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Identifying Business Risk Factors of Identity Theft

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This is to certify that the doctoral study by

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Abstract

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MBA, DeVry University, 2003

BSBA, University of Phoenix, 1992

Doctoral Study Submitted in Partial Fulfillment

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Abstract

Businesses are under pressure to identify and control risks affecting profitability, including the risk of fraud. Identity theft, a type of fraud, costs businesses, governments, and individuals in excess of $56 billion a year. In order to develop good internal controls to help prevent and detect fraud, it is necessary to identify the risks to the business, but business owners are not always aware of what risk factors relate to identity theft. A nonexperimental research design formed the basis of this research study. The population for this study was data from all 50 U.S. states, represented via government databases maintained by the Federal Trade Commission, the U.S. Census Bureau, and the Department of Labor from all 50 U.S. states from 2008 until 2014. The fraud triangle theory formed the theoretical framework for this study. Regression analysis determined the significance of relationships between state-specific instances of international immigration, state-specific unemployment rates, and state-specific instances of identity theft. Both state-specific instances of international immigration and state-specific unemployment rates demonstrated a significant and positive relationship with instances of identity theft. The implications for positive social change include improved understanding of risk factors for identity theft, which could lead to lower costs of operation for businesses and lower prices for consumers.

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Dedication

I would like to dedicate this study to my father, Alfred D. Minniti, who is a second generation American and a Bronze Star recipient for his service in the Vietnam War. He taught me that it is possible to attain any goal as long as you work hard for what you want.

Acknowledgments

I would like to acknowledge that this study would not have been possible without the guidance, mentoring, and support I received from Dr. Roger Mayer. Several individuals from Walden University whom I will not mention led me down the wrong paths during my studies. Dr. Mayer was able to show me the correct path and was invaluable to me as a mentor and guide.

Table of Contents

ii

List of Tables

List of Figures

Section 1: Foundation of the Study

The Committee of Sponsoring Organizations of the Treadway Commission (COSO; 2013), a joint initiative of five private sector organizations, provides guidance for businesses related to developing a framework of internal controls. Key to the COSO framework is the requirement that businesses continually assess risks. As described by the COSO framework, managers must consider the impact that the external environment has on the achievement of organizational goals. Management is responsible for implementing internal controls to reduce risks (Prabowo, Jap, & Agoes, 2015). A key to successful implementation of the COSO standards is having management use the standards for guidance on developing internal controls (Vandervelde, Brazel, Jones, & Walker, 2012). An external risk a business faces is the risk of fraud (COSO, 2013).

Fraud can directly affect the profitability of a business (Federal Trade Commission [FTC], 2013), and one type of fraud that affects businesses is identity theft. In the United States, identity theft was the most common type of consumer fraud between 2000 and 2008 (Ng, Watters, & Chen, 2012). Reported instances of identity theft reached record levels in 2015 (FTC, 2016).

With the FTC's implementation of the *Red Flag Rules*, businesses that sell on credit are required to have internal controls to help prevent identity theft (Smith & Gilbert, 2012). Business owners and managers could be fined and face other sanctions for failing to have a proper identity theft protection program (Smith & Gilbert, 2012). The focus of this study was to determine if there is a relationship between the two independent variables, state-specific unemployment and state-specific international

immigration, and the dependent variable, identity theft. Knowledge of the relationship between the variables could help business owners and managers develop better internal controls to manage the external risk factors associated with identity theft.

Background of the Problem

On May 10, 2006, President Bush issued the Executive Order 13402 that established the Identity Theft Task Force. The executive order obliges business owners to protect customer confidential information and verify the identity and legal right of all their employees who live and work in the United States (Griffith, 2012). In 1986, Congress enacted the Immigration Reform and Control Act of 1986. The Act prohibits employers from hiring individuals who are in the country illegally and requires that employers verify individuals' identity and eligibility to work in the United States prior to presenting an employment offer (Harper, 2012). Congress passed the Sarbanes Oxley Act in 2002 requiring public companies to establish effective internal controls (Jahmani & Dowling, 2015). These governmental regulations require organizations to focus on identifying risks and developing corresponding internal controls to mitigate the risks.

The focus of this study was to determine the relationship between two external risk factors, unemployment and immigration, and identity theft. Andresen (2015) stated that unemployment affects the motivation to commit a crime. When individuals cannot find legal opportunities to obtain income, they will resort to crime (Entorf & Sieger, 2014). Xenakis and Cheliotis (2013) linked economic factors, such as unemployment, to a wide variety of crimes, including identity theft. Because other researchers linked unemployment to identity theft, the variable was an appropriate risk factor for this study.

Immigration has also been linked to identity theft by researchers in the field. Calderón (2014) noted the concern that business leaders have related to undocumented immigrants and identity theft. In addition, Cebula and Koch (2008) linked both undocumented immigration and unemployment to identity theft. Another study in the Los Angelas area contridicted the Cebula and Koch (2008) study and indicated that crime rates were lower in areas with high immigrant concentrations (MacDonald, Hipp, & Gill, 2013). The fact that previous studies have contridictory conclusion is evidence that further research is necessary.

Problem Statement

Business owners and managers need to control the risks to their businesses, including the risk of fraud (COSO, 2013). Companies with inefficient internal controls have lower profits as compared to companies with effective internal controls (Feng, Li, McVay, & Skaife, 2015). According to the FTC (2015), the Consumer Sentinel Network Data Book for January to December 2014 documented that complaints of identity theft increased 14.7% from 2013 (290,099 complaints) to 2014 (332,646 complaints). One estimate indicated that identity theft costs exceed $56 billion a year (Sen & Borle, 2015). The general business problem is that businesses are negatively affected by the risk of identity theft. The specific business problem is that some U.S. business managers lack information about the relationship between external risk factors, including state-specific international immigration and the state-specific unemployment rate, with reported instances of identity theft.

Purpose Statement

The purpose of this quantitative, nonexperimental correlational study was to determine the relationship between external risk factors, including state-specific amount of international immigration and the state-specific unemployment rate, with reported incidents of identity theft. The independent variables in this study were the state-specific international immigration rates and state-specific unemployment rates. The dependent variable was the number of state-specific reported instances of identity theft. The state-specific international immigration rates and state-specific unemployment rates are both expressed as a percentage of the state's population. The state-specific reported instances were reported as instances per 100,000 members of the states population. The study population consisted of data from 2009 to 2014 from all 50 states. I segregated the data for all 50 states on a state-by-state basis and included the state population as a controlling variable. The results of this study may assist businesses in identifying risk factors of identity theft, which will help determine where additional internal controls might be necessary. In addition, the study results may contribute to positive social change by identifying risk factors for identity theft, which could lead to lower costs of operation for businesses and lower prices for consumers.

Nature of the Study

Three primary research methods are available to researchers including (a) quantitative, (b) qualitative, and (c) mixed methods (Raich, Müller, & Abfalter, 2014). A researcher using a quantitative research method uses statistical analysis to determine if a relationship exists between variables (Szyjka, 2012). The purpose of this study was to

examine the relationship between variables; therefore, quantitative research was an appropriate choice for research method.

According to Barnham (2015), qualitative researchers focus on exploring why something occurs rather than what occurs. Qualitative researchers use descriptive data, such as observations and interviews (Madill, 2015). As such, a qualitative research method was inappropriate for this study. Researchers using mixed methods comingle the attributes from the quantitative and qualitative design methodologies (Landrum & Garza, 2015). I restricted data collection to only quantitative secondary data from reliable sources. Since I was looking for a relationship between variables, it was appropriate to use quantitative rather than qualitative data in this study. Since I only used quantitative data and I did not use qualitative data, I rejected the use of the mixed methods design.

I considered three quantitative research designs including (a) correlational, (b) descriptive, and (c) experimental. According to Bettany-Saltikov and Whittaker (2014), correlational and descriptive designs are examples of nonexperimental designs. Yarcheski, Mahon, and Yarcheski (2012) stated that a descriptive research design results in a statistical description of the identified variables. While I employed descriptive statistics, I did not use descriptive statistics to test my hypotheses. Experimental designs use techniques to manipulate independent variables (Plavnick & Ferreri, 2013). I did not manipulate the independent variables, and so I rejected using an experimental design. In order to test my hypotheses, I used a correlational design. A correlational design measures the significance of relationships between variables (Boslaugh, 2013). Because I measured the significance of the relationship between state-specific unemployment and

state-specific international immigration to instances of identity theft, the correlational design was the most appropriate research design for my study.

The correlational statistical treatment was determined to be appropriate for this study because, as described by Campbell and Stanley (1963b), the design helps a researcher determine if a relationship exists between two or more variables. In a correlational study, the credibility of the hypothesis occurs if a high correlation occurs; conversely, the credibility of the hypothesis is minimized if a lower correlation occurs (Campbell & Stanley, 1963a). A correlational design met the needs of my research and allowed me to determine the extent of the relationship between the two independent variables and a dependent variable.

Research Question

The overreaching research question (RQ) that guided this study was: What is the relationship between state-specific international immigration and state-specific unemployment rates with reported incidents of identity theft? To guide this study, I developed the following RQs:

RQ1: To what extent, if any, does state-specific international immigration relate to instances of identity theft?

RQ2: To what extent, if any, does the state-specific unemployment rate relate to instances of identity theft?

RQ3: To what extent, if any, does the combination of state-specific international immigration and the state-specific unemployment rate relate to instances of identity theft?

Hypotheses

Based upon these RQs, I developed the following hypotheses.

$H_0$1: There is no significant statistical relationship between state-specific international immigration and instances of identity theft.

H_a1: There is a significant statistical relationship between state-specific international immigration and instances of identity theft.

$H_0$2: There is no significant statistical relationship between the state-specific unemployment rate and instances of identity theft.

H_a2: There is a significant statistical relationship between the state-specific unemployment rate and instances of identity theft.

$H_0$3: There is no significant statistical relationship between the combination of state-specific international immigration and state-specific state unemployment rate and instances of identity theft.

H_a3: There is a significant statistical relationship between the combination of state-specific international immigration and state-specific state unemployment rate and instances of identity theft.

Theoretical Framework

I conducted this study to better understand risk factors related to identity theft, a type of fraud. Because of this focus on fraud, the theory that framed this study was the fraud triangle theory. The fraud triangle, developed by Cressey (1952) and expanded on by Davis and Pesch (2012), is the seminal theory related to why people commit fraud, including identity theft.

The fraud triangle has three points: (a) pressure, or needs; (b) rationalization; and (c) opportunity. Cressey (1952) postulated that external financial pressures drive individuals to commit what he referred to as crimes of trust, or fraud. In order to commit the crimes, the criminals rationalized their behavior. Victims also need to provide the criminals the opportunity to commit the criminal act (Cressey, 1952).

The independent variables in my doctoral study are examples of the first point of the fraud triangle: pressure or need. Both independent variables of unemployment and immigration represent factors that increase economic need (Xenakis & Cheliotis, 2013). While I was not attempting to consider the rationalization of the fraudsters, the results of my study may help business owners develop specific internal controls to mitigate these risks. Internal controls reduce the opportunity for fraud, and so address the third point of the fraud triangle (COSO, 2013).

Definition of Terms

Fraud: Fraud is the deliberate misrepresentation or omission of facts with the intent to mislead another person to their detriment (Policastro & Payne, 2015).

Malware: Malware is malicious software that is loaded onto a computer (Zhang, Jha, & Raghunathan, 2014).

Means of identification: Means of identification is any type of information that can identify a particular individual such as Social Security numbers, credit card numbers, or the like (Hopwood, Leiner, & Young, 2012).

Pharming: Pharming is a method used by fraudsters to direct traffic from a legitimate website to another, usually counterfeit, website controlled by the fraudster (Kim, Lee, Cho, & Cha, 2012).

Phishing: Phishing is a technique used by fraudsters to obtain personal information for purposes of identity theft. This theft can include sending illegitimate e-mails asking for personal information (Purkait, 2012).

Shoulder surfing: Obtaining information such as an individual's user ID and password by observing them enter it into an electronic device (Wu, Lee, Lin, & Wang, 2014).

Spoofing: Spoofing is sending a message from a computer that claims to be a trustworthy or secure source of information (Rizi & Khayyambashi, 2013).

Assumptions, Limitations, and Delimitations

Assumptions

Assumptions are statements used to acknowledge circumstances that are beyond a researcher's control (Kirkwood & Price, 2013). Items the researcher accepts as true, without evidence, are also assumptions (Paul & Elder, 2013). Theoretical assumptions help to define the scope of a theory (Foss & Hallberg, 2014). Several assumptions were necessary in order to complete this study. The first assumption was that the population figures retrieved from the U.S. census were accurate within an acceptable margin of error. I assumed the data were an accurate count of the United States and the 50 states included in the census.

The second assumption was that the unemployment figures published by the U.S. Bureau of Labor Statistics (BLS) were accurate. The third assumption was that the data collected on identity theft by the FTC's Consumer Sentinel Network were the most accurate data available, even though there may be errors in the data. Multiple regression analysis requires making several assumptions including (a) multicollinearity, (b) sample size, (c) outliers, (d) normality, (e) homoscedasticity, and (f) independence of residuals (Rovai, Baker, & Ponton, 2014).

Limitations

Limitations are biases embedded in the research design or interpretation that can potentially pose a threat to validity (Houghton, Casey, Shaw, & Murphy, 2013). The goal of this study was to determine if a relationship exists among three variables. The dependent variable of the study was identity theft, and the independent variables were unemployment rates and rates of international immigration. A second limitation of this study was that victims of identity theft do not always report the crime. The FTC (2012b) reported that 30% of the victims of identity theft in 2011 did not file a police report about the crime. Therefore, the data set might underrepresent the actual levels of identity theft that took place during the period focused on in this study.

A third limitation was that some individuals report cases of identity theft when in fact no identity theft occurred (Porkess & Mason, 2012). In addition, reports have indicated people who immigrated illegally were encouraged to plead to aggravated identity theft charges to avoid long prison terms (Cooley & Mitchell, 2012). Because reported crime statistics are the only source of data for many types of crime, researchers

often use the statistics and accept them as a valid source of data (Loftin & McDowall,
2010). Finally, the fact that a relationship exists between variables does not infer
causality (Arrawatia, Misra, & Dawar, 2015).

Examination of causality is outside the scope of this research but could be a basis
for further research. All factors that are beyond the control of the researcher are
limitations of the study (Brutus, Aguinis, & Wassmer, 2013). Any data missing from the
secondary data sources,and any errors in the data collected by the secondary data sources
are considered to be limitations in the study as these items are beyond the control of the
researcher.

