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Abstract

This teaching case covers technical and non-technical concerns about data mining enabled by the creation of a data warehouse by the California Franchise Tax Board (CFTB). CFTB used data mining to analyze data collected from federal, state and municipal agencies and other organizations to identify residents who under-report income or fail to file tax returns. The case presents different stakeholders' privacy, financial, technical and political concerns regarding the use of data obtained from an array of sources. The case is aimed at an undergraduate or MBA/MS course on IS Management, Data Management/Warehousing or Information Privacy. It could also be used to study IT and public policy, or E-government. It provides an opportunity for students to consider how social and political factors interact with technical challenges in inter-enterprise relationships. It also offers an opportunity to consider the value of data in relation to both the financial and non-financial costs of obtaining it.

Introduction

> *"The art of taxation consists in so plucking the goose as to get the most feathers with the least hissing."*
> -- Attributed to Jean Baptist Colbert

In January 2006 Frank Lanza, Director of the Filing Compliance Bureau (hereafter, the Bureau) of the California Franchise Tax Board (www.ftb.ca.gov; the Board) and Mary Yessen, Section Manager for the Bureau's Integrated Non-filer Compliance Business Section, were discussing next steps in the analysis of data collected from many sources, in order to identify Californians who were not paying their fair share of state income taxes. In December the Bureau had won an award from the Center for Digital Government for its Integrated Non-Filer Compliance (INC) system project. "After all our hard work, that award is well deserved," Said Mary. "Absolutely!" Frank replied. "However, let's not rest on our laurels. There are decisions to be made regarding the latest pilot project."

IBM Global Services built the INC system, which was launched in 2001 and utilized a data warehouse containing information on direct and indirect "income indicators" for Californians. Data collected from various federal, state, county and local sources were analyzed to identify possible non-filers and under-reporters and to estimate the taxes they owed. In 2004-2005 the system yielded more than $2 billion in taxes, fees, penalties and interest (see Figure 1). By comparison, a winter 2005 taxpayer amnesty program (the first since 1984) brought in about $800 million from 180,000 taxpayers. The system was strongly supported by the previous California Franchise Tax Board Executive Officer, Gerald H. Goldberg, who had protected the Filing Compliance Bureau from political influence during his 25 years of leadership. Mr. Goldberg retired at the end of August, and his successor was expected to be announced soon and sworn in to office by the end of the month. It remained to be seen whether the new Executive Officer would share Mr. Goldberg's enthusiasm for the INC system.

Fiscal Year	NPA's Issued[1]	Returns Filed[2]	Total Assessments (millions)[3]
2000/2001	87,647	99,376	$ 261
2001/2002	294,216	151,102	$1,669
2002/2003	594,212	258,629	$4,122
2003/2004	499,602	252,103	$2,986
2004/2005	528,856	248,766	$2,115

Notes: 1. Notices of Proposed Assessment mailed by the Non-filer Program for fiscal year.
2. The system tracks non-filer accounts from issuance of the demand for a return until account resolution.
3. Total assessments include tax, penalties, fees, and interest.

Figure 1 Non-filers Detected Through the INC System
Source: http://www.ftb.ca.gov/aboutFTB/taxpayer_advocate/2006_BillRghtsAnnlRpt.pdf

California's Tax Gap

> *"Income tax returns are the most imaginative fiction being written today."* -- Herman Wouk

Personal income taxes provided about half of the State of California's General Fund revenues in 2005 (See Figure 2). Unfortunately, California faced a large budget deficit, which showed little sign of dissipating soon; for fiscal year 2005-06 Governor Schwarzenegger's office anticipated spending up to $6 billion more than it took in.

Some Californians apparently were not paying their fair share of taxes. The difference between collected and uncollected taxes (the "tax gap") occurs when individuals or organizations under-report income, fail to file tax returns, or pay fewer taxes than they rightfully owe. The Bureau estimated this figure at $6.5 billion. However, improving compliance gave rise to challenges, including citizen concerns about their privacy, issues in working with other state agencies, and other social and political issues that deserved careful consideration. Frank Lanza and Mary Yessen knew that while most citizens endorsed the idea that everybody should pay their fair share of taxes, opinions varied as to the appropriateness of the tactics that were in use or could be used to improve compliance.

