	**n**
1	65 +	1.8	1.36	414
2	55-64	2.0	1.81	317
3	45-54	2.2	1.61	342
4	25-34	2.4	2.06	272
4	35-44	2.4	1.95	472
6	15-24	2.6	1.86	210

Table 27a: Ranking By Age (Germany) (Cheating on taxes is: 1 = never justifiable; 10 = always justifiable)			
SIGNIFICANT DIFFERENCES IN MEAN SCORES			
	p value		
15-24 v. 65 +	0.0001		
15-24 v. 55-64	0.0003		
15-24 v. 45-54	0.0078		
25-34 v. 65 +	0.0001		
25-34 v. 55-64	0.0124		
35-44 v. 65 +	0.0001		
35-44 v. 55-64	0.0038		
45-54 v. 65 +	0.0002		

Table 27b: Age and Attitudes toward Tax Evasion ANOVA Analysis					
	Σ Squares	Df	Mean Squares	Fisher F-value	p value
Between Groups	142.273	5	28.455	9.060	<0.0001
Within Groups	6,347.088	2,021	3.141		
Total	6,489.361	2,026			

CONCLUDING COMMENTS

What can be said with a high degree of confidence is that opposition to tax evasion differed by country. The Chinese sample was most opposed to tax evasion, followed closely by the United States and Germany. Russians and Indians had similar opinions on the matter. Brazilians were by far the least opposed to tax evasion. It would take another study or two to determine the reasons for the differences. Culture, history, politics and economics all play a role.

A comparison of the relationship between educational level and attitude toward tax evasion yielded mixed results. The group most opposed to tax evasion was one of the groups with little or no formal education in Brazil, Russia and China, while the strongest opposition in India and the USA came from the most educated group. In Germany the two groups tying for strongest opposition were incomplete elementary education and university degree, which were at opposite ends of the education spectrum. Thus, one cannot say that the relationship between education and attitude toward tax evasion is uniform across countries and cultures. More research is needed to determine why the various relationships are what they are.

On the issue of gender and its relationship to attitude toward tax evasion, the results are also mixed. The only country where women were definitely and consistently more strongly opposed to tax evasion was the United States. In Russia, women were more strongly opposed to tax evasion, but only at the 11 percent level, which is generally considered insignificant. In India and China there was no significant difference between genders. In Brazil the difference was insignificant generally, but men were significantly more opposed to tax evasion in the categories of incomplete secondary: technical and university degree. In Germany, men and women generally had the same degree of opposition to tax evasion, except in the case of those who held a university degree. In that category men were significantly more strongly opposed to tax evasion.

Table 28 summarizes the findings.

Table 28: Summary of Findings

		EDUCATION LEVEL			
Brazil	**Russia**	**India**	**China**	**USA**	**Germany**
Most opposed Inadequately completed elementary education	Most opposed Incomplete elementary education	Most opposed University degree	Most opposed No formal education	Most opposed University degree	Most opposed Incomplete elementary education & university degree (tie)
2nd place (tie) Completed secondary: technical; University degree	2nd place Completed elementary education	2nd place (tie) Completed elementary education; Complete secondary: college preparatory; Some university	2nd place Completed elementary education	2nd place Incomplete secondary: university preparatory	
Least opposed Incomplete secondary: technical	Least opposed Some university	Least opposed Incomplete secondary: university preparation	Least opposed University degree & Complete secondary: college preparatory (tie)	Least opposed Incomplete secondary: technical	Least opposed Incomplete secondary: technical
$p < 0.0001$	$p = 0.1000$	$p = 0.516$	$p = 0.120$	$p = 0.135$	$p = 0.001$