Delimitations

Delimitations define the boundaries of the study established by the researcher
(Pereira, 2012). Choices made by the researcher during the study are also delimitations
(Newcomer, Marion, & Earnhardt, 2014). The data I used in this study were secondary
data on reported instances of identity theft from 2009 to 2014 in the United States. My
definition for identity theft was broad, including any criminal activity in which the
personal identifying information of the victim was used by the perpetrator for personal
gain.

I used secondary data on international immigration from the years 2009 to 2014
as reported by the U.S. Census Bureau. It was necessary to generalize these sample data
across the entire historical population. Historic data may not be indicative of current or
future year's data. Additional delimitations include the three variables expressed in the
research questions of the study: (a) state-specific unemployment, (b) state-specific

international immigration, and (c) instances of identity theft. These variables were considered delimitations because they defined the boundries of the study.

Significance of the Study

Contribution to Business Practice

The costs of identity theft affect both individuals and businesses. Individuals and businesses could use information on the drivers of identity theft to help mitigate the costs associated with identity theft. I designed this study to determine the extent of the relationship between (a) identity theft and international immigration and (b) identity theft and unemployment rates. Knowledge of this relationship, or lack of a relationship, will assist business owners in developing appropriate internal controls and reducing the risk of identity theft.

The results of the study may provide valuable information to company managers and external auditors that could assist them in evaluating the risk of identity theft in the hiring of employees and the sales of goods and services. A more comprehensive risk assessment could allow managers to develop cost-efficient internal controls to help prevent or detect the risks to the business and reduce losses from identity theft. The benefits of a strong control environment come from a recent study that determined financial markets reacted positively and stock prices increased for companies that announced a strong system of controls to prevent identity theft (Bose & Leung, 2013).

Implications for Social Change

Society may benefit from the results of this study. Immigration is currently a major issue in both national and state politics. News media reports implied that people

who have immigrated illegally are primary instigators of identity theft (Menjivar & Abrego, 2012). The results of this study provided a better understanding of the relationship between international immigration and identity theft, allowing for the development of better internal controls, which could reduce fraud losses to organizations.

Unemployment could also be a driver for the increases in instances of identity theft. The determination of a possible relationship between unemployment and identity theft could exert pressure on policy makers for the formulation of laws to minimize or deter identity theft by addressing the unemployment variable through fiscal and monetary policy. These actions, in turn, could lead to reduced costs for compliance and business losses due to identity theft.

The issues of immigration and unemployment are being debated by individuals throughout the country. Identity theft is also an area of national concern (FTC, 2015). Understanding the relationship between immigration, unemployment, and identity theft may allow for a more informed discorse on the topics. It could also provide businesses with the information they need to design better internal controls to prevent and detect identity theft.

A Review of the Professional and Academic Literature

The purpose of this literature review was to examine the past published research on the variables and possible methodologies for this study. The specific variables for this study were identity theft, international immigration, and unemployment. In this section, I will present a review of the literature on fraud triangle theory and a review of

methodologies used by other researchers to explore the theory as well as a review of the literature on the variables of this study.

The purpose of this quantitative study was to determine the extent of the relationship between (a) state-specific international immigration, (b) the state-specific unemployment, and (c) instances of identity theft within each state. The independent variables in this study were unemployment and international immigration. The dependent variable in this study was reported incidents of identity theft. This was a nonexperimental study using a linear multiple regression model for analysis. Based upon the research questions, I developed the following hypotheses.

$H1_0$: There is no significant statistical relationship between state-specific international immigration and instances of identity theft.

$H1_a$: There is a significant statistical relationship between state-specific international immigration and instances of identity theft.

$H2_0$: There is no significant statistical relationship between the state-specific unemployment rate and instances of identity theft.

$H2_a$: There is a significant statistical relationship between the state-specific unemployment rate and instances of identity theft.

$H3_0$: There is no significant statistical relationship between the combination of state-specific international immigration and state-specific state unemployment rate and instances of identity theft.

H3$_a$: There is a significant statistical relationship between the combination of state-specific international immigration and state-specific state unemployment rate and instances of identity theft.

For the literature review for this quantitative research study, Ireviewed 217 documents: 10 were seminal works, 187 were articles from peer-reviewed journals less than 5 years old, and 19 were other articles and books. The 187 peer-reviewed articles published in the last 5 years account for 86% of the works cited. The literature reviewed includes research on the variables and possible research designs and methodologies for this study.

I searched for data at both physical and online libraries. I used seven libraries to gather material for this study: (a) Maricopa (AZ) County Library, (b) the City of Phoenix (AZ) Library, (c) the Arizona State University Library, (d) the Walden University Library (online), (e) the University of Phoenix Library (online), (f) the DeVry University Library (online), and (g) the Grand Canyon University Library (online). The databases searched included (a) Google Scholar, (b) Academic Search Complete, (c) ProQuest Accounting & Tax, (d) ACM Digital Library, (e) Business Source Complete, (f) Dissertations & Theses at Walden University, (g) Federal Digital System, (h) Homeland Security Digital Library, (i) LegalTrac, (j) LexisNexis Academic, (k) ProQuest Central, (l) ProQuest Criminal Justice, (m) Springer ebooks, (n) Taylor & Francis Online, and (o) Thoreau. I conducted searches using keywords related to the variables in the study. Some of the keywords used in the online searches were as follows: *identity theft, identity fraud, immigration,*

unemployment, employment, illegal immigration, consumer fraud, fraud, fraud statistics,

identity theft statistics, and *identity theft laws*.

Despite the fact that identity theft is a growing problem costing billions of dollars

a year, very little is known about the causes of identity theft (Reyns & Henson, 2015).

Academic research on identity theft is new and limited (Lai, Li, & Hsieh, 2012). Identity

theft is a crime that is international and not just a problem for the United States

(Mathews, 2013). It is possible to effectively measure losses from fraud and incorporate

internal controls to reduce the losses from fraud (Button, Gee, & Brooks, 2012). The

limited amount of research on this topic supported the need for this study.

The Fraud Triangle

The theoretical framework supporting this doctoral study was the fraud triangle

theory. The seminal work about why people commit fraud, including identity theft, is the

fraud triangle developed by Cressey (1952; Davis & Pesch, 2012). The fraud triangle has

three main points: (a) pressure or needs, (b) rationalization, and (c) opportunity (Cressey,

1952). Pressure comes from the need for something, such as cash to pay bills (Cressey,

1952). Rationalization is how individuals find ways to believe actions they know are

wrong are acceptable under the circumstances, such as convincing themselves they are

only borrowing the money rather than stealing the money (Cressey, 1952). Finally,

opportunity occurs when the victim allows the fraudster access to the victim's assets

(Cressey, 1952). Kassem and Higson (2012) proposed a new fraud triangle theory adding

a new dimension: (a) motivation, (b) capability, (c) opportunity, and (d) personal

integrity.

Cressey (1950) originally developed what researchers came to call the fraud triangle. Cressey did not refer to it as such; the first use of the term, fraud triangle, to describe the idea came from the Association of Certified Fraud Examiners (Morales, Gendron, & Guenin-Paracini, 2014). The American Institute of Certified Public Accountants has integrated the fraud triangle into the Statement on Auditing Standards Number 99 (Buchholz, 2012). The fraud triangle is a primary theory used by forensic accountants (Soltani, 2014).

Studies such as Dellaportas's (2013) on why accountants commit fraud have continued to show the validity of Cressey's (1950) fraud triangle theory. The cognitive dissonance theory indicates fraudsters commit the crime then rationalize their behavior to improve their own self-worth (Trompeter, Carpenter, Jones, & Riley, 2014). I believe the cognitive dissonance theory supports the rationalization component of the fraud triangle theory. Other researchers have claimed the professional development of the fraud triangle as a criminology theory concentrates on limiting opportunity and an individual's lack of ethics to the exclusion of other factors such as the role of society and political agendas in combatting crimes such as fraud (Morales et al., 2014).

The fraud triangle is important to my study because it theorizes the importance of internal controls in a business. A business cannot control the pressures on an employee, customer, or vendor, nor can it control an individual's ability to rationalize their behavior. A business can only control the opportunity to commit fraud by having internal controls over the business processes (Buchholz, 2012). Companies must have internal controls to help prevent and detect fraud (Rodgers, Soderbom, & Guiral, 2015).

Sykes and Matza (1957) studied how perpetrators of crimes rationalized their behavior by using neutralizing language. There are five basic ways to use neutralizing language to rationalize criminal behavior: (a) denial of responsibility, (b) denial of victim, (c) denial of injury, (d) condemnation of the condemners, and (e) appeal to higher loyalties (Klenowski, 2012). By rationalizing their behavior, most white-collar criminals do not consider themselves to be criminals and deny they had intent when committing their crimes (Stadler & Benson, 2012). Except for their ability to rationalize their behavior and resistance to considering their activities as crimes, white-collar criminals have been assumed to be basically normal people (Benson, 2013). Historically white-collar crime, including identity theft, was considered to be a civil dispute under common law rather than a criminal act (Bennett, LoCicero, & Hanner, 2013).

Alternative Theories

The elements of fraud theory. Although I selected the fraud triangle theory as the underlying theory for my research, there is another theory for how individuals commit white-collar crimes known as the elements of fraud (Dorminey, Fleming, Kranacher, & Riley, 2012). In this theory, Dorminey et al. (2012) stated there are three elements of fraud: (a) the act, (b) concealment, and (c) conversion. The act consists of the actual theft or misappropriation of assets. Concealment represents the perpetrator's attempts to hide the act from others. Conversion is the process of turning the ill-gotten gains into something the perpetrator can use. Criminals use other people's identities in order to conceal their illegal activities. Internal controls help to limit the opportunity fraudsters have to commit the act or crime.

The elements of fraud are used by managers to help identify the risk of fraud in a business (Power, 2013). Internal controls can be used to help prevent or detect the act, which is the first element in the elements of fraud theory. Managers and those with responsibility for governance must implement controls to restrict a perpetrators access to assets and deny them the opportunity to commit the act of fraud. Based on the elements of fraud theory, managers and those charged with governance concentrate on developing internal controls for the theft or misappropriations of assets (Power, 2013). I did not select the elements of fraud theory because it focuses on starting with the act without considering the demographics or motivations of the fraud perpetrators that led up to the act (Dorminey et al., 2012).

The social learning theory. Akers's (1998) social learning theory postulates that individuals learn criminal activity and rationalize the acceptability of criminal activities based on their social networks. One quantitative study using regression models to compare the variables supported the social learning theory as it relates to online criminal activity by linking peer offending to online criminal activities in juveniles (Holt, Bossler, & May, 2012). Allen and Jacques (2013) conducted a qualitative study of 16 campus police officers of a large university and in their findings indicated a link between criminal activity to opportunity, social learning, peer pressure, supervision, and culture. A study indicated that virtual peers are just as influential to online criminals as traditional peers are to offline offenders (Miller & Morris, 2014). Another mixed-methods cross-sectional study of 1,674 participants indicated that the social learning theory was valid despite the

debate about the effects of self-control on criminal behavior (Yarbrough, Jones, Sullivan,

Sellers, & Cochran, 2012).

The social learning theory is a combination of the differential reinforcement

theory and the theory of differential association (Akers, 1998; Maskaly & Donner, 2015).

The theory of differential reinforcement postulates that criminal behavior occurs when

individuals experience positive reinforcement, such as obtaining something they desire,

either actual or anticipated, and the adverse consequences of their action are minor and

do not control or prevent further criminal behavior (Megens & Weerman, 2012). The

theory of differential association postulates that individuals learn criminal behavior by

associating with other criminals, the same way law-abiding citizens learn to behave by

associating with other individuals who obey the law (Moore, 2011). Cressey (1952)

conducted a review of the critics' issues with Sutherland's (1947) differential association

theory and stated that many of the critics' issues derived from misinterpretation by the

critics. The social learning theory also contains variables from other criminology theories

including deterrence, social bonding, and neutralization theories (Capece & Lanza-

Kaduce, 2013).

Akers (1998) indicated that the probability persons will engage in criminal and

deviant behavior increases (and the probability of conforming to the norm decreases)

when those persons meet the following conditions: (a) they differentially associate with

others who commit criminal behavior and espouse definitions favorable to it, (b) they are

relatively more exposed in-person or symbolically to salient criminal/deviant models, (c)

they define it as desirable or justified in a situation discriminative for the behavior, and

(d) they have received in the past and anticipate in current or future situations a relatively greater reward than punishment for the behavior. Akers's social learning theory has received significant empirical support in explaining criminal behavior (Holt et al., 2012) and is regarded as one of the leading theories in criminology (Tittle, Antonaccio, & Botchkovar, 2012).

According to the social learning theory, it is possible that when identity thieves perceive that the potential benefits outweigh the risk of punishment associated with the criminal act of identity theft, they will commit the crime (Maskaly & Donner, 2015). The benefits received by the identity thieves include employment, health care, social status, purchasing power, and access to credit facilities. Because individuals with similar demographics and perhaps geographic locations can be grouped together, it is feasible that individuals observing others in the same demographic or geographic group receiving benefits from identity theft would want to learn the skill from those who were successfully committing the crime.

White-collar crime. Identity theft is a type of fraud and fraud is a crime; therefore, the theories as to why people commit crime will apply to why they commit identity theft. Limiting the opportunity to commit crimes by establishing internal controls is one of the ways to prevent white-collar crimes such as identity theft (Cressey, 1950). Research on fraud is conducted in various research branches including criminology, ethics, business management, accounting, and auditing (Free & Murphy, 2015).

Frauds including identity theft are a type of white-collar crime. White-collar crimes are illegal and or unethical actions taken by employees or other agents of an

organization (Vadera & Aguilera, 2015). The term *white-collar crime* is attributed to Sutherland who was the first to explore the link between the upper white-collar class and economic crimes (Arnulf & Gottschalk, 2012).

Sutherland is one of the early criminologists and his works are widely accepted (Alalehto & Persson, 2013). Sutherland differentiated economic crimes from violent crimes (Gottschalk, 2012). White-collar crimes are often viewed as being less severe than violent crimes despite the financial damage done by white-collar criminals (Leshem & Ne'eman-Haviv, 2013). White-collar crimes are estimated to cost between $200 billion to $600 billion per year (Hussain & Manzoor, 2014).

Sutherland went on to note that the penalties for white-collar criminals tend to be less severe than the penalties imposed on violent criminals (Dorminey et al., 2012). A study indicated the punishment for white-collar crimes was increasing while the punishment for drug and narcotics offenses was decreasing thereby decreasing the disparity in sentences (Buell, 2014). Court ordered restitution and voluntary restitution agreements are common punishments for white-collar criminals (Faichney, 2014).