	2004	**2004**	**2005**	**2005**	
	amount (millions)	*percent of total*	*amount (millions)*	*percent of total*	*percent change*
Personal Income Tax	$ 38,540	50.1	$ 43,790	49.1	13.6
Corporation Tax	$ 8,812	11.5	$ 13,337	14.9	51.4
Subtotal	$ 47,351	61.6	$ 57,127	64.0	20.6
Other Revenue Sources	$ 29,532	38.4	$ 32,125	36.0	8.8
Total General Fund Revenues	$ 76,884	100.0	$ 89,252	100.0	16.1

Figure 2   State of California General Fund Revenues
Source: 2005 *Annual Report*, California Franchise Tax Board

The Integrated Non-Filer Compliance (INC) System

> *"The income tax has made more liars out of the American people than golf has."* --- Will Rogers

The Franchise Tax Board collected state personal and corporate income taxes (when formed in the 1920's its mission was to collect corporate taxes, then referred to as "franchise" taxes; personal income taxation went into effect in 1935 in California). The Board was also responsible for several non-tax programs, such as child support debt collection. In 2000, the Board's ambitious *eGovernment Blueprint* described how computers and the Internet would be used to improve administration and taxpayer relations. In 2005 about 60% of personal income tax returns were filed electronically, and a corporate electronic filing program was expected to start in 2006 (most corporate tax payments already came in as electronic funds transfers, but corporate returns were still paper-based in 2005). The Board employed 5,300 permanent employees; another 1,000 temporary employees were hired during peak tax filing time. The Board was organized around three primary business functions: Tax Filing and Collections, Auditing, and Filing Enforcement. This latter aspect – essentially accounts receivable management -- was run through the 120-person Filing Compliance Bureau, which also handled some income withholding programs.

The two-step compliance process for individual income taxes worked as follows: Individuals identified as likely to have income on which taxes were not paid were sent a notice, requesting them to either file a tax return or explain why they did not owe any money. Using information generated by the INC system, the Bureau sent out 615,000 non-filer notices for tax year 2003. In 2005 they mailed 750,000 non-filer notices for tax year 2004 (notices are sent after the extended due date for tax returns). If this first notice did not yield a response from a non-filer, the individual would then be sent a Notice of Proposed Assessment, including an estimate of the amount of taxes owed based on information that indicated that the person was either doing business in California or earning income in California. The corporate compliance process for tax-owing businesses was similar but not identical.

The proposal for the INC system had explained:

> *"The Non-filer Program's automated non-filer systems were developed during the middle 1970's and are constrained by typical 'legacy system' limitations. They were designed around technology which is now over twenty-five years old and cannot be "tuned or enhanced" to efficiently use today's hardware and software, or to meet today's business goals. Neither system has adequate evaluation and decision support capability. These systems have limited effectiveness and cannot adapt to new tax laws or sources of income data without great difficulty. This severely hampers the department's ability to identify additional non-filers and to adapt to changing business needs. These existing systems generate over $200 million in revenue annually, but need to be redesigned to prevent this revenue from being put at risk. This will allow the Non-filer Program to meet its customers' expectations in a fair and less intrusive manner and to more easily respond to changing business needs and generate additional revenue. … FTB estimates that the combined benefits to be obtained by achieving the objectives and solving the current system problems will result in the identification of nearly 100,000 new non-filers with an accompanying increase in net revenue of $36 million a year. In addition, 55,000 incorrect notices, assessments, and other compliance actions which now intrude into the lives of taxpayers will be eliminated."*

IBM developed the INC system at a cost of $61 million. Its hardware elements were:

> IBM P5-590 Server
> IBM 2/05 Mainframe
> EMC SAN Storage Server

The system's software elements consisted of:

> IBM DB2 Universal Database Enterprise-extended version for AIX
> IBM WebSphere Application Server, Advanced Edition
> IBM WebSphere MQ
> IBM Rational Application Developer
> Data cleansing tools Ascential Quality Stage and Data Stage
> Business Objects report writer

For this project the Bureau used a "benefit-based alternative procurement method" (an approach the State of California was using more often lately for capital investments). The contract specified that IBM would receive a percentage of new revenues generated by the INC system, subject to a pre-set cap. Frank Lanza stated:

> *"It's an incentive to them to deliver a system that is free of bugs and defects, with the functionality specified in our requirements document. It's an incentive for us because the sooner we pay them off out of the benefits, the more revenue we have for the state."*

IBM was paid off in about four years. As of 2006, INC system maintenance was included in the operational budget of the Bureau's Information Systems department. The system's database contained 220 million income records regarding more than 35 million individuals and 4 million business entities. Data had been collected from sources that included banks, various state agencies (such as California's Employment Development Department), local agencies, and the United States Internal Revenue Service (including listings of all taxpayers who filed a Federal return using a California address, as well as 1099 interest, dividend, stock sales, and retirement income data). In addition to these *direct* income indicators that reflect actual income that might have gone unreported to the CFTB, the INC database also included various *indirect* income indicators from external sources that reveal potential sources or uses of income. These indirect indicators, such as the Federal 1098 form (reporting mortgage interest paid), proved to be an excellent way to identify tax cheats. The effort involved in obtaining data from some sources was low. For example, thanks to a uniform format for data that had been laid out by the IRS, it was easy to match up federal and state taxpayer information to be fed into the INC system. Other state agencies, however, contributed indirect income indicator data in less malleable formats, such as the State Bar Association's list of licensed attorneys or lists of occupational license holders (realtors, barbers, cosmetologists, physicians, veterinarians, etc.).

Before deciding whether to obtain and use a data source, Bureau managers considered both the costs of integrating the data and the additional value each source would contribute. The time and cost to expand the INC database was considerable. Some agencies did not collect all the needed data elements, nor did some have the ability to transmit the data electronically. There were significant reformatting challenges when collating data from local agencies, because each took a different approach to data collection and management. Some agencies collected U.S. Social Security numbers and some did not, so records that did not include this identifier needed to be matched by name and address (leading inevitably to errors, such as when John Smith Sr. and John Smith Jr. resided at the same address). Mary Yessen felt that mandating a common identifier (Social Security or federal taxpayer ID number) would greatly decrease the cost of integrating data into the INC system, and improve data quality. In the meantime, locating usable data and reconciling it with tax filings was tedious and difficult.

Apart from issues involved in finding, evaluating and integrating new data sources, the INC system worked well, in Mary's opinion. A GUI front end (Figure 3, below) made it easy to query the database and run analytic reports (subject to strict employee access requirements based on job responsibilities). The INC system also enabled better customer service and communication, in Frank Lanza's view, and reduced the number of letters and phone calls made to taxpayers. Because INC helped them handle most typical filing enforcement cases, para-professionals could be used to assist highly-skilled auditors, a mix that resulted in lower operational costs. Employees liked it because most of the pertinent business rules and tax compliance "thinking" was automated. Mary noted that even technicians and lower-level staff could use the system to quickly, fairly and consistently resolve tax compliance cases. Although INC was used primarily by the Non-filer program, other CFTB units also used it to a lesser extent. The