Table 28: Summary of Findings					
		EDUCATION LEVEL			
		GENDER			
Brazil	**Russia**	**India**	**China**	**USA**	**Germany**
No significant difference overall. p = 0.5217 Men significantly more opposed for 2 levels of education – (1) incomplete secondary: technical and (2) university degree.	Overall, women more strongly opposed but not significantly p = 0.1084	No significant difference p = 0.1821	No significant difference p = 0.2566	Women more strongly opposed p = 0.0002	No significant difference overall. p =1.000 Men significantly more opposed – University degree p = 0.0220
		AGE			
Brazil	**Russia**	**India**	**China**	**USA**	**Germany**
Most opposed – 65+ and 45-54 Least opposed – 15-24 and 25-34 p < 0.0001	Most opposed – 65+ and 55-64 Least opposed – 15-24 and 25-34 p < 0.0001	Most opposed – 15-24 2nd place (tie) 45-54; 55-64; 65+ Least opposed – 25-34 p = 0.752	Most opposed – 55-64 and 65+ Least opposed – 15-24 p = 0.005	Most opposed – 55-64 and 65+ (tie) Least opposed – 15-24 p < 0.0001	Most opposed – 65+ and 55-64 Least opposed – 15-24 p < 0.0001

The present study examined the relationship between education and attitude toward tax evasion from two perspectives. It summarized the findings of more than 30 student surveys and also analyzed the *Human Values* data on the topic, which includes a larger and more diverse demographic. Hopefully, it will pique the interest of other researchers to conduct additional research on the relationship between level of education and attitudes on tax evasion.

REFERENCES

Ahmad, M. (1995). *Business Ethics in Islam*. Islamabad, Pakistan: The International Institute of Islamic Thought & The International Institute of Islamic Economics.

Alm, J. & B. Torgler. (2004). Estimating the Determinants of Tax Morale. *Proceedings of the 97th Annual Conference on Taxation of the National Tax Association – Tax Institute of America*, 269-274.

Alm, J., J. Martinez-Vazquez & B. Torgler. (2005). Russian Tax Morale in the 1990s. *Proceedings of the 98th Annual Conference on Taxation of the National Tax Association*, 287-292.

Alm, J. & B. Torgler. (2006). Culture differences and tax morale in the United States and in Europe. *Journal of Economic Psychology,* 27, 224-246.

Alm, J., J. Martinez-Vazquez & B. Torgler. (2006). Russian attitudes toward paying taxes – before, during and after the transition. *International Journal of Social Economics,* 33(12), 832-857.

Armstrong, M.B. & J. Robison. (1998). Ethics in Taxation. *Journal of Accounting, Ethics & Public Policy*, *1*(4), 535-557, reprinted in Robert W. McGee (Ed.), *The Ethics of Tax Evasion* (pp. 330-348). Dumont, NJ: The Dumont Institute for Public Policy Research.

Babakus, E., T. B. Cornwell, V. Mitchell & B. Schlegelmilch (2004). Reactions to Unethical Consumer Behavior across Six Countries. *The Journal of Consumer Marketing*, *21*(4/5), 254-263.

Barnett, J. H. & M. J. Karson. (1987). Personal Values and Business Decisions: An Exploratory Investigation. *Journal of Business Ethics*, 6(5), 371-382.

Barnett, J. H. & M. J. Karson. (1989). Managers, Values, and Executive Decisions: An Exploration of the Role of Gender, Career Stage, Organizational Level, Function, and the Importance of Ethics, Relationships and Results in Managerial Decision-Making. *Journal of Business Ethics*, 8(10), 747-771.

Bird, R. M., J. Martinez-Vazquez & B. Torgler. (2004). Tax Performance in Developing Countries: the Role of Demand Factors. *Proceedings of the 97th Annual Conference on Taxation of the National Tax Association – Tax Institute of America*, 284-289.

Block, W. (1989). The Justification of Taxation in the Public Finance Literature: A Critique. *Journal of Public Finance and Public Choice*, *3,* 141-158.

Block, W. (1993). Public Finance Texts Cannot Justify Government Taxation: A Critique. *Canadian Public Administration/Administration Publique du Canada, 36*(2), 225-262, reprinted in revised form under the title "The Justification for Taxation in the Economics Literature" in Robert W. McGee (Ed.), *The Ethics of Tax Evasion* (pp. 36-88) The Dumont Institute for Public Policy Research, Dumont, NJ, 1998.