Many white-collar criminals do not consider themselves to be criminals at all (Stadler & Benson, 2012). Indeed, white-collar crimes, such as fraud and identity theft, are considered to be crimes of trust, wherein the offenders breached the trust that was place with them (Menard & Morris, 2012). A qualitative study of 49 convicted identity thieves indicated that most rationalized their behavior by citing the opinion that they caused no injury to the victims (Copes, Vieraitis, Cardwell, & Vasquez, 2013).

Theory of differential association. The field of criminology has accepted Sutherland's (1947) theory of differential association and Akers's (1985) social learning theory (Durrant & Ward, 2012). There is empirical evidence to support the social learning theory's concepts that white-collar criminals anticipate the rewards they will obtain have greater value than the consequences they will suffer if caught, and that criminals learn their behavior from other criminals (Moore, 2011). The accounting profession relies on fraud theories in developing internal controls (COSO, 2013).

Researchers categorize identity thieves into one of three criminal categories: situational offenders, routine offenders, and professional offenders. Situational offenders are individuals who happen upon the opportunity and commit the crime. Routine offenders look for and take advantage of opportunities as a type of continuous criminal enterprise. Unlike most street criminals, professional identity thieves learn their trade from research and participation in the legitimate and illegitimate economy and from association with other offenders (Vieraitis, Copes, Powell, & Pike, 2015).

Internal Controls

Internal controls for businesses. The identification of the risk factors of identity theft will assist businesses in developing internal controls to prevent identity theft and maintain compliance with the FTC's *Red Flag Rules*. Internal controls are procedures designed to (a) protect an organization's assets, (b) ensure the reliability of the financial reports, and (c) ensure compliance with laws, regulations, and company policies. One of the major ways to prevent fraud in a company is to have a strong system of internal controls (Daniels, Ellis, & Gupta, 2013).

Companies should have internal controls for operations, financial reporting and compliance (COSO, 2013). Internal controls have been used by managers in businesses since the 15th century (Gupta, Weirich, & Turner, 2013). The use of internal controls, referred to at the time as internal checks, was documented by authors of auditing books published as early as 1917 (Gupta et al., 2013).

The Foreign Corrupt Practices Act of 1977 was the first federal law to require companies to have internal controls of financial accounting. The Foreign Corrupt Practices Act of 1977 required publicly traded companies to maintain a system of internal controls. COSO, which was formed as a result of the 1994 Treadway Commission, developed a framework for internal controls that includes five components including: control environment, control activities, risk assessment, information and communication, and monitoring (COSO, 2013).

In addition to the internal controls required by the FTC's Red Flag Rules, Section 404 of the Sarbanes-Oxley Act of 2002 requires all publicly traded companies to document and evaluate their internal controls on a periodic basis (Rice, Weber, & Wu, 2015). Material weaknesses in a company's internal controls must be reported to the public in the company's financial reports (Bedard & Graham, 2012). The financial report of a public company must also contain an assessment of the company's internal controls (Balsam, Jiang, & Lu, 2014). Smaller family owned businesses tend to have more material weaknesses in internal controls than large public corporations (Bardhan, Lin, & Wu, 2015). The use of internal controls ties into Cressey's (1950) fraud triangle theory

because internal controls are policies or procedures that limit the opportunity to commit fraud against a company.

An organization's management team is ultimately responsible for developing and maintaining a company's internal controls (Miller, Proctor, & Fulton, 2013). Companies rely on internal controls to help reduce unethical behavior (Liu, Wright, & Wu, 2015). It can be challenging to design an effective internal control system because changing economies, technologies, business models, globalization, and regulatory requirements all affect the risks faced by a company. Incompetent employees can also increase the risk of fraud as they cover up errors to avoid detection or rely on other individuals for help violating the segregation of duties (Campbell, Butler, & Raiborn, 2014). Designing, implementing, and managing an internal control system requires the use of professional judgment (COSO, 2013).

The COSO framework comprises the efforts of five major professional associations in the accounting profession including the (a) American Institute of Certified Public Accountants (AICPA), (b) Institute of Management Accountants (IMA), (c) Institute of Internal Auditors (IIA), (d) American Accounting Association (AAA), and (e) Financial Executives International (FEI) (COSO, 2013). The committee developed guidelines for internal controls that defined three main objectives: (a) effectiveness and efficiency of operations, (b) reliability of financial reporting, and (c) compliance with laws and regulations. The COSO framework on internal controls provides a principles-based approach that provides flexibility to companies and which can be used by any type of entity regardless of size or legal structure (COSO, 2013). The internal control system

for smaller companies could be less formal and structured than a system for large companies while still maintaining effective internal controls (Liu et al., 2015).

The COSO framework on internal control. The COSO (2013) defined internal controls as "a process, effected by an entity's board of directors, management and other personnel, designed to provide reasonable assurance regarding the achievement of objectives relating to operations, reporting, and compliance" (p. 3). The fundamental concepts of the framework indicate it is (a) geared to the achievement of objectives in one or more categories, (b) a process consisting of ongoing tasks and activities, (c) is effected by people, (d) is able to provide reasonable but not absolute assurance, and (e) is adaptable to different entity sizes and legal structures (COSO, 2013). COSO's definition of internal controls is intentionally broad so that it can be applied to organizations of different sizes, geographic locations, industries, and legal structures. The COSO framework was originally published in 1992 and updated in 2013 addressing additional fraud risks (Shapiro, 2014).

The COSO framework on internal control includes five main components of the internal control framework: (a) control environment, (b) control activities, (c) information and communication, (d) risk assessment, and (e) monitoring (Higgins, 2012). The control environment, which is also referred to as the tone at the top, sets forth the entity's integrity and ethical values detailing how the organization assigns authority and responsibility, recruits and develops human resources, develops and enforces performance standards, and provides incentives for achieving the standards (Soltani,

2014). Control activities are the policies and procedures established by the company to help mitigate risk and ensure that management's objectives are met.

Information & communication includes how the organization collects, analyzes, and disseminates information, to both internal and external users of the information. Risk assessment is the process used by management to identify and assess the risks to achieving the organization's goals and objectives. Monitoring is an ongoing and continuous evaluation of the effectiveness and functionality of the internal controls of the organization (COSO, 2013). The COSO (2013) framework also identifies three main areas of objectives for organizations as (a) operations objectives, (b) financial reporting objectives, and (c) compliance objectives.

FTC Red Flags Rules. Because identity theft is a major problem for businesses, the FTC adopted the Red Flag requirements in 2008 to help combat identity theft in the United States. After several postponements, the Red Flags Rule went into effect on January 1, 2011 (Smith & Gilbert, 2012). The Red Flags Rule requires organizations to implement written identity theft protection programs and internal controls (Smith & Gilbert, 2012). The procedures should address red flags when collecting identifying information or authenticating customers and transactions (Identity Theft Red Flags Rules, 2013).

The Identity Theft Red Flags Rules (2013) requires businesses to take four steps (a) identify relevant red flags, (b) set up procedures to detect the red flags, (c) take preventive or mitigative actions when red flags are identified, and (d) update and monitor the program on a regular basis (Smith & Gilbert, 2012). This system ensures that red

flags are continually identified and mitigated. The Identity Theft Red Flags Rules require

businesses to update their procedures on a periodic basis. The definition of a creditor

under the Identity Theft Red Flags Rule was amended in 2013 to include any business

that in the normal course of business advances funds to or on behalf of a person, based on

an obligation of a person to repay the funds.

Immigration

The first independent variable in this study was immigration. The United States

has a large population of international immigrants and has enacted laws that regulate

international immigration (Curriden, 2013). The population of international immigrants

can be divided into two subsets, legal and illegal immigrants.

The relationship between crime and international immigration has interested

policymakers, academics, and the public since the late 1800s (Curriden, 2013). Indeed,

the public's belief that crime is linked to immigration appears to be a social fact believed

by many people. This study could provide viable data to support or refute the relationship

between international immigration and identity theft.

International immigration. One estimate indicated that there were 11.2 million

unauthorized aliens living in the United States in 2010 and that unauthorized aliens

accounted for 5.2% of the nation's workers (Patten, 2012). The report further indicated

that many illegal immigrants committed document fraud. The Patten (2012) report

defines immigration-related document fraud as the use, sale, or counterfeiting of identity-

related documents, such as birth certificates, Social Security cards, passports, visas,

employment authorizations, or any other documents used to circumvent U.S. immigration laws.

Congress has been passing laws to restrict illegal immigration since the 1880s, starting with the Chinese Exclusion Act signed by President Arthur and the Geary Act that that was passed in 1892 (Curriden, 2013). Immigration legislation includes laws prohibiting the hiring of undocumented workers, laws criminalizing marriage fraud and the use for fraudulent documents to evade employer sanction laws (Chacon, 2009). In fact, the estimate of immigrants using fraudulent documents has increased since the passing of the Immigration Reform and Control Act of 1986 that requires employers to inspect the documents of their prospective employees before securing their services.

Immigration and crime. In the early 1900s, criminologists developed theories linking international immigration to crime, based in large part on a research study conducted in 1907 by the U.S. Customs and Immigration Bureau (McDonald, 2007). A quantitative study based on data from the 50 states, using the dependent variable of international immigration and the independent variable of identity theft, links undocumented immigration to identity theft (Cebula & Koch, 2008). Considering only undocumented immigrants, Cebula and Koch (2008) found a relationship with identity theft.

In 2009, the United States Supreme Court made it easier for illegal aliens to evade prosecution under the identity theft statutes by ruling that illegal aliens who use fictitious identification documents cannot be considered identity thieves unless they knew they were stealing real people's identities. In 2009, in *Flores-Figueroa v. United States*

(2009), the Supreme Court ruled that the U.S. government must prove that a criminal defendant knew that the means of identification he/she was illegally using belonged to another person or they could not be convicted of identity theft. This allowed identity thieves to claim they believed the information they were using was fictitious and they had no knowledge the identifying information they were using actually belonged to another person.

Unemployment

The second independent variable in this study was unemployment. There are previous studies showing a relationship between unemployment rates and overall crime rates (Chang & Wu, 2012). Cantor and Land (1985) conducted a quantitative study of the relationship between unemployment and crime in the post WWII era from 1946–1982. Fallahi, Pourtaghi, and Rodriguez (2012) conducted a quantitative study on how unemployment volatility is related to criminal activity. Another quantitative study on data obtained from 10,222 adult criminal offenders was conducted to determine the relationship between unemployment and repeat criminal offenders (D'Alessio, Stolzenberg, & Eitle, 2014). D. Wu and Wu (2012) linked unemployment to drug and fraud crimes. Other studies linking unemployment to crime but not necessarily to the subset crime of fraud include, Blomquist and Westerlund (2014), Huang and Huang (2015), and Andresen (2012).

Society tries to minimize the time individuals spend on unemployment benefits. Efforts are made to reduce or curtail unemployment benefits to spur individuals to return to the workforce (Hofmann, 2015). Psychologists suggest that periods of unemployment

can alter a person's personality, which could cause them to act in ways they would not have, had they never been unemployed (Boyce, Wood, Daly, & Sedikides, 2015). Unemployment can cause people to participate in risky behavior including hazardous drinking (Bosque-Prous et al., 2015).

Unemployment can cause an increase in both first time and repeat criminal offenders (D'Alessio et al., 2014). Cebula and Koch (2008) found a relationship between unemployment and the rate of reported ID theft per 100,000 individuals during the year 2005 using state-specific data. Similar to my study, Cebula and Koch used independent variables including both immigration and unemployment.

Identity Theft

The dependent variable in this study was identity theft. Identity theft occurs when an individual uses the identity characteristics of another individual without their permission (Archer, 2012). Identity theft is a type of fraud.

Mathews (2013) reviewed the issues with international identity theft and the differences in laws between various nations. Zakaria (2013) studied the perceived risk of identity theft on an individual's willingness to participate in e-commerce. Bose and Leung (2013) studied how identity theft countermeasures, or internal controls, affect the value of a company.

Identity theft is considered to be a growing problem and one of the most significant problems of the last 20 years to affect businesses and private citizens alike (Holt & Turner, 2012). Since the turn of the century, the instances of identity theft have increased by 793%, from just 31,140 in 2000 to 332,646 in 2014 (FTC, 2015). Losses

from identity theft are estimated to be $48 billion a year (Gibbs, Cassidy, & Rivers, 2013). Although not all cases are known, researchers validly use reported crimes for data in academic and other research (Loftin & McDowall, 2010).

In the past identity theft was considered to be a civil law matter and was not recognized as a criminal activity, but today it is one of the most recognized crimes in the United States. This recognition does not imply that identity theft did not occur 10 years ago, but that the effects on the victims were less noticeable. An individual in the 18th century coming to America from Europe or vice versa, could use the identity of a person still in Europe with little or no effect on that person (Kirk, 2014).

During the 19th century, it was possible for someone to move west and assume a new identity to escape criminal charges or creditors. Even as late as the 1960s and 1970s, if a business wanted to check a person's credit, it had to call all of that person's creditors individually and trust that the customer provided a list of all of his/her creditors in an application. Identity theft has increased as face-to-face transactions have been replaced technology (Seda, 2014).

Technology gives fraudsters additional ways to obtain a victim's information. Identity thieves use malware to obtain information stored on personal computers (Ibrahim & Thanon, 2015). Phishing e-mails are sent out by fraudsters hoping to get personal information (Purkait, 2012). An example of a phishing e-mail is a message sent to a potential victim asking them if they would be willing to accept a large sum of money someone needs to hide in the United States. These e-mails originated in Nigeria and are referred to as the Nigeria 911 scam.

Vishing is similar to phishing but the fraudsters call the victims instead of using e-mail. Identity thieves can also obtain victims information from virtual worlds such as Second Life (Keene, 2012) and social media sites such as Facebook (Wall, 2013). Identity theft is one of the most prominent frauds committed on an international scale (Button, 2012). Identity theft and fraud have often been considered to be victimless crime or a crime of lesser impact but a recent study of 835 fraud victims in Wales disputes this notion and indicates fraud can have devastating effects on the victims (Button, Lewis, & Tapley, 2014).

Congress passed the Identity Theft and Assumption Deterrence Act (1998) in order to help reduce the instances of identity theft. As identity theft continued to grow Congress passed the Identity Theft Penalty Enhancement Act (2004), and the Identity Theft Enforcement and Restitution Act (2008). Identity theft continues to be a profitable crime.