Collection Department used it to look up information such as taxpayers' bank or asset information, and the Audit Department used the system to verify that a taxpayer had reported all the income that was indicated in the database.
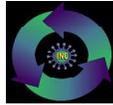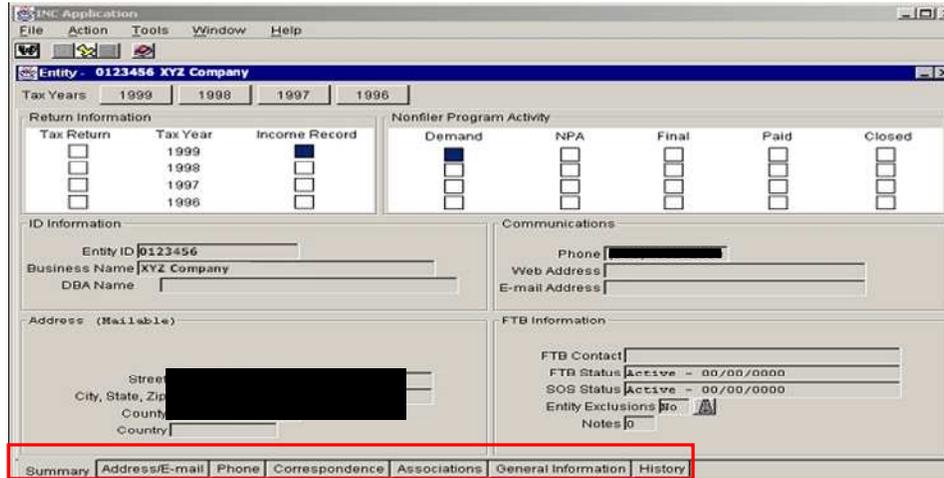

Figure 3   INC System Interface

Although the INC system had won kudos, there had been a number of challenges along the way.

Taxpayer Relations

Californians were usually not happy to be contacted by the Filing Compliance Bureau; some complained to elected officials about perceived privacy violations and "Big Brother" government. A review revealed that at times the Bureau had inadvertently taken a heavy-handed approach. For instance, the decision whether to contact a presumed non-filer was sometimes based on overly broad criteria. In one incident, the INC system calculated the average reported income for all barbers, and letters were then sent to all holders of barber licenses who did not report barbering income. Inactive license holders were instructed to contact the Bureau and prove they had not been working as barbers. For various reasons – poor health, family situation, and others -- some individuals held licenses but were not currently working as barbers. Since license renewal cost just $40 per year, it might be that many non-active barbers would think it best to renew -- even for several years when they were inactive -- rather than go through the steps of acquiring a license all over again when ready to return to work. Many felt that the Bureau was not being fair; citizens were being required to shoulder the burden of proof when, in their view, they had done nothing wrong. Mary Yessen felt that use of the INC system *per se* did not cause these problems, but did magnify customer-service issues in that the system identified many presumed non-filers or under-reporters for the first time. Over time, algorithms for estimating unreported income and procedures for contacting presumed non-filers were successfully refined. Further analysis revealed that some notification letters were a bit heavy-handed. Yessen reflected on recent changes that were made in that aspect of customer service:

> *"We can't say 'We know you earned this amount of money; you owe us a tax return and you better get it to us now.' The letter is phrased a little differently now: 'This is an indication that you may have earned money in the State of California using this occupational license.' On the back side the recipient is*

> *allowed a chance to respond and tell us that they didn't use the license. Once we get that information back, of course we do a little deeper digging just to verify what they're telling us is correct, but I think we now phrase the letter in such a manner that it kind of takes that accusatory tone out of it."*

With these operational adjustments Mary believed taxpayer relations were improving. Still, political costs also were incurred when individual citizens felt the Bureau violated their privacy (California's privacy policy is shown in Appendix A). Mary knew it was vital to carefully and diligently control how the INC data were used. Neither she nor Frank wanted to expose the Bureau to legal risks. For example, as was true in many other states, an agency needed to establish a reasonable basis for looking into a person's finances, thanks to federal and state privacy laws such as California's Information Practices Act of 1977. Frank explained, "We just can't say because you drive a Ferrari and live in Beverly Hills 90210, we're going to audit you," even if a filer's tax return showed a low income.

Evaluating Data Sources

Figure 4 summarizes the 12 direct income data sources used in the INC system as of January 2006. In order to show improvements in taxes collected, numbers of non-filers identified, and percent of non-filers who filed in subsequent years, it was necessary to continue to evaluate new direct and indirect income indicators. For example, evidence suggested that many non-filers operated in a cash economy (paid "under the table"), but current data sources did not capture this information. Also, people who do not have bank accounts often cash payroll checks at check-cashing storefront establishments, which do not retain data about most transactions.