Browning, J. & N. B. Zabriskie. (1983). How Ethical Are Industrial Buyers? *Industrial Marketing Management*, *12*(4), 219-224.

Callan, V. (1992). Predicting ethical values and training needs in ethics. *Journal of Business Ethics*, *11*(10), 761-769.

Cohn, G. (1998). The Jewish View on Paying Taxes. *Journal of Accounting, Ethics & Public Policy, 1*(2), 109-120, reprinted in Robert W. McGee (Ed.), *The Ethics of Tax Evasion* (pp. 180-189). Dumont, NJ: The Dumont Institute for Public Policy Research, 1998.

Crowe, M. T. (1944). The Moral Obligation of Paying Just Taxes, The Catholic University of America Studies in Sacred Theology No. 84.

DeMoville, W. (1998). The Ethics of Tax Evasion: A Baha'i Perspective. *Journal of Accounting, Ethics & Public Policy*, *1*(3), 356-368, reprinted in Robert W. McGee (Ed.), *The Ethics of Tax Evasion* (pp. 230-240). Dumont, NJ: The Dumont Institute for Public Policy Research, 1998.

Frey, B. S. & B. Torgler (2007). Tax morale and conditional cooperation. *Journal of Comparative Economics*, *35,* 136-159.

Friedland, N., S. Maital & A. Rutenberg (1978). A Stimulation Study of Income Tax Evasion. *Journal of Public Economics*, *10*, 107-116.

Groenland, E. & G. van Veldhoven (1983). Tax Evasion Behavior: A Psychological Framework. *Journal of Economic Psychology*, *3*, 129-144.

Gronbacher, G.M.A. 1998. Taxation: Catholic Social Thought and Classical Liberalism. *Journal of Accounting, Ethics & Public Policy, 1*(1), 91-100, reprinted in Robert W. McGee (Ed.), *The Ethics of Tax Evasion* (pp. 158-167). Dumont, NJ: The Dumont Institute for Public Policy Research, Dumont, NJ, 1998.

Gupta, R. & R. W. McGee. (2010a). A Comparative Study of New Zealanders' Opinion on the Ethics of Tax Evasion: Students v. Accountants. *New Zealand Journal of Taxation Law and Policy, 16*(1), 47-84.

Gupta, R. & R. W. McGee. (2010b). Study on Tax Evasion Perceptions in Australasia. *Australian Tax Forum*, 25(4), 507-534.

Harris, J. R. (1990). Ethical Values of Individuals at Different Levels in the Organizational Hierarchy of a Single Firm. *Journal of Business Ethics, 9*(9), 741-750.

Hotaling, A. & D. Arnold (1981). The Underground Economy. *Massachusetts CPA Review*, *55*(3), 8-14.

Hyman, D.(1999). *Public Finance: A Contemporary Application of Theory to Policy*, 6e. Orlando: Harcourt Brace.

Izraeli, D. (1988). Ethical Beliefs and Behavior among Managers: A Cross-Cultural Perspective. *Journal of Business Ethics, 7*(4), 263-271.

Jackson, B. R. & V. C. Milliron. (1986). Tax Compliance Research: Findings, Problems, and Prospects. *Journal of Accounting Literature, 5,* 125-165.

Jalili, A. R. (2012). The Ethics of Tax Evasion: An Islamic Perspective. In Robert W. McGee (Ed.), *The Ethics of Tax Evasion in Theory and Practice* (forthcoming). New York: Springer.

Johnston, D.C. (2003). *Perfectly Legal: The Covert Campaign to Rig Our Tax System to Benefit the Super Rich – and Cheat Everybody Else*. New York: Penguin.

Johnston, D.C. (2007). *Free Lunch: How the Wealthiest Americans Enrich Themselves at Government Expense (and Stick You with the Bill)*. New York: Penguin.

