Practitioners’ Perspectives on Alternatives to the Paper-Based System for Preventing Welfare Fraud

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Federal agencies have begun to devote greater attention to detecting welfare fraud. This dissertation reviews three proposed alternatives to the current Paper-Based system for preventing welfare fraud, namely, the Paper-Based system with Fingerprint Imaging, Electronic Benefits Transfer (EBT), and EBT with Fingerprint Imaging. It also examines the policy implications likely to result from implementation of these various systems.

Practitioners were randomly selected from agency directories and mailed a survey. Information was sought on their socioeconomic background, professional affiliations, and opinions on several welfare fraud detection systems.

Statistically significant differences in their responses resulted from differences in their socioeconomic backgrounds, agency affiliations, and professions. Law enforcement, city and county employees, and noncollege graduates more often preferred the EBT with Fingerprint Imaging system for preventing the most common forms of welfare fraud. EBT administrators, state and federal practitioners, college graduates, and city and county respondents placed their confidence in the technologies of fingerprinting as the most accurate means to identify an individual and opted for combining EBT with Fingerprinting system.

State, federal, and EBT administrators over 40 years of age feared it would be difficult to prevent unauthorized access to welfare recipient fingerprints and to
provide real time data with such a system. There was also concern that use of Personal Identification Numbers would not positively prove who was accessing benefits.

Three major policy concerns were expressed by the respondents about the generally preferred EBT with Fingerprint Imaging System: (1) its excessive cost, (2) the feasibility of limiting access to authorized representatives, and (3) the threat posed by fingerprinting to the constitutional rights of welfare recipients.
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The journey is over and the race has been won. I would like to thank several individuals: Dr. Peter Kobrak, chair of the dissertation committee, whose words of encouragement and countless hours of reviewing materials will be forever appreciated; Dr. Kathleen Reding, for also serving on the committee and providing guidance and direction; Steve Garrard, who agreed to serve on the committee, even though he was too busy to do so; Dr. Jim McComb, for his assistance with the analysis of the data; and my mother, for showing me how important it is to be compassionate.

The person most responsible for the completion of my doctoral degree is not here, at least not physically. My father passed away on July 29, 1999. He was more responsible for the completion of the degree than I was. He has served as my motivation and inspiration. I hope, in some small way, that the completion of this degree is a reflection of the impact he has had on me. Forever he will be in my thoughts.

Timothy Jerome Cole
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CHAPTER I
INTRODUCTION

Statement of the Problem

For many years the Paper-Based system of distributing welfare benefits has been accused of being manipulated by criminals who steal from the poor and defraud the government. The four most common forms of fraud are: (1) duplicate assistance fraud, when individuals use an assumed name and false identification to apply for benefits for which they are already receiving; (2) coupons and checks that are stolen directly from the recipients or from their mailboxes; (3) welfare benefits that are counterfeited; and (4) food stamp trafficking, which is the illegal sale and purchase of food stamps. Oftentimes recipients are attacked for their benefits or just after cashing their welfare check. This many times goes unreported, and thus may not be considered a major crime. It has been suggested that fingerprinting applicants for welfare benefits will deter fraud. The latest technology involves a process called Fingerprint Imaging. Computers are used to scan and digitize fingerprints by automatically creating a spatial geometry or map of the unique ridge patterns of the prints and translating the spatial relationship into a binary code for the computer-searching algorithm.

The Los Angeles Department of Social Services and the New York City Department of Social Services have used the process of identifying individuals who...
have applied for welfare benefits. Both systems have been successful in preventing fraud in the enrollment phase of receiving benefits.

Fingerprint Imaging identifies recipients who are applying for benefits under an assumed name after a database search has been completed. If a national Fingerprint Imaging system is established, it will detect those individuals applying for benefits in two different states. Fingerprint Imaging has proven to have an impact on duplicate assistance fraud (fraud that occurs at the time an individual applies for benefits). However, this system has not been proven to have any impact on the other forms of fraud that occur in the welfare system (stolen benefits, counterfeiting, and food stamp trafficking).

A planned alternative to the Paper-Based system being used by many states is the Electronic Benefits Transfer (EBT) system. The EBT system provides welfare benefits through an Automated Teller Machine (ATM) and a Point of Sale (POS) terminal located in grocery stores. The EBT system can replace the multiple Paper-Based system with a single integrated electronic system that delivers benefits for a full range of federal and state programs. The EBT system has been heavily promoted as an alternative to the more traditional Paper-Based system. “An important planned benefit of converting from paper to electronic delivery is the EBT system’s value in reducing fraud abuse and inefficiency” (EBT Task Force, 1993, p. 16).

Currently, 38 states have implemented EBT pilot projects or are considering implementing a pilot project soon. Unfortunately, not all EBT pilot projects have been successful in preventing fraud. “In Reading, Pennsylvania, a sandwich shop trafficked $200,000 in food stamps before investigators, by using a sting operation, were able to track and identify the illegal activity” (EBT Task Force, 1993, p. 17).
States are investing millions of dollars in EBT systems with the assumption the system will prevent the types of fraud that have occurred repeatedly in the Paper-Based system. However, it appears there is a chance the same forms of fraud that occurred in the Paper-Based system will still take place in the EBT system. It has not been determined that distributing welfare benefits electronically will prevent individuals from applying for benefits they are already receiving. EBT cards can be stolen and, with knowledge of a Personal Identification Number (PIN), an unauthorized individual can have access to benefits for which they are not entitled. EBT cards are similar to credit/debit cards in that they can be counterfeited. Financial institutions have been struggling to combat counterfeiting of credit/debit cards for many years.

Some EBT pilot projects have been vulnerable to food stamp trafficking. Very similar to the Paper-Based system, food benefits are bought and sold illegally between welfare recipients and food store owners and/or employees.

Investigations have resulted in store owners/employees processing the EBT card through a card reader to indicate a purchase was made. The store owner/employee will then pay the welfare recipient $.50 to $.75 on the dollar and then receive full reimbursement from the United States Treasury.

Millions of dollars are lost to fraud and abuse in the welfare system. Federal and state agencies are investing taxpayer dollars in hopes of preventing these welfare crimes that have traditionally occurred. The question facing public agencies is which system will most effectively prevent fraud, if any, and what are the policy implications associated with implementing such a system? A review of all three systems is necessary in order to answer these questions.
Purpose of the Study

The purpose of this research study is to objectively evaluate three alternatives to the welfare Paper-Based system in terms of preventing fraud and to look into what policy implications are involved with implementing an alternative. The three alternatives to the Paper-Based system for this study are: Paper-Based with Fingerprint Imaging, Electronic Benefits Transfer (EBT), and EBT with Fingerprint Imaging. The research concentrates on identifying each system’s capacity to prevent the four most common forms of fraud, determine if one alternative can prevent all fraud, determine if one alternative can provide fraud prevention benefits, identify technologies that will and will not prevent fraud, and examine potential policy implications for the alternatives. The four most common forms of fraud are duplicate assistance fraud, counterfeiting, stolen benefits, and food stamp trafficking. These crimes have traditionally occurred in the welfare system. The alternative systems are judged in terms of preventing each common form of fraud. For example, the Paper-Based system used in association with Fingerprint Imaging will be evaluated on its ability to prevent duplicate assistance fraud. A survey seeking nominal, ordinal data and policy implications was sent to individuals across the country who are directly involved in welfare fraud to identify their perceptions of the effectiveness of the alternative delivery and identification systems. Comparisons are made based social and demographic characteristics that are found to be significantly different when compared. These respondents either investigate welfare fraud, administer welfare programs in which fraud is committed, or are responsible for delivering benefits to the rightful recipient. The social and demographic characteristics that utilized in this
study are profession, employer, employer's involvement with EBT or Fingerprint Imaging, age, educational levels, gender, race, and years of experience.

Recommendations are made based on the data collected as to which particular system best prevents fraud (if any), changes to the welfare system that are necessary to prevent all fraud, benefits produced as a result of preventing fraud, and technologies that will and will not prevent fraud.

It is the intent of this research project to offer direction and guidance, mainly to the state of Michigan, but also to other state and federal agencies in choosing a welfare distribution system that best prevents fraud.

**Significance of the Study**

"To paraphrase the late economist Ernst Shumacker, the smart person solves problems, the genius avoids them. Preventing crime is easier and cheaper than treating it" (Osborne & Gaebler, 1992, p. 223).

This study will provide information from individuals involved in law enforcement, welfare benefit administration, and EBT administration that will assist state and federal governments in choosing an effective system to prevent fraud from occurring in welfare programs or in determining that none of the alternatives will prevent fraud. According to Killerane (1996), 10% of all welfare benefits ($2.2 billion) is lost to fraud in the Paper-Based system (p. 1327). To combat such crimes, state and federal governments are investing millions and millions of dollars in Electronic Benefits Transfer (EBT) and Fingerprint Imaging systems. As a result of these new methods to identify individuals and distribute benefits electronically, high expectations are being placed on government officials to do a better job of preventing welfare fraud. This study will examine the perspectives of individuals regarding
whether EBT or Fingerprint Imaging alone will prevent fraud in the welfare system, whether it is necessary to combine the two systems, or whether no current alternative is available that will prevent fraud. This study will also review potential policy implications for the three alternatives. This study is significant since no state has combined both EBT with a Fingerprint Imaging system. Thus, no data exist that would demonstrate the potential of EBT with Fingerprint Imaging as an alternative to the Paper-Based system. Perspectives were gathered from professionals in law enforcement, EBT administration, and welfare benefit administration on the three alternatives to the Paper-Based system: Paper-Based with Fingerprint Imaging, EBT, and EBT with Fingerprint Imaging. All of these respondents are directly involved with the prevention of welfare fraud. Each one of these respondents offers a unique perspective on fraud prevention. For example, law enforcement professionals provide a crime prevention view; welfare benefits administrators, a welfare system’s position; and EBT administration, an electronic delivery perspective. City and county respondents provide a perspective of being directly involved with a distribution system. State and federal respondents offer an administrative delivery distribution perspective.

There have been very few EBT pilot projects reviewed whose primary focus was fraud prevention. The evaluations that have been completed have left many questions unanswered. As Robert Robinson (1994), Secretary of the United States Department of Agriculture, points out:

We believe that EBT could reduce fraud and abuse in the Food Stamp program, particularly fraud from mail theft. However, it does not appear that EBT would have a major impact on reducing fraud and abuse at the time recipients apply for food stamps. Furthermore, while EBT has the potential to reduce the sale or trading of food stamps, the amount of reduction that would result from using EBT is unclear at this time. (p. 1)
Unfortunately, not being able to prevent fraud can cost the taxpayers in terms of dollars lost to fraud and moneys spent to investigate. "States spent $83 million in conducting recipient anti-fraud investigations in 1992" (Robinson, 1994, p. 5). It is important for research to examine if the three alternatives (Paper-Based with Fingerprint Imaging, EBT, and EBT with Fingerprint Imaging) are a means to prevent fraud.

Fingerprint Imaging has been successful in identifying those individuals who are applying for state assistance under an assumed name. However, Fingerprint Imaging's impact on the other forms of fraud has not been clearly identified. For example, what impact will Fingerprint Imaging have on counterfeiting, on stolen benefits being used by unauthorized individuals, or food stamp trafficking? Data need to be gathered to choose a system that will decrease crimes committed against the poor and the government units trying to provide for them. Federal and state agencies are pursuing different directions in their fraud prevention measures. There needs to be one alternative offered to states that will prevent fraud from occurring and that will positively identify those truly in need.

Summary of Chapter I

Estimates are that 10% of all welfare benefits are lost to fraud and abuse. Clearly, issues exist that must be resolved before states invest additional moneys in welfare benefit systems with the assumption that all forms of fraud will be prevented. Many of these issues involve problems implementing a new system and what program outcomes will result. Research needs to be completed on alternatives to the Paper-Based system. Each alternative must be examined in order to critique preventive measures and pinpoint vulnerabilities within the systems. At this time, the only
method that exists to compare the Paper-Based system with Fingerprint Imaging, to Electronic Benefits Transfer (EBT), to EBT with Fingerprint Imaging is to gather perspectives of those who have been professionally responsible for combating the fraud problem in the welfare system.

Overview of the Chapters

This research is organized into seven chapters. Included in Chapter I are an introduction, a statement of the problem, and the purpose of the study.

The next chapter, Chapter II, will provide background information about the three systems that are being reviewed: the Paper-Based system with Fingerprint Imaging, Electronic Benefits Transfer, and Electronic Benefits Transfer with Fingerprint Imaging. Information will be provided about the application distribution and the use of benefits for each system. Chapter III provides a review of current literature that is relevant to the research question, methodology, instrumentation, and statistical analysis. Chapter IV presents the conceptual framework, which explores the three models of the study.

Chapter V consists of the methodology, with descriptions of the research design, sample population, instrumentation, data collection procedures, and procedures for the statistical analysis. Data analysis and research findings are presented in Chapter VI, and the summary, conclusions, and recommendations are in Chapter VII.

The next chapter of the study will provide background information of the application, processing, and distribution of welfare benefits.
CHAPTER II

BACKGROUND INFORMATION

Introduction

The following information provides a description of the application, distribution, and use of welfare benefits for the Paper-Based, Paper-Based with Fingerprint Imaging, Electronic Benefits Transfer, and Electronic Benefits Transfer with Fingerprint Imaging systems. These forms of state assistance will be reviewed: Aid to Families of Dependent Children (AFDC), or also known as Temporary Assistance to Needy Families; Medicaid (MA); and Food Stamps (FS). The process to apply for welfare benefits differs slightly from state to state. However, ADC, MA, and FS are all federally funded programs; thus, states must meet the same criteria during the application process. The State of Michigan’s application process will be reviewed for the Paper-Based system. The source of this information will be the Michigan Family Independence Agency’s Program Administrative Manual (1994).

Paper-Based System

Application Process

An individual may up pick up an application for AFDC benefits at the local county social services office. On the same day a person comes to the local office, he or she has the right to fill an application and receive local office help to provide the minimum information for filing. For individuals who cannot come to the local county
office, they may request an application via telephone or letter to receive AFDC benefits. A social service worker must reply by phone call or letter within 5 days. Once the application is completed, an interview is scheduled for the applicant.

The interview's purpose is to explain the social service's program requirements to the applicant and determine eligibility. The interview is an official and confidential discussion. Its scope must be limited to circumstances directly related to determining the group's (mother, father, and children) eligibility and benefits. Another purpose of the interview is to offer information on programs and services available through social services and other programs. In Michigan, the social service worker is responsible for the following during the interview: state the client's rights and responsibilities, review and update the application, resolve any unclear or inconsistent information, request any needed information not brought to the interview, advise the client on agency standard operating procedures, and provide information on other social service programs and make referrals if needed.

A member of the group must be designated as a grantee for the purpose of case identification and benefit issuance. Normally, the group picks the grantee. The social services worker may designate a member if policy prohibits the group's choice from acting as the grantee, or if the group fails to designate a grantee or disagrees about who it should be.

The grantee must be considered a resident. A person is a resident if he or she is not receiving assistance from another state, is living in the state where the benefits are issued, except for a temporary absence, at the time of application, and intends to remain in the state permanently or indefinitely.

To be eligible for AFDC benefits, a group must be in financial need. In Michigan, financial need exists when the group's monthly income is less than its
monthly need requirements based on assistance standards. Also, the group's assets cannot exceed the asset limit to qualify for AFDC. In Michigan, the following are considered assets: cash and deposits in banks and warrants; lump sum payments such as lottery winnings and inheritance; trusts, promissory notes, and accounts receivable; uncashed checks, draft deposits in savings and loans and credit unions; stocks, bonds, and securities; money in pension plans; income tax returns; real property, mortgages and loan contracts; vehicles, boats, tools, and machinery.

Another factor in determining the grant amount is countable income. In Michigan the amount of the grant is determined by subtracting countable income from the appropriate assistance standard to determine benefits. The following is considered countable income: adoption subsidies, disability benefits, child support, spousal support, rental income, Supplemental Social Security Income, veterans' payments, unemployment payments, earnings from income, strike pay, and military allotments.

Under the Paper-Based system, grantees are mailed AFDC checks usually twice monthly. The checks are mailed to the grantee's last known address. Grantees are responsible for cashing AFDC checks at a local financial institution or check cashing center.

Regarding application for food stamps in Michigan, food stamps can be issued to an individual or to a group (mother, father, and children). An application may be made in person, by letter, or by phone call. For food stamp eligibility, the social service worker must determine the following: who lives together; of those living together, who purchases and prepares food; and the relationship of the people living together.
In Michigan, generally persons who live together and purchase and prepare food together are members of the same food stamp group. An example is a family of four: husband, wife, and two children are members of the same food stamp group. A recipient of food stamps is a grantee of public assistance. A grantee can have residence while living in Michigan for any purposes other than a vacation, even if the grantee has no intent to remain in the state permanently or indefinitely. Lack of a permanent dwelling or a fixed mailing address does not affect a person’s state residence status. If the grantee has no permanent address, food stamps can be picked up at the local county social services office or mailed to an address agreed upon between the grantee and the social services worker.

In Michigan, an applicant for food stamps (FS) will be asked to provide some form of verification such as a voter registration card, a wage stub, or a birth certificate. Food stamp applicants who do not have a Social Security number must apply for one. To be eligible for food stamps, the group must meet the same financial eligibility factors (income and asset requirements) as for AFDC.

All FS groups are evaluated for expedited Food Stamp Service. Food stamp groups can receive food stamps the same day if they have less than $150 in monthly gross income and $100 or less in liquid assets, or they are destitute migrant or seasonal farm workers with less than $100 in liquid assets, or the group’s combined gross liquid assets are less than its monthly rent and/or mortgage payments plus heat and other utilities.

As a condition of Food Stamp and AFDC eligibility, certain groups must complete and return a monthly report concerning income and changes in circumstances. In Michigan, failure to report will result in case closure. Each program
has its own categories of mandatory monthly reporting. Therefore, a combination of programs must be evaluated separately for reporting requirements.

For Medicaid (MA) eligibility in Michigan, an application for MA may be made in person, by letter, or by phone call. An MA applicant’s income and assets are reviewed for eligibility. Only a person’s own income and assets and those of his or her spouse and those of his or her parents can be used to determine the applicant’s eligibility. For example, a child’s income and assets cannot be used to determine eligibility for his parents or siblings.

In Michigan, AFDC recipients are automatically eligible for MA benefits. Thus, most of the application requirements for AFDC apply to MA. In Michigan, if an applicant is applying for MA, he or she would still have to provide verification of assets and income. The MA applicant would have to be considered a resident of the state, which means he or she is not receiving welfare benefits from another state, living in the state where the benefits were issued except for a temporary absence. The applicant must plan on remaining in the state permanently or indefinitely. The social services worker will verify that the applicant is not covered by any private health care before processing the application for MA. As with Food Stamp and AFDC, MA eligibility groups must complete and return a monthly report concerning income and changes in circumstances.

**Distribution of Benefits**

In the distribution of welfare benefits under the Paper-Based system, according to the Food and Nutritional Services, $6.1 billion of the $20 billion in food stamps benefits issued in fiscal year 1992 were distributed through the mail (Robinson, 1994, p. 3).
AFDC checks are usually mailed to recipients twice monthly, food stamps are mailed once monthly, and Medicaid cards are mailed once yearly in the State of Michigan. The Michigan Family Independence Agency replaces lost, stolen, destroyed, or not received checks. Replacement must be requested by the last workday of the fourth calendar month after the date the check was issued. Recipients of welfare benefits are to inform the local county social services agency of their most current address. Grantees who lack a permanent address may pick up their benefits at the local county social services agency. Food stamp recipients may be issued replacement of food stamps, which have been reported lost, destroyed, mutilated, stolen, or not received. Food stamps can be replaced only twice within 6 months if one of the following occurs: food stamps are not received, stolen, reported lost, or misplaced after receipt. Grantees must complete a replacement affidavit to have food stamps replaced. The signed replacement affidavit must be received by the local county social services agency within 10 days of the original report of loss by the grantee.

Use of Welfare Benefits

Food stamps can be used to buy eligible food items at any Food and Nutritional Services authorized retail store or approved meal provider. Eligible food includes: any food or food product intended for human consumption except alcoholic beverages, tobacco, and foods prepared for immediate consumption. The following types of food stamp recipients may purchase prepared food in certain Food and Nutritional Service approved restaurants: grantees 60 years of age and over and their spouses, blind and disabled grantees and their spouses, and homeless individuals.
AFDC benefits can be used to provide shelter, clothing, and other basic needs of maintenance for recipients and their children. Grantees may cash their AFDC checks and use the money at their discretion.

In the area of Medicaid usage, grantees and those covered by Medicaid may use their cards at hospitals, at doctors' offices, for prescriptions, and for health care services when no private insurance is available. Grantees must present their MA card and sign for the services provided.

Paper-Based System With Fingerprint Imaging

Application Process

Typically, the social service agency will first provide the individual seeking welfare assistance with information regarding the Fingerprint Imaging process. The applicant will then be required to provide personal identification such as a Social Security number, a birth certificate, or a driver's license. After a short wait, the applicant's fingerprint image will be obtained, and the system will begin to search for a match. If no match is found, the operator will complete the enrollment of the client into the system by taking the photo image and keying the applicant's personal information. However, if a match is found, the operator will typically consult with the applicant regarding the accuracy of the personal information initially supplied. What occurs next in the chain of authority is likely to differ among various counties and states that implement such procedures. However, for purposes of this model, Suffolk County, New York, procedures require the operator to advise the eligibility examiner of the discrepancy. If the eligibility examiner cannot resolve the conflict, he or she must bring the matter to the attention of the eligibility supervisor. If a conflict
remains, the supervisor notifies the Special Identification Unit, which performs manual review of the prints. If, at this point, the review confirms the match, the case may be denied or closed.

**Distribution of Benefits**

Disbursement of benefits is the same under the Paper-Based with Fingerprint Imaging as it is under the Paper-Based system.

**Use of Welfare Benefits**

Use of welfare benefits is the same under the Paper-Based system with Fingerprint Imaging as it is under the Paper-Based system.