Data Source	Revenue Per Case	Data Provider
Federal 1099-INT (Interest income)	$1,784	IRS
Federal K-1 Sub S (partnership income)	$1,436	IRS
Federal 1099-G (Tuition program payments)	$1,322	IRS
Federal 1099-PATR (Income from cooperatives)	$1,265	IRS
Federal K-1 P/S (partnership income)	$1,253	IRS
Federal 1099-OID (original issue discount)	$1,119	IRS
CA Sales Tax Return	$ 993	Board of Equalization
Federal 1099R (pensions or profit sharing)	$ 837	IRS
Federal 1099-MISC (Miscellaneous income)	$ 749	IRS
CA EDD Wage data	$ 626	Employment Development Department
CA EDD Employer data	$ 555	Employment Development Department
IRS listing of Californians filing Federal returns	$ 453	IRS

Figure 4   Direct Income Sources in INC

The Bureau estimated that if it received data about cash transactions in excess of $10,000 (which, by law must be reported), nearly $2.3 million in additional tax revenues would come in. New legislation would need to be passed to require that this data be shared with the Bureau, and managers did not want to push for such legislation unless they were confident the data would prove worthwhile for purposes of tax compliance. Some legislators were reticent to sponsor laws that would be unpopular with their constituencies, particularly if these measures would yield relatively low incremental revenues for the state. Thus, the Bureau carefully evaluated all possible new data sources.

In summer 2004 the Bureau petitioned the State Assembly for authorization to obtain data from check cashing institutions and four other indirect sources (Figure 5). Other data sources under consideration in 2006 included property taxes paid and data from the Division of Motor Vehicles (records of the makes and models of automobiles registered in the state). Frank Lanza noted that while some data acquisition costs could be easily quantified, there were also nettlesome political issues, particularly in dealing with various state agencies. In 2004 a law was proposed to require cities to share data about license owners with the Bureau. Lanza recalled the turmoil that caused:

"The cities made a huge stink, saying 'Oh, my gosh, we can't provide the data; we don't have the right IT platform to do that. We need money from the State of California.' The non-revenue part of government does not view sharing data as an opportunity for the greater good. We could say to them, 'If you give us that data we are going to generate $10 million of additional revenue for the state of California.' The response will be 'But that's not revenue that accrues to our agency, we don't get credit for it.'"

Proposed Source	New Taxpayers[1]	Expected Value	Explanation of Indicator
City Business Tax	14,287	$1,271,543	Self-employed in cities with license
Community Care Licensing	4,312	$ 866,712	Self-employed care facility providers
Alcoholic beverage control	3,569	$ 717,369	Self-employed seller of liquor/wine
Motor fuel data	1,664	$ 334,866	Self-employed truckers

Notes: 1. "New taxpayers" are non-filers identified via this source.
        2. Example calculation: Community Care Licensing: The California Department of Social Services licenses more than 88,000 care facilities for children, adults, and the elderly. Applying the typical self-employed non-filer rate of 4.9% X 88,000 = 4,312 contracts X $201 taxes owed = $866,712.

Figure 5   Expected Value of Proposed New Indirect Data Sources

Frank felt that agency middle managers focused on their agencies' missions, which sometimes conflicted with cooperation around data sharing. When agency executive officers got involved, it was easier to reach agreement that investment in programming and testing time would help the state's coffers in the long run.

What about Commercial Data Brokers?