Kelley, S.W., O.C. Ferrell & S.J. Skinner. (1990). Ethical Behavior Among Marketing Researchers: An Assessment of Selected Demographic Characteristics. *Journal of Business Ethics*, *9*(8), 681-688.

Kirchler, E. (2007). *The Economic Psychology of Tax Behaviour*. New York: Cambridge University Press.

Kirchler, E., S. Muehlbacher, B. Kastlunger & I. Wahl. (2010). Why Pay Taxes? A Review of Tax Compliance Decisions. In J. Alm, J. Martinez-Vazquez & B. Torgler (Eds.), *Developing Alternative Frameworks for Explaining Tax Compliance* (pp. 15-31). London & New York: Routledge.

Leiker, B. H. (1998). Rousseau and the Legitimacy of Tax Evasion. *Journal of Accounting, Ethics & Public Policy*, *1*(1), 45-57, reprinted in Robert W. McGee (Ed.), *The Ethics of Tax Evasion* (pp. 89-101). Dumont, NJ: The Dumont Institute for Public Policy Research.

Longenecker, J. G., J. A. McKinney & C. W. Moore. (1989). Do Smaller Firms Have Higher Ethics? *Business and Society Review*, *71*, 19-21.

Marlow, Michael L. (1995). *Public Finance: Theory and Practice*. Orlando: Harcourt Brace.

Martinez-Vazquez, J. & B. Torgler. (2009). The Evolution of Tax Morale in Modern Spain. *Journal of Economic Issues, 43*(1), 1-28.

McGee, R. W. (1994). Is Tax Evasion Unethical? *University of Kansas Law Review*, *42*(2), 411-35.

McGee, R. W. (1997). The Ethics of Tax Evasion and Trade Protectionism from an Islamic Perspective, *Commentaries on Law & Public Policy*, *1,* 250-262.

McGee, R.(Ed.). (1998a). *The Ethics of Tax Evasion*. Dumont, NJ: The Dumont Institute for Public Policy Research.

McGee, R. W. (1998b). The Ethics of Tax Evasion in Islam, in Robert W. McGee (Ed.), *The Ethics of Tax Evasion* (pp. 214-219). Dumont, NJ: The Dumont Institute.

McGee, R. W. (1998c). The Ethics of Tax Evasion in Islam: A Comment. *Journal of Accounting, Ethics & Public Policy, 1*(2), 162-168, reprinted in Robert W. McGee (Ed.), *The Ethics of Tax Evasion* (pp. 214-219). Dumont, NJ: The Dumont Institute for Public Policy Research, 1998.

McGee, R. W. (1998d). Christian Views on the Ethics of Tax Evasion. *Journal of Accounting, Ethics & Public Policy, 1*(2), 210-225. Reprinted at http://ssrn.com/abstract=461398.

McGee, R. W. (1998e). Jewish Views on the Ethics of Tax Evasion, *Journal of Accounting, Ethics & Public Policy, 1*(3), 323-336.

McGee, R. W. (1999). Is It Unethical to Evade Taxes in an Evil or Corrupt State? A Look at Jewish, Christian, Muslim, Mormon and Baha'i Perspectives. *Journal of Accounting, Ethics & Public Policy*, *2*(1), 149-181. Reprinted at http://ssrn.com/abstract=251469.

McGee, R. W. (2001). Some Ethical Problems with Using Public Finance as a Tool of Social Engineering. *Public Finance & Management*, *1*(3), 363-369. Reprinted at http://spaef.com/PFM_PUB/pubv1n3.html.

McGee, R. W. (2004). *The Philosophy of Taxation and Public Finance*. Norwell, MA and Dordrecht: Kluwer Academic Publishers.

McGee, R. W. (2006a). Three Views on the Ethics of Tax Evasion. *Journal of Business Ethics*, *67*(1), 15-35.

McGee, R. W. (2006b). A Survey of International Business Academics on the Ethics of Tax Evasion. *Journal of Accounting, Ethics & Public Policy*, *6*(3), 301-352.