**Electronic Benefits Transfer (EBT) System**

**Application Process**

The application for Aid to Families of Dependent Children, Food Stamps, and Medicaid under the EBT system is virtually the same as it was for the Paper-Based system. The social services worker will review the applicant’s income and assets and residency requirements. The applicant will be asked to provide personal identification. However, there are some differences between the Paper-Based system and the EBT system.

Applicants who are approved for AFDC, Food Stamps, or Medicaid receive plastic cards with a magnetic stripe, photograph, and signature panel. If applicants cannot demonstrate at the end of training sessions that they can use an ATM machine, they are then restricted to using only Point of Sale (POS) machines at
grocery stores (Wood & Smith, 1991). After the training sessions have been completed, grantees are assigned a Personal Identification Number (PIN). Grantees are instructed to keep their PIN confidential. Participation in EBT training is mandatory for recipients except for those who have experience using ATMs and Point of Sale (POS) machines.

**Distribution of Benefits**

To access benefits, a grantee goes to a terminal that may be dedicated to the system or may be part of an existing Automated Teller Machine (ATM) or Point of Sale (POS) network. When the grantee inserts the card, a device reads the magnetic stripe. In the case of an attended terminal, the grantee presents the card to a clerk who sweeps the card through the stripe reader. The grantee’s identity is usually verified by the PIN, and the terminal communicates with an authorization center to ascertain that the recipient is eligible for benefits, the card has not been reported lost or stolen, and benefits are available (Wood & Smith, 1991, p. 1). The central processor stores and consolidates the retailer redemption information.

Once each day, the central processor prepares a magnetic tape in ACH format for delivery to a contractor financial institution and off-setting debit to the contractor financial institution. The Federal Reserve processes the tape in the night cycle to apply credits to the appropriate retailer’s financial institution and an off-setting debit to the contractor financial institution. The contractor financial institution then initiates a wire transfer to request reimbursement from Food and Nutritional Service’s letter of credit account at the U.S. Treasury.
Use of Welfare Benefits

The EBT card and system should link and operate like commercial credit and debit card systems widely used across this country. Grantees should be able to purchase food items at any grocery store that is authorized by the United States Department of Agriculture. AFDC grantees will be able to access benefits from an ATM.

Electronic Benefits Transfer System With Fingerprint Imaging

Application Process

The application for welfare benefits (AFDC, MA, and Food Stamps) under the Electronic Benefits Transfer with Fingerprint Imaging is very similar to the process under the Paper-Based system and the Electronic Benefits Transfer system. There are, however, a few differences. During the enrollment period, the agency will provide the individual seeking welfare assistance with information regarding the Fingerprint Imaging process. The applicant will then be required to provide personal information such as a date of birth. A live scan device attached to the enrollment workstation captures fingerprint images from applicant for future comparison and verification. The information collected to create a new applicant record then enters the search/match process where it is compared against all existing database records. The computer does not actually compare one fingerprint to another, but rather conducts a mathematical search. The computer’s search algorithm converts the data extracted by the scanner into a binary code, which is then used to search the computer’s file. The computer, using a component called a matcher, can search an applicant’s print against the database prints at a rate of 500 to 600 prints per second.
If a fingerprint match is found, the record can be forwarded to a dedicated fraud investigation workstation for further review.

**Distribution of Benefits**

The disbursement of benefits under the EBT system with Fingerprint Imaging would be the same as when the EBT system funds are electronically deposited into the recipient’s account. The exception is in accessing benefits. A grantee goes to a terminal that may be dedicated to the system or may be part of an existing Automated Teller Machine (ATM) or Point of Sale (POS) network. The grantee must place his or her index finger on a Fingerprint Image Reader. During disbursement at an ATM or POS, there will be self-verification by the fingerprint reader to compare a live-scanned fingerprint with the same print encoded on the EBT card. Benefits cannot be accessed unless there is a match between the live scanned print and the encoded print on the EBT card. A fingerprint secured card cannot be used by anyone other than the authorized recipient of the entitled benefits. Every time the EBT card is used at an ATM or POS, there must be an exact match between the fingerprint of the individual using the card and the fingerprint that is encoded on the card. Without an exact match, benefits cannot be accessed.

**Use of Welfare Benefits**

Grantees should be able to purchase food items at any grocery store that is authorized by the United States Department of Agriculture and equipped with an EBT/Fingerprint Imaging Card Reader. AFDC grantees will be able to access benefits from an ATM with an EBT/Fingerprint Imaging Reader.
Summary of Chapter II

In summary, this research project examines the failures of the current Paper-Based system of preventing fraud and possible alternatives that would avert such activity. The alternatives being considered are Fingerprint Imaging with the Paper-Based system, Electronic Benefits Transfer, and Electronic Benefits Transfer with Fingerprint Imaging. The process of applying for benefits under all three systems is very similar. The greatest distinctions among the three systems are in the distribution and use of benefits. The Paper-Based system relies on checks and coupons being mailed to recipients, while the EBT and EBT with Fingerprint Imaging benefits are electronically deposited. Once recipients have received their benefits, they are not required to provide any means of personal identification to use their benefits with the Paper-Based system. The EBT system requires recipients to use their Personal Identification Number (PIN). The EBT system with Fingerprint Imaging requires the use of both the PIN and an exact fingerprint match to access and use benefits.

The next chapter will review the current literature that is pertinent to this study. The literature review relied on articles, reviews of projects, and published interviews written about Fingerprint Imaging Electronic Benefits Transfer and welfare fraud. The literature is structured around the three welfare distribution systems and how each system would combat the four main types of fraud, namely, duplicate assistance fraud, counterfeiting, stolen benefits, and food stamp trafficking.
CHAPTER III

LITERATURE REVIEW

Introduction

For many years there has been growing discontent with this country’s welfare system. Part of the problem is the belief that welfare benefits are not being used for their intended purpose, which is feeding and clothing the poor. It is thought that one way to gain back the public’s confidence in our welfare system is to improve its integrity. Welfare administrators face the challenge of convincing taxpayers that those receiving benefits are truly in need and will use them for their rightful purpose. Because of this, states understand the importance of preventing welfare fraud. According to the American Public Welfare Association (1996), “States cited most often the ability to detect and reduce fraud through Electronic Benefits Transfer. Thirty-four states or 71% ranked this benefit among their top three choices for switching from a Paper-Based system to a EBT system” (p. 13). The way in which welfare benefits are distributed and the positive identification of recipients can have a great impact on the prevention of fraud. Currently, there are two systems of distributing welfare benefits: The Paper-Based system, which is the distribution of welfare benefits by coupon or check, and the Electronic Benefit Transfer (EBT) system, which electronically deposits benefits into a welfare recipient’s account.

Some cities and states have implemented Fingerprint Imaging with the Paper-Based system as a means to prevent fraud, but no state has implemented Fingerprint
Imaging with an EBT system. There is limited literature and, as yet, apparently no formal research published on the Paper-Based system, Benefits Transfer (EBT) system, and the EBT system with Fingerprint Imaging system and fraud prevention. Therefore, this literature review relied on articles, reviews of projects, and published interviews.

This literature review will describe the types of fraud that have occurred in the Paper Based system and outline each system's approach to preventing fraud, as well as other issues.

Welfare Fraud in the Paper-Based System

The current Paper-Based system of distributing welfare benefits has been accused of being beset with fraudulent abuse. Food stamp coupons have been used illegally to pay for everything from illegal drugs to a house. Coupons are often redeemed or sold at discount for cash, often with the help of unscrupulous retailers. In some large cities in the United States, 25% of the welfare recipients are involved in the food stamp trafficking, according to the EBT Task Force (1993, p. 1). Other sources have indicated similar findings. Some news reports have estimated that one in five food stamp transactions is fraudulent in some way, which is a major problem when it relates to a $25 billion program.

For the recipients who sell their stamps, it is a profitable enterprise. They convert something they never paid for into cash they can spend any way they choose. For the buyer who typically pays between $.50 and $.75 on the dollar, it is also an easy profit. As Mike Cooper of the United States Department of Agriculture, Office of Inspector General, points out, “Because food stamps were transferable and nearly
impossible to trace, it was difficult to detect abuse in the system” (Hardy, 1995, p. A25).

The Office of Inspector General (OIG), United States Department of Agriculture, determined the following to be the most common forms of welfare fraud. The first form is duplicate assistance fraud, in which a person supplies false identification claiming to be someone else. Second, individuals can counterfeit benefits. Third, coupons are stolen from mail boxes. Fourth, recipients may misuse coupons by selling or trading them for other items, which is referred to as trafficking. Also included in the trafficking category is retailers’ misuse of coupons, for example, selling them for cash (Robinson, 1994).

The check and coupon-based system can pose other fraudulent possibilities. Because checks are lost or stolen, some recipients may never receive their checks and may need to have them replaced. Also, recipients who must take the entire benefit payment at once run risks in carrying several hundred dollars or more (Wood & Smith, 1991, p. 1).

Reducing fraud is a high priority for state welfare agencies. In a survey conducted by Glickman and associates in 1994, retailers in the pre-implementation and post-implementation of EBT were asked about perceptions of fraud in the food stamps system. In the pre-implementation, almost 49% reported that it was easy for recipients to trade food stamps for cash, while only 14% of retailers thought it was very hard for recipients to trade for cash (Glickman et al., 1994, p.125). Those surveyed by Glickman et al. were asked to compare only the Paper-Based system to the EBT system. No other alternative, that is, the Paper-Based system with Fingerprint Imaging or EBT with Fingerprint Imaging, was addressed.
In summary, the first food stamp office in a major city opened in Detroit, Michigan, in July of 1961 (Cole, 1995, p. 9). Soon afterwards, welfare benefit administrators were faced with the dilemma of food stamp trafficking. The distribution of welfare benefits by a Paper-Based system has provided an opportunity for criminals to steal from the poor and defraud the government of millions of dollars.

**Paper-Based System With Fingerprint Imaging**

The Paper-Based system distributes benefits by issuing checks or coupons. Usually, a check or a book of food stamps is mailed monthly or bi-weekly to the recipient. Fingerprint Imaging is a part of the field of science called Biometric. Biometric involves the scanning or recording of some unique characteristic, such as fingerprints; a comparison is then made to a digitized image on a database for positive identification. Interest concerning welfare applications and Fingerprint Imaging began in 1990 when Los Angeles County awarded a $9.2 million contract for the Automated Fingerprint Imaging Reference Manual (AFIRM) system.

According to Sack (1994), “The fingerprinting technique has been tried and found cost effective in Los Angeles. It is designed to prevent welfare applicants from using assumed names to collect benefits in more than one place” (p. 1).

The literature reveals that for many years there has been a problem with individuals applying for assistance under an assumed name. A number of reasons explain why this form of duplicate assistance fraud has increased in the welfare system. According to Tanka (1996),

> Over the past several years, the potential for duplicate assistance fraud has increased dramatically due to three primary factors: easier access to false identification; rapidly expanding caseload without a parallel increase in caseworkers; increasing complex regulations and limited time to respond to serious family situations. (p. 2)
In New York, those trying to defraud the social services system use forged documents and attempted to register for aid under more than one name or apply for aid in more than one county. To prevent these types of fraud, New York Department of Social Services installed an Automated Fingerprint Imaging system. In the first 4 months of operation, more than 200 people were caught applying for benefits they were already receiving. Additionally, 15,000 did not show up for their fingerprinting appointments (Morpho, 1996, p. 1). Further, the State of New York completed fingerprint matches of their welfare registers with those of five neighboring states and found 4,200 individuals receiving state assistance from more than one state (Morpho, 1996, p. 1). The results available so far show AFIRM to be highly effective in combating multiple-case fraud. Preliminary data show AFIRM will lead to significant benefits savings, potentially as high as $116 million, before recidivism over the remaining 26 months of the pilot (Tanka, 1996, p. 4). In the City of Los Angeles, a Fingerprint Imaging system was also implemented in 1996. In the first 6 months of operation, 3,021 cases were terminated and 242 new applications were denied. According to Warfel and Miller (1994), savings attributed to the Los Angeles system was $5.4 million (p. 8).

The U.S. Secret Service has commented favorably on Los Angeles County’s efforts because of the benefits that a fingerprint enrollment verification system offers. These same officials maintain “that failure to use the available fingerprinting technology to deter fraud in the initial enrollment phase of the program may open the entire system to fraud and abuse” (United States General Accounting Office, 1995, p. 7). It appears that Fingerprint Imaging may have an impact on duplicate assistance fraud; however, it may not be the complete answer to the welfare fraud problem. According to Killerane (1996),
Fingerprinting is not a panacea for all forms of welfare fraud. In addition to the use of multiple aliases to obtain additional benefits, criminals may also underreport income on public assistance. They may also trade their benefits, such as food stamps, for cash or goods on the street. (p. 1332)

Killerane points out that Fingerprint Imaging may deter duplicate assistance fraud but would have little impact on other types of fraud such as counterfeiting of benefits or benefits being stolen and used by an authorized individual for food stamp trafficking.

Other Legal Issues Related to Fingerprinting

Not everyone believes Fingerprint Imaging is the solution to the welfare fraud problem. One of the major arguments against Fingerprint Imaging is the belief that it criminalizes welfare recipients. A president of a local NAACP chapter stated, “The fact that people have to rely on welfare is already dehumanizing enough and for them to have to now be fingerprinted makes it even more dehumanizing” (Killerane, 1996, p. 1343). Several U.S. Supreme Court decisions deal directly with welfare and outline an individual’s right to receive public assistance. Although once considered a privilege, courts currently consider welfare benefits an entitlement.

In several U.S. Supreme Court cases, the rulings have been that as long as states met the needs of the poor, the method in which those needs are met does not matter (Killerane, 1996, p. 1328). Fingerprint Imaging, or any other requirement for public assistance, cannot interfere with the right of legitimately needy people to obtain welfare benefits. Killerane points out, “Fingerprint Imaging does not deny benefits to recipients; it merely prevents individuals from receiving more than their fair share of welfare benefits” (p. 1339).

There is considerable literature written concerning the constitutional rights of welfare recipients in begin fingerprinted. To satisfy the Fourteenth Amendment of
due process and right to privacy, a Fingerprint Imaging requirement for obtaining public assistance must not deprive an individual of life, liberty, or property without due process of law or abridge his privileges or immunities as a United States citizen.

In many situations, courts have regularly upheld fingerprinting against charges that it violates the right to privacy. The Michigan Court of Appeals ruled in the case of Nuriel v. Young Women's Christian Association of Metropolitan Detroit, “Taking and furnishing of fingerprints is not violative of constitutional prohibition against compulsory self-incrimination, as prohibition protects only testimonial evidence” (Michigan Court of Appeals, 1990). Another example, in Davis v. Mississippi (1969), the U.S. Supreme Court observed that fingerprinting involves none of the probing into an individual’s private life and thoughts that resembles an interrogation or search. Constance (1996) endorses the decisions made by the Supreme Court: “Among the primary concerns of those opposed to the prospect of Fingerprint Imaging is the potential for an intrusion upon an individual’s right to privacy. Fingerprint Imaging does not present a constitutional invasion of a privacy issue” (p. 403).

The current legal literature points out that states can constitutionally fingerprint individuals as a requirement for receiving public assistance. Wilson (1994) supports this concept: “Fingerprint Imaging provides an unbiased approach to positive identification of welfare recipients. There is never a group that is discriminated against as a result of the use of Fingerprint Imaging” (p. 19). A fingerprint does not indicate race, gender, height, or weight. Thus, a fingerprint is less biased than a photograph. As Constance (1996) asserts, “Fingerprinting is not punitive in nature, but rather a means of identification which is useful in many circumstances, including the enforcement of laws” (p. 405).
To summarize, according to the current literature, Fingerprint Imaging is not intended to scare away potential recipients of public assistance. It is merely another identification tool that officials will use to deliver the correct amount of aid as fairly and quickly as possible. The U.S. Supreme Court has determined that fingerprinting as a requirement for welfare benefits does not violate an individual's constitutional rights. The Paper-Based with Fingerprint Imaging and the EBT with Fingerprint Imaging both use the fingerprinting process to identify those individuals who are eligible to receive some form of state assistance. Fingerprints are taken during the application for welfare benefits. The purpose of the fingerprint process is to identify those citizens who are eligible to receive public assistance. However, some have viewed the process as criminalizing the welfare process. According to the literature, this was not the intent. It is a means of determining that the individual applying for benefits is who they say they are. Therefore, Fingerprint Imaging programs are subject only to a rational basis for review, which they can easily satisfy. The literature indicates that preventing welfare fraud is a legitimate goal, and fingerprinting is a rational means for achieving it. However, the literature also maintains that fingerprinting welfare recipients will not totally prevent fraud from occurring. The next section of the study will review the literature regarding EBT.

Electronic Benefits Transfer (EBT) System

States are required to implement the Electronic Benefits Transfer system by the year 2002 unless waived. The EBT system had been promoted as a powerful weapon in the prevention of fraud in the welfare system. Glickman and associates (1994) interviewed retailers in states where EBT had been implemented. Retailers in the pre-implementation and post-implementation stages were asked about their
perceptions of fraud in the food stamp system. Glickman et al. interviewed recipients who had used both the paper coupons and the EBT system. Recipients perceived it harder to sell benefits for cash with EBT than with coupons. About 75% agreed or strongly agreed with the statement, with only 20% disagreeing or strongly disagreeing (p. 125).

The appeal of EBT to prevent fraud, in part, is based on the use of the Personal Identification Number (PIN) to access benefits. This concept has been endorsed by the executive administration. Vice President Al Gore stated that "the use of PINs would limit the transferability of benefits and create an audit trail to track where and when a particular card is being used" (Minaham, 1994, p. 1). The American Public Welfare Association (APWA, 1996) surveyed 48 states concerning the status of EBT projects. Of those surveyed, 45 states (94%) plan to use PINs for benefit security. In fact, all of the states surveyed plan to use PINs as a security measure. Only those states not involved in the development of EBT projects indicated they were not sure about the use of PINs (APWA, 1996, p. 12). Recipients are warned against sharing their PIN with any other individual. According to Wood and Smith (1991), "State agencies currently apply rules for negligent behaviors that impose the risk of loss on the client" (p. 12).

The current literature describes the use of a Personal Identification Number as an advantage the EBT system has over any Paper-Based system. Whether the PIN will deter fraud has not been fully explored. According to Craig Beauchamp, Deputy Director of the United States Department of Agriculture, Office of Inspector General, "EBT and use of PIN will probably reduce street trafficking, and it certainly gives us a great tool to identify the stores and recipients who are trafficking. It will not, however, put an end to it" (Wood & Smith, 1991, p. 12). The APWA (1994)
supports Beauchamp’s position of EBT as a fraud prevention tool: “While EBT must not be seen as a cure-all for food stamp fraud, it does represent a major advance over paper coupons” (p. 2). Texas Comptroller John Sharp also endorses the advantages of an EBT system over the Paper-Based system:

The paper coupons are often stolen and used to buy drugs. If one of the new cards is stolen, however, a single telephone call cancels the account. Also, transmitting benefits electronically, rather than by mail, will clamp down on thefts. (p. 9)

Gore, APWA, and Sharp’s comments did not address the EBT system’s ability to prevent duplicate assistance fraud, counterfeiting, or food stamp trafficking.

There have been incidents where the EBT system has failed to prevent fraud. Lutterbeck (1995) discovered “a store owner in Baltimore was arrested for trafficking in $1.2 million dollars of EBT benefits in the course of a year” (p. 11). This account is consistent with the findings of Glickman et al. (1994): “It appears that the selling of benefits for cash under EBT is much more difficult than under the Paper-Based system, although it is still possible” (p. 139). Glickman et al. examined three counties to review incidents of fraud after EBT had been implemented. The problem with Glickman et al.’s results is that fraud under the EBT system may have gone undetected, thus never accounted for, which would explain the large reduction. For example, Glickman et al.’s study states that each county experienced a reduction in fraud after EBT was implemented. However, if the recipient would allow his or her EBT card to be processed in exchange for cash, this process would go virtually undetected. Another example would be if a store employee has access to a recipient’s PIN, he or she may be able to manually process a transaction without the EBT card. Glickman et al. point this out: “There is no sound quantitative estimates of the percentage of benefits sold for cash under EBT” (p. 139). Glickman et al. also state:
"EBT benefits are protected by the recipient’s PIN if the card is lost or stolen and the remaining benefits on the card cannot be used without the PIN" (p. 121). Glickman et al.’s study does not consider the crimes that can be committed once the PIN is known by an unauthorized individual. As Bob Rasor, head of the Financial Crimes Division of the U.S. Secret Service, which has jurisdiction over funds transferred electronically, points out, “that number (PIN) is as good as cash” (Mannix, 1993, p. 2).

In summary, the literature concerning EBT indicates that it will be more difficult for individuals to commit welfare fraud; however, crimes will still occur under this system. The four most common forms of fraud that occurred in the Paper-Based system (duplicate assistance fraud, stolen benefits, counterfeiting, and food stamp trafficking) can still occur in the EBT system. Many EBT pilot projects across the country have experienced fraud. The literature indicates that EBT has been shown to have no impact on duplicate assistance fraud. EBT cards can still be counterfeited. Cards can be stolen, and food stamp trafficking can still take place. The literature also shows that welfare systems may experience new forms of fraud that did not occur under the Paper-Based system (wire fraud, double swiping of cards, and the selling of PINs). Much of the attention given to EBT as an alternative to the Paper-Based system is based on its success in the private sector. Differences between government units and the private sector exist. “Industry experts say there’s no central tracking system among the ATM networks, mainly because each reported theft is relatively small, usually totally under $1,000.00” (“Automated Teller Machine Fraud Grows,” 1993, p. 3).

Several other issues are raised in the literature concerning EBT and fraud. The literature points out one of the advantages EBT has over the Paper-Based
system in detecting fraud: EBT can provide data files that point out unusual transactions or patterns that can be investigated. When the EBT system was introduced, this was one of the most appealing aspects of the system. This can be seen in a statement made by Health and Human Services Secretary Donna Shalala: "With EBT there's considerably less paper. The flip side is that we'll have an electronic audit for every transaction, making fraud easier to detect and prosecute" (Gore, 1994, p. 1). The questions raised in such literature are that detecting fraud and preventing fraud are not the same. When statistics indicate a reduction in fraud, it is fraud that has been detected, while fraud that goes undetected is not reported. The literature also raises questions that the EBT system does not directly link the authorized recipient with the use of the card. The literature describing the EBT system indicates that it would be possible for an unauthorized individual to use an EBT card with knowledge of the proper PIN with or without knowledge of the authorized recipient.