When considering potential new data sources, a suggestion was offered: Why not get data from for-profit businesses, such as credit agencies? These companies had sophisticated information systems and could easily sell data at a reasonable cost and in a form that was fully interoperable with the INC system. However, there were political perils in working with such businesses. In February 2005 about 30,000 Californians had been the victims of identity theft when at least 50 fake firms accessed information about them that was stored in the ChoicePoint service, a for-profit data aggregation company that sells personal credit-related information. Nearly 163,000 Americans had been affected by this breach. When, the following June, the U.S. Internal Revenue Service announced that it had awarded a $20 million contract to ChoicePoint to help uncover assets owned by individuals in order to collect on delinquent accounts, there was a storm of protest. Senator Patrick Leahy from Vermont stated: "It is especially galling right now to be rewarding firms that have been so careless with the public's confidential information." Massachusetts Congressman Edward Markey stated: "It is disturbing that an agency as critical to data privacy as the IRS would choose this moment to hand over sensitive data to a company which is under a cloud due to prior security breaches." The IRS quickly announced it would conduct a security review of ChoicePoint's practices. By then, though, it was clear that agencies should steer clear of commercial data brokers, at least until proper protections were in place. A decision was made that the Filing Compliance Bureau would only obtain data from other government agencies; they would not purchase data from commercial data brokers.

The Property Tax Pilot Project

A pilot study using property tax data from two of California's most affluent counties began in February 2005, aiming to determine the potential value-added of these data as indirect indicators of income. For the pilot test, data were provided by means of an Excel spreadsheet, since the two counties' systems were not compatible (with each other or with INC). If property tax data helped identify new non-filers or under-reporters of income, it would be necessary to find some other way for counties to provide the data, since converting spreadsheet data for use in the INC system was a cumbersome process involving time-consuming manual steps on the part of both county and Bureau employees. The technical challenge of matching data fields and formats from each of 58 counties with the

taxpayer identification information already stored in the INC system would also be considerable – especially as compared with the mortgage interest data received from the IRS form 1098, which was fully interoperable with the Bureau's systems. For those counties not equipped to share data in a usable format, the high cost of updating their systems would certainly impede data sharing. Frank Lanza commented on these roadblocks:

> *"I really think technology issues are secondary. Even though there are challenges there, in the future solutions will be available to share data among government agencies, and the cost to do so is dropping over time. It's really … the political policy environment that these government agencies are operating in and the lack of common understanding that by sharing data they're serving the greatest good for the greatest number."*

Even if property tax data could be easily obtained and matched with INC data, it was not clear whether the value-added would be sufficiently compelling. Residents' property tax assessments could be matched with data already stored in the INC database, such as wage information from the IRS and the California Employment Development department, banking and other financial records, and mortgage interest paid. If, compared with these data sources the property tax data did not yield new names or useful differences in imputed income, then it might not be worth pursuing this source further.

This pilot, using data from Marin and San Diego counties, ran for six months, ending in August, 2005. One staff person was dedicated to the pilot study for approximately two months, and based on the analysis, about fifty assessments were issued. The pilot data suggested that the Bureau could anticipate collecting an additional $150,000 using property tax data. Based on this initial analysis, Frank noted:

> *"The preliminary conclusion is that it is not a gold mine of information. Property taxes are probably not very helpful in identifying non-filers, but may have more value in identifying taxpayers who are hiding income."*

There was also some legal ambiguity concerning the use of property tax data. California laws essentially require probable cause to question whether a taxpayer has under-reported income. If an individual claims only $100,000 in income, yet pays out nearly $100,000 in property taxes, it seemed to Frank that probable cause would be evident; "Where are they getting the income to pay those taxes?" However, both Frank and Mary were concerned that they didn't know where exactly to draw the line on this sort of investigation.

Looking Ahead

A decision about whether to expand the use of property tax data would be made following a complete analysis of the pilot-test results, due shortly. Meanwhile, in January 2006 Lanza and Yessen felt that the Filing Compliance Bureau had probably already identified and incorporated the most productive sources of direct and indirect income information. New sources were likely to provide only incremental benefits, so it was important to clearly quantify those benefits and to fully understand the costs of adding each data source. It appeared that the INC system might be reaching a point at which adding new sources of individual taxpayer data would have a negative ROI.

Given the troubling need for increased tax income to cover the state's rapidly expanding budget, Frank and Mary began to wonder if they should start to investigate adding data sources that might point to corporations that were failing to file or under-reporting their taxable income.