The Internet makes access to information almost instantaneous. Identity thieves use the Internet as a method to gather an individual's identification (Hopwood et al., 2012). Criminals are able to monetize identity theft in a number of different ways, including fraudulent banking and credit transactions (Sood, Bansal, & Enbody, 2012). Akers's (1998) social learning theory suggests criminals learn how to commit online crimes from other criminals on the Internet (Conradt, 2012).

One method identity thieves use to obtain personal information is to steal it from companies or governmental entities. A data breach occurs when a thief misappropriates sensitive or confidential from an organization's computers (Sen & Borle, 2015). One

estimate puts the costs to businesses in the United States for data breaches at over 1 billion dollars in 2014 (Zelle & Whitehead, 2014).

A large number of data breaches have been attributed to identity thieves (Kapoor & Nazareth, 2013). Despite the considerable funds spent on securing data thieves continue to be able to compromise information technology (IT) networks at will (Soluade & Opara, 2014). Data breaches can occur from hacking or with malware such as spyware or keylogger programs (Moise, 2015).

Identity thieves phish for information by sending out e-mails that appear to be from governmental entities or financial institutions requesting victims' identification. Phishers often suggest a victim's account has been compromised or that a service will be terminated unless the personal information is provided. Identity thieves even use information posted on social networking sites to commit identity theft (Tan, Qin, Kim, & Hsu, 2012).

Identity theft statistics. The FTC's Consumer Sentinel Network reported 1,554,860 fraud complaints filed in 2014, and of those complaints, 13% were for identity theft. Through calculation, this outcome equates to 332,646 identity theft complaints filed in 2014 with the FTC. Of the reported identity theft complaints, 17% were for credit card fraud, 38% were for government benefits/document fraud, 12% were for phone or utilities fraud, 5% were for employment fraud, 8% were for bank fraud, and 4% were for loan fraud. The 332,646 identity theft complaints reported in 2014 represented an increase of 14.7% over the 290,099 identity theft complaints reported in 2013 (FTC, 2015). Reported instances of identity theft declined in 2010 to 251,089 reported instances

but rose in 2011 to 279,226 reported instances and rose to a record high of 369,132 reported instances in 2012 (FTC, 2012a).

The 10 states with the highest per capita instances of identity theft in 2012 from highest to lowest were; Florida, Georgia, California, Michigan, New York, Nevada, Texas, Arizona, Maryland and Alabama (FTC, 2012a). It can be noted that the states with higher instances of identity theft on a per capita basis tend to be states with a higher than average number of international immigrants. The U.S. Census Bureau's 2000 census indicated the percentage of a state's population that was born in a foreign country was 16.7% for Florida, 7.1 % for Georgia, 26.2% for California, 5.3% for Michigan, 20.4% for New York, 15.8% for Nevada, 13.9% for Texas, 12.8% for Arizona, 9.8% for Maryland and 1.4% for Alabama (U.S. Census, 2000).

Additionally, the states with the highest instances of identity theft tended to have higher than average unemployment. For 2012 the national average unemployment rate according to the BLS was 8.1%. For 2012 the unemployment rates for the individual states with the highest instances of identity theft were: 8.6% for Florida, 9.0% for Georgia, 10.5% for California, 9.1% for Michigan, 8.5% for New York, 11.1% for Nevada, 6.8% for Texas, 8.3% for Arizona, 6.8% for Maryland, 7.3% for Alabama (BLS, 2012).

Conversely the states with the lowest instances of identity theft in 2012 from lowest to highest were; South Dakota, North Dakota, Hawaii, Montana, Maine, Alaska, Vermont, Iowa, West Virginia, and Wyoming (FTC, 2012a). It can be noted that the states with lower instances of identity theft on a per capita basis tend to be states with a

lower than average number of international immigrants. The U.S. Census Bureau's 2000 census indicated the percentage of a state's population that was born in a foreign country and that percentage varied by state (U.S. Census, 2000). Data were used from the 2000 Census for comparative purposes because the 2010 Census did not include questions to quantify the foreign born population. Additionally, the states had divergent rates of unemployment ranging from a low of 3.0% to a high of 11.5% in 2012 (BLS, 2012).

One issue that was noted while conducting the literature review was that the number of reported instances of identity theft changed from study to study and from year to year. This variance in reported figures is attributed to changes in reported activity over time. This variance is an indication that some of the instances of identity theft that occurred in one year were actually reported in a subsequent year. Identity theft continues to be a growing problem with 279,226 reported cases in 2011 and 369,132 reported cases in 2012 (FTC, 2013).

Legal issues with identity theft. Until 1996, identity theft was not recognized as a crime at the state level. Arizona was the first state in the United States to criminalize identity theft. The legal definition of identity theft adopted by the State of Arizona can be summarized as follows: (a) taking the identity of another person or entity or knowingly accepting the identity of another person is a Class 4 felony (Identity Theft Law, Arizona Revised Statutes § 13-2008) and (b) aggravated identity theft of another person or entity is a Class 3 felony (Identity Theft Law, Arizona Revised Statutes § 13-2009). Aggravated identity theft includes taking the identity of three or more persons by purchasing, manufacturing, or possessing any identifying information or where the economic loss

from the identity theft exceeds $3,000 (Identity Theft Law, Arizona Revised Statutes §

13-2009).

Arizona also identifies trafficking in the identity of another person or entity as a

Class 2 felony (Identity Theft Law, Arizona Revised Statutes § 13-2010). Trafficking the

identity of another person or entity includes any sale, transfer, or transmission of any

personal identifying information to obtain or continue employment or for any unlawful

purpose, whether or not an actual loss is suffered by the victim. Because identity theft is

changing by adapting to new technology and thieves are finding new ways to obtain

identifying information and new ways to benefit from its fraudulent use, state laws have

not kept up with the changes (Stephan, Pennington, Krishnamurthi, & Reidy, 2009). Even

relatively new technologies such as online gaming are affected by identity theft (Woo,

Choi, & Kim, 2012).

In 1998, government leaders attempted to curtail identity theft through legislation.

Congress passed the Identity Theft and Assumption Deterrence Act (1998) to officially

make identity theft a federal crime. The Identity Theft and Assumption Deterrence Act

(1998) established the FTC and increased the maximum penalty for identity theft to 15

years in prison.

The Identity Theft Penalty Enhancement Act (2004) created penalties for

aggravated identity theft, which is the act of using another person's identity to commit a

felony, including immigration violations. Congress passed the Identity Theft

Enforcement and Restitution Act (2008) to clarify what could be included in court

ordered restitution in identity theft cases. The Identity Theft Enforcement and Restitution

Act also allowed the federal government to prosecute cases where the victim and offender both resided in the same state.

Financial and professional identity theft. Identity theft often includes other crimes, such as forgery, credit card fraud, and counterfeiting. By committing identity theft, a small group of individuals can affect a large number of victims. For example, in one case, an 18-year-old hacker and his associates infected as many as 1.3 million computers, causing more than $20 million in losses (Biegelman, 2009). The most common type of identity theft occurs on a personal level when a victim's personal identifying information, such as name, date of birth, Social Security number and mother's maiden name, are misappropriated and used by identity thieves for their personal gain.

Employment fraud, often attributed to immigrants, occurs when the fraudster uses the name and social security number of the victim to gain employment (Biegelman, 2009). Another type of employment fraud is professional identity theft, which is a lesser-known form of identity theft, wherein the offender misappropriates the professional identifying information of the victim such as professional certifications, professional and practicing licenses, degrees, awards, job history, and professional associations. An example would occur when an unqualified accountant secures an auditing job by using the fraudulently acquired certificate of a qualified accountant. Another type of professional identity theft is known as *notario fraud*, which occurs when a non-lawyer poses as a licensed attorney and promises to provide legal advice or assistance on immigration matters (Longazel & Fleury-Steiner, 2013).

Physicians are a prime target for professional identity theft because the criminals want to use physicians' prescribing power and insufficient safeguarding of the doctor's information by hospitals and clinics creates this opportunity (Agrawal & Budetti, 2012). Professional identity theft of any type can be difficult to trace, because degrees and certifications contain the recipient's name but no other identifying information. The costs to a business that uses an untrained individual who obtained their credentials through professional identity theft could be significant.

Various criminal activities can occur once a criminal has accessed the victim's personal information and identity. Account takeover fraud can occur when the criminal uses the victim's personal information to access and/or manipulate existing bank or financial accounts owned by the victim. This takeover includes gaining access to depository accounts, brokerage accounts, credit card accounts, and other accounts maintained at financial institutions.

New account fraud occurs when the fraudster uses the information to open new accounts at financial institutions. The victim is often not immediately aware of the existence of these accounts or even the fact that these new accounts have been opened in his or her name. Loan fraud occurs when the fraudster applies for loans, including credit cards, student loans, and mortgage loans, in the name of the victim using the victim's personal identification (Biegelman, 2009).

Credit card fraud occurs when the fraudster obtains information on the victim's credit card number and creates a counterfeit card to make purchases or obtain cash advances This type of fraud has increased with the popularity of the Internet because

thieves can make online purchases and do not risk being caught while physically entering a business establishment to make a purchase. Fraudsters often purchase goods sent to P.O. boxes or to third-party intermediaries to reduce the risk of being caught (Biegelman, 2009).

Government benefits fraud occurs when the fraudster uses the victim's personal information to obtain government benefits such as Social Security, Medicare, welfare, unemployment insurance, food stamps, or student loans. Government benefits fraud is defined as someone breaking the rules to receive benefits they are not legally entitled to (Tunley, 2011). Tunley's (2011) study linked benefits fraud to Sutherland's (1947) differential association theory of criminal behavior. Utilities fraud occurs when fraudsters use the victim's personal information to obtain utility services, such as gas, electricity, cable, or phone service (Biegelman, 2009).

Criminal identity theft is another non-financial identity theft. Criminal identity theft occurs when the fraudster uses the victim's personal information while committing a crime. The criminal provides law enforcement personnel with false identification in order to avoid criminal prosecution.

Identity theft and tax fraud. The Internal Revenue Service (IRS) documented increases in tax-related identity theft, which includes employment fraud and tax refund fraud. The Internal Revenue Service reports increases in identity theft related tax fraud with 456,453 incidents in the 2009 tax year, 440,581 incidents in the 2010 tax year and 1,125,634 incidents in the 2011 tax year (Treasury Inspector General for Tax Administration [TIGTA], 2012b). For the 2011 tax year a TIGTA (2012a) audit identified

1.5 million tax returns with identity issues with potential fraudulent tax refunds exceeding $5.2 billion.

False refund claims are one method criminals use to obtain large refund checks using a legitimate taxpayer's name and Social Security number and filing a fake tax return in the victim's name (Fisk & Stigile, 2012). According to the Internal Revenue Service a majority of the fraudulent tax refunds are paid out using direct deposit or debit cards, which allows the identity thieves quicker access to the stolen funds (TIGTA, 2012a). For the 2010 tax year the IRS identified 48,357 returns where Social Security Numbers were used on multiple returns, which is an indication of identity thieves filing false returns, often before the legitimate taxpayer files their return (TIGTA, 2012a). In 2010 the IRS estimates that $70.6 million in fraudulent tax refunds were paid to identity thieves who filed fraudulent tax returns prior to the real taxpayer filing their return (TIGTA, 2012a).

Illegal immigrants use fraudulently acquired Individual Taxpayer Identification Numbers to claim tax refunds for wages and taxes paid under their names (McKee & McKee, 2011). Criminals use the IRS name to contact individuals via the Internet, by phone, or in a letter to con the victim into disclosing personal information, which is then used to file false returns (Fisk & Stigile, 2012). The outsourcing of tax preparation to foreign countries has increased the opportunities for identity thieves to obtain taxpayers' personal information (Nouri & Lafond, 2012). Another issue with tax fraud is that the AICPA's Statements on Standards for Tax Services do not hold a tax professional

responsible for detecting fraud when preparing tax returns (Desai & Roberts, 2013;

DeZoort, Harrison, & Schnee, 2012).

Identity theft and health care fraud. Medical or health care identity fraud

occurs when the fraudster uses the victim's personal information to obtain health care

services (Mancini, 2014). Health care fraud is usually perpetrated by individuals who

either do not have access to health insurance or those who do not have the means to pay

for the much-needed health care services. Health care fraud can have consequences that

go far beyond financial costs. For instance, false health information can be entered into

the victim's files, causing medical professionals to provide incorrect care when victims

are seen at hospitals or a doctor's offices (Mancini, 2014).

Medical identity theft is a major issue and a quarter of a million people were

victims of identity theft in 2005 (Mancini, 2014). Over 12,000 cases of medical identity

theft were reported between 2007 and 2009 with over 32% of the frauds being discovered

over a year after they occurred (Agrawal & Budetti, 2012). In addition to the financial

costs of identity theft it can also be fatal to the victim when incorrect information in their

file is relied upon when providing medical services (Weinstock, 2014).

The American Health Information Management Association recognizes three

types of health care identity fraud. The first type occurs when an individual obtains health

insurance or health care using another person's identifying information. The second type

occurs when a doctor or hospital bills for services using health insurance information

purchased in the illegal marketplace.

An example of the harm caused by these first two types is shown in the 2010 case where an Armenian-American criminal organization defrauded Medicare out of $35 million by submitting over $100 million in claims across 25 states (Sanchez, 2012). The third type of health care identity fraud involves individuals attempting to obtain drugs for their own use or to sell on the streets. In this case, the person who obtains the drugs does not intend to use the drugs, but to sell them illegally.

How identity thieves obtain personal information. There are many ways for the fraudster to obtain the personal information of the victim. These ways can be divided into four main categories. Computer crime is the first category. Computer crime includes hacking, phishing, spyware, computer viruses, vishing, pharming, spear phishing, and stealing data from online transactions.

Malware is used to gain access to a victim's computer that allows the hacker to look for passwords and other personal information (Fisk & Stigile, 2012). Fraudsters have even obtained victims' identifying information from online dating services (Smith, 2012). Fraudsters who claim to offer online dating services may require information that they will later use to commit identity fraud. In a study in England the researchers interviewed 20 victims to determine how fraudsters groom victims on dating sites prior to committing their frauds (Whitty, 2013).

The second major category of identity theft is personal betrayal. Personal betrayal includes theft of the victim's personal information by his or her friends, family members, employees, or others who have access to the information. Fraudsters exploit victims and gain their trust through affinity fraud, which occurs when the fraudster builds trust with

the victim based on common interests, such as religion, age, race, or professional

designations (Perri & Brody, 2012). There have even been cases of parents and

stepparents stealing the identities of their own children and foster parents are even more

likely to steal a child's identity (Little, 2014). A child's identity can be used to defraud

the government, commit crimes and even obtain loans (VanderPal, 2015).