Electronic Benefit Transfer System With Fingerprint Imaging

This literature review has examined two welfare distribution systems: (1) the Paper-Based system with Fingerprint Imaging, and (2) the Electronic Benefits Transfer. The third system that will be examined will be Electronic Benefits Transfer with Fingerprint Imaging. The United States General Accounting Office (GAO, 1995) determined that "EBT alone does not effectively deter fraud in the delivery of food benefits. Thus, an EBT program without the enhanced security of biometric verification raises a genuine concern about the potential for increased program costs and losses" (p. 7). The concern increases with the proposal to expand EBT into other federal, state, or local government programs involving billions of dollars.
Many states are investing millions of dollars in EBT systems with the hope that it will prevent fraud that has traditionally occurred in the Paper-Based system. In December of 1995, the GAO reported that the state EBT systems and pilot projects that were reviewed had not eliminated fraud (U.S. GAO, 1995, pp. 2–3). The literature reports that there are advantages to combining the Fingerprint Imaging system with the EBT system:

With the fingerprint-secured EBT card, a program administer could link the responsibility for use of the card to the recipient and if fraud was alleged, have the information needed to determine a future course of action. A fingerprint secured card could not be used by anyone other than the authorized recipient of the entitled benefits. (U.S. GAO, 1995, p. 5)

Fingerprint Imaging was been selected as a means to increase security in the EBT system for a number of reasons. Fingerprinting has been historically accepted as a means of providing positive identification in law enforcement. Fingerprint Imaging has also been successful in preventing duplicate assistance fraud in different cities across this country. However, these cities have incorporated only Fingerprint Imaging with the Paper-Based system and not the EBT system.

Without Fingerprint Imaging, EBT systems could face the same types of crimes challenged by private industry. According to Arend (1994), credit card fraud cost issuers worldwide more than $711 million (p. 46). Some examples of crimes faced by the credit card industry are counterfeiting of cards and the videotaping of ATM users as they punch their secret access codes. As Hintze (1995) discovered, credit card fraud has increased by 15% since 1960 (p. 21). These same types of crimes could be encountered by states, which implement EBT to distribute welfare benefits.

The literature indicates EBT with Fingerprint Imaging may be the most effective system available to prevent fraud from occurring in the welfare system. As
the U.S. General Accounting Office (1994) points out, “A fingerprint-secured card could not be used by anyone other than the authorized recipient of the entitled benefits” (p. 6). Unfortunately, the literature does not indicate the costs involved in implementing an EBT system with Fingerprint Imaging. Each social service agency, Point of Sale machine, and ATM will have to be equipped with a Fingerprint Reader. The literature finds that counterfeiting, stealing benefits, and food stamp trafficking are much more difficult with the combination of EBT and Fingerprint Imaging.

This study has reviewed literature relating to fraud in the welfare system and potential alternatives to the Paper-Based system for the delivery of benefits. The next section of the study will examine fraud in other government programs and alternatives to the Paper-Based system for the delivery of those benefits.

Fraud in Other Government Programs

Fraud has occurred in a number of other government programs besides welfare. The same threats of fraud that exist in the Paper-Based welfare system are present in Social Security and Supplemental Security Income, unemployment insurance, and child support. Some examples of such fraudulent acts are eligibility fraud, mail theft, counterfeiting, physical attacks of recipients, and forgery. Fraud exists because agencies rely on paper documents for identification. These government programs also provide documents that can easily duplicated. “In May, police raided an immigrant neighborhood in Los Angeles, seizing 24,000 phony Social Security cards counterfeiters were preparing to sell on the streets, along with 50,000 dummy drivers licenses, green cards, and other official looking documents” (Paige, 1998, p. 1). This is not the only example of criminal acts that have cost taxpayers millions of dollars. “The Social Security Administration has uncovered tens of thousands of
prisoners illegally drawing Social Security and disability benefits, and an intensified crackdown on inmate fraud may save taxpayers $3.46 billion over the next seven years" (Havemann, 1998, p. 1).

As with the welfare system, other government benefit programs require limited identification (driver’s license, Social Security card, or green card). These documents can be purchased easily on the street, allowing an individual to acquire a new identity at limited expense. These new identities can then be used to obtain benefits. Social Security benefits are many times claimed by relatives long after the beneficiary is dead. A search for a new identity usually begins where the record of a life ends—in a newspaper’s obituaries. The goal is to find the name of a infant who died around the same time that the person seeking the new identity was born. Many times the new identities allow an individual to apply for benefits twice or to avoid being located in order to pay child support. There are other problems with distribution systems that cannot prove positive identification. “The licenses helped John Santer and five accomplices scam at least $4 million from businesses and mess up the lives of many innocent people with forged checks and fraudulent credit cards” (Zamora, 1998).

The Social Security Administration, Office of Inspector General (OIG) is attacking fraud on a variety of fronts. Social Security is one of the largest benefit programs in the country. “That’s a big beat to patrol, with a lot of money at stake, given that the two SSA programs receiving the most attention paid out a total of more than $541 billion in benefits in 1995” (Paige, 1998, p. 1). The OIG focuses on residency issues, if beneficiaries live in the United States; eligibility, whether they really are entitled to benefits; and disability fraud and internal corruption at SSA itself.
In order to counter the increasingly sophisticated cons of the future, the OIG has also established an Electronic Crimes Team to collect electronic forensic evidence and monitor computer network intrusions, to develop computer profiling and data mining techniques to detect patterns of fraud, and to develop data-based matching arrangements with other government agencies and some private banks. In all, Social Security OIG investigations have led to at least 1,194 convictions for fraud since October 1997, resulting in fines and judgments in the amount of $40 million. These statistics indicate that fraud is present in the Social Security Administration programs.

Fraud also exists in the child support payment system. “An investigation into thefts at the Harris County Texas Child Support Office is being hampered by the same poor security and record keeping that made the thefts possible” (Stinebaker, 1996). In most states, child support checks are mailed out to the custodial parent’s last known address. However, most child support agencies do little to verify whether the parent actually received the support check.

The next section of the study will discuss alternatives to the Paper-Based system.

Alternatives to the Paper-Based System for the Delivery of Nonwelfare Benefits

Federal and state agencies are looking for ways to prevent fraud from occurring, not just in the welfare system but in all government programs. With this in mind, states are looking for alternatives simply to the Paper-Based system. The United States government is using a fingerprint recognition system for intake and manifest processing of Cuban, Haitian, and other refugee populations. Refugees provide fingerprints upon arrival at United States bases and are checked by the
fingerprint system to see if they have been previously repatriated to their home country. This system processes 125 people per hour (Warfel & Miller, 1994, p. 5).

Child support enforcement agencies are also using new methods to prevent fraud and abuse. According to Justin (1997), “Child support agencies are paying more attention to the timely recognition and identification of fraudulent cases through interviews and contacts made during the location process” (p. 24). The use of fingerprints can be a valuable investigative tool for locating delinquent child support payers. These prints can be stored on databases that can be shared with other child support agencies to locate and prosecute parents who have failed to contribute to the support of their children. Searches can also be processed to locate where these parents are living, especially if they are using an assumed name.

Other government programs are utilizing other means to prevent fraud and lower administrative costs. The states of Florida, Georgia, North Carolina, Alabama, Tennessee, Missouri, and Arkansas distribute Social Security and Supplemental Security Income Benefits electronically.

In addition to state initiatives, the federal government also is fueling EBT expansion. The Department of the Treasury’s Financial Management Service is adding recipients to the 8,500 persons in the EFT system who are receiving Social Security, Supplemental Security, Veterans Pension and Compensation, Railroad Retirement Board, and Civil Service retirement payments in programs it operates in Houston and Dallas/Fort Worth. (Mitchell, 1995, p. 16)

Since 1975, Social Security beneficiaries have had the option of having their benefits directly deposited (Bondar, 1984, p. 17). Other government programs are also moving towards electronic deposit of benefits. Recently the Michigan State Supreme Court issued an administrative order 1998-3: “Therefore, it is ordered that circuit courts, in receiving and disbursing support payments, shall use electronic funds transfer to the fullest extent possible” (Michigan State Supreme Court, 1998, p. 1).
The transition to Electronic Funds Transfer (EFT) was a gradual result of various policy decisions as well as legislation. The following is an example of legislation passed that would help prevent fraud: "The House approved a bill late Wednesday to outlaw identity theft, a measure that would make it a federal crime for fraud artists to misuse anyone's personal information to commit crimes" (O'Harrow, 1998, p. 1). In 1977, 2 years after implementation of EFT program, the Social Security Administration and the Department of the Treasury contracted Temple University to conduct a study of direct deposits of Social Security benefits (Bondar, 1984). This study had two objectives: to find out why beneficiaries had enrolled or not enrolled, and to see if any modifications were necessary. Convenience was the primary reason for requesting direct deposits, followed by safety/security and physical problems in going to the bank. The results of the Temple study are consistent with studies conducted of EBT welfare systems.

State agencies and recipients appreciate the convenience of EFT and EBT systems but also recognize the need for the increased security these systems offer over the Paper-Based systems. As with welfare benefits, no state has implemented a system to distribute Social Security or child support benefits that combines both EBT and Fingerprint Imaging.

In summary, many other government programs besides welfare are affected by fraud. Public agencies are looking for alternatives to the Paper-Based system for the delivery of Social Security, child support, unemployment insurance, and veterans benefits to save on administrative costs and prevent fraud. States plan on combining welfare assistance with other benefits on one card to make benefit delivery more cost effective. Potentially, a citizen could use one EBT card to receive welfare benefits, Social Security, unemployment, Medicaid, retirement benefits, and disability...
payments. Terry Williams, Project Manager for Wyoming's Department of Health points this out:

We hope to eventually use the cards as so-called "health passports," with a person's entire health record stored on the card. The health data could be shared with dissimilar regional computer systems, laying the groundwork for statewide or regional health service system. (EBT Task Force, 1993, p. 1)

"The Western Governor's Association has begun planning to expand the use of smart cards into the health services area" (Newcomb, 1993, p. 28). The State of Ohio is exploring ways to reduce administrative costs and improve service in areas ranging from income taxes and Social Security benefits to driver's licenses and voter registration as a result of using one electronic benefits transfer card (Hintze, 1995, p. 23).

Welfare benefits appear to be the front runner in electronic delivery of benefits. However, it also appears that eventually the plan would be to provide all government benefits by way of an EBT system that would replace many Paper-Based systems. Robert Robinson (1994), Secretary of the United States Department of Agriculture, points this out in testimony before the United States Congress:

According to studies we have reviewed to date, using EBT to deliver food stamp benefits alone will be more costly than delivering benefits through the current coupon-based system. The Office of Technology Assessment (OTA), in its September 1993 report, Making Government Work: Electronic Delivery of Federal Services, also raises the issue of the cost effectiveness of EBT for a singly benefit program. OTA says "that using EBT for multiple programs would be more cost effective." In this regard, states that are moving toward EBT are using it as a means to combine the issuance of multiple benefits—not just for Food Stamp Program Benefits. For example, Maryland, which operates an EBT system, has combined food stamps, Aid to Families With Dependent Children, General Assistance, and child support onto one card. This allows the state to take advantage on the economic of scale to reduce the cost of EBT to individual assistance programs. Other states are considering including refugee assistance; supplemental benefits for women infants and children; and Medicaid benefits on their EBT systems. (p. 6)
The EBT Task Force also believes the multiple Paper-Based benefit delivery systems will be replaced with a single electronic system that delivers benefits for a full range of federal and state programs (EBT Task Force, 1993, Appendix E).

Potentially, any government program that delivers benefits could be subjected to fraud if the proper precautions are not established. Alternatives to the welfare Paper-Based system will most likely serve as a model for other government programs. If fraud is not prevented in the Paper-Based system, EBT, or other alternatives, it may very well be present in other government programs, which could result in millions of dollars being obtained fraudulently.

Summary of the Literature

The literature indicates that soon after welfare benefits were issued, fraud became a problem that federal and state agencies had to address. According to Killerane (1996), 10% of the $22 billion spent annually on food stamps nationwide is lost to fraud (p. 1327). Fingerprint Imaging was introduced as a method of positively identifying individuals applying for and receiving public assistance. Articles and government reports were published, documenting the success of the AFIRM system in Los Angeles, California, and in New York City.

Often the literature written about Fingerprint Imaging preventing fraud focused on the constitutional rights of welfare recipients to be fingerprinted. The literature did address multiple case fraud (someone applying for benefits which they are already receiving). However, there is little attention given to Fingerprint Image's impact on the other forms of fraud that occurred in the Paper-Based system (stolen benefits, counterfeiting, and food stamp trafficking).
The literature consistently represents the Electronic Benefits Transfer (EBT) system as a more efficient method of distributing welfare benefits over the Paper-Based system. Nonetheless, the literature is often conflicting when portraying EBT as more effective in preventing welfare fraud than the Paper-Based system. When EBT was first introduced, much of the literature focused on the prevention of fraud. After a number of pilot projects were reviewed, the literature turned to EBT’s ability to detect fraud instead of preventing it. Again and again, the literature described law enforcement’s arrests of individuals involved in food stamp trafficking. These arrests occurred after thousands and sometimes millions of dollars of illegal transactions were processed with EBT cards. As more data were gathered, EBT was seen as an improvement over the Paper-Based system for finding who had committed a crime, but not as a measure of preventing fraud from occurring.

There is very little literature and no data published on EBT being used in conjunction with a Fingerprint Imaging system, in part because no state has implemented both EBT and Fingerprint Imaging together, thus no pilot projects have been reviewed and no data have been produced. One of the sources for developing the theory of combining these two systems is the United States General Accounting Office (GAO). The GAO published a study in 1995 entitled “Electronic Benefits Transfer Use of Biometric to Deter Fraud in the Nationwide EBT Program.” In this report, the GAO strongly recommends that states consider using Fingerprint Imaging with their EBT systems as a means of preventing fraud:

EBT, alone, does not effectively deter fraud in the delivery of food stamp benefits. Thus, an EBT program without the enhanced security of biometric verification (Fingerprint Imaging) raises a genuine concern about the potential for increased program costs and losses. (p. 9)
This government report conflicts with previous reports about the overall effectiveness of an EBT program in terms of preventing fraud. Other literature about EBT indicates the system will be effective in the prevention of fraud.

Once a state implements a pilot project using both EBT and Fingerprint Imaging, a comparison of the three systems (Paper-Based with Fingerprint Imaging, EBT, and EBT with Fingerprint Imaging) can be made. Until then, only perspectives can be gathered comparing the three systems in terms of fraud prevention. This study will provide perspectives on Fingerprint Imaging, EBT, and Fingerprint Imaging with EBT to prevent fraud that has traditionally occurred in the welfare system. Table 1 provides the current status of the EBT projects across the country. This study is important for a number of reasons. Beyond preventing fraud in the welfare system, an alternative to the Paper-Based system may be utilized in other government programs for increased security during the application and distribution of benefits.

The conceptual model for this study, presented in Chapter IV, includes characteristics of individuals involved in law enforcement, welfare benefit administration, and EBT administration, and perceptions of preventing fraud in the welfare system. Following the conceptual model will be a description of the three systems—Fingerprint Imaging used with Paper-Based system, EBT, and EBT with Fingerprint Imaging, as well as the research questions, hypotheses, and rationale for the study. Chapter V focuses on methodology, including data collection procedures. Data analysis is presented in Chapter VI, followed by implications, conclusions, and recommendations in Chapter VII.

The following chapter will review the conceptual framework for the study.
Table 1

Current Status of the EBT Projects Across the United States

<table>
<thead>
<tr>
<th>State</th>
<th>EBT Status</th>
<th>Plans</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alabama</td>
<td>Member of the Southern Alliance of States, negotiations underway</td>
<td>Pilot first, statewide by 1997</td>
</tr>
<tr>
<td>Arkansas</td>
<td>No implementation plans at this time</td>
<td>Pilot in 1996, statewide by 1997</td>
</tr>
<tr>
<td>Arizona</td>
<td>Planning implementation in January of 1997</td>
<td>Undecided</td>
</tr>
<tr>
<td>California</td>
<td>Pilot and demonstration project release</td>
<td>Statewide implementation</td>
</tr>
<tr>
<td>Colorado</td>
<td>Requests for bids (RFB) issued proposals were due April of 1996 in 1998</td>
<td>Pilot in 1997, statewide expansion</td>
</tr>
<tr>
<td>Connecticut</td>
<td>Member of New England Coalition of States</td>
<td>Statewide expansion July of 1997</td>
</tr>
<tr>
<td>Florida</td>
<td>Request for Bids was released May of 1996</td>
<td>Pilot and statewide expansion</td>
</tr>
<tr>
<td>Hawaii</td>
<td>Conducting feasibility study</td>
<td>Undecided</td>
</tr>
<tr>
<td>Idaho</td>
<td>In the planning stages</td>
<td>Statewide expansion 1999</td>
</tr>
<tr>
<td>Illinois</td>
<td>State in negotiations with vendors for EBT services</td>
<td>Statewide expansion by 1999</td>
</tr>
<tr>
<td>Indiana</td>
<td>Preparing Request for Bids</td>
<td>Hoping for statewide expansion</td>
</tr>
<tr>
<td>Kansas</td>
<td>Implemented pilot project in 1996</td>
<td>Statewide expansion after pilot project</td>
</tr>
<tr>
<td>Kentucky</td>
<td>Planning stages of implementing Also member of the Southern Alliance of States</td>
<td>EBT planning implementation</td>
</tr>
<tr>
<td>Louisiana</td>
<td>Considering proposals</td>
<td>Will start with statewide expansion</td>
</tr>
<tr>
<td>State</td>
<td>EBT Status</td>
<td>Plans</td>
</tr>
<tr>
<td>--------------</td>
<td>---------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------</td>
</tr>
<tr>
<td>Maryland</td>
<td>Implemented statewide in 1983</td>
<td>Expansion to include other benefits</td>
</tr>
<tr>
<td>Michigan</td>
<td>Releasing Request for Bids in 1997</td>
<td>Pilot in 1999</td>
</tr>
<tr>
<td>Minnesota</td>
<td>Pilot in Hennepin and Ramsey Counties</td>
<td>Statewide expansion is planned</td>
</tr>
<tr>
<td>Mississippi</td>
<td>Have released the Request for Bids</td>
<td>Pilot then statewide expansion</td>
</tr>
<tr>
<td>Missouri</td>
<td>Part of Southern Alliance of States</td>
<td>Pilot then signed contract</td>
</tr>
<tr>
<td>Montana</td>
<td>Planning to implement EBT system</td>
<td>Pilot started with Medicaid, statewide expansion with food stamps and Women, Infants and Children</td>
</tr>
<tr>
<td>Nebraska</td>
<td>Holding hearings then report on EBT</td>
<td>No current plans to implement</td>
</tr>
<tr>
<td>Nevada</td>
<td>No plans to implement EBT</td>
<td>No plans for implementation</td>
</tr>
<tr>
<td>New Hampshire</td>
<td>Considering proposals Member of New England Coalition of States</td>
<td>Statewide by 1999</td>
</tr>
<tr>
<td>New Jersey</td>
<td>Pilot project and demonstration in progress preparing for statewide</td>
<td>Eventually statewide expansion</td>
</tr>
<tr>
<td>New Mexico</td>
<td>Implemented statewide EBT system</td>
<td>None established</td>
</tr>
<tr>
<td>New York</td>
<td>Contract negotiations Also member of New England Coalition of States</td>
<td>Statewide by 1999</td>
</tr>
<tr>
<td>North Carolina</td>
<td>Will roll out EBT system in 1999</td>
<td>Statewide expansion by the end of 1999</td>
</tr>
<tr>
<td>North Dakota</td>
<td>Implemented EBT pilot project in February of 1996</td>
<td>Statewide in 1999</td>
</tr>
<tr>
<td>State</td>
<td>EBT Status</td>
<td>Plans</td>
</tr>
<tr>
<td>---------------</td>
<td>---------------------------------------------------------------------------</td>
<td>--------------------------------------------</td>
</tr>
<tr>
<td>Ohio</td>
<td>Pilot project in progress; hoping to begin statewide expansion</td>
<td>Expansion timing uncertain due to litigation</td>
</tr>
<tr>
<td>Pennsylvania</td>
<td>Negotiating contracts</td>
<td>Statewide expansion</td>
</tr>
<tr>
<td>South Carolina</td>
<td>Have implemented statewide expansion of EBT system</td>
<td>No plans at this time</td>
</tr>
<tr>
<td>South Dakota</td>
<td>EBT pilot project in process</td>
<td>Hoping for statewide expansion</td>
</tr>
<tr>
<td>Texas</td>
<td>Implemented statewide EBT system in November of 1995</td>
<td>No plans at this time</td>
</tr>
<tr>
<td>Utah</td>
<td>Trying to implement statewide</td>
<td>No plans presently</td>
</tr>
<tr>
<td>Vermont</td>
<td>Contract negotiations underway Part of the New England Coalition of States</td>
<td>Pilot then statewide</td>
</tr>
<tr>
<td>Virginia</td>
<td>Released Request for Bids</td>
<td>No plans at this time</td>
</tr>
<tr>
<td>Wisconsin</td>
<td>Request for Bids issued; working with Minnesota</td>
<td>Phase in statewide</td>
</tr>
<tr>
<td>Wyoming</td>
<td>Pilot project in progress exploring use of commercial networks</td>
<td>Statewide expansion</td>
</tr>
</tbody>
</table>
CHAPTER IV

CONCEPTUAL FRAMEWORK

Introduction

This study theorizes that respondents' characteristics, perceptions of the welfare problem, and perceptions of changes in welfare policy to prevent fraud will influence their selection of an alternative or no alternative to the more traditional Paper-Based system welfare policy (see Figure 1). The study also theorizes there will be potential policy implications as a result of selecting one of the alternatives. The one trait that all of the respondents have in common is their direct involvement with welfare fraud. Law enforcement respondents are responsible for investigating fraud, welfare benefit administrators are responsible for administrating programs with integrity, and EBT administrators are responsible for assuring rightful recipients receive their benefits. Each of these respondents may share similarities but are also different in their characteristics and perceptions. These differences may explain why total agreement on a single welfare policy alternative may not be achieved. Their similarities, though, may explain why they have selected the same policy alternative. The differences may also explain why no alternative was selected. The study seeks to determine whether all will select the same alternative or different alternatives among the three possibilities, or whether they will select none of the alternatives based on their characteristics and perceptions. I am hypothesizing that the characteristics and perceptions of the respondents will determine what selection is made. In this study,
Figure 1. Model for Alternative Systems.
respondents will be asked to do the following: (a) identify an alternative system that would prevent the common forms of welfare fraud that have occurred in the Paper-Based system, namely, duplicate assistance fraud, counterfeiting, stolen benefits, and food stamp trafficking; (b) identify changes that are needed in the welfare system that would prevent all fraud; (c) choose an alternative that would provide benefits as a result of preventing fraud; and (d) identify specific technologies of each alternative that prevent fraud and ones that would not prevent fraud; and (e) identify potential policy implications.