McGee, R. W. (2006c). The Ethics of Tax Evasion: A Survey of Romanian Business Students and Faculty. *The ICFAI Journal of Public Finance*, *4*(2), 38-68. Reprinted in Robert W. McGee & Galina G. Preobragenskaya, *Accounting and Financial System Reform in Eastern Europe and Asia* (pp. 299-334). New York: Springer, 2006.

McGee, R. W., I. Nickerson & W. Fees (2006). German and American Opinion on the Ethics of Tax Evasion. *Proceedings of the Academy of Legal, Ethical and Regulatory Issues* (Reno), *10*(2), 31-34.

McGee, R. (2007). Ethics and Tax Evasion in Asia. *ICFAI Journal of Public Finance*, *5*(2), 21-33 (May). Reprinted in R.W. McGee*, Business Ethics: A 360 Degree Appraisal*, Hyderabad, India: ICFAI University Press.

McGee, R. W. & Z. Guo (2007). A Survey of Law, Business and Philosophy Students in China on the Ethics of Tax Evasion. *Society and Business Review*, *2*(3), 299-315.

McGee, R. W., C. Noronha & M. Tyler (2007). The Ethics of Tax Evasion: a Survey of Macau Opinion. *Euro Asia Journal of Management*, 17(2), 123-150. Reprinted in Robert W. McGee (Ed.), *Readings in Accounting Ethics* (pp. 283-313), Hyderabad, India: ICFAI University Press, 2009.

McGee, R. W. & S. López Paláu (2007). The Ethics of Tax Evasion: Two Empirical Studies of Puerto Rican Opinion. *Journal of Applied Business and Economics, 7*(3), 27-47. Reprinted in Robert W. McGee (Ed.), *Readings in Accounting Ethics* (pp. 314-342). Hyderabad, India: ICFAI University Press, 2009.

McGee, R. W. & M. Tyler (2007). Tax Evasion and Ethics: A Demographic Study of Thirty-three Countries. *International Journal of Business, Accounting, and Finance*, *1*(1), 95-114.

McGee, R. W. (2008a). Changing Attitudes toward the Ethics of Tax Evasion: An Empirical Study of 10 Transition Economies. *Accounting and Finance in Transition, 5,* 145-154. Also Fifth International Conference on Accounting and Finance in Transition. London, July 12-14, 2007. Reprinted in Robert W. McGee (Ed.), *Taxation and Public Finance in Transition and Developing Economies* (pp. 119-136). New York: Springer (2008), under the title Trends in the Ethics of Tax Evasion: An Empirical Study of Ten Transition Economies.

McGee, R. W. (2008b). Opinions on Tax Evasion in Thailand, in Robert W. McGee (Ed.), *Taxation and Public Finance in Transition and Developing Economies* (pp. 609-620). New York: Springer.

McGee, R. , J. Alver & L. Alver (2008). The Ethics of Tax Evasion: A Survey of Estonian Opinion, in R. W. McGee (Ed.), *Taxation and Public Finance in Transition and Developing Economies* (pp. 461-480). New York: Springer.

McGee, R. W. & Y. An (2008). A Survey of Chinese Business and Economics Students on the Ethics of Tax Evasion, in Robert W. McGee (Ed.), *Taxation and Public Finance in Transition and Developing Economies* (pp. 409-421). New York: Springer.

McGee, R. W., M. Basic & M. Tyler (2008). The Ethics of Tax Evasion: A Comparative Study of Bosnian and Romanian Opinion, in Robert W. McGee (Ed.), *Taxation and Public Finance in Transition and Developing Economies* (pp. 167-183). New York: Springer.

McGee, R. & Y.Butt (2008). An Empirical Study of Tax Evasion Ethics in Hong Kong. Proceedings of the International Academy of Business and Public Administration Disciplines (IABPAD), Dallas, April 24-27, 72-83.