The third major category is document loss which includes lost or stolen wallets or

purses, credit cards, checkbooks, and mail and documents retrieved through dumpster

diving. The fourth category is data loss through business leaks, which refers to data stolen

from businesses and government entities. This type of identity theft includes credit card

and customer files hacked from business computers and copies of credit card slips stolen

by cashiers. Many states have laws that require companies to notify consumers if their

personal information has been compromised in a data security breach. The costs of

making these notifications and the penalties for non-compliance vary significantly by

state (Romanosky, Telang, & Acquisti, 2011).

Identity theft crimes tend to follow a common pattern (Albrecht, Albrecht, &

Tzafrir, 2011). The first stage is discovery, during which the perpetrators gain access to

the victim's information and verify the information. Often the identity thieves perform

reconnaissance by gathering information on potential victims before deciding which

would be the most vulnerable to victimize.

The second stage is action. At this stage, the perpetrators accumulate

documentation and conceive adequate cover-up or concealment plans. The third and final

stage is trial, which can be divided into three types of procedures (a) small thefts to test

the stolen information; (b) larger thefts, often involving personal interaction, with little

chance of being caught, and (c) the largest thefts, which are completed once the

fraudsters have confidence that the identity theft scheme is working (Albrecht et al.,

2011). Therefore, the crime of identity theft requires the criminal gain access to personal

information that allows the criminal to impersonate the victim (McKee & McKee, 2011).

Preventing identity theft. Most individuals' private information, including

medical records, bank records, tax returns and credit files, are only a few clicks away

from a potential fraudsters' access (Hopwood et al., 2012). Individuals can take

preventive or detective measures to help reduce their chances of becoming victims of

identity theft. One measure is to review their credit report on an annual basis. Consumers

can access a free copy of their credit report on an annual basis from online sources, such

as annualcreditreport.com. Additionally, many banks and financial institutions offer fraud

protection services. A recent study of 639 older adults without dementia concluded that

older individuals, especially those with lower levels of cognitive health or who were in

poor health, were more likely to be victims of criminal scams (James, Boyle, & Bennett,

2014).

It might be more difficult to maintain the privacy of an individual's personal

information than most people believe. One study indicated that individuals fear being

victims of identity theft as much as, or more than, they fear being victims of traditional

crimes (Roberts, Indermaur, & Spiranovic, 2012). Using biometrics as a means of

identification might help to reduce instances of identity theft. Biometrics includes

identifying information such as voiceprints, fingerprints, palmprints, facial structure, and

facial features (Mapayi, Salami, & Robert, 2012).

Individuals should be aware of the indicators that they might be victims of

identity theft. The FTC on its "Consumer Information" website has identified several

clues that could be indicators of identity theft including (a) withdrawals from bank

accounts that can't be explained, (b) no longer receiving bills in the mail, (c) merchants

refusing to accept checks, (d) debt collection calls on unknown accounts, (e) unfamiliar

accounts listed on a credit report, (f) unfamiliar charges listed on a credit report, (g) bills

for medical services not received, (h) health insurance company denies claims for

legitimate medical services because policy limits have been exhausted, (i) denial of

health insurance for a unknown condition, or (j) notice from the IRS that there is

unreported income from an unknown employer (FTC, 2012b). Often when identity theft

is reported to financial institutions, the employees of the financial institutions take the

stance that the victim is attempting to avoid paying for items or is perpetrating a fraud on

the financial institution (Procaccino & Sanchez, 2016).

Methodologies

Allen and Jacques (2013) conducted a qualitative study that linked criminal

activity to opportunity, social learning, peer pressure, supervision, and culture. A

qualitative study indicated that virtual peers are just as influential to online criminals as

traditional peers are to offline offenders (Miller & Morris, 2014). A mixed-methods

cross-sectional study indicated that the social learning theory was valid despite the debate

about the effects of self-control on criminal behavior (Yarbrough et al., 2012).

Murphy and Dacin (2011) conducted a qualitative study to determine how individuals rationalize their behavior when given the opportunity and motivation to commit fraud. Cebula and Koch (2008) conducted quantitative study using secondary data from the 50 states, related the rate of reported identity theft per 100,000 population to independent variables including the unemployment rate, the percent of the population residing in urban areas, and the extent of undocumented immigration.

Cantor and Land (1985) conducted a quantitative study of the relationship between unemployment and crime. Other researchers conducted a quantitative study to determine the relationship between various variables and crime using regression models to compare variables to online criminal activity (Holt et al., 2012). The methodology for my study was similar to the methodology used by Holt et al. (2012).

Transition and Summary

In Section 1 of the study, I provided an overview of the study. I defined the purpose of the research as an investigation between (a) identity theft and international immigration and (b) identity theft and unemployment. I outlined the academic and professional research in the field of identity theft, including causes of identity theft, criminal statistics, laws and regulations passed to address identity theft, and the research links between the independent and dependent variables in this study.

In Section 2, I will provide a background of research methodologies and designs as they relate to my research. In this section, I will also outline the population, sampling, and the role of the researcher. I will conclude Section 2 with a discussion of my data analysis techniques and a review of how I validated the study results.

Section 2: The Project

The purpose of this nonexperimental quantitative research study was to determine the extent of the relationship between international immigration and identity theft and unemployment and identity theft. To test the research hypotheses, I used secondary data archived by governmental agencies including the FTC, the U.S. Department of Labor, the U.S. BLS, and the U.S. Census Bureau. I conducted a statistical analysis to determine if a relationship existed between the variables.

Purpose Statement

The purpose of this quantitative nonexperimental correlational study was to determine the relationship between external risk factors, including state-specific amount of international immigration and the state unemployment rate, with reported incidents of identity theft. The independent variables in this study were the state-specific number of international immigrants and state-specific unemployment rates. The dependent variable in this study was the number of state-specific reported instances of identity theft.

The state-specific international immigration rates and state-specific unemployment rates were both expressed as a percentage of the state's population. The state-specific reported instances are reported as instances per 100,000 members of the states population. The study population consisted of data from 2009 to 2014 from all 50 states. Data for the year 2014 were the latest published at the time I conducted the data collection; therefore, it was a necessary limitation in the study.

I segrated the data by state and included the state population as a controlling variable. This prevented the data from larger states from skewing the results. The results

of this study may assist businesses in identifying risk factors of identity theft which will help determine where additional internal controls might be necessary. In addition, the study results may contribute to positive social change by identifying risk factors for identity theft, which could lead to lower costs of operation for businesses and lower prices for consumers.

Role of the Researcher

My role as the researcher in this study was to develop a research question, collect data, and analyze and interpret results (Szyjka, 2012). I collected the secondary data for this study from reports produced by agencies of the U.S. government. My professional background includes extensive knowledge about forensic accounting, auditing, fraud, and identity theft; I lecture throughout the country on these topics. I have also published books and articles on identity theft, forensic accounting, and fraud.

A researcher's past experiences could introduce researcher bias in data collection (Chapman & Schwartz, 2012). However, because I used secondary data, I had no contact with the individuals whose information was collected, thus minimizing the bias that could be present in a study of this type. Additionally, since I only used secondary data, there was no risk of violating ethical principles for research on human subjects as defined in The Belmont Report (National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research, 1978). Research with no participants has limited data collection ethical risks (Mertens, 2014).

Participants

This study did not include any participants, as the government had already collected the data. Irwin (2013) defined this type of data as secondary data. Irwin indicated it is appropriate, acceptable, and ethical to use secondary data in research.

Primary data refer to data collected for a specific research purpose, but when data were previously collected and subsequently used in research the data set is secondary (Emanuelson & Egenvall, 2014). Because data I used for my study were not collected specifically for this study, they are considered secondary data. The advantages of using secondary data are the fact that they are readily available and that the use of secondary data can reduce researcher bias in a study (Emanuelson & Egenvall, 2014). Rabinovich and Cheon (2011) indicated the value of using secondary data is that it is often held in large volumes, does not take a considerable amount of time and means to collect, and due to its prior collection, remains separate from the chief aim of the study where it is employed. Secondary data sources are an efficient and convenient way for researchers to obtain data and provide a valid alternative to fieldwork (Clary & Kestens, 2013).

One of the benefits of conducting research on secondary data is that they are available for a later analysis and comparison. Additionally, subsequent researchers can replicate the results of this research by using the same secondary data (Irwin, 2013). The use of secondary data reduces the risk of researcher bias in the data collection process. There are critics who suggest the use of secondary data violates individual's privacy rights since they did not consent to the use of the information (Zottnick, 2015).

Research Method and Design Method

Research Method

The purpose of this study was to determine the extent of a relationship between (a) international immigration, (b) unemployment, and (c) reported incidents of identity theft. A quantitative methodology was appropriate for this study because the focus of my research was the relationship between variables measured with numeric data. Quantitative research is theory driven, and the variables can be measured (Barnham, 2015). Quantitative researchers aim to classify features by counting them and constructing statistical models (McCusker & Gunaydin, 2015). All of the variables identified for this research could be measured in terms of the frequency of their occurrence; therefore, the quantitative method became the appropriate research method for this study.

There are several types of quantitative research, which can be divided into three broad categories: experimental, quasiexperimental, and nonexperimental (Barnham, 2015). Experimental designs usually involve the manipulation of one or more variables in the study (Quick & Hall, 2015). Researchers using nonexperimental designs, like this study, use data that were collected previously for other purposes. I used data previously collected by the U.S. FTC to document cases of identity theft, the data collected by the U.S. Department of Labor on unemployment statistics, and the data collected by the U.S. Census Bureau on population numbers, which are collected to fulfill the requirements set forth in the U.S. Constitution.

Both qualitative and mixed methods research methods were inappropriate for this study. Qualitative research methods analyze data such as words, phrases, or sentences to arrive at conclusions (Barnham, 2015). Since I only used numerical data and did not analyze words, phrases, or sentences, I rejected the use of both the qualitative and mixed methods research methods. Qualitative research relates to social life and relies more on words than on numbers (McCusker & Gunaydin, 2015).

Mixed methods research combines qualities of both quantitative and qualitative research methods (Johnson, 2015). I did not use any of the qualitative tools to collect data for this research project, and since the data used in this research project are strictly numeric, a qualitative research design would be inappropriate for this study. Since mixed methods research combines aspects of both quantitative research and qualitative research, and secondary data already existed that were appropriate to address the problem under study, the mixed methods design was not appropriate for this study.

Research Design

A nonexperimental research design formed the basis of this research study. An experimental design would not have been appropriate, as no variables were being manipulated (Quick & Hall, 2015). A nonexperimental research design was appropriate because only secondary data were analyzed in the study.

Although weaknesses are recognized in nonexperimental research methods, they are a dominate design in research studies in crime and justice (Braga & Weisburd, 2014). A nonexperimental, quantitative research design known as the descriptive comparative design was used for this study. I selected this design because a descriptive comparative

design does not allow random assignments to groups and does not allow for manipulation of the independent variables (Cantrell, 2011).

I used a regression analysis and correlational analysis to analyze the data. The multivariate regression and multivariable regression are the two types of regression models that are most commonly used in academic research. The multivariable model is appropriate when there are multiple independent variables and when there are two or more dependent variables (Hidalgo & Goodman, 2013). Although I used descriptive statistics, I did not base my hypotheses testing on the descriptive statistics.

Statistical research studies are appropriate approaches to quantitative research (Landrum & Garza, 2015). I determined the correlational statistical treatment to be appropriate for this study because it is designed to determine if a relationship exists between two or more variables (Campbell & Stanley, 1963b). In a correlational study, the credibility of the hypothesis is strengthened if a high correlation occurs; conversely, the credibility of the hypothesis is minimized if a lower correlation occurs (Campbell & Stanley, 1963a).

A correlational analysis allowed me to determine the extent of the relationship between the two independent variables and a dependent variable. Because there were more than 2 variables I also used a regression analysis. I selected a period of 6 years to center on the time period following the U.S. economic collapse in 2008 and the last year for which government data had been published at the time of my data collection, which was 2014.

I created a database for the dependent variable of identity theft, as reported for each state for the years 2009 to 2014. The data retrieved for the independent variables were maintained in separate data files. I then analyzed the data using PASW Statistics GradPack Base for Windows, which was formally referred to as SSPS, and is published and licensed by SSPS, Inc. To test the hypotheses, I conducted a separate linear regression analysis for each year: 2009, 2010, 2011, 2012, 2013, and 2014. To further validate the results, I used a correlation analysis to compare each of the independent variables to the dependent variable. I calculated a *p*-value for each year studied to assist in testing the hypothesis.

Population and Sampling

The population for this study was data from all 50 U.S. states. It is important to have an appropriate sample size to determine if there is a relationship between the independent and dependent variables (Durand, 2013; Landau & Stahl, 2013). Through a census sampling technique, which is a nonprobability sampling methodology, I evaluated the data. The census sampling technique allowed me to examine a complete population of data rather than just a random subset (Daniel, 2012). Probability sampling is another appropriate method for selecting samples for research. There are several methods of selecting probability samples including convenience sampling, snowball sampling, and random sampling. Probability sampling gives all elements of the population a known probability of being selected (Daniel, 2012). Census sampling is a type of nonprobability sampling that does not give some elements of the population a chance of being selected (Daniel, 2012).

The use of samples smaller than the population size creates a risk of error in the analysis (Zhu, Barnes-Farrell, & Dalal, 2015). The U.S. Census numbers used in this study are considered to be the most accurate reliable count of the U.S. population and the demographics that make up the population of the country and are routinely used by the government, businesses, and academic researchers. Information on the accuracy of the data in the U.S. Census, as well as the sample design and estimation methodology used, is documented in the Census Bureau's report titled, *American Community Survey Accuracy of the Data (2010)* (U.S. Census Bureau, 2011).

The U.S. Department of Labor's BLS is the principle fact-finding agency for the U.S. government, including data on unemployment. The BLS's data collection includes sample surveys, administrative data, and modeling. The bureau uses a 90% confidence level to determine the estimates (BLS, 2014).

Data for identity theft originated from reports published by the FTC in its annual Consumer Sentinel Network Data Book. The data included the actual number of unverified reports of identity theft filed with the FTC (2014). The data did not come from any survey instruments.

I used a census rather than a random sample. A census is not subject to the random sampling error because a there is no sample (Daniel, 2012). Since this study consisted of a population of 50 participants (i.e., states), it was cost effective to use a census because of the small size of the population. In a study with a small population, a census is preferred over random sampling because it helps to reduce random sampling errors and systematic errors (Daniel, 2012).