The respondents may select the best policy alternative among the three that are currently available, namely, the Paper-Based system with Fingerprint Imaging, Electronic Benefits Transfer (EBT), and EBT with Fingerprint Imaging; or they may indicate "undecided," "do not know," or "none." For the purpose of understanding the alternatives, a brief description of each system is provided in this chapter.

The following sections will discuss the characteristics, perceptions of the problems, and perceptions of changes in welfare policy to prevent welfare fraud of respondents who are directly involved with welfare fraud. This study anticipates that such characteristics and perceptions will influence a respondent's choice of a welfare policy alternative or selection of no alternative to the Paper-Based system and implications involved with implementation.

Characteristics

All of the respondents are employed in law enforcement, welfare benefit administration, or EBT administration. Respondents may range in age from 22 years to 65 years. They are most likely employed by municipal, county, state, or federal public agencies. Their experience may extend from months to many years. Their
educational levels may range from a high school diploma to an associate, bachelor's, master's, doctoral, or law degree. The majority of respondents in law enforcement and EBT administration are expected to be male. In welfare benefit administration, both genders are expected to be more equally represented.

The next section of the study will look at perceptions of the welfare fraud problems by respondents who are directly involved with welfare fraud.

Perceptions of the Problem

One of the biggest challenges facing government in preventing fraud is the relative size of the welfare program. There are simply not enough personnel available to impact the deterrence and detection of welfare fraud. Agencies are not adequately staffed to impact the fraud problem. There are too few investigators, social service workers, and system technicians to detect and deter fraud. It is not possible to place a practitioner at every location where a potential fraudulent act can occur, or to adequately administer caseloads to detect fraud. Often, many demands and lack of personnel leads to opportunities for fraud. As a result of this understaffing, duplicate assistance fraud (an individual receiving public assistance twice—once under the person's own name and once under an assumed name) has a greater chance of occurring. As Lipsky (1980) points out, "Bureaucrats characteristically have large caseloads relative to their responsibilities. The actual numbers are less important than the concern they typically cannot fulfill their mandated responsibilities with such caseloads" (p. 29). This point is made clear by the American Public Welfare Association (1996): "Caseworkers who are too busy with unnecessary paperwork cannot pay adequate attention to staff the program's ballooning caseloads" (p. 3).
In addition to an overwhelming amount of paperwork, the welfare system is responsible for the administration of a large caseload. As a result of this situation, social service agencies are not very familiar with recipients and may meet with them only once or sometimes twice per year. Because of this unfamiliarity, caseworkers are unable to detect a person applying for benefits that they are already receiving. Because of this situation, there is little chance of an individual being apprehended; thus, the unlawful activity continues.

The more traditional Paper-Based system has been described as being very susceptible to welfare fraud. The ease with which fraud can be committed makes agencies' tasks that much more difficult. For example, estimates have suggested that food stamp trafficking may account for as much as 10% of benefits issued. Every day, opportunities occur for food stamps and other benefits to be purchased, sold, and traded illegally. At this time, respondents have no way of knowing who used the coupons and other benefits. Currently, it is extremely difficult to prevent food stamp trafficking when paper coupons or EBT cards are utilized. The end result of this unlawful activity is a large volume of fraud investigations. As Craig Beauchamp points out, “The ranks of investigators are thin for the magnitude of the problem” (Raab, 1993, p. 32).

An additional problem with trying to prevent duplicate assistance fraud is counterfeiting of identification documents, thereby enabling an individual to produce multiple identities. Robinson (1994) has observed:

Unless better ways of verifying applicant supplied information prior to eligibility determination are established, individuals choosing to provide erroneous incomplete information to the state agency can receive benefits to which they are not eligible regardless of whether those benefits are disbursed as coupons or through an EBT card. (p. 5)
False identification documents, such as Social Security cards or birth certificates, can be easily purchased illegally.

Once it has been determined that the applicant for benefits is rightfully eligible, benefits must be delivered to only the recipient.

Welfare systems are responsible for disbursing benefits in an efficient manner while at the same time assuring that the rightful recipient receives those benefits. The organization imposes tight control over resource dispersal if it can (Lipsky, 1980, p. 73). Unfortunately, even with tight control, benefits dispersed are not always received by the rightful recipient. Benefits are often stolen from mail boxes (postal theft) and the recipients themselves. Benefits most often stolen are those that can be used by anyone who has them in their possession. With the paper-coupon system, once the benefits are taken from the rightful recipient, they cannot be traced. This problem is present in both the Paper-Based and EBT systems. With the EBT system, anyone with the access card and knowledge of the PIN can have access to benefits. Unless some form of positive identification is required, benefits can be utilized by the recipient under his or her own name, then a separate set of benefits can be utilized under an assumed name. Social service agencies are in need of verification during the application process, other than merely paper documents' verification that would confirm the person's identity. It is hoped the task can be completed in an efficient manner so there is no delay in the application and processing of benefits. The challenge for a welfare benefit administrator is to prevent fraud while at the same time processing large numbers of recipients efficiently.

For many agencies, pinpointing welfare fraud is extremely difficult and challenging. The agencies, many times, rely on eyewitness testimony and/or evidence that is usually costly in terms of man-hours and financial investment made. Expenses
are incurred as a result of many man-hours which are involved with surveillance, gathering evidence, and securing witnesses. These elements of the investigation are especially critical for food stamp trafficking and counterfeiting rings, where surveillance cameras and undercover operations are implemented.

Respondents are concerned with a number of issues regarding the vulnerability of the EBT system against welfare fraud. If the EBT system is determined to be suspect, it could be very costly to states. Cohen (1993) argues, “Scam artists will create enough losses in the EBT system that it would take years to retool” (p. 17). Some of these losses could be the same that occurred in the Paper-Based welfare system.

Without proof that a person actually has received benefits (for example, in the case of canceled checks) to which he or she was not entitled, the social service agency will be severely handicapped in its ability to assure accountability. Under EBT, it would be difficult to prove actual receipt of benefits. Because of this, it is expected the EBT system will be highly susceptible to fraud activity.

Respondents involved with the welfare system are concerned with preventing the same types of crimes that occurred in the credit card industry, namely, counterfeiting credit cards, stolen cards, and theft of PINs. Within the EBT system, stolen cards can be used to access benefits by someone other than the authorized recipient. This can be accomplished if an individual has knowledge of the Personal Identification Number (PIN). Most equipment needed to counterfeit cards is easily purchased on the open street at minimum cost. These same threats could possibly exist in the EBT environment.
Changes in Welfare Policy to Prevent Fraud

Respondents are in need of a welfare system that establishes crime prevention measures in reference to violations of state and federal laws. To accomplish this, changes in the welfare system would have to be made that would place greater accountability with the client and retailer for the use of welfare benefits. A more accountable system would be more likely to prevent fraud. A more preventable system would provide a greater probability of reducing large volume of fraud that has traditionally occurred in the Paper-Based welfare system.

Many professionals believe there is a need for a picture, eye witness, or a biometric measurement such as a fingerprint, so it can be proven benefits have been transacted. Surveillance cameras do not prove positive identification of an individual accessing or utilizing welfare benefits. An alternative welfare system that provides positive identification may prevent the types of fraud that have traditionally occurred. Because the EBT system will utilize the commercial network, this alternative would have to attach added security that is not provided in the credit/debit card process. It is anticipated the added security would prevent any EBT card from being counterfeited or used by anyone except the individual to whom the card was issued. The belief is, by adding these securities, it would deny benefits to anyone who would attempt to gain access to an authorized recipient’s account. Benefits could be processed only to the authorized recipient as a result of the grant the person had received from the social service agency. The GAO recommended fingerprint verification over other security options such as the use of Personnel Identification Number (PIN). One such alternative is Fingerprint Imaging. According to the GAO,
"fingerprint verification is the biometric option that offers the greater potential for reducing fraud in EBT systems" (U.S. GAO, 1995, p. 32).

The most desirable alternative welfare policy would ensure the recipient benefits authorized and paid are directed only to the individual entitled to receive them. No unauthorized individual should have access to a welfare recipient's benefits under any circumstances. The alternative would prevent the theft of benefits from the time they are forwarded from the state agency to the time they are utilized by the authorized recipient.

Differences in Perceptions

A number of differences in perceptions exists among the groups of professionals. They simply cannot thoroughly and professionally investigate all the fraud that is occurring in the welfare system. It appears there is too much fraud to investigate in relation to the professionals assigned this task. There is also the problem of costly investigations requiring hours of investment made by professionals. Their perspective reflects a need for preventive measures up-front, so there is less fraud to investigate later on.

Welfare agencies want to prevent fraud at the beginning when the applicant applies for benefits, midway when benefits are dispersed, and at the end when benefits are used. When an applicant applies for welfare benefits, these administrators want assurances that an individual is not already receiving some form of assistance. In most states, welfare recipients are required to report to the social service agency only once and sometimes twice per year to review their welfare eligibility. Because of large caseload assignments, workers in many social service agencies are not that familiar with the recipients, which allows an individual to go undetected when
applying for benefits under an assumed name. There is little chance of detecting duplicate assistance fraud once an individual is declared eligible. Professionals would not be able to detect an individual receiving benefits under an assumed name based on observation. The best chance to prevent duplicate assistance fraud is during the application process. Welfare agencies want to establish rightful eligibility and have assurances the recipient will receive the entitled benefits. Professionals involved directly with welfare fraud are in search of a secure system that would forward benefits only to those for whom they are intended.

Professionals' need to prevent fraud is directly related to the justification of the switch from paper to an electronic system. However, respondents directly involved with welfare fraud are concerned with individuals manipulating the EBT system, which would result in the same crimes that have been experienced in the Paper-Based system and credit card industry: counterfeiting of EBT cards and stolen EBT cards being used by unauthorized persons.

Similarities in Perceptions

Though these professionals differ in characteristics, they do share similar perceptions concerning the problems in preventing welfare fraud and possible prevention. Lack of human resources to address the welfare fraud problem is one of the most significant issues facing these respondents. There are simply not enough personnel to adequately staff positions that would result in sufficient fraud prevention. Many professionals believe that there needs to be some form of positive identification during critical points of the welfare process. Those points are application, distribution, and accessing of benefits. Many of the professionals also believe that no one alternative will totally prevent fraud. The position taken by these
respondents is that there needs to be improvement in the welfare system, but no system will prevent all forms of fraud.

Potential Policy Implications

Several potential policy implications are associated with the alternatives to the Paper-Based system. It is possible that the EBT system would only be transferring the fraud from paper to plastic. Thus, the same crimes could occur in an EBT system that occurred in the Paper-Based system. The EBT system is seen by many as an improvement over the Paper-Based in terms of detecting fraud. This system would enable public agencies to identify large numbers of potential felons. “Gore feels that the use of the PINs would limit the transferability of benefits and create an audit trail to track, where and when a particular card is being used” (Minaham, 1994, p. 1). But little attention has been given to EBT’s capability to prevent fraud. Thus, this system would be identifying only those who are involved with fraudulent activity. The same resources would be needed to investigate fraud with the EBT system that were required under the Paper-Based system.

An EBT program without the enhanced security raises a genuine concern about the potential for higher program costs and losses from theft. By adding the Fingerprint Imaging component to either a Paper-Based system or EBT system, accountability would be added to the application of welfare benefits. Any alternative to the Paper-Based system must meet its expectations in order to secure the public confidence. For law enforcement respondents, this would be a system that prevents fraud and not simply detects it.

Although development of an EBT system with biometric safeguards would be more expensive, largely because of the need to purchase hardware and software, and would take longer to implement nationwide, such system
enhancement is needed to ensure that the future system is practical and not beset by fraud. (U.S. GAO, 1995, p. 32)

In theory, each ATM and POS terminal would use a fingerprint reader to compare a live scanned fingerprint with the same print encoded on the EBT card. Benefits could not be accessed unless there were a positive match between the print on the EBT card and the live print.

Another possible implication is the constitutional right to fingerprint applicants for welfare benefits. Many perceive the fingerprinting of recipients as criminalizing the welfare process. Other professionals view fingerprinting of welfare applicants as a means of identification, similar to a driver's license or photo identification. A second consideration in fingerprinting recipients is how efficient the fingerprint imaging system is in verifying an individual's identification. Hours or days, for someone who is in desperate need of food and shelter, is a very long time.

Welfare agencies are already finding it difficult to administer the backlog of applicants for public assistance. Any delay in the application process would only create an even longer backlog. The issue of administrative costs is also a critical issue. If states decide to select the Paper-Based system with Fingerprint Imaging, there is the cost of purchasing fingerprint readers and computer databases that must be installed in every social service agency, in addition to the cost of training staff to process the fingerprinting of welfare applicants. If states choose the EBT system, there is the cost of installing a Point of Sale (POS) machine in every retailer who is authorized to accept food stamps. There also would be costs for training clients how to access benefits from ATMs and POS machines. If a state selects the EBT with Fingerprint Imaging system, there would be the cost of installing a fingerprint reader...
at every authorized ATM and POS machines, and training costs for both staff and recipients.

Costs to implement and maintain an EBT system must not outweigh the savings attributed to fraud prevention. Installation of POS machines and fingerprint readers cannot be more than the savings derived from preventing the improper use of welfare benefits. McKinnon (1995) points out that "the EBT system might not survive if it does not reduce fraud. Tax-payers might lose confidence in the country's already much maligned welfare programs if this system fails to live up to its expectations" (p. 14). This becomes even more of a critical issue if the EBT system cannot be intra-graded with existing financial infrastructure. Current ATMs and POS machines must be utilized in order for welfare benefits to be distributed. The administrative costs could be greatly increased if states have to purchase, install, and maintain their own electronic network without employing current commercial networks that are in existence.

The following section of the study will provide a brief description of the three alternatives.

Paper-Based System With Fingerprint Imaging

When an applicant applies for welfare benefits, the agency will provide the individual seeking welfare assistance information regarding the Fingerprint Imaging process. During the application process, the applicant will be asked to schedule an appointment to have his or her fingerprint taken. The fingerprint will be compared against all accessible database records. If there is a positive match with the applicant's fingerprint during the database search, either an eligibility worker's supervisor reviews the matter or the matter is referred to the welfare fraud...
investigation unit. The distribution and use of benefits is the same under this system as it would be under the Paper-Based system. The checks or coupons are mailed to the grantee's last known address or, in some situations, the benefits may be picked up at the local social service agency. Benefits may be used to purchase food items, shelter, clothing, and other basic needs of recipients and their children (see Figure 2).

Electronic Benefits Transfer System

The application for benefits under the EBT system is virtually the same as under the Paper-Based system with Fingerprint Imaging. There are a few exceptions. Under the EBT, applicants are not fingerprinted; applicants are provided an EBT card with a magnetic stripe code and assigned a Personal Identification Number (PIN). In some states, grantees are required to attend training on how to use the EBT card before becoming eligible for benefits.

The biggest difference between the Paper-Based system with Fingerprint Imaging and EBT is in the distribution and use of benefits. In the Paper-Based system, benefits are usually mailed to the grantee's last known address. In some situations, grantees may pick up the benefits at the social services agency.

In the EBT system, benefits are electronically deposited into the recipient's account at a local financial institution. Usually the accounts are maintained as a result of a contract between the state and the financial institution.

The use of welfare benefits is significantly different with the EBT system compared to the Paper-Based system. To receive benefits from the EBT system, a recipient must use the EBT card at either an ATM or Point of Sale (POS) terminal. If the recipient is purchasing food items, he or she would present the card to a clerk who would process the card through a card reader. The recipient must provide the
Figure 2. Model of Paper-Based System With Fingerprint Imaging.
clerk with the proper Personal Identification Number (PIN) before the transaction can be completed. The recipient must also key punch the correct PIN when accessing benefits from an ATM. Most states using the EBT system require recipients to report lost or stolen cards within 48 hours (see Figure 3).

EBT Used in Conjunction With Fingerprint Imaging

When EBT and Fingerprint Imaging are used in conjunction, applicants would be fingerprinted and those prints would be compared to prints on the agency’s database. Only those applicants whose prints fail to match any print on the database would be considered eligible for state assistance. Each applicant would receive training in using the EBT card. Applicants deemed eligible would receive an EBT card with their engraved fingerprint and would be asked to select a PIN.

Benefits would be distributed in the same way under this system as in the EBT system. Electronic deposit would be made into the recipient’s account each month. The most significant difference between the two other systems and EBT with Fingerprint Imaging is that each EBT card issued would now have the recipient’s encoded fingerprint on the card (see Figure 4).

Summary

The conceptual framework used for this study theorizes that professionals’ characteristics and perceptions may influence their choice of public policy. In terms of this study, respondents who are directly involved with welfare fraud are being asked to select an alternative to the Paper-Based system in order to prevent fraud. The three alternatives are the Paper-Based system with Fingerprint Imaging, Electronic Benefits Transfer (EBT), and EBT with Fingerprint Imaging. I anticipate
ELECTRIC BENEFITS TRANSFER SYSTEM

Client, goes to ATM
terminal to access
benefits

Client uses EBT card at
doctor’s office and hospitals

Client's case is reviewed
for continued eligibility
once a year by social
services worker.

Applicant obtains
application for benefits
from County Welfare
Agency

Applicant may apply for:
Aid to Families of Dependent Children (AFDC)
Food Stamps (FS)
Medicaid (MA)

Applicant returns
application for benefits
with verification of
assets and income

Social Service Worker
interviews applicant to
make determination for
eligibility of benefits

Social Service Worker
makes determination if
applicant is eligible for
state assistance

Eligible client receives plastic
card and Personal Identification
Number (PIN). The card
may carry a photograph and a
signature panel

To access benefits a client
uses a terminal that may be
dedicated to the system or
may be part of an existing
ATM or POS Network

Client, goes to ATM
terminal to access
benefits

Client purchases food items
with the use of the EBT card.
Clerk sweeps the EBT card
through a card reader at
participating vendors

Client uses EBT card at
doctor’s office and hospitals

Points Where Fraud Can Occur
1. Eligibility fraud: This can occur one of
   three ways: an applicant applies for
   benefits which they are already
   receiving; an applicant applies for
   benefits in one state while receiving
   benefits in another state and a client
   is not truthful about their personal
   assets.
2. EBT cards are stolen
3. Food stamp trafficking - the illegal
   sale and purchase of food stamps.

Applicant obtains application for benefits from County Welfare Agency

 Applicant may apply for: Aid to Families of Dependent Children (AFDC) Food Stamps (FS) Medicaid (MA)

 Applicant returns application for benefits with verification of assets and income

 Social Service Worker interviews applicant to make determination for eligibility of benefits

 Social Service Worker makes determination if applicant is eligible for state assistance

 Eligible client receives plastic card and Personal Identification Number (PIN). The card may carry a photograph and a signature panel

 To access benefits a client uses a terminal that may be dedicated to the system or may be part of an existing ATM or POS Network

 Client, goes to ATM terminal to access benefits

 Client purchases food items with the use of the EBT card. Clerk sweeps the EBT card through a card reader at participating vendors

 Client uses EBT card at doctor’s office and hospitals

 Figure 3. Model of Electronic Benefits Transfer System.

 1. Eligibility fraud: This can occur one of three ways: an applicant applies for benefits which they are already receiving; an applicant applies for benefits in one state while receiving benefits in another state and a client is not truthful about their personal assets.
 2. EBT cards are stolen
 3. Food stamp trafficking - the illegal sale and purchase of food stamps.
**ELECTRIC BENEFITS TRANSFER SYSTEM WITH FINGERPRINT SECURITY**

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Applicant obtains application for welfare benefits from county welfare agency.</td>
</tr>
<tr>
<td>2</td>
<td>Eligible client's fingerprint are electronically placed in the agency's database.</td>
</tr>
<tr>
<td>3</td>
<td>Benefits are electronically deposited by a government agency into the client's account at a specified financial institution.</td>
</tr>
<tr>
<td>4</td>
<td>Client accesses benefits at an ATM that has fingerprint recorder to compare a live scanned fingerprint with the same print encoded on the EBT card.</td>
</tr>
</tbody>
</table>

**Points Where Fraud Can Occur**

1. Eligibility fraud: Can occur one of three ways - applicant applies for benefits for which they are already receiving; applicant applies for benefits in one state while receiving benefits in another state and an applicant is not truthful about personal assets.
2. EBT cards are stolen.
3. Food stamp trafficking - the illegal sale and purchase of food stamps.

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Figure 4. Model of Electronic Benefits Transfer System With Fingerprint Imaging.
there are differences and similarities between the respondents in their perceptions pertaining to fraud prevention and changes in the welfare system that would need to be made. Each practitioner has a different set of social and demographic characteristics and perceptions, and this may explain why each selects its alternative. However, given that each may differ, respondents may nevertheless select the same alternative to the Paper-Based system. Another possibility is that each may select the same alternative but may differ on the policy implications.

The following are the two research questions addressed within this study. The questions are based on a review of the current literature.

**Research Questions**

The research questions for this study are:

1. Do respondents who are directly involved with welfare fraud, who have similar or different social and demographic characteristics, endorse the same program mechanisms regarding welfare fraud issues?