McGee, R W. & G. M. Cohn (2008). Jewish Perspectives on the Ethics of Tax Evasion. *Journal of Legal, Ethical and Regulatory Issues*, *11*(2), 1-32.

McGee, R. W., S.S.M. Ho & A.Y.S. Li (2008). A Comparative Study on Perceived Ethics of Tax Evasion: Hong Kong vs. the United States. *Journal of Business Ethics*, *77*(2), 147-158.

McGee, R. & C. Lingle (2008). The Ethics of Tax Evasion: A Survey of Guatemalan Opinion, in R.W. McGee (Ed.), *Taxation and Public Finance in Transition and Developing Economies* (pp. 481-495). New York: Springer.

McGee, R. & S. López Paláu (2008). Tax Evasion and Ethics: A Comparative Study of the USA and Four Latin American Countries, in Robert W. McGee (Ed.), *Taxation and Public Finance in Transition and Developing Economies* (pp. 185-224). New York: Springer.

McGee, R. W. & T. B. Maranjyan (2008). Opinions on Tax Evasion in Armenia, in Robert W. McGee (Ed.), *Taxation and Public Finance in Transition and Developing Economies* (pp. 277-307). New York: Springer.

McGee, R. W. & B. M'Zali (2008). Attitudes toward Tax Evasion in Mali, in Robert W. McGee, editor, *Taxation and Public Finance in Transition and Developing Economies* (pp. 511-517). New York: Springer.

McGee, R. W. & C. Noronha (2008). The Ethics of Tax Evasion: A Comparative Study of Guangzhou (Southern China) and Macau Opinions. *Euro Asia Journal of Management*, *18*(2), 133-152.

McGee, R. & G. Preobragenskaya (2008). A Study of Tax Evasion Ethics in Kazakhstan, in R.W. McGee, editor, *Taxation and Public Finance in Transition and Developing Economies* (pp. 497-510). New York: Springer.

McGee, R. W. & M. J. Rossi (2008). A Survey of Argentina on the Ethics of Tax Evasion, in R.W. McGee (Ed.), *Taxation and Public Finance in Transition and Developing Economies* (pp. 239-261). New York: Springer.

McGee, R. & R. Tusan (2008). The Ethics of Tax Evasion: A Survey of Slovak Opinion, in R.W. McGee, editor, *Taxation and Public Finance in Transition and Developing Economies* (pp. 575-601). New York: Springer.

McGee, R. W. (2009). Views toward Tax Evasion: A Comparative Study of Moldova and Romania. *ICFAI University Journal of Public Finance*, *7*(3&4), 7-24.

McGee, R. W. & S. N. Vittadini Andres (2009). The Ethics of Tax Evasion: Case Studies of Taiwan, in Robert W. McGee, *Readings in Business Ethics* (pp. 200-228). Hyderabad, India: ICFAI University Press. An abbreviated version was published in Marjorie G. Adams and Abbass Alkhafaji (Ed.), *Business Research Yearbook: Global Business Perspectives*, Volume XIV, No. 1 (pp. 34-39). Beltsville, MD: International Graphics: Beltsville, MD, 2007.

McGee, R. W., M. Basic & M. Tyler (2009). The Ethics of Tax Evasion: A Survey of Bosnian Opinion, *Journal of Balkan and Near Eastern Studies*, *11*(2), 197-207.

McGee, R. W., S. Benk, A. M. Ross & H. Kılıçaslan (2009). An Empirical Study of Ethical Opinion in Germany. *Journal of Accounting, Ethics & Public Policy*, *10*(2), 243-259.

McGee, R. W. & S. Bose (2009). The Ethics of Tax Evasion: A Survey of Australian Opinion, in Robert W. McGee, *Readings in Business Ethics* (pp. 143-166). Hyderabad, India: ICFAI University Press.

McGee, R. W. & W. Gelman (2009). Opinions on the Ethics of Tax Evasion: A Comparative Study of the USA and Six Latin American Countries. *Akron Tax Journal, 24,* 69-91.