Ethical Research

Researchers using previously gathered secondary data have no direct contact with individual participants (Taljaard et al., 2013). By using previously gathered data, I did not use human participants directly and did not require confidentiality agreements or consent forms. I relied on ethical standards established by the U.S. Census Bureau, the U.S. Department of Labor, and the FTC in collecting the original data.

According to the utilitarianism belief system, an act is morally right if the benefits exceed the costs (Freiman, 2013). Utilitarians consider the intent of the individual acting based on moral responsibility (Gray & Schein, 2012). Based on utilitarianism, no additional harm comes to original participants by researchers who use data available in the public domain. Therefore, since the knowledge gained by conducting this study could benefit society as a whole, this study stands on a firm ethical foundation. All collected data will remain on a portable drive kept in a locked office. In line with Walden University's doctoral study requirements and as recommended by Skulason, Hauksdottir, Ahcic, and Helgason (2014), I will destroy the data 5 years after the conclusion of this study.

Data Collection

Instruments

Researchers sometimes use instruments such as surveys, interviews, and experiments to collect data for research (Birley & Moreland, 2014). I did not use a data collection instrument in this research, but instead relied on secondary data collected by others. The use of secondary data in research can help to avoid bias on the part of the

researcher because data collection occurred separate from the development of the

research question (Abu-Shanab & Harb, 2013). The secondary data come from data

previously collected by the U.S. government.

The FTC's Consumer Sentinel Network collects the data on identity theft. The

data collected on identity theft come from consumer complaints filed with the FTC

(2014). Recipients of these data include the FTC, the National Association of Attorneys

General, the U.S. Postal Inspection Service, the Better Business Bureau, the Federal

Bureau of Investigation, the Internet Crime Complaint Center, the National Consumers

League, the Social Security Administration, and the U.S. Secret Service. The FTC also

receives direct reports from identity theft victims via the Identity Theft Report victims

file with the FTC (FTC, 2014).

The FTC does not conduct surveys of consumers (FTC, 2014). The data are

contained in the Consumer Sentinel Network, which is a database of millions of

consumer complaints available to law enforcement agencies (FTC, 2014). The network

archives data on an annual basis. The U.S. Department of Labor collects and archives

unemployment data. The agency collects sample surveys data and uses modeling with a

90% confidence level related to the unemployment estimates (BLS, 2014).

The BLS collects data on an ongoing basis and publishes employment statistics on

a monthly and annual basis. The data collected on international immigration came from

data previously obtained by the U.S. Census Bureau. Information on the accuracy of the

data in the U.S. Census, as well as the sample design and estimation methodology used,

is documented in the Census Bureau's report titled, *American Community Survey*

Accuracy of the Data (2010) (U.S. Census Bureau, 2011). The Census Bureau conducts a full census every 10 years and publishes population estimates on an annual basis. All secondary data used in this study were annual numbers.

Government agencies collected and archived all data necessary for this study, thus I did not use any additional data collection instruments for this study. I retrieved archival data on a state-by-state basis, which included 50 separate data sets. The analysis of 50 separate data sets provided data on the entire population for analysis.

It is possible that some data are missing, since it would be impracticable to retrieve any missing data; this is a limitation of the study. It is also possible that there are errors in the data, which would also be impracticable to correct; therefore, data errors are a limitation of the study. In order to increase the validity of the data collection, I created Adobe PDF documents to reduce the risk that data might be accidently changed.

Data Collection Technique

The U.S. Government has archived the data that I used for this study. I did not use any additional data. I only used secondary data to answer my research question. Secondary data are less subject to bias and ambiguity because the data collectors are separate from the researcher and the researchers' goals and preconceptions cannot skew the data collected (Rabinovich & Cheon, 2011). Although primary data are always preferred, secondary data are appropriate for use in large studies (Fleischhacker, Evenson, Sharkey, Pitts, & Rodriguez, 2013).

Alvarez, Canduela, and Raeside (2012) recommended the use of secondary data collected by official surveys. The use of existing data sets is an economical and cost

effective way to obtain data for a study (Greenhoot & Dowsett, 2012). According to Irwin (2013), it is appropriate to use secondary data in research.

There are four basic steps to take when using secondary data. The first step is to identify the secondary data that is appropriate for the study in question. The second step is to create a personalized dataset. The third step is to identify the variables needed for the study. The fourth and final step is to determine the appropriate statistical methodology with which to analyze the secondary data (Greenhoot & Dowsett, 2012).

Before a researcher draws conclusions from the secondary data, it is necessary to consider the completeness, accuracy, timeliness, consistency of measurement, accessibility, format, and linkage with other data sources (Shamblen & Dwivedi, 2010). The U.S. Census Bureau designed the forms used to collect data for the United States Census. The U.S. BLS designed the forms used to collect employment statistics in the United States. The FTC designed the forms used to collect identity theft statistics.

I used data previously collected and published in annual reports by the FTC in its annual Consumer Sentinel Network Data Books for my dependent variable. The U.S. Census Bureau collects annual state populations, including immigration statistics. The federal government uses the population estimates for statistical purposes, including the allocation of federal funding. I used these data as a basis for my independent variable of immigration. The U.S. BLS collected and published unemployment data, which forms the basis for my independent variable of state-specific unemployment.

Data Analysis

The data in this study were analyzed in order to answer the three RQs:

RQ1: To what extent, if any, does state-specific international immigration relate to instances of identity theft?

RQ2: To what extent, if any, does the state-specific unemployment rate relate to instances of identity theft?

RQ3: To what extent, if any, does the combination of state-specific international immigration and the state-specific unemployment rate relate to instances of identity theft?

I converted the raw data from the government reports into Excel spreadsheets to allow copying into statistical software for analysis. Once I copied the data, I checked for accuracy against the original documents. I created Adobe PDF copies of the data from the government websites to maintain in my records to help validate the accuracy of the data I copied into the spreadsheets and statistical software. I analyzed the secondary data based solely on the data collected by the original sources without any modifications to the data. Prior to any data collection or analysis, I worked with the Walden University's Institutional Review Board (IRB) received approval for this study and complied with all of the IRB's guidelines and requirements. My IRB approval number was 07-25-16-0153554.

I initially collected and organized secondary data on a state-by-state basis. Irwin (2013) indicated that it is appropriate to use secondary data in academic research. Once I collected the data and performed tests of assumptions, conducted hypothesis testing. Researchers use the Pearson's correlation to measure the strength of the association between a single independent variable and a single dependent variable (Metzger et al.,

2013). Researchers use multiple regression analysis to determine the relationship between three or more variables (Nathans, Oswald, & Nimon, 2012).

Multiple regression helps a researcher determine if there is a relationship between multiple independent variables and one or more dependent variables (Agudo-Peregrina, Iglesias-Pradas, Conde-González, & Hernández-García, 2014; Chong, 2013). There are a number of statistical models that available when comparing multiple variables including logistic regression, factorial ANOVA, and discriminant analysis (Allison, 1977). When the variables are categorical, the researcher must factorial ANOVA or logistic regression (Bernard, 2013). I used a multiple regression analysis to determine what, if any, relationship existed between the independent variables and the dependent variable.

One method of testing a hypothesis is to calculate the p-value and compare it to an alpha level. The researcher compares the p-value to the alpha value to determine if the values are statistically significant (Gibbons & Pratt, 1975). For this study, I selected an alpha of .05. Gardner and Altman (1986) indicated that an over emphasis on p-values has shifted academic studies away from basic results towards an over reliance of hypothesis testing. I calculated the p-value to determine if there is a relationship between the variables as indicated in the following hypothesis:

$H_0 1$: There is no significant statistical relationship between state-specific international immigration and instances of identity theft.

$H_a 1$: There is a significant statistical relationship between state-specific international immigration and instances of identity theft.

$H_0$2: There is no significant statistical relationship between the state-specific

unemployment rate and instances of identity theft.

H_a2: There is a significant statistical relationship between the state-specific

unemployment rate and instances of identity theft.

$H_0$3: There is no significant statistical relationship between the combination of

state-specific international immigration and state-specific state unemployment

rate and instances of identity theft.

H_a3: There is a significant statistical relationship between the combination of

state-specific international immigration and state-specific state unemployment

rate and instances of identity theft.

A multiple regression analysis using statistical software to determine the extent of

a relationship between the independent variables and the dependent variable formed the

basis of my hypothesis testing. Multiple regression analysis requires making several

assumptions including (a) multicollinearity, (b) sample size, (c) outliers, (d) normality,

(e) homoscedasticity, and (f) independence of residuals (Rovai et al., 2014). Allison

(1977) indicated that with large sample sizes, normality is not an issue.

I used a census sampling strategy which includes the complete population. Thus,

sample size was not an issue for this study. While conducting my inferential testing, the

PASW Statistics output helped me ascertain the assumptions of normality, linearity,

homoscedasticity, independence of error, and multicollinearity. I tested for outliers by

producing a scatterplot to detect outliers.

The statistical software that I used was PASW Statistics GradPack Base for Windows, published and licensed by SSPS, Inc. I used Microsoft Excel spreadsheets to display and analyze the data collected in this study. Both the SSPS and Microsoft office software are off-the-shelf software packages with no alterations or customizations. In line with Walden University's doctoral study requirements, I will destroy the data 5 years after the conclusion of this study.

Study Validity

Researchers have a responsibility to select appropriate data for a study based on the research question and hypothesis (Lobo, Fisher, Peachey, Ploeg, & Akhtar-Danesh, 2015). The data used in this study included archived data previously collected by governmental agencies. Government, business, and academic researchers regularly use this data. The data on unemployment is from the U.S. Department of Labor and the data on international immigration is from the U.S. Census Bureau. Although Iversen, Furstenberg, and Belzer (1999) indicated the existence of errors in the population count, this data set offers the best way to measure changing demographics of the U.S. population.

The data on instances of identity theft came from the FTC, which is the best source of data on identity theft and is the preferred data source used by law enforcement agencies. The information on identity theft comes from reported cases only and that it is probable that some cases of identity theft remain unreported. This lack of information means that the instances of identity theft may exceed the reported figures.

Although the possibility that some level of unreliability exists, it would be impracticable to attempt to achieve 100% reliability for the data being used. It is common and accepted for researchers to use reported crime statistics for research as it is the only data available (Loftin & McDowall, 2010). To help ensure the reliability of the data I included an analysis of the variances in the data, using standard deviation.

Campbell and Stanley (1963a) developed the ideas of external and internal validity in research. Internal validity or credibility relates to the truthfulness of the conclusions (Lee, 2012). Internal validity also refers to the validity that can be inferred based on the relationship between two variables as causal or inferring that a lack of a relationship proves a lack of causality (Zhu et al., 2015).

The instrument design is a common threat to internal validity (Henderson, Kimmelman, Fergusson, Grimshaw, & Hackam, 2013). Measuring the statistical significance is a common method of determining internal validity (Christensen & Carlile, 2009). Changes over time, or maturation is a threat to internal validity (Irvin & Kaplan, 2014).

An example of external validity occurs when study results can be extrapolated to the population from which the study sample was derived (Lee, 2012). Threats to external validity include pretesting, researcher interaction, and interventions (Henderson et al., 2013). When multiple treatments occur, it is possible for generalization to occur (Funderburk, Kenneson, & Maisto, 2014).

Researchers have suggested that there is an inherent trade-off between internal validity and external validity when conducting research. The study data included statistics

originally gathered by the U.S. government. I assumed the instrument the government used to collect the data was valid and used the government data because it was the best available data.

Construct validity includes establishing correct measures of the items being studied (Bulloch, 2013). Because state populations vary widely, I converted the data to a per capita equivalent to increase the construct validity and reduce any bias based on the population size of a state. The FTC presents identity theft data in terms of instances of occurrences per 100,000 persons. This normalizing of the data helped to ensure the validity of the data across all sizes of population.

Transition and Summary

I began Section 1 of this study with an introduction to the problem and description of the study purpose. There was also an explanation of the available research methods and details on why the quantitative correlational design is best for this study. The assumptions conveyed elements of the study that I believed to be true, but unverified.

The limitations of the study detailed influences outside of my control. The delimitations are items that I chose not to include for various reasons. I also provided the significance of this study and its implications for social change in Section 1. In the closing segment of Section 1, I presented a review of the professional and academic literature. The review began with a review of the primary theory as well as alternative theories.

In Section 2, I discussed the research methodologies and the specific research design. I presented a discussion of the population and data gathering and analysis

techniques. Also discussed in Section 2 were the validity, reliability, and ethical viability of the research.

In Section 3, I will present the findings from the research study, including how it can apply to businesses. The findings will also include an analysis of data. Finally, I will conclude the study by providing a summary of recommendations for future research.

Section 3: Application to Professional Practice and Implications for Change

Overview of the Study

The purpose of this quantitative correlational study was to determine if there was a relationship between identity theft and international immigration, between identity theft and unemployment, or between identity theft and a combination of international immigration and unemployment. I gathered secondary data from all 50 states for the years 2009 to 2014. I selected 2009 as the starting point because it was the first year after the economic collapse in 2008. The final year of the study, 2014, was the most recent year with available data.

An analysis of the data indicated there was a significant statistical relationship between unemployment and identity theft, between international immigration and identity theft, and between the combination of unemployment and international immigration and identity theft. The results of the study indicate that both unemployment and international immigration are risk factors for identity theft. The identification of risks is the first step in developing good internal controls to prevent or detect fraud in an organization.

Presentation of Findings

This study was about understanding risk factors related to fraud, and more specifically, the risk factors associated with identity theft. I based this study on Cressey's (1952) fraud triangle theory. According to Cressey, three things are necessary for occupational fraud to occur: (a) pressure, or needs; (b) rationalization; and (c) opportunity. Cressey postulated that external financial pressures drive individuals to commit what were referred to as crimes of trust, or fraud. In order to commit the crimes,

the criminals rationalized their behavior. Victims also need to provide criminals with the opportunity to commit the criminal act (Cressey, 1952). The independent variables in my doctoral study are examples of the first point of the fraud triangle: pressure or need. Both independent variables of unemployment and immigration represent factors that increase economic need (Xenakis & Cheliotis, 2013).

In this study, I addressed three RQs to determine what, if any, relationship existed between identity theft and international immigration and identity theft and unemployment. The RQs were the following:

RQ1: To what extent, if any, does state-specific international immigration relate to instances of identity theft?

RQ2: To what extent, if any, does the state-specific unemployment rate relate to instances of identity theft?

RQ3: To what extent, if any, does the combination of state-specific international immigration and the state-specific unemployment rate relate to instances of identity theft?