2. Do respondents directly involved with welfare fraud, who have similar and different social and demographic characteristics, foresee the same policy implications when implementing the proposed welfare alternatives to the Paper-Based system?

The goal of this research study is to explore perceptions of respondents who are directly involved with welfare fraud based on different social and demographic characteristics, as well as the following: (a) selecting of an alternative system regarding measures that can be taken to prevent common fraud from occurring in the welfare system, (b) capturing the necessary changes needed to prevent fraud, (c) identifying the specific technologies of each alternative system that will prevent fraud and those that will not prevent fraud, and (d) examining potential policy implications.
Three systems will be compared: Paper-Based system with Fingerprint Imaging, Electronic Benefits Transfer, and Electronic Benefits with Fingerprint Imaging. In addition to the fraud prevention measures, policy implications will also be addressed.

Hypotheses

The Paper-Based system used with Fingerprint Imaging, EBT, and EBT with Fingerprint Imaging are three alternatives to the Paper-Based system for preventing crimes in the welfare system. There are pilot Paper-Based systems used with Fingerprint Imaging and there are pilot EBT systems. There are, however, no pilot or statewide Fingerprint Imaging system used in conjunction with EBT in the United States. It is also possible that none of the alternatives will prevent all forms of fraud.

City, county, state, and federal government units are looking for effective methods to prevent welfare fraud. At the present time, a number of pilot and statewide projects are being tested to prevent welfare benefits from being misused. The cities of Los Angeles and New York are testing fingerprinting recipients. The states of Maryland and Texas are distributing welfare benefits electronically (EBT) in an attempt to prevent welfare fraud. The United States General Accounting Office recommends combining EBT with Fingerprinting. There are a number of differing opinions regarding which system would be the most comprehensive and effective approach to fraud prevention in the welfare system. This research project will attempt to gather perspectives from various respondents who are directly involved with the welfare system as to which alternative to the Paper-Based system (Paper-Based with Fingerprint Imaging, EBT, or EBT with Fingerprint Imaging) would be the most effective. Another possibility is that no alternative will be selected.
In summary, the major hypotheses of this research may be stated as follows:

*Hypothesis I:* There is a relationship based on social and demographic characteristics between professionals and selection of an alternative to the Paper-Based system welfare policy for the purposes of preventing the most common forms of fraud, namely, duplicate assistance fraud, counterfeiting, stolen benefits, and food stamp trafficking.

*Hypothesis II:* There is a relationship based on social and demographic characteristics between professionals and selection of an alternative to the Paper-Based welfare policy that would provide the necessary changes to prevent all fraud.

*Hypothesis III:* There is a relationship based on social and demographic characteristics between professionals and selection of an alternative to the Paper-Based welfare system that would provide benefits as a result of preventing fraud.

*Hypothesis IV:* There is a relationship based on social and demographic characteristics between professionals and selection of an alternative to the Paper-Based welfare system and agreement on the specific technologies of each system.

*Hypothesis V:* There is a relationship based on social and demographic characteristics between professionals and selection of specific technologies that will not prevent fraud.

*Hypothesis VI:* There is a relationship based on social and demographic characteristics between professionals' perceptions of potential policy implications and their selection of an alternative to the Paper-Based welfare system for the purposes of preventing fraud.

The next section of this research study will describe the reason for choosing the survey method for data collection and the justification for it.
Rationale for the Study

Because welfare fraud is such a problem, all states have established welfare fraud units. Various attempts were made to contact these agencies to obtain data relevant to fraud committed against the Paper-Based, Fingerprint Imaging, and EBT systems. However, during the process it became evident that interval and ratio data information from state and federal agencies was virtually impossible to obtain. One reason was the lack of comprehensive and accessible records. The other reason, as stated previously, is that no state has an EBT system used in conjunction with Fingerprint Imaging system.

The survey is a far less expensive approach to collecting data than telephone or in-person interviews. As United States Department of Agriculture Secretary Robert Robinson (1994) points out:

Determining precisely just how much trafficking is occurring and how often food stamps are being sold for non-food purchases would be an extraordinarily difficult and expensive effort. Doing so would require literally an army of investigators tracking a nationwide sample of program recipients for several months to determine how much they used their food stamps. (p. 5)

Also, most states are in the developmental stages of the EBT process, thus have little data available.

Even if the data were accessible, they would not provide a comparison of the three systems. Gathering the perspectives of qualified respondents, all three systems (Paper-Based with Fingerprint Imaging, EBT, and EBT with Fingerprint Imaging) can be compared to each other in terms of fraud prevention. Currently, states can provide statistical data that will compare only the EBT system and Paper-Based system or the Fingerprint Imaging system and the Paper-Based system. The data would not indicate if the Fingerprint Imaging system is more effective at preventing
fraud than the EBT system, because no state has had both systems operational. Data from states that have implemented either EBT or Fingerprint Imaging will only indicate fraud committed against the respective systems. A panel of respondents will offer a broader perspective in regard to the vast amount of fraudulent acts that have been perpetrated.

One of the advantages to the survey method over collecting data from individual states is that it allows an opportunity to examine whether some forms of fraud and abuse are not affected at all, while others are affected greatly. For example, EBT may have little potential for reducing duplicate assistance fraud, whereas Fingerprint Imaging may have a large impact on duplicate assistance fraud, but little, if any, impact on food stamp trafficking. Other problems with statistical data provided by states can also exist. As Constance (1996) points out, "The actual statistics concerning welfare fraud and the success of efforts to prevent it are often conflicting" (p. 413). A state may show a reduction in fraud but at the same time have an increase in the number of arrests.

As the size and complexity of fraud cases increase, they also become harder to detect. Many crimes may go unreported, and thus are not included in federal, state, and local data. This does not mean that the fraud is not occurring; it simply means that criminals are not being arrested and prosecuted for various reasons. In the case of food stamp trafficking, for example, it takes many man-hours to execute an arrest. Respondents in the present study provided a broader perspective on fraud that is occurring in welfare system.

Very little data are available concerning Fingerprint Imaging, EBT, and welfare fraud. Because the present study utilizes a survey involving qualified respondents, perspectives should determine which system is endorsed by local, state,
and federal agencies. In December 1994, the General Accounting Office (U.S. GAO, 1995) reported that “the state EBT pilot projects that had been reviewed including those used to distribute food stamps had not eliminated fraud” (p. 5). The GAO recommended that testing and study are needed to resolve technological and policy issues. However, the GAO points out:

Because fraud, other than counterfeiting, persists in EBT pilots around the country, it is believed that, if feasible, an evaluation should be completed before full implementation of the nationwide EBT program is envisioned by the Federal EBT Task Force in 1999. (U.S. GAO, 1995, p. 9)

By consulting professionals, not only the EBT system but also other alternative welfare distribution systems are being evaluated.

The next chapter of the study will explore the methodology used for this study.
CHAPTER V

METHODOLOGY

Overview

A discussion of the methods and procedures utilized in this study will be presented in this chapter. Given the nature of this study, it was determined that the best source of information would be to gather perspectives from a variety of respondents who are directly involved in combating welfare fraud through the use of Electronic Benefits Transfer systems and Fingerprint Imaging systems.

Varying groups of professionals offer different perspectives on the welfare fraud problem. Some respondents provide information based on their knowledge and perceptions of crimes committed against the welfare system. Others pinpoint vulnerabilities that may be present during the application and distribution of benefits for the three systems being considered. Some respondents provide their knowledge and perceptions about the benefits of each system in combating the welfare fraud problem.

This study utilized a cross-sectional, nonrandom sample of professionals connected with state and federal welfare programs. The names of the professionals were obtained from the 1996 EBT conferences and public directories that identified states' respondents who were employed by government agencies involved with welfare systems. The survey also included professional contacts of this writer while employed in the Michigan Family Independence Agency, Office of Inspector General.
This section will present a discussion of the methodology and procedures that were utilized in this study. The following topics are addressed: sample inclusion criteria, data collection procedures, questionnaire development, pretesting, collection site, operational definitions of variables, survey instrument, human research subject protection, sample number, nonresponses, survey questions as related to hypotheses, reliability, validity, threats to internal validity, structure, statistical tests, delimitations, and limitations of the research.

Sample Inclusion Criteria

The target population consists of professionals who are currently employed in law enforcement, welfare benefit administration, or EBT administration. As defined by Kerlinger (1973), a purposive sampling is a nonprobability sample which is characterized by the use of judgment and a deliberate effort to obtain representative samples by including presumably typical areas or groups in the sample (p. 129).

The individuals selected for this study are considered experts because of their experience with welfare problems and because their input offers practical solutions to those problems. These same respondents also offer insight into what possible implications could result from implementing one of the alternatives to the Paper-Based system. These individuals bring unique qualifications to this study. Some examples of the professional responsibilities represented in this sample are: (a) responsible for EBT pilot projects in their own state, (b) involved with either the investigation or arrest of welfare fraud criminals, (c) experienced in the conversion of the Paper-Based system to an EBT system, (d) responsible for the distribution of welfare benefits, and (e) experienced in writing policy for the procedures to be used during the application of welfare benefits for the Paper-Based or EBT systems.
The sample was restricted to participants employed by government agencies. Private sector professionals were not consulted, since information concerning crimes committed in the private sector (mainly the banking industry) during the application process and/or distribution of funds is considered confidential and relevant information is unavailable. For example, according to Newcomb (1993), "Industry experts say there's no central tracking system among the ATM networks mainly because each reported theft is relatively small totaling under $1,000" (p. 2). In the welfare system, states are responsible for keeping accurate records of crimes committed against the welfare system.

Respondents selected to participate in this study met the following four criteria: (1) professional responsibilities include direct involvement with investigation of welfare fraud, administration of welfare programs, or EBT systems; (2) employed by a city, county, state, or federal agency; (3) familiar with the Paper-Based, EBT systems in either the distribution administration, operations, or welfare crimes that are committed; and (4) familiar with EBT/pilot projects in their own state or other states. The next section of this research study provides a step-by-step description of the data collection procedures that were used.

Data Collection Procedures

The sample members were sent a letter of introduction containing a statement of confidentiality, a survey, and a return envelope. Each letter (see Appendix B) explained the purpose of the survey, structure of the survey, and instructions necessary to complete the survey. The following are agencies represented in the research study: United States Secret Service; United States Federal Bureau of Investigation; United States Department of Agriculture, Office of Inspector General,
Fraud Unit, in the states of New Mexico, Maryland, Minnesota, Pennsylvania, Ohio, New Jersey, Texas, New York, and Wyoming. A second letter and survey were sent 3 weeks after the first survey was mailed to those participants who had not provided a response. The letter stated that a survey was mailed out 2 weeks previously and had not been returned. The letter also stated that a second survey was being forwarded and its return was requested. Each return envelope received a code; the code was recorded so a second survey was not sent. For the purpose of this study, nominal and ordinal level scales were utilized in the survey, along with one open-ended question to gather the data.

The next section will describe how the questionnaire was developed.

Questionnaire Development

The questionnaire was developed after reviewing key literature, government reports, and pilot projects dealing with welfare fraud, EBT, and Fingerprint Imaging. Interviews were also conducted with officials from the Michigan Family Independence Agency’s Office of Inspector General and the Michigan EBT Task Force. First, the most common types of fraud perpetrated were identified (duplicate assistance fraud, stolen benefits, counterfeiting, and food stamp trafficking). Next, changes that were considered necessary were made, such as identifying benefits, technologies to prevent fraud, and policy implications for the alternatives to the Paper-Based system, namely, Electronic Benefits Transfer (EBT) and Fingerprint Imaging, and a hybrid system that combines both EBT and Fingerprint Imaging.

Questions were developed based on difficulties identified through the evaluation of the Paper-Based and EBT systems. Specifically, questions for the research instrument attempted to locate where failures in preventing fraud have
occurred in the welfare system. Adjustments were made that were consistent with the research objectives. A pretest was conducted prior to the mailing of the survey to the sample population. The following section will describe the pretesting of the survey.

**Pretesting**

The survey instrument was pretested for clarity, terminology, and structure among a small group of 10 welfare fraud and welfare benefit professionals employed by the Michigan Family Independence Agency. These 10 professionals were excluded from the larger sample used to gather actual data for the study. Modifications were made based on the feedback and were balanced with the research project’s goals.

The following section outlines the data collection sites once the survey was mailed.

**Data Collection Site**

The data collection site included local, state, and federal agencies of the 50 states. Some examples of the data collection sites are: Montgomery County Prosecutor’s Office, New York State Department of Social Services, and the United States Department of Agriculture. These agencies are physically located throughout the United States. The research instrument was sent by ordinary mail to these data collection sites.

The respondents were asked to return the survey to the Michigan Family Independence Agency’s Office of Inspector General at 235 S. Grand Ave., Lansing, Michigan 48909. The researcher provided a stamped self-addressed envelope.

The relationship of the independent and dependent variables will be explained in the following section of the research study.
Operationalization of Variables

This research examined and tested the relationship between the independent and dependent variables. As defined by Babbie (1990), an independent variable is "presumed to cause or determine the value of the dependent variable" (p. 372). Babbie defines the dependent variable as "the variable that is assumed to depend or be caused by another—called the independent variable" (p. 370).

This research project is contingent upon the selected sample having a basic understanding of Fingerprint Imaging, EBT, and EBT with Fingerprint Imaging, as well as the implications of implementing each system. Each of the systems was defined in the survey along with other relevant terms. Questions were worded in the research instrument to examine and measure perceptions of respondents concerning the perceived impact each system could have on crimes committed in the welfare system. A sample statement from research instrument is: "The EBT system will not prevent recipients from applying for benefits which they are already receiving under an assumed name." In this statement, the perception of the EBT system is the dependent variable; the independent variable would be the perceiver's characteristics, including, but not limited to, education, gender, age, organization, and professional involvement. Each sample participant had the choice of selecting one of the systems or of indicating "undecided," "don't know," or "none."

Definitions of the operational variables are provided in the next section of the study.
Operational Definitions of Variables

The following is a list of operational definitions pertaining to the dependent variables (perceptions of Paper-Based system, Electronic Benefit Transfer, and Fingerprint Imaging).

**Perception of the Paper-Based System (Dependent Variable)**

The Paper-Based system is the distribution of welfare benefits by paper coupon or check to recipients. There are at least 12 federal and state benefit programs that utilize the Paper-Based system according to the EBT Task Force (1993, p. 6). Some of the benefit programs are: food stamps; Aid to Families of Dependent Children; Social Security Insurance; unemployment; veterans’ benefits; federal pensions; military pensions; and Women, Infants, and Children program. Coupons and checks are usually mailed to recipients but sometimes can be picked up at the local government agency.

**Perception of the Electronic Benefits Transfer (Dependent Variable)**

EBT provides benefit access to those entitled to social program benefits with Automated Teller Machines and retail Point of Sale terminals. The recipient inserts the card into a device that reads the magnetic stripe or, in the case of attended terminals, presents the card to a clerk who sweeps the card through the stripe reader. The recipient’s identity is usually verified by his or her Personal Identification Number, and the terminal communicates with an authorization center to ascertain that the recipient is eligible for benefits and the card has not been reported lost or stolen (Wood & Smith, 1991, p. 1).
Perception of the EBT With Fingerprint Imaging (Dependent Variable)

Computers are used to scan and digitize fingerprints by automatically creating a spatial geometry or map of the unique ridge patterns of the prints and translating the spatial relationship into a binary code for the computer’s searching algorithm (U.S. GAO, 1995, p. 15). The encoded print must match the live print before benefits can be disbursed.

Survey Instrument

Each participant in the study received a questionnaire containing 38 items (Appendix C). The first section of the research instrument contained statements concerning the use of the Paper-Based System with Fingerprint Imaging, EBT, and EBT with Fingerprint Imaging. Following each of the statements, the respondents were asked to chose one of the systems that was the best alternative to the Paper-Based system, or to indicate “undecided,” “don’t know,” or “none.” Example of possible responses were: (1) Paper Based with Fingerprint Imaging (PBwFPI), (2) EBT, (3) EBT with Fingerprint Imaging (EBTwFPI), (4) Undecided, (5) Don’t Know, and (6) None. In the next section of the survey, respondents were asked to select from: { } Strongly Agree, { } Agree, { } Undecided, { } Disagree, or { } Strongly Disagree. An example of one survey item is: “A form of biometric must be used in conjunction with EBT in order to prevent fraud. { } Strongly Agree, { } Agree, { } Undecided, { } Disagree, { } Strongly Disagree. One open-ended question addressed policy implications. The last 10 items requested demographic information. Definitions were provided to assist respondents in answering questions.
The procedures that were used to keep the names of sample members confidential are articulated in the following section.

Human Confidentiality and Subject Protection

The study was submitted to Western Michigan University’s Human Subjects Institutional Review Board (HSIRB) under the exempt category of research. The name of each participant has remained anonymous to the researcher. The original survey was mailed out; approximately 3 weeks later a second was mailed to those who had not returned their surveys. The approval that was requested was based on the assurance of confidentiality and anonymity.

A review of the desired response rate is provided in the next section.

The Sample Number

Information is reported on the number of surveys returned and the number of nonreturns. A 50% or better response rate was expected of those surveys originally mailed out. The actual sample of 450 professionals was selected from the purposive sampling frame. The sample size was based on the recognition that, given the subject, a larger sample was used as a means to increase the probability of representatives of the population and ensure a sufficient number of responses to meet the assumptions needed for statistical testing. The number of nonresponses are also indicated in the research project.

The way each sample question related to the study’s hypotheses is outlined in the next section.
Relation of the Survey Questions to the Dependent Variables

The dependent variables for this study are: perceptions of Paper-Based System with Fingerprint Imaging, perceptions of Electronic Benefits Transfer (EBT), and perceptions of EBT with Fingerprint Imaging. Each survey question is related to one of the three systems.

The reliability of the study is addressed in the subsequent section.

Reliability

The survey instrument used in this study, if replicated, should yield the same result each time. This assumption is based on the following: All questions were relevant to the study, and participants in the study had somewhat similar professional experience. The research instrument utilizes closed-ended responses; thus, respondents were provided with standardized answers from which to choose.

The study’s validity is reported next.

Validity

The purpose of the research instrument was to measure three systems in order to recommend which system would best prevent welfare fraud. The three systems were the Paper-Based with Fingerprint Imaging, EBT, and EBT with Fingerprint Imaging. Data were available for the Paper-Based system with Fingerprint Imaging and the EBT system as a means to prevent fraud. However, no state has implemented an EBT system with Fingerprint Imaging; thus, it was not possible to compare the three systems using other means. Also, by using a variety of professionals, a broader perspective was gathered concerning the three systems as opposed to collecting
statistical data from each state. By utilizing professionals, a comparison was made of the three systems' strengths and weaknesses. The questions in the research instrument were based on the prevention of fraud that has routinely occurred in the past in the Paper-Based system. All respondents were asked to objectively evaluate the three systems based on the statements provided and then to select one of the systems, or indicate if they strongly agree, agree, are undecided, disagree, or strongly disagree with the statement provided.

Threats to the internal validity of the study are expressed in ensuing paragraph.

Threats to Internal Validity

In this research study, possible threats to internal validity were: (a) low sample return; and (b) biased replies from respondents either in favor or in opposition to the Paper-Based, Fingerprint Imaging, or EBT systems.

The structure that was used for this study is examined in the following section.

Structure

Because closed-ended questions were used, respondents were asked to select an answer from a list that was provided. Closed-ended questions provided a greater uniformity of responses and were more easily processed. The survey provided an efficient method of gathering data for the researcher and was far less time-consuming for the respondents, thus increased the probability of a higher return ratio.

A discussion of the statistical tests that were used for analyzing the data is presented next.
Statistical Tests

Percentages, means, and mediums were applied to the data. The collected data were at the nominal and ordinal levels. For the nominal and ordinal level data, a chi-square test was utilized. This primarily tests for bivariate analysis of independence to determine significant relationships between the variables. This test is used when a researcher is interested in the number of responses, objects, or people that fall into two or more categories. It is also known as a "goodness-of-fit" statistic. Goodness-of-fit relates to whether a significant difference exists between an observed number and expected number of responses, people, or objects falling in each category designed by the researcher. The expected number is what the researcher expects by chance or according to some null hypothesis (Huck, Cormier, & Bonds, 1974, p. 68). Chi-square analysis was also used for the ordinal level data.

All statistics, viewed collectively, should provide reliable indicators from which conclusions may be drawn.

The study's limitations are outlined in the following section.

Limitations

Limitations of the study include the following:

1. The purpose of this study is descriptive, not explanatory.

2. Many of the respondents in this study were involved with EBT and Fingerprint Imaging. Their continued employment may be contingent on the success of either EBT or Fingerprint Imaging systems. Therefore, an objective response concerning the failure to prevent fraud may not be provided, even with assurances that responses will be kept confidential.
3. No aggregate data were available for all three models (Paper-Based with Fingerprint Imaging, EBT, and EBT with Fingerprint Imaging) to confirm or dismiss the results of this study.

4. Few respondents possessed expertise in all three areas of the research (Paper-Based with Fingerprint Imaging, EBT, and EBT with Fingerprint Imaging). A respondent may have had knowledge of the EBT system but may not have been considered an expert in Fingerprint Imaging. To overcome this limitation, descriptions of all three methods to prevent fraud were provided to the respondents.

5. The structuring of responses to the research instrument might have overlooked important answers.

Policy Implications

To obtain potential policy implications for the research, an open-ended question was presented to the sample. The purpose of this open-ended question was to gather data on implementing a new welfare system. Policy implications will be reviewed and discussed in the next chapter, along with the social and demographic characteristics associated with the implications.

A description of the sample, data collection procedures, questionnaire development, pretesting, the human research protection, reliability, validity, statistical tests, and limitations of the study have been provided in this chapter. A discussion of the data analysis and findings will be presented in Chapter VI.

Summary of Chapter V

In summary, a survey consisting of 38 items was mailed to approximately 450 professionals. The names of the respondents were chosen from public directories
such as the United Council of Welfare Fraud Directory. The items that were chosen for the survey instrument came from the literature. The survey was pretested and the necessary changes were made. The confidentiality of the respondents will be protected. The necessary steps have been outlined in this chapter so the study can be replicated. The main statistical tests for this study are percentages and chi-square.