McGee, R. & B. Zali (2009). The Ethics of Tax Evasion: An Empirical Study of French EMBA Students, in R. W. McGee, *Readings in Business Ethics* (pp. 185-199). Hyderabad, India: ICFAI University Press. An abbreviated version was published in M. G. Adams &A. Alkhafaji (Eds.), *Business Research Yearbook: Global Business Perspectives*, Volume XIV, No. 1 (pp. 27-33). Beltsville, MD: International Graphics, 2007).

McGee, R., I. Nickerson & W. Fees (2009). When Is Tax Evasion Ethically Justifiable? A Survey of German Opinion, in R.W. McGee (Ed.), *Readings in Accounting Ethics* (pp. 365-389). Hyderabad, India: ICFAI University Press.

McGee, R., S. Paláu & G. Lopez (2009). The Ethics of Tax Evasion: An Empirical Study of Colombian Opinion, in R.W. McGee, *Readings in Business Ethics* (pp. 167-184). Hyderabad, India: ICFAI University Press.

McGee, R. & S. Smith (2009). Ethics and Tax Evasion: A Comparative Study of Utah and Florida Opinion, in R. W. McGee (Ed.), *Readings in Accounting Ethics* (pp. 343-364). Hyderabad, India: ICFAI University Press.

McGee, R. W. & S. Benk (2011). *The Ethics of Tax Evasion: A Study of Turkish Opinion. Journal of Balkan and Near Eastern Studies*, forthcoming.

McGee, R. W. (Ed.) (2012). *The Ethics of Tax Evasion in Theory and Practice*. New York: Springer.

Milliron, V. (1985). A Behavioral Study of the Meaning and Influence of Tax Complexity. *Journal of Accounting Research, 23*(2), 794-816.

Musgrave, R.A. (1959). *The Theory of Public Finance: A Study in Public Economy*. New York: McGraw-Hill.

Musgrave, R.A. (1986). *Public Finance in a Democratic Society. Volume II: Fiscal Doctrine, Growth and Institutions*. New York: New York University Press.

Musgrave, R.& P. Musgrave (1976). *Public Finance in Theory and Practice*, 2nd edition. New York: McGraw-Hill.

Musgrave, R.A. & A.T. Peacock (Eds.) (1958). *Classics in the Theory of Public Finance*. London & New York: Macmillan.

Nasadyuk, I. & R. W. McGee (2008). The Ethics of Tax Evasion: An Empirical Study of Business and Economics Student Opinion in Ukraine, in Robert W. McGee (Ed.), *Taxation and Public Finance in Transition and Developing Economies* (pp. 639-661). New York: Springer.

Oliva, R. R. (1998). The Schism between Tax Practitioners' Ethical and Legal Obligations: Recommendations for the Fusion of Law and Ethics. *Journal of Accounting, Ethics & Public Policy*, *1*(4), 603-628, reprinted in Robert W. McGee (Ed.), *The Ethics of Tax Evasion* (pp. 350-371). Dumont, NJ: The Dumont Institute for Public Policy Research (1998).

Pennock, R. T. (1998). Death and Taxes: On the Justice of Conscientious War Tax Resistance. *Journal of Accounting, Ethics & Public Policy*, 1(1), 58-76, reprinted in Robert W. McGee (Ed.), *The Ethics of Tax Evasion* (pp. 124-142). Dumont, NJ: The Dumont Institute for Public Policy Research (1998).

Rosen, H. S. (1999). *Public Finance*, fifth edition. New York: Irwin/McGraw-Hill.

Ruegger, D. & E. W. King (1992). A Study of the Effect of Age and Gender upon Student Business Ethics. *Journal of Business Ethics*, *11*(3), 179-186.

Schansberg, D. E. (1998). The Ethics of Tax Evasion within Biblical Christianity: Are There Limits to "Rendering Unto Caesar"? *Journal of Accounting, Ethics & Public Policy*, *1*(1), 77-90, reprinted in R.W. McGee (Ed.), *The Ethics of Tax Evasion* (pp. 144-157). The Dumont Institute for Public Policy Research, Dumont, NJ,.