The independent variables of the study were state-specific international immigration and state-specific unemployment. The dependent variable was state-specific instances of identity theft. The state-specific international immigration rates and state-specific unemployment rates were both expressed as a percentage of the state's population. The state-specific reported instances were reported as instances per 100,000 members of the state's population.

Hedayati (2012) indicated there was a link between international immigration and idrntity theft. Patten (2012) stated international immigrants committed document fraud, whereby they created false identity documents, which is a type of identity theft. Smith (2013) linked gang crimes, including identity theft, to unemployment. Chang & Wu's (2012) study showed a relationship between unemployment rates and overall crime rates. Fallahi, Pourtaghi, and Rodriguez (2012) conducted a quantitative study on how unemployment volatility is related to criminal activity. My findings supported these links between identity theft and international immigration and between identity theft and unemployment.

Tests of Assumptions

Prior to testing the assumptions and after compiling the data into an Excel spreadsheet, I reviewed the files for missing or incorrect data by comparing my spreadsheets to the original data published by the government to verify the completeness and accuracy. The data for instances were expressed as reported instances of identity theft per 100,000 members of the state's population as reported by the FTC. The data for unemployment were expressed as a percentage as reported by the Department of Labor. I converted international immigration data to a percentage by dividing the number of international immigrants in a state as reported by the Census Bureau by the total population of the state as reported by the Census Bureau.

Prior to completing hypothesis testing, a researcher must test data assumptions including (a) multicollinearity, (b) sample size, (c) outliers, (d) normality, (e) homoscedasticity, and (f) independence of residuals (Rovai et al., 2014). Since I used a

census sample, sample size was not an issue for this study. I created scatterplots to compare the variable sets (identity theft and unemployment, identity theft and international immigration, and unemployment and international immigration) for all years included in the study. A visual inspection of the plots (see Figures 1 to 3) indicated some outliers but the number of outliers was not significant.
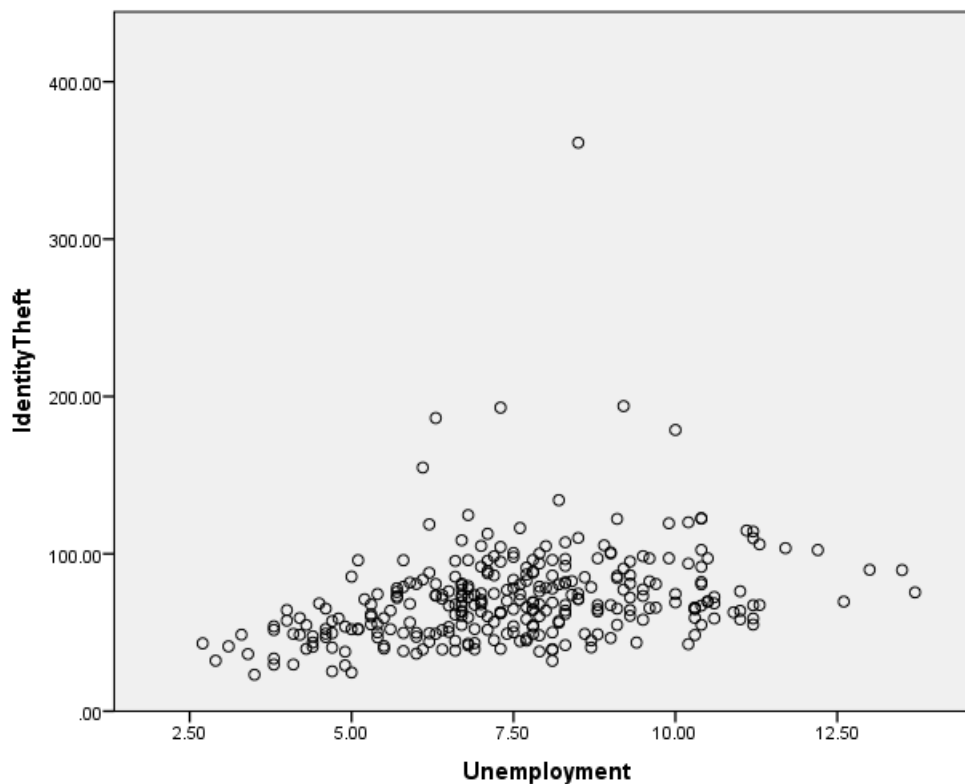
Figure 1. Identity theft and unemployment from 2009 to 2014.
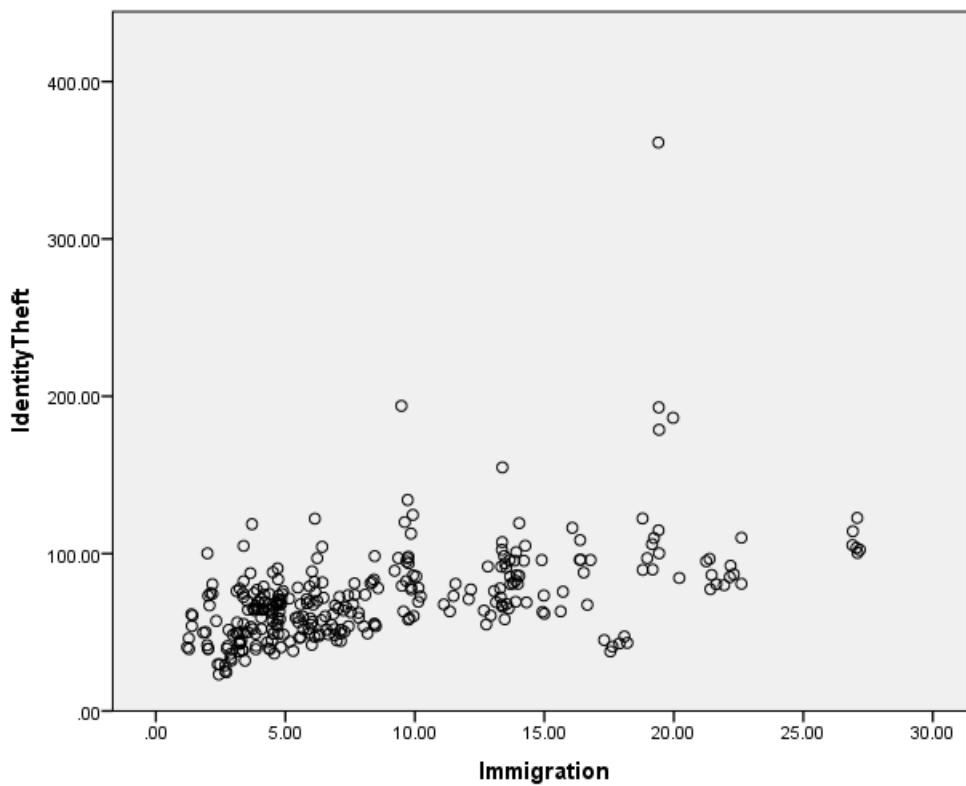
Figure 2. Identity theft and international immigration from 2009 to 2014.
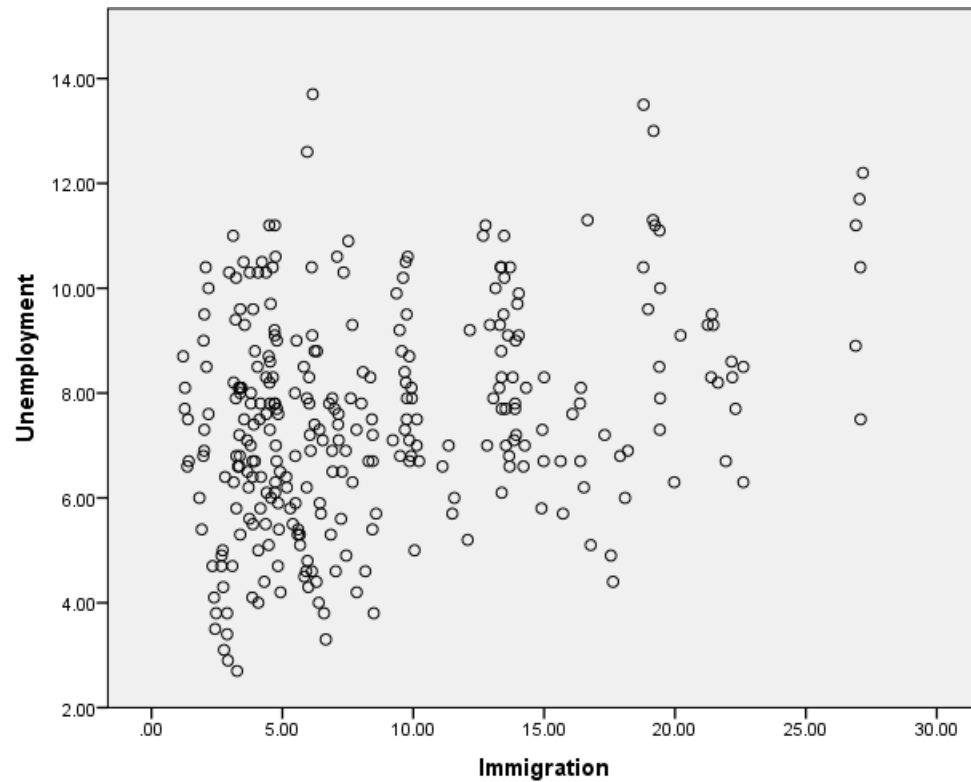
Figure 3. Unemployment and international immigration from 2009 to 2014.

The data for the study consisted of 300 data sets, 50 for each year of the study

from 2009 through 2014. The data for all variables (international immigration,

unemployment, and identity theft) were included in the calculations. There were no

missing data for any of the variables for the 6-year period of the study. Table 1 is a

summary of the descriptive statistics across all years for each of the variables and for

each individual year for all of the variables.

Table 1

*Means (*M*) and Standard Deviations (*SD*) for International Immigration, Unemployment and Identity Theft for 2009 Through 2014*

Variable	*M*	*SD*
2009 through 2014		
Immigration	8.78	6.06
Unemployment	7.53	2.05
Identity Theft	72.7	30.86
2009		
Immigration	8.56	6.1
Unemployment	8.48	1.99
Identity Theft	69.89	23.39
2010		
Immigration	8.7	6.11
Unemployment	8.75	2.06
Identity Theft	62.67	20.35
2011		
Immigration	8.77	6.11
Unemployment	8.12	1.93
Identity Theft	66.89	26.31
2012		
Immigration	8.77	6.13
Unemployment	7.34	1.71
Identity Theft	85.49	48.31
2013		
Immigration	8.85	6.08
Unemployment	6.73	1.54
Identity Theft	69.15	26.61
2014		
Immigration	9.04	6.12
Unemployment	5.74	1.26
Identity Theft	78.33	27.61

Note. $N = 300$ (50 per year)

With a large sample size, the normality assumption is not an issue (Allison, 1999).

However, I did develop probability plots for each of the variables to test this assumption

(Figures 4 to 6). The residual plotting for all of the variables is near the normal line.

Because all residuals are close to the line, I determined there was no reason to believe

that residuals were independent. I did not detect any violations of the normality

assumption and therefore proceeded to test my hypotheses.

Identity Theft
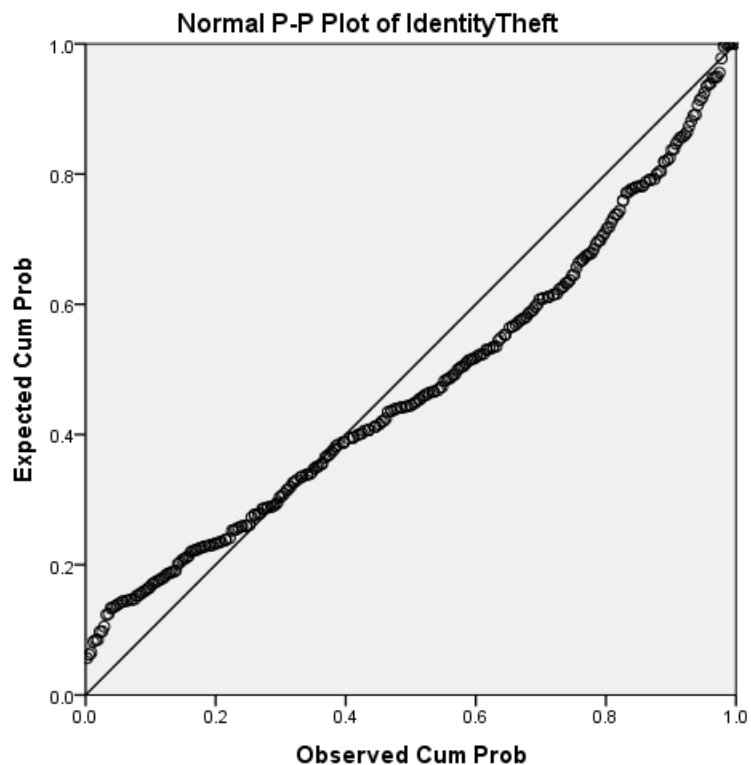
Figure 4. Normal P-P plot of residual standards for identity theft.

Unemployment
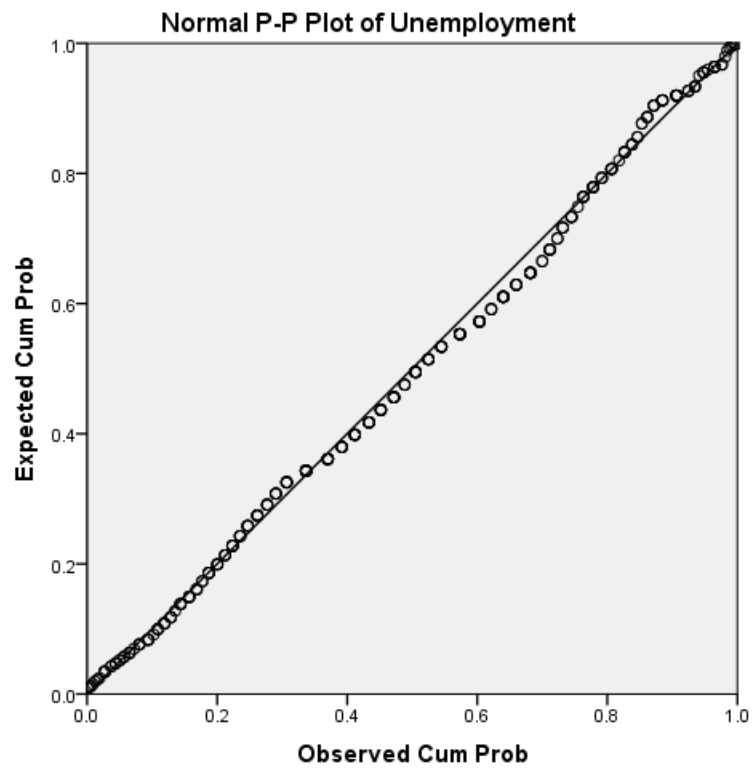
Figure 5. Normal P-P plot of residual standards for unemployment.