The following section will address the data analysis utilized for this study.
CHAPTER VI

DATA ANALYSIS/RESEARCH FINDINGS

Introduction

In this section, the results of the study will be presented and analyzed. The social and demographic characteristics of the sample will be described, and the results of testing the hypotheses will be discussed.

Perceptions of professionals regarding the following will be analyzed: ways to prevent specific forms of fraud, namely, duplicate assistance fraud, counterfeiting, stolen benefits, and food stamp trafficking; prevention of all fraud; benefits of fraud prevention; and specific technologies that will and will not prevent fraud. In addition, potential policy implications will be examined for each of the alternatives to the Paper-Based welfare system.

In all, 267 surveys were completed out of the original 450 surveys mailed out. Twenty-six were returned and marked “returned to sender.” The response rate was 59.3%. From the first mailing, 212 surveys were returned, and 55 surveys were returned from the second mailing. The research instrument contained 27 statements which produced nominal level data, followed by 10 statements that produced ordinal level data. For the purpose of gathering data regarding potential policy implications, one open-ended question was provided in the survey.

The following statistical tests were used to analyze the quantitative data: percentages, means, medians, and chi-square for the nominal and ordinal level data.
First, I will describe the population using the 10 social and demographic characteristics which were used as independent variables for this study.

Results

Sample Characteristics

As Table 2 demonstrates, 37% \((n = 101)\) were law enforcement respondents, 46% \((n = 123)\), were welfare benefit administrators, and 16% \((n = 42)\) were EBT administrators. Forty-two percent of the respondents were employed by city and county governments \((n = 112)\). Fifty-eight percent were employed by state and federal governments \((n = 155)\). This is not surprising since most EBT and Fingerprint Imaging programs are administered primarily by state and federal agencies. One practitioner listed his or her profession as “other.”

Table 2 shows that more respondents were employed by an agency that was directly involved with EBT or Fingerprint Imaging, 69% \((n = 184)\). Of those respondents who were not employed by an agency that was directly involved with EBT or Fingerprint Imaging, 34% \((n= 91)\) indicated familiarity with such systems in other states. There were more respondents with a college degree, 70% \((n = 187)\), and more male respondents, 55% \((n = 147)\). The percentages were almost equal, with the exception of law enforcement. It was expected that law enforcement respondents were going to be predominantly male. This is not surprising since law enforcement continues to be a profession overrepresented by men, and social work is a profession more often pursued by women. There were substantially more Caucasians, 91% \((n = 243)\). This was unexpected and no explanation is offered as to why a higher percentage of minorities was not represented in the sample. All \((N = 267)\) but one of
Table 2
Demographics by Profession ($N = 267$)

<table>
<thead>
<tr>
<th></th>
<th>Law Enforcement ($n = 101$)</th>
<th>Welfare Benefit Admin. ($n = 123$)</th>
<th>EBT Admin. ($n = 42$)</th>
<th>Total ($N = 267$)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Employed by:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>City/County</td>
<td>44%</td>
<td>51%</td>
<td>12%</td>
<td>42%</td>
</tr>
<tr>
<td>State/Federal</td>
<td>56%</td>
<td>49%</td>
<td>88%</td>
<td>58%</td>
</tr>
<tr>
<td><strong>Employers’ Involvement:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>67%</td>
<td>67%</td>
<td>79%</td>
<td>69%</td>
</tr>
<tr>
<td>No</td>
<td>31%</td>
<td>31%</td>
<td>21%</td>
<td>29%</td>
</tr>
<tr>
<td>Don’t know</td>
<td>1.2%</td>
<td>0.8%</td>
<td>—</td>
<td>2%</td>
</tr>
<tr>
<td><strong>Employers’ Not Involved/Familiar with</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>36%</td>
<td>36%</td>
<td>29%</td>
<td>34%</td>
</tr>
<tr>
<td>No</td>
<td>21%</td>
<td>26%</td>
<td>28%</td>
<td>28%</td>
</tr>
<tr>
<td>Don’t know</td>
<td>0.3%</td>
<td>—</td>
<td>0.2%</td>
<td>0.1%</td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No college degree</td>
<td>40%</td>
<td>29%</td>
<td>0.7%</td>
<td>30%</td>
</tr>
<tr>
<td>College degree</td>
<td>60%</td>
<td>86%</td>
<td>92%</td>
<td>70%</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>65%</td>
<td>48%</td>
<td>59%</td>
<td>55%</td>
</tr>
<tr>
<td>Female</td>
<td>33%</td>
<td>52%</td>
<td>41%</td>
<td>45%</td>
</tr>
<tr>
<td><strong>Race/Ethnicity:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caucasian</td>
<td>87%</td>
<td>94%</td>
<td>92%</td>
<td>91%</td>
</tr>
<tr>
<td>African American</td>
<td>8%</td>
<td>0.4%</td>
<td>0.7%</td>
<td>6%</td>
</tr>
<tr>
<td>Hispanic American</td>
<td>3%</td>
<td>2%</td>
<td>—</td>
<td>0.2%</td>
</tr>
<tr>
<td><strong>Employment:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full-time</td>
<td>100%</td>
<td>99%</td>
<td>100%</td>
<td>99%</td>
</tr>
<tr>
<td>Part-time</td>
<td>0%</td>
<td>1%</td>
<td>0%</td>
<td>1%</td>
</tr>
</tbody>
</table>

The respondents were employed full-time. The median years of experience for all respondents was 10. The mean age for all respondents was 48.6.
Summary of Sample Characteristics

As Table 2 indicates, more of the respondents were employed by a state or federal agency. More of the respondents’ employers were directly involved with an EBT or Fingerprint Imaging system. This is consistent with information provided in the literature that indicates that 38 states have either pilot or statewide EBT or Fingerprint programs. Of those who did not work for an employer directly involved with EBT or Fingerprint Imaging, a majority had knowledge of systems in other states. Most of the respondents had a college degree, 70%. This was expected since many professional positions in welfare benefit administration and EBT administration require a college degree. Law enforcement and welfare benefit administrators had substantially more professional experience than EBT administrators. This is not surprising since EBT is a relatively new process of distributing welfare benefits. The median years of experience for the respondents was 10. The mean age was 48.6. This may be explained by the fact that many of the respondents could have begun their careers at entry level positions and gradually progressed to administrative positions in law enforcement and welfare benefit administration.

The following section of the study will analyze the data in relationship to the study’s hypotheses. Because there were so few part-time and non-Caucasian respondents, these groups were not considered separately in the data analysis.

Data Presentation for Hypothesis Testing

Data Analysis for Research Hypothesis I

Research Hypothesis I: There is a relationship based on social and demographic characteristics between professionals and their selection of an
alternative to the Paper-Based system for preventing specific forms of welfare fraud:
duplicate assistance fraud, counterfeiting, stolen benefits, and food stamp trafficking.

In order to examine the first research hypothesis, respondents were assigned
to groups based on their social and demographic characteristics and systems that
might reasonably be expected to have an impact on preventing the four most common
forms of fraud (duplicate assistance fraud, counterfeiting, benefits being stolen, and
food stamp trafficking). Individuals who chose a particular system more than 50% of
the time (six or more selections in their responses to the 12 relevant questions) were
considered to have selected that system. Individuals who did not choose a particular
system more than 50% of the time were assigned to a “no selection” group.
Questions were grouped based on subject matter. Twelve of the initial 15 questions
(Section 1 of the research instrument) addressed the prevention of welfare fraud.
Questions 6, 7, and 9 were excluded from this section of the data analysis, and were
utilized in a section where the questions were more appropriate. The 12 questions
addressed the prevention of the four most common forms of fraud. The statistical
significance is observed at the conventional .05.

Table 3 examines the relationship based on social and demographic
characteristics between a profession and the selection of an alternative to the Paper-
Based system for preventing fraud, namely, duplicate assistance fraud, counterfeiting,
stolen benefits, and food stamp trafficking. The chi-square results are displayed in
Table 3. One of the respondents listed profession as “other” and was not considered.

Respondents did not select the Paper-Based with Fingerprint Imaging or EBT
systems the minimum number of times to be considered for the chi-square tests. This
implies that respondents employed in law enforcement, welfare benefit, and EBT
administration did not believe these systems were the best alternatives in terms of
Table 3

Profession and the Prevention of the Most Common Forms of Fraud ($N = 266$)

<table>
<thead>
<tr>
<th></th>
<th>Law Enforcement ($n = 101$)</th>
<th>Welfare Benefit Admin. ($n = 123$)</th>
<th>EBT Admin. ($n = 42$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Selection</td>
<td>17%</td>
<td>25%</td>
<td>63%</td>
</tr>
<tr>
<td>EBT w Fingerprint Imaging</td>
<td>83%</td>
<td>75%</td>
<td>35%</td>
</tr>
</tbody>
</table>

Note. $\chi^2 = 28.941, df = 2, p < .05$.

preventing the four most common forms of fraud. There was a statistically significant difference between the respondents based on their profession and selection of the EBT with Fingerprint Imaging and the selection of no alternative ($p < .05$). The findings suggest a relationship between the characteristic profession and selection of a particular system.

Eighty-three percent ($n = 84$) of law enforcement respondents selected the EBT with Fingerprint Imaging system. Seventy-five percent ($n = 92$) of welfare benefit administrators selected the EBT with Fingerprint Imaging system. The percentages for the EBT administrators were dissimilar when compared with the other groups of professionals. Sixty-three percent ($n = 27$) of EBT administrators made no selection regarding fraud prevention, and 37% ($n = 15$) selected the EBT with Fingerprint Imaging.

There were obvious differences between the groups. Law enforcement respondents had the strongest belief (83%) that to prevent duplicate assistance fraud, counterfeiting, stealing of benefits, and food stamp trafficking, government agencies must implement a welfare policy that utilizes both EBT and Fingerprint Imaging. One reason law enforcement may have chosen the EBT with Fingerprint Imaging system...
is the long history this profession has had in relying on the use of fingerprints. In addition, law enforcement may believe that combining EBT with Fingerprint Imaging could provide conclusive evidence that the recipient actually received the benefits. Although, welfare benefit administrators had a lower percentage of responses compared to law enforcement, their responses still indicate that welfare systems are in need of added security. Perhaps they are aware that billions of dollars are at risk.

**EBT administrators do not share this same premise.** These respondents are responsible for the administration of the EBT system, thus may be less likely to believe the system is vulnerable to fraud. It could also be that EBT administrators are not willing to accept that fraud could continue under the EBT system without some form of biometric measurement such as Fingerprint Imaging. Lastly, EBT administrators may be less likely to endorse the EBT with Fingerprint Imaging system or the Paper-Based with Fingerprint Imaging system because the EBT system was highly promoted by the federal government as well as the commercial financial industry as an improvement over the more traditional Paper-Based welfare system.

Based on the results shown in Table 3, **Research Hypothesis I was accepted.** The findings that appear in Table 3 indicate a significant relationship. Law enforcement respondents had the highest percentage of selecting the EBT with Fingerprint Imaging to prevent the four most common forms of welfare fraud, followed by welfare benefit administrators. EBT administrators had the highest percentage for no selection.

The next section of the study presents the data analysis to determine if a relationship exists between employer type and selection of an alternative to the Paper-Based system for the purpose of preventing fraud.
Categories where there were insufficient responses to conduct a valid test were deleted. This resulted in eliminating the Paper-Based system with Fingerprint Imaging and EBT. There were statistically significant differences \( (p < .05) \) based on which government agency they were employed by and their selection of an alternative system.

As Table 4 indicates, 80\% \((n = 86)\) of city and county practitioners selected the EBT with Fingerprint Imaging system for Research Hypothesis I to prevent the more common forms of welfare fraud. Sixty-six percent \((n = 90)\) of the state and federal respondents selected the EBT with Fingerprint Imaging system for the prevention of duplicate assistance fraud, counterfeiting, benefits being stolen, and food stamp trafficking. The results of the chi-square test show statistically significant differences \( (p < .05) \) between the groups of respondents. A much higher percent of city and county respondents selected the EBT with Fingerprint Imaging system than did state and federal respondents.

Table 4

<table>
<thead>
<tr>
<th></th>
<th>City/County ((n = 108))</th>
<th>State/Federal ((n = 137))</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Selection</td>
<td>20%</td>
<td>34%</td>
</tr>
<tr>
<td>EBT w Fingerprint Imaging</td>
<td>80%</td>
<td>66%</td>
</tr>
</tbody>
</table>

*Note. \( \chi^2 = 5.797, df = 1, p < .05. \)*

City and county professionals may have a stronger belief than state and federal professionals that there is a need to combine EBT with Fingerprint Imaging in order to prevent fraud. More city and county professionals may strongly believe the
federal government should provide the funding for an EBT with Fingerprint Imaging system. This belief may be based the fact the federal government is mandating an EBT system be implemented, even though the system has not be proven to prevent fraud.

Based on the chi-square test results shown in Table 4, Research Hypothesis I was accepted. There is relationship based on social and demographic characteristics between professionals and selection of an alternative to the Paper-Based system to prevent the more common forms of fraud. A higher percentage of city and county respondents selected the EBT with Fingerprint Imaging system than other professionals.

Table 5 presents the chi-square test results to determine if a relationship exists between education and selection of an alternative to the Paper-Based welfare system to prevent fraud.

Table 5

<table>
<thead>
<tr>
<th></th>
<th>Noncollege Graduate (n = 76)</th>
<th>College Graduate (n = 169)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Selection</td>
<td>18%</td>
<td>33%</td>
</tr>
<tr>
<td>EBT w Fingerprint Imaging</td>
<td>82%</td>
<td>67%</td>
</tr>
</tbody>
</table>

Note. \( \chi^2 = 5.169, df = 1, p < .05 \).

There were insufficient responses for the Paper-Based or EBT systems to conduct a valid test for questions related to Research Hypothesis I. This implies that both noncollege and college graduates believed that the Paper-Based with Fingerprint Imaging or EBT systems would not be the best alternative to prevent the four
most common forms of fraud. This resulted in eliminating the Paper-Based system with Fingerprint Imaging and the EBT system. There was a statistically significant difference between respondents based on their education and the selection of an alternative to the Paper-Based System for the purpose of preventing specific forms of fraud ($p < .05$). Table 5 indicates that 82% ($n = 62$) of respondents who did not have a college degree selected the EBT system with Fingerprint Imaging 50% or more of the time. Sixty-seven percent ($n = 113$) of the respondents who did have a college degree selected the EBT with Fingerprint Imaging for preventing specific forms of fraud.

Noncollege graduates were more likely to choose the EBT with Fingerprint Imaging system than college graduates. For college graduates, a greater number of respondents made no selection for preventing the four major forms of fraud when compared to noncollege graduates. One possible explanation for these results are the education requirements for professions. Law enforcement respondents in this study had the highest percent of noncollege graduates when compared to the other professions. Many law enforcement positions do not require a college degree. As noted earlier, law enforcement has had a long history of using fingerprints. Fingerprints have been used by law enforcement for almost 100 years to identify criminals, both upon arrest and after comparison of crime scene fingerprints with already established criminal fingerprint files (U.S. GAO, 1995, p. 2). Another possible explanation for these results may be that many college graduates are administrators who have a broader understanding of how fraud occurs. These respondents may be administrators who foresee policy implications for the EBT with Fingerprint Imaging system and thus were less likely to select that system than noncollege graduates.
Based on the results demonstrated in Table 5, Research Hypothesis I was accepted. There is a relationship based on social and demographic characteristics between respondents and selection of an alternative to the Paper-Based system for the prevention of the most common forms of fraud. Those respondents without a college degree had a higher percentage for selecting EBT with Fingerprint Imaging system.

Summary of Data Analysis for Research Hypothesis I

Research Hypothesis I was accepted based on the results shown in Tables 3–5. There were not enough selections of the Paper-Based with Fingerprint Imaging system and EBT to apply the chi-square test. An alternative had to be selected by at least five respondents within the same social or demographic category to be considered for the chi-square test. The respondents who selected “undecided,” “don’t know,” or “none” were categorized as making no selection. Those results were compared to the respondents who selected the EBT with Fingerprint Imaging system for the chi-square analysis.

Of those respondents who selected the EBT with Fingerprint Imaging, law enforcement respondents, city/county employees, and noncollege graduates designated it more often than other respondents within the same social and demographic category. Results of the chi-square tests indicate that the following variables were not statistically significant when comparisons were made within the same social and demographic category: gender, age, experience, respondents whose employer was directly involved with either EBT or Fingerprint Imaging, and respondents whose employer was not directly involved with either EBT or Fingerprint Imaging. Since these social and demographic characteristics were judged
not to be significantly different, it appears that these variables did not influence the selection of an alternative system.

The next section of the study examines the data regarding changes necessary to prevent all fraud in the welfare system.

**Data Analysis for Research Hypothesis II**

*Research Hypothesis II:* There is a relationship based on social and demographic characteristics between the professionals and agreement that the alternatives will not prevent all forms of fraud.

This section of the study will examine the second research hypothesis to determine if there is a relationship based on social and demographic characteristics between professionals and agreement that no one alternative will provide all the necessary changes to prevent fraud. Questions were grouped based on the selection of an alternative that provided changes which would result in a more secure system in comparison to the more traditional Paper-Based welfare system. The questions from the research instrument that were utilized for this section were: 16–20, 22, and 24. Questions 19, 21, and 23 were not used in this section but were utilized in another section.

Table 6 examines whether there is a relationship between the characteristic profession and determination that none of the alternatives offers enough changes to prevent fraud. One respondent listed profession as “other,” and thus was not considered for analysis purposes. The chi-square results are displayed in Table 6. Categories where there were insufficient responses to conduct a valid test were eliminated. This resulted in the elimination of the Paper-Based with Fingerprint Imaging and the EBT system.
Table 6

Profession and Prevention of All Fraud (N = 266)

<table>
<thead>
<tr>
<th></th>
<th>Law Enforcement (n = 101)</th>
<th>Welfare Benefit Admin. (n = 123)</th>
<th>EBT Admin. (n = 42)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Selection</td>
<td>64%</td>
<td>60%</td>
<td>88%</td>
</tr>
<tr>
<td>EBT w Fingerprint Imaging</td>
<td>36%</td>
<td>40%</td>
<td>12%</td>
</tr>
</tbody>
</table>

Note. $\chi^2 = 10.031$, df = 2, $p < .05$.

There was a statistically significant difference between the variable “profession” and agreement by the respondents that none of the alternatives would prevent all forms of fraud.

Sixty-four percent (n = 65) of law enforcement respondents, 60% (n = 74) of the welfare benefit administrators, and 88% (n = 37) of EBT administrators failed to select any of the three alternatives. There were statistically significant differences between the groups. Research Hypothesis II was accepted. There is a relationship based on social and demographic characteristics between respondents and agreement that no one alternative will prevent all forms of fraud.

A higher percentage of EBT administrators, than of any other profession, did not select any of the alternatives. The findings suggest that EBT administrators have the strongest belief that more changes are needed in the welfare system, besides EBT and Fingerprint Imaging, to effectively prevent fraud. There are several possible explanations for the results shown in Table 6. EBT administrators may be less willing to pay for all of the changes that are necessary to prevent fraud. These respondents may contend they can only prevent fraud at a reasonable cost. The investment in preventing fraud cannot be greater than the potential savings. These respondents may
also be taking the position that technology will provide only some of the answers; fraud will continue no matter which alternative is selected. The respondents may have made no selection due to the failings of the EBT system. Many states invested millions of dollars in the EBT programs after it was promoted as a cure for all fraud problems. It was discovered after reviewing pilot projects that fraud was still occurring. EBT administrators may not want relive that situation; instead, they may be likely to take a "wait and see approach" until more EBT and EBT with Fingerprint Imaging pilot systems are reviewed. Even though law enforcement respondents submitted a smaller percentage of responses than EBT administrators, this group may think that if states chose an EBT or EBT with Fingerprint Imaging system, which will utilize the commercial infrastructure (ATMs and Point of Sale machines), the same types of fraud that have occurred in the banking industry will occur. "Commercial credit card industry reports fraudulent applicants have increased 33% in the past two years" (U.S. GAO, 1995, p. 1).

Table 7 reviews the chi-square results to determine if there is a relationship between employer and agreement that no one alternative offers enough changes to prevent fraud. Categories where there were insufficient responses to conduct a valid test were excluded. Thus, Paper-Based with Fingerprint Imaging and the EBT were eliminated. Table 7 shows that 53% (n = 57) of city and county respondents did not select a system. Seventy-six percent (n = 104) of the state and federal respondents did not select an alternative to the Paper-Based system.

There was a statistically significant difference between the respondents based on employer and selection of an alternative welfare system that would provide the necessary changes to prevent fraud (p < .05).
Table 7
Employer and Prevention of All Fraud \((N = 245)\)

<table>
<thead>
<tr>
<th></th>
<th>City/County ((n = 108))</th>
<th>State/Federal ((n = 137))</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Selection</td>
<td>53%</td>
<td>76%</td>
</tr>
<tr>
<td>EBT w Fingerprint Imaging</td>
<td>47%</td>
<td>24%</td>
</tr>
</tbody>
</table>

Note. \(\chi^2 = 5.797, df = 1, p < .05\).

Based on the stated results, one can state that 53% of city and county and 76% of the state and federal respondents do not believe that any of the three alternatives provide the necessary changes to the welfare system that would result in the prevention of fraud. This presumption may be the result of not having enough time to thoroughly review and change the alternatives that are available. The message was: "Gore to agencies: 'Deliver benefits on line by 1999'" (Minaham, 1994, p. 6). These deadlines may be unrealistic. It is possible that not enough time has been devoted thus far to developing the appropriate computer hardware and software to effectively prevent fraud.

The chi-square test results shown in Table 7 suggest there is more of an agreement between respondents employed by state and federal respondents that none of the alternatives provide the necessary changes to prevent fraud. Thus, Research Hypothesis II is accepted. There is a relationship between respondents based on employment type and agreement that none of the alternatives will provide enough change to prevent all fraud.