Schwartz, R. & S. Orleans (1967). On Legal Sanctions. *University of Chicago Law Review, 34*, 274-300.

Smith, S. R. & K. C. Kimball (1998). Tax Evasion and Ethics: A Perspective from Members of The Church of Jesus Christ of Latter-Day Saints. *Journal of Accounting, Ethics & Public Policy*, *1*(3), 337-348, reprinted in Robert W. McGee (Ed.), *The Ethics of Tax Evasion* (pp. 220-229). Dumont, NJ: The Dumont Institute for Public Policy Research, 1998.

Song, Y. & T. Yarbrough (1978). Tax Ethics and Taxpayer Attitudes: A Survey. *Public Administration Review*, *38*(5), 442-452.

Spicer, M. & S. Lundstedt (1976). Audit Probabilities and the Tax Evasion Decision: An Experimental Approach. *Journal of Economic Psychology, 2*, 241-245.

Tamari, M. (1998). Ethical Issues in Tax Evasion: A Jewish Perspective. *Journal of Accounting, Ethics & Public Policy, 1*(2), 121-132, reprinted in Robert W. McGee (Ed.), *The Ethics of Tax Evasion* (pp. 168-178). Dumont, NJ: The Dumont Institute for Public Policy Research, 1998.

Tittle, C. (1980). *Sanctions and Social Deviance: The Question of Deterrence*. New York: Praeger.

Torgler, B. (2003). Tax Morale: Theory and Empirical Analysis of Tax Compliance. Dissertation der Universität Basel zur Erlangung der Würde eines Doktors der Staatswissenschaften.

Torgler, B. (2005). Tax morale in Latin America. *Public Choice*, *122,* 133-157.

Torgler, B. (2006a). The Importance of Faith: Tax Morale and Religiosity. *Journal of Economic Behavior & Organization, 61,* 81-109.

Torgler, B. (2006b). Compliance in India: An Empirical Analysis. *The Icfai University Journal of Public Finance*, *4*(2), 7-18.

Torgler, B. & F. Schneider (2007). What Shapes Attitudes Toward Paying Taxes? Evidence from Multicultural European Countries. *Social Science Quarterly, 88*(2), 443-470.

Torgler, B., I. C. Demir, A. Macintyre & M. Schaffner (2008). Causes and Consequences of Tax Morale: An Empirical Investigation. *Economic Analysis & Policy, 38*(2), 313-339.

Torgler, B. & F. Schneider (2009). The impact of tax morale and institutional quality on the shadow economy. *Journal of Economic Psychology, 30,* 228-245.

Torgler, B. (2010). Serious Tax noncompliance: Motivation and Guardianship. *Criminology & Public Policy, 9*(3), 535-542.

Torgler, B. & N. T. Valev (2010). Gender and Public Attitudes toward Corruption and Tax Evasion. *Contemporary Economic Policy, 28*(4), 554-568.

Vogel, J. (1974). Taxation and Public Opinion in Sweden: An Interpretation of Recent Survey Data. *National Tax Journal*, *27*, 499-513.

Wallschutzky, I. (1984). Possible Causes of Tax Evasion. *Journal of Economic Psychology*, *5*(4), 371-384).

Warneryd, K. & B. Walerud (1982). Taxes and Economic Behavior: Some Interview Data on Tax Evasion in Sweden. *Journal of Economic Psychology, 2*, 187-211.

Wood, J. A., J. G. Longenecker, J. A. McKinney & C. W. Moore. (1988). Ethical Attitudes of Students and Business Professionals: A Study of Moral Reasoning. *Journal of Business Ethics, 7*(4), 249-257.

World Values Survey Data. www.wvsevsdb.com/

Yusuf, S.M. (1971). *Economic Justice in Islam*. Lahore: Sh. Muhammad Ashraf.