Immigration
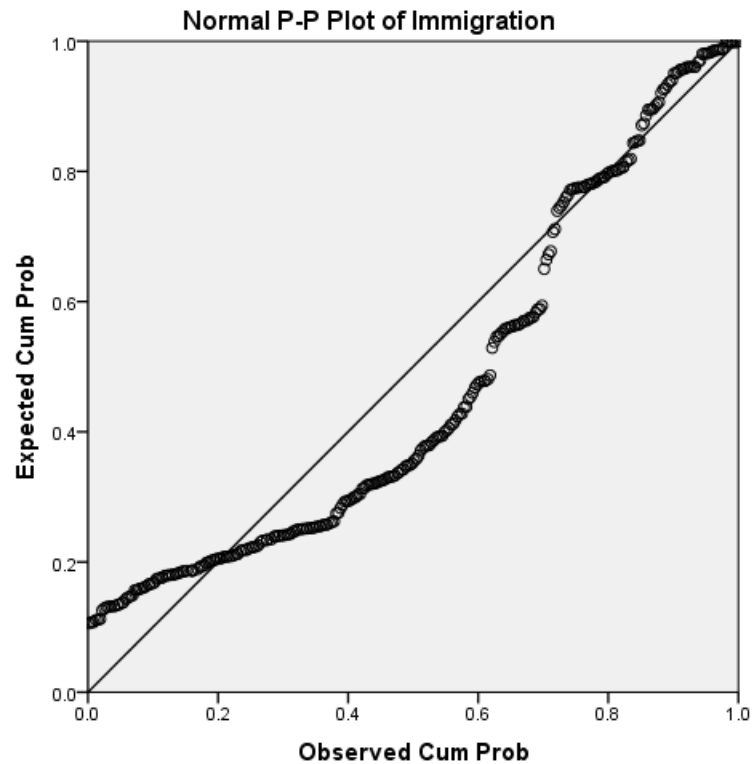
Figure 6. Normal P-P plot of residual standards for international immigration.

Hypotheses Testing RQ 1

The first RQ and hypotheses for this study were:

RQ1: To what extent, if any, does state-specific international immigration relate

to instances of identity theft?

$H_0 1$: There is no significant statistical relationship between state-specific

international immigration and instances of identity theft.

$H_a 1$: There is a significant statistical relationship between state-specific

international immigration and instances of identity theft.

To answer the first RQ, I had to determine if there was a relationship between state-specific international immigration and state-specific instances of identity theft. To consider the possible relationship between state-specific international immigration and state-specific instances of identity theft, I ran a Pearson's correlation analysis for all years from 2009 through 2014 (see Table 2). I also did a Pearson's correlation analysis for each of the years 2009, 2010, 2011, 2012, 2013 and 2014 (see Table 2).

Table 2

Pearson's Correlation for Identity Theft and International Immigration

Year	Pearson's Correlation	p
2009 to 2014	0.51	<0.01
2009	0.69	<0.01
2010	0.68	<0.01
2011	0.61	<0.01
2012	0.45	<0.01
2013	0.54	<0.01
2014	0.45	<0.01

Using Pearson's correlation, the coefficient can range from -1 to 1. A coefficient of 0 indicates there is no relationship between the variables, a coefficient of -1 indicates an inverse relationship and a coefficient of 1 indicates a direct relationship (Emerson, 2015). The results indicated there was a significant statistical relationship between state-specific international immigration and state-specific instances of identity theft. A coefficient of .69, which was high in 2009, indicates a high degree of correlation. The coefficient for the 6 years studied was .51, which indicates a high degree of correlation.

One method of testing a hypothesis is to calculate the *p*-value and compare it to an alpha level. The researcher compares the *p*-value to the alpha value to determine if the

values are statistically significant (Gibbons & Pratt, 1975). For this study, I selected an alpha of 0.05. The p-value for international immigration and identity theft is < 0.01 (see Table 2). The p-value was below the established alpha level of 0.05; therefore, I was able to reject the null hypothesis. The results indicated there was a significant statistical relationship between the state-specific international immigration and state-specific instances of identity theft.

Hypotheses Testing RQ 2

To answer the second RQ, I had to determine if there was a relationship between state-specific unemployment and state-specific instances of identity theft.

RQ2: To what extent, if any, does the state-specific unemployment rate relate to instances of identity theft?

$H_0 2$: There is no significant statistical relationship between the state-specific unemployment rate and instances of identity theft.

$H_a 2$: There is a significant statistical relationship between the state-specific unemployment rate and instances of identity theft.

To consider the possible relationship between state-specific unemployment and state-specific instances of identity theft, I ran a Pearson's correlation analysis for all years from 2009 through 2014 (see Table 3). I also did a Pearson's correlation analysis for each of the years 2009, 2010, 2011, 2012, 2013 and 2014 (see Table 3).

Table 2

Pearson's Correlation for Identity Theft and Unemployment

Year	Pearson's Correlation	p
2009 to 2014	0.32	<0.01
2009	0.46	<0.01
2010	0.59	<0.01
2011	0.57	<0.01
2012	0.44	<0.01
2013	0.53	<0.01
2014	0.55	<0.01

The correlation coefficient for the 6 years studied was .32. The results indicated a relationship between unemployment and identity theft though at a lower level than the relationship between international immigration and identity theft. As previously noted, I selected an alpha of 0.05. The p-value (Table 3) for unemployment and identity theft is < 0.01. The p-value was below the established alpha level of 0.05; therefore, I was able to reject the null hypothesis. The results indicated there was a significant statistical relationship between the state-specific unemployment and state-specific instances of identity theft.

Hypotheses Testing RQ 3

To answer the third RQ, I had to determine if there was a relationship between the combination of state-specific international immigration and state-specific unemployment and state-specific instances of identity theft.

RQ3: To what extent, if any, does the combination of state-specific international immigration and the state-specific unemployment rate relate to instances of identity theft?

$H_0$3: There is no significant statistical relationship between the combination of state-specific international immigration and state-specific unemployment rate and instances of identity theft.

H_a3: There is a significant statistical relationship between the combination of state-specific international immigration and state-specific state unemployment rate and instances of identity theft.

To consider the relationship between the combination of state-specific unemployment and state-specific international immigration and state-specific instances of identity theft, I first ran a Pearson's correlation to determine if state-specific unemployment and state-specific international immigration were correlated with the following results (see Table 4).

Table 4

Pearson's Correlation for International Immigration and Unemployment

Year	Pearson's Correlation	p
2009 to 2014	0.3	<0.01
2009	0.3	<0.01
2010	0.35	<0.01
2011	0.41	<0.01
2012	0.45	<0.01
2013	0.38	<0.01
2014	0.33	<0.01

The correlation coefficient for the 6 years studied was .3. The results indicated a

relationship between unemployment and international immigration. As previously noted,

I selected an alpha of .05. The p-value for international immigration and unemployment

is < 0.01 (see Table 4). The p-value was below the established alpha level of 0.05. The

results indicated there was a significant statistical relationship between the state-specific

unemployment and state-specific international immigration.

I conducted a linear regression analysis to determine if a relationship existed

between the combination of the independent variables, international immigration, and

unemployment, and the dependent variable, identity theft, with the following results.

Table 5

Model Summary: Regression Analysis

R	R^2	Adj R^2	SE of the Estimate
.538	.290	.285	26.09541

Table 6

Analysis of Variance

ANOVA[a]				
Model		df	F	p
1	Regression	2	60.61	$>.01$[b]
	Residual	297		
	Total	299		

a. Dependent Variable: Identity Theft

b. Predictors: (Constant), International Immigration, Unemployment

Table 7

Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	p
	B	Std. Error	Beta		
(Constant)	30.94	5.78		5.36	<0.01
International Immigration	2.31	0.26	0.45	8.83	<0.01
Unemployment	2.77	0.74	0.18	3.58	<0.01

I used a standard linear regression model with an $\alpha = 0.05$ (2 tailed) to examine the ability of state-specific international immigration and state-specific unemployment in predicting state-specific instances of identity theft. I conducted a preliminary analysis to determine if the assumptions of multicollinearity, normality, linearity, outliers, homoscedasticity, and independence of residuals. I did not note any violations. The model was able to predict state-specific instances of identity theft, $F(2, 297) = 60.61$, $p < 0.01$, $R^2 = .29$. Based on the R^2 (.29) approximately 29% of the variations in state-specific instances of identity theft are accounted for by the combination of state-specific international immigration and state-specific unemployment. As previously noted I selected an alpha of 0.05. Since the p-value was < 0.01. The p-value was below the established alpha level of 0.05, therefore I was able to reject the null hypothesis. The results of the analysis indicated there was a significant statistical relationship between the combination of state-specific unemployment and state-specific international immigration and state-specific instances of identity theft.

Applications to Professional Practice

Business owners and managers need to be aware of the risks their businesses face. Fraud, including identity theft, is a significant threat to businesses. The COSO

Framework for Internal Controls requires businesses to identify risks and to develop both preventive and detective internal controls to mitigate the identified risks (COSO, 2013). I considered in my study two possible risks that could affect a businesses' vulnerability to becoming a victim of an identity theft fraud. The two risk factors studied were international immigration and unemployment.

The results of my study indicated there was a significant statistical relationship between international immigration and identity theft, between unemployment and identity theft and between the combination of international immigration and unemployment and identity theft. Businesses in geographic areas with high instances of unemployment or international immigration should implement internal controls to help prevent or detect instances of identity theft. Demshock (2016) indicated the IRS could use data analytics to help reduce the instances of tax return identity fraud. Understanding risk factors for identity theft aids in developing appropriate internal controls.

Implications for Social Change

Reducing instances of identity theft can help businesses to reduce costs associated with this type of fraud. Reducing the cost of fraud can increase a business's profits. Businesses with higher profits pay more in taxes and tend to hire and expand more than businesses with lower profits. My study identified two of the risk factors for fraud. By identifying international immigration and unemployment as risk factors for fraud my research provides needed information to business owners and managers. Risk assessment is one of the components of the COSO Framework for Internal Control (COSO, 2013). The first step in conducting a risk assessment is to identify the risks related to the

business. My study identified two risks factors for identity theft. Knowledge of the risk factors for identity theft will allow owners and managers to develop appropriate internal controls to help prevent and detect these risks.

Identity thieves can also victimize individuals. Because my research identified two risk factors for identity theft, individuals living in areas with high unemployment or high international immigration should take steps to protect their personal information. The personal information most often stolen by identity thieves includes an individual's name, Social Security Number, date of birth, address, medical identification numbers, bank account numbers, and other personal information that directly identifies the individual.

The existence of a relationship between factors is not necessarily an indication of causality. My research indicated that instances of identity theft correlate to both unemployment and international immigration. The correlation between identity theft and unemployment and international immigration could be because individuals who are unemployed or are international immigrants commit more instances of identity theft than employed individuals and natives. The correlation between identity theft and unemployment and international immigration could also indicate that the unemployed and international immigrants are more likely to take risks that cause them to be victims of identity theft. I caution the reader of this report not to assume facts that are not in evidence and remember that the risk exists regardless of the cause.

Recommendations for Action

McMahon, Bressler, and Bressler (2016) reported that 44% of small businesses surveyed in 2013 indicated they were victims of data breaches, where perpetrators compromised personal information with an average cost to the business of $9,000. My study identified two risk factors for identity theft. Business owners and managers need to be aware of these risk factors so they can protect their businesses from this type of fraud. It is necessary to publish this information. In addition to publishing my dissertation, I will include the results in the continuing professional education and college courses I teach. I have also contacted several professional associations about presenting the results of my research at professional conferences.

Recommendations for Further Research

As noted above, my research indicated that both unemployment and international immigration relate to instances of identity theft. That could be because individuals who are unemployed or are international immigrants commit more instances of identity theft than employed individuals and natives. It could also indicate that the unemployed and international immigrants are more likely to take risks that cause them to be victims of identity theft. Further research could help to identify if the unemployed and international immigrants are more likely to commit identity theft or to be the victims of identity theft.

Additional research could identify other risk factors for identity theft. Researchers could also determine the best internal controls for businesses to implement to help prevent and detect identity theft. Research on the risk factors for individuals becoming victims of identity theft could provide needed information so individuals can take

appropriate steps to protect themselves. It would also be appropriate to study the costs of identity theft on a business, an individual, and on society as a whole.

Reflections

As a forensic accountant, in addition to conducting fraud investigations, I consult with business owners in developing and implementing appropriate internal controls to detect and prevent fraud. Over the course of the years, I read many news articles blaming the high instances of identity theft on international immigrants. My own investigations on identity theft cases also indicated perpetrators of identity theft were often unemployed. I could not find any studies where researchers had investigated these risk factors for identity theft. I believed it was necessary to determine if a relationship between identity theft and international immigration or a relationship between identity theft and unemployment actually existed. I did not have any preconceived biases on either international immigration or unemployment. A relationship between immigrants to the United States and the unemployed with identity theft does not mean that these groups are the perpetrators of crime. These groups could be the victims.

Since I was able to verify information on two risk factors for identity theft, I can provide this information to business owners and managers. I have incorporated the results of this study into several continuing education courses I teach. When evaluating risks it is always better to rely on data than to rely on assumptions. Unfortunately, in my career, I have seen far too many executives, managers, and business owners rely on assumptions rather than gathering the data necessary to make an informed decision. It is my hope that

sharing the results of my research will allow business owners and managers to make better decisions on the risk factors for fraud in their businesses.

Conclusion

Identity theft is an issue for businesses, individuals, governments, and society as a whole. While not a new crime, it has expanded with the use of technology for conducting transactions and storing information. Because of the risk and associated costs of identity theft, it is necessary for businesses, governmental entities, and individuals to take steps to help prevent the risk of identity theft. My research identified two of the risk factors for identity theft, international immigration, and unemployment. My research indicated there was a correlation between identity theft and international immigration and between identity theft and unemployment. Both state-specific instances of international immigration and state-specific unemployment rates demonstrated a significant and positive relationship with instances of identity theft. Although it is not possible to show causation based on my research, the identification of the risk factors should help business owners and managers implement internal controls to help reduce the risk of identity theft fraud.

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