Table 8 will examine the data to determine if there is a relationship between professionals and agreement there is no alternative that would provide the necessary changes to prevent fraud.
Table 8
Education and Prevention of All Fraud ($N = 255$)

<table>
<thead>
<tr>
<th></th>
<th>Noncollege Graduate ($n = 77$)</th>
<th>College Graduate ($n = 178$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Selection</td>
<td>53%</td>
<td>72%</td>
</tr>
<tr>
<td>EBT w Fingerprint Imaging</td>
<td>47%</td>
<td>28%</td>
</tr>
</tbody>
</table>

Note. $\chi^2 = 8.376$, df = 1, $p < .05$.

For the chi-square analysis, categories where there were insufficient responses to conduct a valid test were eliminated. This resulted in deleting the Paper-Based system with Fingerprint Imaging and EBT alternatives. The minimum number of selections per social or demographic characteristic was five in order to be considered for the chi-square test. A statistically significant difference existed between the respondents based on education and determining changes necessary to prevent fraud ($p < .05$). As Table 8 indicates, 53% ($n = 41$) of noncollege graduates and 71% ($n = 126$) of college graduates did not select any of the three alternatives that were presented.

Of the respondents who were noncollege graduates, a smaller percentage made no selection when compared to college graduates. Based on these results, one can infer that respondents with more education believe that none of the alternatives offers the changes that are necessary to prevent all fraud in the welfare system. The findings further suggest that those respondents with more education did not select the more technical and sophisticated EBT with Fingerprint Imaging system, over the less elaborate Paper-Based with Fingerprint Imaging system, for providing the necessary changes to prevent fraud.

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There could be a number of reasons for this. Educated respondents may not be convinced that EBT with Fingerprint Imaging can prevent fraud until there are available data to review. More extensive pilot testing would provide a means for determining the reliability and accuracy of the equipment through an actual practical application and serve to identify other possible problems, for example, in the case of individuals who illegally gain access to welfare recipients’ accounts. However, data will not be available until a pilot EBT with Fingerprint Imaging system is implemented by one of the states or within a few counties in a state. One of the factors the respondents would have to consider is not only the reduction in fraud but also whether the fraud that does occur can be detected. Those respondents without a college degree may be relying too much on fingerprinting to prevent many of the crimes that are occurring in the welfare system.

The results shown in Table 8 indicate Research Hypothesis II was accepted. More respondents with a college degree, in comparison to those without a college degree, were convinced that none of the alternatives would provide enough changes to prevent all fraud.

Table 9 of the study will review the chi-square test results to determine a relationship between experience and agreement between respondents that none of the alternatives provide enough changes to prevent all fraud in the welfare system.

As a result of the chi-square analysis, categories where there were insufficient responses to conduct a valid test were eliminated. The minimum number of selections for an alternative had to be five per social or demographic category to be considered for the chi-square test. This resulted in eliminating the Paper-Based system with Fingerprint Imaging and EBT alternatives. There was a statistically significant difference between respondents based on their years of professional experience and
Table 9

Experience and Prevention of All Fraud \((N = 256)\)

<table>
<thead>
<tr>
<th></th>
<th>&lt; 10 Years ((n = 135))</th>
<th>&gt; 10 Years ((n = 121))</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Selection</td>
<td>73%</td>
<td>58%</td>
</tr>
<tr>
<td>EBT w Fingerprint Imaging</td>
<td>27%</td>
<td>42%</td>
</tr>
</tbody>
</table>

Note. \(\chi^2 = 6.817, df = 1, p < .05\).

their selection of an alternative that would provide changes that are necessary to prevent fraud in the welfare system \((p < .05)\). Table 9 indicates that 73\% \((n = 99)\) of the respondents who had 10 or less years of experience made no selection. Fifty-eight percent \((n = 70)\) of the respondents who had 10 or more years of experience made no selection of the three alternatives that would provide the necessary changes to prevent fraud.

A higher percentage of respondents with 10 or less years of experience than those who had 10 or more years of experience made no selection. Respondents with more experience may have concerns that an alternative system may not produce as much revenue. An alternative system may not be able to recoup as much money as the Paper-Based system, which would result in less revenue being provided to the state by the federal government. States are paid by the federal government when an individual is ordered by the court to pay restitution for moneys fraudulently received. Without proof that a person actually has received benefits (for example, canceled checks), agencies will be severely disadvantaged in preventing fraud. According to the Michigan Family Independence Agency (1994), "In 1994 $24.5 million in restitution was ordered" (p. 2). Another risk the older respondents may have perceived is the sharing of fingerprints with other agencies. The issue of who would
have access to fingerprint records is controversial and has yet to be settled by the courts.

Those respondents with less experience may feel overwhelmed by their current workload. Thus, they may have concerns that none of the alternatives will prevent fraud, and fraud may actually increase. Part of the appeal of an alternative welfare process would be the reduction in fraud. Unfortunately, a concern many of these respondents may have is if a chosen alternative would provide an increase of fraud, there may not be enough available resources to handle the investigation workload.

Based on the results shown in Table 9, Research Hypothesis II was accepted. There is a relationship based on social and demographic characteristics between professionals and agreement that none of the alternatives will prevent all fraud. There was a higher percent of respondents with 10 or less years of experience than those with 10 or more years of experience who made no selection for any of the available alternatives providing changes that would prevent fraud.

There was not enough selection of the Paper-Based with Fingerprint Imaging or EBT systems to apply the chi-square test. Each one of the alternatives would need to have been selected by a minimum of five respondents for each social or demographic category. The respondents who selected “undecided,” “don’t know,” or “none” were categorized as making no selection. Those results were compared to the respondents who selected the EBT with Fingerprint Imaging system for the chi-square analysis.
Summary of Data Analysis for Research Hypothesis II

Based on the results of Tables 6-9, Research Hypothesis II was accepted. There is a relationship based on social and demographic characteristics between professionals and agreement that none of the alternatives will prevent all fraud. These tables indicate a much higher percentage for no selection than for any of the alternatives that would provide the necessary changes to prevent fraud. The EBT administrators had the highest percent of respondents who believed that none of the alternatives would provide enough changes to prevent all fraud compared to law enforcement and welfare benefit administrators. State and federal respondents had a higher percent for no selection than city and county respondents. College graduates had a higher percent than noncollege graduates for not selecting an alternative welfare system that would provide the necessary changes to prevent fraud.

One can conclude that more changes are needed in the welfare system beyond the implementation of EBT and Fingerprint Imaging to prevent all forms of fraud in the welfare system. The chi-square test indicates that the following variables were not statistically significantly different from each other for Hypothesis II: gender, age, respondents whose employer was directly involved with either EBT or Fingerprint Imaging, and respondents whose employer was not directly involved with either EBT or Fingerprint Imaging.

Data Analysis for Research Hypothesis III

Research Hypothesis III: There is a relationship based on social and demographic characteristics between professionals and selection of an alternative to the Paper-Based welfare system that would produce fraud prevention benefits.
This section of the study will examine the third research hypothesis, namely, that there is a relationship based on social and demographic between professionals and selection of an alternative to the Paper-Based welfare system that would produce fraud prevention benefits. If an alternative was not selected the minimum number of times, it was not considered for the analysis. This resulted in the elimination of the Paper-Based with Fingerprint Imaging and EBT systems. The measure of 50% was chosen to indicate a selection for a welfare system from the three alternatives that were provided. Individuals who did not choose a particular system more than 50% of the time were assigned to the no selection group.

Questions were grouped on the basis of selecting an alternative to the Paper-Based system that would produce fraud prevention benefits, such as reducing undercover investigations or eliminating the need for surveillance cameras.

Table 10 examines if there is a relationship between profession and selection of an alternative that would provide benefits as a result of fraud prevention. The chi-square results are displayed in Table 10.

Table 10

<table>
<thead>
<tr>
<th>Employer and Fraud Prevention Benefits (N = 245)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>City/County (n = 108)</td>
</tr>
<tr>
<td>No Selection</td>
</tr>
<tr>
<td>EBT w Fingerprint Imaging</td>
</tr>
</tbody>
</table>

*Note. $\chi^2 = 9.040, df = 1, p < .05.*

The results demonstrated in Table 10 indicate that 29% (n = 66) of city and county respondents did not select any of one of the three alternatives 50% or more of
the time. Seventy-one percent \( (n = 77) \) selected the EBT with Fingerprint Imaging system 50% or more of the time. Statistically significant differences existed between the respondents based on employer and selection of an alternative that would provide welfare fraud prevention benefits \( (p < .05) \). Based on the chi-square test results presented in Table 10, Research Hypothesis III was accepted for city and county respondents. A relationship exists between professionals based on social and demographic characteristics and selection of an alternative to the Paper-Based welfare system that would produce fraud prevention benefits.

These results indicate that city and county respondents believe that the EBT with Fingerprint Imaging system would provide more benefits than the other alternatives. This may be explained by the fact that many of these respondents have been directly involved with Paper-Based with Fingerprint Imaging and EBT systems. They may feel these systems have failed to produce the benefits as claimed. For example, there may still be expensive labor-intensive investigations involving surveillance cameras and other equipment under the EBT and Paper-Based with Fingerprint Imaging systems.

The state and federal respondents do not believe any one of the three systems is a better alternative to the Paper-Based welfare system in producing fraud prevention benefits. These respondents may be fearful that no additional benefits will result from any of the alternatives. The position of the respondents could be that surveillance cameras, undercover investigations, and many man-hours would still be required if any of the alternatives were selected. For example, the EBT system would indicate an electronic transaction had occurred. The system would show the time, amount, and location of the transaction and the EBT card that was used. However, without eyewitness testimony or a photograph, there is no concrete evidence it was
the recipient who accessed the benefits. These elements of a fraud investigation all represent administrative costs.

Summary of Data Analysis for Research Hypothesis III

There were not enough selections of the Paper-Based with Fingerprint Imaging and EBT to apply the chi-square test. Research Hypothesis III was accepted for city and county practitioners. State and federal respondents did not select any one of the three alternatives. One explanation for these results is city and county respondents believe EBT with Fingerprint Imaging may reduce welfare fraud investigations. Fewer investigations represent a reduction in administrative costs. These respondents may also assume that surveillance cameras may not be needed because positive identification can be provided with the EBT with Fingerprint Imaging system but not with any of the other alternatives.

The following variables were judged not to be significantly different from each other for testing data related to Research Hypothesis III: profession, education, gender, age, experience, respondents whose employer was directly involved with either EBT or Fingerprint Imaging, and respondents whose employer was not directly involved with either EBT or Fingerprint Imaging. It could thus not be determined if these variables affected the selection of an alternative system.

The following section of the study will review the results of data for testing Research Hypothesis IV.
Data Analysis for Research Hypothesis IV

Research Hypothesis IV: There is a relationship based on social and demographic characteristics between practitioners and agreement on specific technologies to prevent fraud for each of the alternatives.

Respondents had to choose among “strongly agree,” “agree,” “undecided,” “disagree,” and “strongly disagree.” Data were collapsed into “strongly agree/agree,” “undecided,” and “strongly disagree/disagree” for analyzing questions 27 through 37: Questions 27, 30, and 36—EBT cards and magnetic stripes; Questions 28, 29, 34, and 32—EBT with Fingerprint Imaging; Questions 31, 33, and 35—Paper-Based with Fingerprint Imaging.

Test results will be presented for questions where there was a significant difference in responses from respondents based on social and demographic variables and the questions presented in Section 4.

Respondents had to choose from “strongly agree” (1), “agree” (2), “undecided” (3), “disagree” (4), and “strongly disagree” (5). A minimum of five selections had to be made for each social or demographic characteristic category to be considered. The following five tables will show those social and demographic characteristics that were found to be statistically significant different ($p < .05$).

Table 11 shows the results of responses to the question, “Magnetic stripes imprinted on EBT cards will prevent fraud.” Forty-four percent ($n = 61$) of those respondents 40 years and younger strongly agreed or agreed that magnetic stripes imprinted on EBT cards will prevent counterfeiting. Forty-three percent of those respondents 40 years and older strongly agreed or agreed with the statement. There was a statistically significant difference between the groups ($p < .05$). Based on the
results shown in Table 11, Research Hypothesis IV was accepted. There is a relationship based on social and demographic characteristics between professionals and identification of technologies that will prevent fraud.

Table 11

Age and Magnetic Stripes Preventing Counterfeiting (N = 266)

<table>
<thead>
<tr>
<th>Response</th>
<th>&lt; 40 Years (n = 139)</th>
<th>&gt; 40 Years (n = 127)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agree</td>
<td>44%</td>
<td>43%</td>
</tr>
<tr>
<td>Undecided</td>
<td>16%</td>
<td>28%</td>
</tr>
<tr>
<td>Disagree</td>
<td>40%</td>
<td>30%</td>
</tr>
</tbody>
</table>

Note. $\chi^2 = 2.497, df = 2, p < .05$.

Younger respondents may be more knowledgeable about the credit card industry due to more frequent use of electronic financing. They may realize that a criminal would need a valid Personal Identification Number (PIN) in order to activate a counterfeit EBT card. Without a valid PIN, the counterfeited card would be useless. This may explain their responses to EBT cards being counterfeited. Respondents who were 40 years and older may have been victims or heard stories in their line of work of someone stealing a Personal Identification Number and producing a counterfeit card. According to the U.S. General Accounting Office (1995), “Commercial Credit Card counterfeiting has increased dramatically in the past few years. Most equipment needed to counterfeit cards is easily purchased on the open market” (p. 15).

The next section of the study will explore responses from respondents regarding the accuracy of fingerprints.
Table 12 shows the results of Question 31, "A fingerprint is the most accurate means available to identify an individual." Statistically significant differences existed between the respondents based on the variable “employer” and responses to Question 31 regarding magnetic stripes and counterfeiting ($p < .05$). Seventy-eight percent ($n = 87$) of city and county respondents and 72% ($n = 111$) of state and federal respondents strongly agreed or agreed that a fingerprint is the most accurate means to identify an individual. Based on the results shown in Table 12, Research Hypothesis IV was accepted. There is a relationship based on social and demographic characteristics between practitioners and identification of specific technologies that would prevent fraud.

Table 12

<table>
<thead>
<tr>
<th>Response</th>
<th>City/County ($n = 112$)</th>
<th>State/Federal ($n = 154$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agree</td>
<td>78%</td>
<td>72%</td>
</tr>
<tr>
<td>Undecided</td>
<td>18%</td>
<td>14%</td>
</tr>
<tr>
<td>Disagree</td>
<td>4%</td>
<td>14%</td>
</tr>
</tbody>
</table>

Note. $\chi^2 = 6.378$, $df = 2$, $p < .05$.

Overwhelmingly, respondents employed by city and county strongly agreed or agreed that fingerprinting is the most accurate means to identify an individual. Seventy-eight percent ($n = 87$) of the city and county respondents believed that a fingerprint is the most accurate means to identify an individual. In comparison to city and county respondents, a slightly lower percentage, 72%, of state and federal respondents believed the fingerprint is the most accurate means to identify an
individual. A higher percentage of city and county respondents than state and federal respondents believed that the fingerprint is the most accurate means to identify an individual.

Many of the respondents employed in law enforcement are employed by city and county agencies. Law enforcement relies on the use of fingerprints for identification. For example, the FBI has about 72 million individual criminal and civil fingerprint records, according to the U.S. General Accounting Office (1995, p. 2). Most EBT administrators are state and federal employees and may be less likely to endorse the use of fingerprints as a means of identifying an individual due to the added administrative costs that would be incurred.

This section of the study will examine to see if there is a relationship between respondents surveyed and the belief that fingerprinting is the most accurate means of identification. The responses are based on profession.

As Table 13 demonstrates, 76% (n = 77) of law enforcement, 79% (n = 97) of welfare benefit administrators, and 57% (n = 24) of EBT administrators strongly agreed or agreed that a fingerprint is the most accurate means available to identify an individual. EBT administrators had the highest percentage of respondents who were undecided and strongly disagreed or disagreed. Statistically significant differences existed between the respondents based on the variable “profession” and responses to Question 31, “A fingerprint is the most accurate means available to identify an individual” (p < .05). Based on the results shown in Table 13, Research Hypothesis IV was accepted. There is a relationship based on social and demographic characteristics between professionals and identification of specific technologies that would prevent fraud.
Table 13

Profession and Fingerprinting to Identify an Individual (N = 266)

<table>
<thead>
<tr>
<th>Response</th>
<th>Law Enforcement (n = 101)</th>
<th>Welfare Benefit Admin. (n = 123)</th>
<th>EBT Admin. (n = 42)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agree</td>
<td>76%</td>
<td>79%</td>
<td>57%</td>
</tr>
<tr>
<td>Undecided</td>
<td>16%</td>
<td>10%</td>
<td>31%</td>
</tr>
<tr>
<td>Disagree</td>
<td>8%</td>
<td>11%</td>
<td>12%</td>
</tr>
</tbody>
</table>

Note. $\chi^2 = 10.923$, df = 2, $p < .05$.

The results of Table 13 are consistent with the other results presented in this chapter. Welfare benefit administrators may have had the highest number of respondents with 79% (n = 97) strongly agree and agree responses due to the success that fingerprint imaging systems have had in deterring duplicate assistance fraud. Major cities in this country, such as New York and Los Angeles, have implemented an automated fingerprint identification system with their Paper-Based welfare system as means to identify individuals applying for benefits twice, once under their own name and again under an assumed name.

Los Angeles County Welfare has utilized fingerprint biometric in the application phase of their General Relief and Aid to Families with Dependent Children entitlement programs by use of the AFIS system, reports the United States Secret Service. The Automated Fingerprint Imaging Record Management (AFIRM) has been extremely successful and cost efficient in detecting individuals whom attempt to file multiple applications using more than one identity. (U.S. General Accounting Office, 1995, p. 1)

Law enforcement respondents were again strong supporters of the use of fingerprinting to identify individuals with a slightly lower percentage, 76% (n = 77), than welfare benefit administrators. Their responses indicate that without a biometric...
measurement, such as a fingerprint, it may be difficult to prove conclusively that the person applying or accessing welfare benefits is entitled to receive them.

As with other results in this study, the findings shown in Table 13 suggest that EBT administrators are less supportive of fingerprinting or fingerprint technology than other respondents, 57% (n = 23). Their perspective could indicate a lack of desire to change the EBT systems to include fingerprint technology. Implementing fingerprint technology into an EBT system would delay meeting mandated deadlines by the executive administration and increase administrative costs.

Table 14 presents the chi-square test results to determine if a relationship exists between the employer and responses regarding the need to combine EBT with Fingerprint Imaging. Eighty-six percent (n = 96) of city and county respondents and 61% (n = 94) of state and federal respondents strongly agreed or agreed with the statement that it was necessary to combine EBT with Fingerprint Imaging. There were statistically significant differences (p < .05) between the respondents based on this variable. Based on the results shown in Table 14, Research Hypothesis IV was accepted. There is a relationship based on social and demographic characteristics between professionals and agreement on technologies to prevent fraud.

Table 14

<table>
<thead>
<tr>
<th>Response</th>
<th>City/County (n = 112)</th>
<th>State/Federal (n = 154)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agree</td>
<td>86%</td>
<td>61%</td>
</tr>
<tr>
<td>Undecided</td>
<td>7%</td>
<td>18%</td>
</tr>
<tr>
<td>Disagree</td>
<td>7%</td>
<td>21%</td>
</tr>
</tbody>
</table>

Note. $\chi^2 = 20.277$, $df = 2$, $p < .05$. 

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City and state respondents may have more concerns than state and federal respondents that the use of the PIN has not been able to prevent fraud in the EBT system. This may explain the differences. Most of the investigations of fraud in the EBT programs have been completed by city and county respondents. This may also explain why they feel there is a need to combine both EBT and Fingerprint Imaging to better prevent fraud. State and federal respondents are responsible for the administration of EBT programs and thus are not as involved with the investigation of fraud. By not being directly involved with fraud investigations, they have not witnessed the crimes that have been committed.

The next section of the study will analyze the data to determine if a relationship exists between the variable “education” and the need to combine EBT with Fingerprint Imaging to prevent fraud in the welfare system.

Table 15 shows the results for Question 32, “It is necessary to combine EBT with Fingerprint Imaging to prevent fraud” for the variable “profession.” As Table 15 indicates, 86% ($n = 87$) of law enforcement and 73% ($n = 80$) of welfare benefit administrators believe that it is necessary to combine EBT with Fingerprint Imaging to prevent fraud. Statistically significant differences exist between the respondents based on the variable “profession” and responses to Question 32 ($p < .05$). Research Hypothesis V was accepted. There is a relationship based on social and demographic characteristics between professionals and agreement on specific technologies to prevent fraud in the welfare system.

Law enforcement may have had a higher percentage of strongly agree and agree responses due to their reliance on fingerprinting. The responses in Table 15 indicate that some forms of fraud may be prevented if it can be physically proven that the individual is not an imposter and that the recipient actually received the benefits.
Table 15
Profession and EBT With Fingerprint Imaging to Prevent Fraud ($N = 266$)

<table>
<thead>
<tr>
<th>Response</th>
<th>Law Enforcement ($n = 101$)</th>
<th>Welfare Benefit Admin. ($n = 123$)</th>
<th>EBT Admin. ($n = 42$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agree</td>
<td>86%</td>
<td>73%</td>
<td>29%</td>
</tr>
<tr>
<td>Undecided</td>
<td>9%</td>
<td>11%</td>
<td>31%</td>
</tr>
<tr>
<td>Disagree</td>
<td>5%</td>
<td>15%</td>
<td>40%</td>
</tr>
</tbody>
</table>

Note. $\chi^2 = 49.701, df = 4, p < .05.$

A potential explanation for welfare benefit administrators not being as supportive as law enforcement regarding the need to implement fingerprinting with EBT could be the constitutional rights of recipients. EBT administrators appear less convinced that it is necessary to combine EBT with Fingerprint Imaging to prevent fraud in the welfare system. EBT systems have taken years to develop and implement in many states; any changes would cause further delay in full implementation statewide.