Acknowledgements

References

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    www.lao.ca.gov/handouts/revtax/2005/Californias_Tax_Gap_030105.pdf

Glossary

Data Mining. The use of sophisticated software and statistical techniques to detect patterns or trends in large amounts of data. Frequently applied to data stored in a data warehouse.

Data Warehouse. A large data base containing historical data used for decision support, data mining, or data retention. Data is periodically copied to a data warehouse from an operational data base, with older copies maintained to support the identification of trends and the computation of forecasts.

Direct Income Indicators. Data collected from such agencies as the California Employment Development Office and the U.S. Internal Revenue Service federal tax income forms, that reflect actual income.

E-file. Allows people to file their tax return electronically over the Internet.

E-government. The provision of government services or information to citizens, businesses or other government agencies via the Internet.

Fiscal year. A fiscal year is a 12-month period ending on the last day of a month other than December. In certain circumstances, a taxpayer is permitted to elect a fiscal year instead of being required to use a calendar year.

Graphical User Interface (GUI). A type of screen interface which allows people to interact with a computer and computer-controlled devices using graphical icons, visual indicators or windows along with text, labels or text navigation to represent the information and actions available to a user.

Indirect Income Indicators. Data collected from such sources as the U.S. Internal Revenue Service mortgage interest paid form or state licensing boards, that reflect potential reportable income.

Internal Revenue Service (IRS). An administrative agency of the U. S. Department of the Treasury that is responsible for collecting federal personal and business income taxes and federal payroll taxes.

Sales tax. A state- or local-level tax on the retail sale of specified property for sales occurring within state boundaries.

Taxpayer Amnesty Program. Fixed period of time during which delinquent taxpayers may pay taxes without penalty. The program is intended to recover tax income that might otherwise be written off.

Use tax. A sales tax that is collectible by the seller where the purchaser is domiciled in a different state.

Appendix A.   California Board of Equalization Privacy Policy

Source: http://www.boe.ca.gov/info/privacypolicy.htm

Pursuant to Government Code section 11019.9, all departments and agencies of the State of California shall enact and maintain a permanent privacy policy, in adherence with the Information Practices Act of 1977 (Civil Code section 1798 et seq.)

It is the policy of the Board of Equalization (BOE) that information which can be identified with a particular person ("personally identifiable information") is only obtained through lawful means and that the collection, use, retention, disclosure, and destruction of such information is in compliance with state privacy laws.

Personally identifiable information is collected by the BOE for purposes of administering the tax and fee programs set forth in the Revenue and Taxation Code. Personally identifiable information regarding BOE employees is also collected, for purposes of personnel administration. When the BOE collects personally identifiable information, it provides the notice required by Civil Code section 1798.17 of the Information Practices Act which includes the purposes for which the information will be used. Any personally identifiable information that is collected must be relevant to the purpose for which it is collected.

Any subsequent use of personally identifiable information shall be limited to the fulfillment of purposes consistent with those purposes previously identified. Personally identifiable information shall not be disclosed, made available, or otherwise used for purposes other than those specified, without the consent of the subject of the information, or as authorized by law. As disclosed in the notice provided by the BOE in compliance with Civil Code section 1798.17, information collected by the BOE may be exchanged with or provided to other entities as authorized by law.

Information security awareness training is provided to all BOE employees. BOE employees and contractors are also required annually to review the pamphlet *Information Security Requirements for Employees with Access to Confidential Information* and to sign a Confidentiality Statement (BOE-4). Access to personally identifiable information is restricted to persons who have an appropriate business need for the information. Information and physical security policies and procedures are in place at the BOE to protect personally identifiable information from theft, unauthorized access, use, modification or disclosure. Internal review of BOE policies and procedures is conducted to ensure that adequate safeguards for information security are in place.

This privacy policy is applicable to all personally identifiable information, including information obtained or disclosed through the BOE website. In addition, BOE's website contains a Privacy Notice in compliance with Government Code section 11015.5.