Summary of Data Analysis for Research Hypothesis IV

Because of the data displayed in Tables 11–15, Research Hypothesis IV was accepted. There is a relationship based on social and demographic characteristics between professionals based on social and demographic characteristics and agreement on technologies that will prevent fraud. Younger respondents (under 40 years), more than older respondents (over 40 years), believed the use of a Personal Identification Number would prevent counterfeiting. Respondents employed by city and county, more than state and federal respondents, strongly agreed or agreed that fingerprinting is the most accurate means to identify an individual. Welfare benefit
administrators, when compared to other professions, had the highest support of strongly agree and agree responses regarding fingerprinting being the most accurate means to identify an individual. More city and county respondents than state and federal respondents felt it was necessary to combine EBT with Fingerprint Imaging.

The following section of the study will analyze the data for identifying technologies that will not prevent fraud in the welfare system.

Data Analysis for Research Hypothesis V

Hypothesis V: There is a relationship based on social and demographic characteristics between professionals and agreement on specific technologies that will not prevent fraud in the welfare system.

Respondents had to choose among “strongly agree,” “agree,” “undecided,” “disagree,” and “strongly disagree.” Data were collapsed into “strongly agree/agree,” “undecided,” and “strongly disagree/disagree” for analyzing questions 27 through 37: Questions 27, 30, and 36—EBT cards and magnetic stripes; Questions 28, 29, 34, and 32—EBT with Fingerprint Imaging; Questions 31, 33, and 35—Paper-Based with Fingerprint Imaging.

Test results are presented for questions where there was a significant difference in responses from respondents based on social and demographic variables and the questions presented in Section 4 of the research instrument.

The next section of the study will present the chi-square results for determining a relationship between the “profession” and the Paper-Based with Fingerprint Imaging allowing only the authorized recipient access to benefits.

Table 16 shows the results for Question 33, “Implementing Fingerprint Imaging with the Paper-Based System will allow only the authorized recipient to
access benefits.” Statistically significant differences existed between the respondents based on the variable “profession” and responses to Question 33 ($p < .05$).

Table 16

Profession and the Paper-Based System With Fingerprint Imaging Preventing Unauthorized Access ($N = 266$)

<table>
<thead>
<tr>
<th>Response</th>
<th>Law Enforcement ($n = 101$)</th>
<th>Welfare Benefit Admin. ($n = 123$)</th>
<th>EBT Admin. ($n = 42$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agree</td>
<td>37%</td>
<td>32%</td>
<td>14%</td>
</tr>
<tr>
<td>Undecided</td>
<td>24%</td>
<td>29%</td>
<td>19%</td>
</tr>
<tr>
<td>Disagree</td>
<td>39%</td>
<td>39%</td>
<td>67%</td>
</tr>
</tbody>
</table>

*Note. $\chi^2 = 12.434$, $df = 4$, $p < .05$.*

Thirty-nine percent ($n = 40$) of law enforcement respondents and 39% ($n = 41$) of welfare benefit administrators strongly disagreed or disagreed that the Paper-Based system with Fingerprint Imaging would allow only the authorized recipient to access benefits, while 67% ($n = 28$) of the EBT administrators strongly disagreed or disagreed with this statement. Based on these results, Research Hypothesis V was accepted. There is a relationship based on social and demographic characteristics between professionals and agreement on specific technologies that would not prevent fraud in the welfare system.

EBT professionals had the highest percentage of respondents who strongly disagreed or disagreed that only authorized individuals could access benefits under the Paper-Based with Fingerprint Imaging system. EBT administrators may have taken this position to justify the switch from the Paper-Based systems to the EBT
system in 38 states. EBT administrators may be convinced it was necessary to switch from the paper system to an electronic system.

A smaller percentage of law enforcement respondents than EBT administrators strongly disagreed or disagreed that adding Fingerprint Imaging would allow only authorized recipients access to welfare benefits. The responses from law enforcement respondents may be due to historically relying on fingerprinting.

Of the welfare benefit administrators, the highest percentage strongly disagreed or disagreed that an unauthorized individual would be denied access to benefits if the Fingerprint Imaging was incorporated with the Paper-Based welfare system. As with law enforcement, this group of respondents had a much lower percentage of strongly disagree or disagree responses when compared to EBT administrators. The position taken by welfare benefit administrators may represent a conflict. Many Paper-Based with Fingerprint Imaging systems have prevented duplicate assistance fraud (when an individual applies for benefits twice) but it has not prevented the other three most common forms of fraud (counterfeiting, stolen benefits, and food stamp trafficking).

The next section of the study will present the chi-square results for examining a relationship between the variable “employer” and the Paper-Based system with Fingerprint Imaging providing data on each welfare transaction.

As Table 17 indicates, 43% ($n = 48$) of city and county respondents strongly agreed or agreed that the Paper-Based system with Fingerprint Imaging would provide data on each welfare transaction. Fifty-one percent ($n = 79$) of state and federal respondents strongly disagreed or disagreed that combining Paper-Based with Fingerprint Imaging would provide data on each welfare transaction. Statistically significant differences existed between the groups ($p < .05$). Based on the results
shown in Table 17, Research Hypothesis V was accepted. There is a relationship based on social and demographic characteristics between state and federal professionals and agreement on technologies that would not prevent fraud.

Table 17

Employer and Paper-Based System With Fingerprint Imaging Providing Real Time Data ($N = 266$)

<table>
<thead>
<tr>
<th>Response</th>
<th>City/County ($n = 112$)</th>
<th>State/Federal ($n = 154$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agree</td>
<td>43%</td>
<td>27%</td>
</tr>
<tr>
<td>Undecided</td>
<td>29%</td>
<td>23%</td>
</tr>
<tr>
<td>Disagree</td>
<td>28%</td>
<td>51%</td>
</tr>
</tbody>
</table>

*Note. $\chi^2 = 1.128, df = 2, p < .05.$*

The responses from these respondents indicate that city and county professionals may feel a stronger bond to the Paper-Based with Fingerprint Imaging system than do state and federal respondents. This may be explained by the fact that many cities and counties, such as Los Angeles and New York, have initiated Paper-Based with Fingerprint Imaging Systems. Most EBT systems in this country are administered by state and federal respondents. This may explain why they do not support the concept of upgrading the Paper-Based welfare system by installing Fingerprint Imaging.

The next section of the study will present the chi-square results for determining a relationship between the variable “profession” and responses to Question 35, “Adding fingerprinting to the Paper-Based system will provide data on each welfare transaction.”
Table 18 indicates that the highest percentage of law enforcement respondents, 42% \((n = 42)\), and EBT administrators, 71% \((n = 87)\), strongly disagreed or disagreed that the Paper-Based system with Fingerprint Imaging provided data on each welfare transaction. It is surprising that only 30% \((n = 37)\) strongly disagreed or disagreed with the statement. Statistically significant differences existed between the groups \(p < .05\). Because of the results shown in Table 18, Research Hypothesis V was accepted. There is a relationship based on social and demographic characteristics between professionals and agreement on technologies that will not prevent fraud.

Table 18

<table>
<thead>
<tr>
<th>Response</th>
<th>Law Enforcement ((n = 101))</th>
<th>Welfare Benefit Admin. ((n = 123))</th>
<th>EBT Admin. ((n = 42))</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agree</td>
<td>38%</td>
<td>39%</td>
<td>7%</td>
</tr>
<tr>
<td>Undecided</td>
<td>21%</td>
<td>31%</td>
<td>21%</td>
</tr>
<tr>
<td>Disagree</td>
<td>42%</td>
<td>30%</td>
<td>71%</td>
</tr>
</tbody>
</table>

*Note. \(\chi^2 = 25.980, df = 4, p < .05\).*

As Table 18 indicates, the highest percent of respondents who strongly disagreed or disagreed with this statement were EBT administrators. One feature of the EBT systems is its ability to track each welfare transaction: the date, time, amount, and location. This was one of the main marketing points made by state and federal respondents when they were lobbying to replace the Paper-Based system with
the EBT system. "EBT provides an audit trail that links individual purchases to specific retailers, whereas coupons provide no such linkage" (Robinson, 1994, p. 8).

The results shown in Table 18 for welfare benefit administrators are surprising, because the Paper-Based system with Fingerprint Imaging cannot track each welfare transaction. States that have implemented a Paper-Based with Fingerprint Imaging system only attempt to match fingerprints at the beginning of the application process, when an individual applies for benefits. This is done to verify that the applicant is not already receiving benefits under an assumed name.

The responses of law enforcement respondents indicate that it is necessary to track welfare fraud in order to help prevent it. This claim could be based on the assumption that individuals will be less likely to commit fraud if they feel they can be prosecuted and found guilty of the crime.

The next section of the study will present the chi-square results for determining a relationship between the variable "employer" and responses asking whether a Personal Identification Number would positively prove who accessed benefits.

Table 19 displays the results of responses from respondents employed by a city, county, state, or federal agency when asked about the PIN identifying welfare recipients. As Table 19 indicates, 83% \((n = 93)\) of city and county respondents and 92% \((n = 142)\) of state and federal respondents are not confident that a PIN will positively prove who accessed welfare benefits. Statistically significant differences existed between the groups \((p < .05)\). Research Hypothesis V was accepted based on the results shown in Table 19. There is a relationship based on social and demographic characteristics between professionals and agreement on technologies that would not prevent fraud.
Table 19

Employer and PIN Indicating Who Accessed Benefits ($N = 266$)

<table>
<thead>
<tr>
<th>Response</th>
<th>City/County ($n = 112$)</th>
<th>State/Federal ($n = 154$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agree</td>
<td>6%</td>
<td>5%</td>
</tr>
<tr>
<td>Undecided</td>
<td>11%</td>
<td>3%</td>
</tr>
<tr>
<td>Disagree</td>
<td>83%</td>
<td>92%</td>
</tr>
</tbody>
</table>

Note. $\chi^2 = 6.321, df = 2, p < .05$.

These outcomes were not unexpected since Personal Identification Numbers have not prevented crimes in the commercial credit card industry. The U.S. Secret Service reports that “commercial credit card industry reports fraudulent applications have increased 33% in the past two years” (U.S. GAO, 1995, p. 3). State and federal respondents may have had such a high percentage because welfare agencies know who the welfare recipient is but not necessarily who received the benefits under the EBT system. This is the same situation respondents faced with the Paper-Based system. There was no direct linkage between the recipient and use of the benefits. The use of the Personal Identification Numbers has failed to prevent fraud in both the credit card industry and EBT pilot projects. These respondents may be concerned that once an individual has knowledge of a PIN and possession of a debit or credit card, they have access to the account.

The next section of the study will present the chi-square results for determining a relationship between the variable “age” and responses regarding Personal Identification Number positively proving who accessed benefits.

As Table 20 indicates, 68% ($n = 26$) of the respondents who were 40 years and younger, and 91% ($n = 207$) of the respondents who were 40 years and older, do
not think that the use of a PIN will positively prove who accessed welfare benefits. Statistically significant differences existed between the respondents \((p < .05)\), and Research Hypothesis V was accepted. There is a relationship based on social and demographic characteristics between respondents and agreement on technologies that would not prevent fraud.

Table 20

<table>
<thead>
<tr>
<th>Response</th>
<th>&lt; 40 Years (n = 38)</th>
<th>&gt; 40 Years (n = 228)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agree</td>
<td>18%</td>
<td>3%</td>
</tr>
<tr>
<td>Undecided</td>
<td>13%</td>
<td>5%</td>
</tr>
<tr>
<td>Disagree</td>
<td>68%</td>
<td>91%</td>
</tr>
</tbody>
</table>

*Note. \(\chi^2 = 17.947, df = 2, p < .05\).*

It was somewhat surprising that there was a higher percentage of respondents who were 40 years and older, compared to those 40 and younger, who did not think a PIN would positively identify an individual accessing benefits. These results may indicate that older respondents have less confidence in the EBT system in terms of preventing fraud. Many of these respondents may have worked for many years with the Paper-Based welfare system and thus feel more comfortable with that process.

The next section of the study will present the chi-square results for determining a relationship between the variable "employer" and responses to the Paper-Based system with Fingerprint Imaging providing positive identification.

Table 21 shows 51% \((n = 79)\) of state and federal respondents strongly disagreed or disagreed that the Paper-Based with Fingerprint Imaging system will
positively prove who accessed the welfare benefits. Only 34% \((n = 38)\) of the city and county respondents strongly disagreed or disagreed. Statistically significant differences existed between the groups \((p < .05)\). Research Hypothesis V was accepted for state and federal professionals. There is a relationship based on social and demographic characteristics between professionals and agreement on technologies that would not prevent fraud.

**Table 21**

**Employer and the Paper-Based System With Fingerprint Imaging Providing Positive Identification \((N = 266)\)**

<table>
<thead>
<tr>
<th>Response</th>
<th>City/County ((n = 112))</th>
<th>State/Federal ((n = 154))</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agree</td>
<td>34%</td>
<td>32%</td>
</tr>
<tr>
<td>Undecided</td>
<td>32%</td>
<td>17%</td>
</tr>
<tr>
<td>Disagree</td>
<td>34%</td>
<td>51%</td>
</tr>
</tbody>
</table>

*Note. \(\chi^2 = 11.014, df = 2, p < .05.\)*

The results shown in Table 21 indicate that state and federal respondents believe that combining Fingerprint Imaging with the more traditional Paper-Based system will not prove who accessed welfare benefits. State and federal respondents may have taken this position because so many states have done away with Paper-Based systems and have already adopted an EBT systems. City and county respondents may have had a smaller percentage of strongly disagree or disagree responses because of a level of comfort they feel with the Paper-Based system.

The following section of the study will discuss potential policy implications for alternatives to the Paper-Based welfare system.
Summary of Data Analysis for Research Hypothesis V

Because of the data displayed in Tables 16–21, Research Hypothesis V was accepted. There is a relationship based on social and demographic characteristics between professionals and agreement on technologies that will not prevent fraud. EBT respondents had the highest percentage of respondents who strongly disagreed or disagreed that only authorized individuals could access benefits under the Paper-Based with Fingerprint Imaging system. More state and federal respondents than city and county respondents felt that adding Fingerprint Imaging would not provide data on each welfare transaction. More EBT administrators than any other profession felt that adding Fingerprint Imaging would not provide data on each welfare transaction. More state and federal respondents felt that the use of the PIN would not positively prove who accessed welfare benefits. There was a higher percentage of respondents who were 40 years and older, compared to those 40 and younger, who did not think a PIN would positively identify an individual accessing benefits. State and federal respondents believe that combining a Fingerprint Imaging with the more traditional Paper-Based system will not prove who accessed the welfare benefits more than city and county respondents.

The following section of the study will discuss potential policy implications for alternatives to the Paper-Based welfare system.

Policy Implications

One of the main purposes of this study is not only to gather data for selecting the most effective alternative to the Paper-Based welfare system, but also to examine possible policy implications for implementing such a system. To accomplish this task,
the following open-ended statement was included in the research instrument: “In my opinion, I perceive the best alternative to the Paper-Based system to be (Please circle one): Paper-Based with Fingerprint Imaging, EBT, EBT with Fingerprint Imaging. The policy implications with selecting this system are:_________________________.”

Of the returned surveys ($N = 267$), 210 responded to the open-ended question. However, many of them veered away from addressing policy implications and instead listed benefits of the system that would best prevent fraud. Of the 267 responses, 20% of the respondents chose not to answer the question, and another 11% listed benefits instead of policy implications. Table 22 shows the social and demographic characteristics of respondents who provided benefits as a result of selecting the EBT with Fingerprint Imaging system.

As this table indicates, 59% ($n = 17$) of the respondents were employed by a city or county agency. All, 100% ($n = 29$), either worked for an employer who was directly involved with EBT or Fingerprint Imaging, or had knowledge of such systems. Sixty percent of the respondents ($n = 17$) were college graduates. Fifty-five percent were female ($n = 16$), and 93% ($n = 27$) were Caucasian. The mean age for respondents who provided benefits was 44.7 years, and the median years of experience was 14 years.

When asked to provide policy implications, many of the respondents instead provided benefits of the EBT with Fingerprint Imaging system. The following will summarize the benefits for the EBT with Fingerprint Imaging system as viewed by the respondents based on profession.
Table 22

Demographics and Benefits for the EBT With Fingerprint Imaging System (N = 29)

<table>
<thead>
<tr>
<th>Employed by:</th>
<th>Law Enforcement (n = 15)</th>
<th>Welfare Benefit Admin. (n = 13)</th>
<th>EBT Admin. (n = 1)</th>
<th>Total (N = 29)</th>
</tr>
</thead>
<tbody>
<tr>
<td>City/County</td>
<td>60%</td>
<td>46%</td>
<td>0%</td>
<td>59%</td>
</tr>
<tr>
<td>State/Federal</td>
<td>40%</td>
<td>54%</td>
<td>100%</td>
<td>41%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Employers’ Involvement:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>No</td>
</tr>
<tr>
<td>53%</td>
</tr>
<tr>
<td>47%</td>
</tr>
<tr>
<td>31%</td>
</tr>
<tr>
<td>69%</td>
</tr>
<tr>
<td>100%</td>
</tr>
<tr>
<td>0%</td>
</tr>
<tr>
<td>41%</td>
</tr>
<tr>
<td>59%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Employers’ Not Involved/Familiar with</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>No</td>
</tr>
<tr>
<td>47%</td>
</tr>
<tr>
<td>53%</td>
</tr>
<tr>
<td>69%</td>
</tr>
<tr>
<td>31%</td>
</tr>
<tr>
<td>0%</td>
</tr>
<tr>
<td>59%</td>
</tr>
<tr>
<td>41%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Education</th>
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<tbody>
<tr>
<td>No college degree</td>
</tr>
<tr>
<td>40%</td>
</tr>
<tr>
<td>College degree</td>
</tr>
<tr>
<td>60%</td>
</tr>
<tr>
<td>46%</td>
</tr>
<tr>
<td>54%</td>
</tr>
<tr>
<td>100%</td>
</tr>
<tr>
<td>41%</td>
</tr>
<tr>
<td>59%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gender</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
</tr>
<tr>
<td>60%</td>
</tr>
<tr>
<td>Female</td>
</tr>
<tr>
<td>40%</td>
</tr>
<tr>
<td>23%</td>
</tr>
<tr>
<td>77%</td>
</tr>
<tr>
<td>100%</td>
</tr>
<tr>
<td>0%</td>
</tr>
<tr>
<td>45%</td>
</tr>
<tr>
<td>55%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Race/Ethnicity:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caucasian</td>
</tr>
<tr>
<td>85%</td>
</tr>
<tr>
<td>100%</td>
</tr>
<tr>
<td>100%</td>
</tr>
<tr>
<td>93%</td>
</tr>
<tr>
<td>Non-Caucasian</td>
</tr>
<tr>
<td>15%</td>
</tr>
<tr>
<td>0%</td>
</tr>
<tr>
<td>0%</td>
</tr>
<tr>
<td>7%</td>
</tr>
</tbody>
</table>

Benefits Provided by Respondents Regarding the EBT With Fingerprint Imaging System

**Law Enforcement**

**Positive Identification.** “The EBT with Fingerprint Imaging system is the only system that would provide positive identification of recipients.” “This system would deter fraud from occurring in the welfare system.” “The EBT with Fingerprint Imaging system is the only alternative that would provide positive identification of..."
the individual receiving the welfare benefits because fingerprints cannot be
duplicated."

**Welfare Benefit Administrators**

 **Accountability.** “Improved control over benefit delivery.” “This system
would prevent anyone other than the authorized recipient from receiving the benefits
and would also prevent duplicate assistance fraud.”

**EBT Administrators**

 **Real Time Information.** “The system would provide real time data on welfare
transactions. There would be more control at each stage of the welfare process.”

The next section of the study will review the alternatives that were selected
for Question 38 and the policy implications associated with the respective systems.

Each respondent was asked to select an alternative from the three that were
provided: Paper-Based with Fingerprint Imaging, EBT, and EBT with Fingerprint
Imaging. Of those who responded to Question 38, 197 chose the EBT with
Fingerprint Imaging system and provided policy implications; 12 chose the EBT and
provided policy implications; and 4 chose the Paper-Based system with Fingerprint
Imaging but did not provide any policy implications. Fifty-four of the respondents did
not select an alternative to the Paper-Based System or provide any policy
implications.

The following section of the study will analyze the results of the policy
implications that were provided. First, the responses are indicated from the
respondents who chose the EBT with Fingerprint Imaging, then EBT, and finally the
Paper-Based system with Fingerprint Imaging. There were similarities and differences
in responses between the respondents when it came to providing policy implications for alternatives to the Paper-Based welfare system. The answers were grouped, based on the profession of the respondent.

**EBT With Fingerprint Imaging System**

**Definition of the EBT With Fingerprint Imaging System**

During benefit enrollment, live scan fingerprint capture allows for a comparison to be made between the live scan and prints recorded on the database. Welfare benefits are disbursed at either an ATM or Point of Sale machine. The system allows for self-verification by using a fingerprint reader to compare a live scanned fingerprint with the same printed on the EBT card.

Overwhelmingly, the EBT with Fingerprint Imaging system was selected by those respondents who provided policy implications. This section of the study is a review of those policy implications. Seventy of the respondents (n = 70) chose the EBT with Fingerprint Imaging system. Table 23 indicates the backgrounds of the respondents.

Table 24 shows the frequency of policy implications as cited by the respondents who chose the EBT with Fingerprint Imaging system. Many of the respondents provided more than one policy implication on their survey. For example, one respondent may have listed access to benefits, costs, and privacy issues as possible policy implications. These policy implications are categorized by the respondent’s profession.

Seventy of the respondents who provided policy implications also chose the EBT system with Fingerprint Imaging. The three most frequently cited implications...
Table 23
Demographics and Policy Implications for the EBT With Fingerprint Imaging System

<table>
<thead>
<tr>
<th></th>
<th>Law Enforcement (n = 27)</th>
<th>Welfare Benefit Admin. (n = 33)</th>
<th>EBT Admin. (n = 10)</th>
<th>Total (N = 70)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employed by:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>City/County</td>
<td>33%</td>
<td>52%</td>
<td>—</td>
<td>37%</td>
</tr>
<tr>
<td>State/Federal</td>
<td>67%</td>
<td>48%</td>
<td>100%</td>
<td>63%</td>
</tr>
<tr>
<td>Employers’ Involvement:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>74%</td>
<td>70%</td>
<td>80%</td>
<td>73%</td>
</tr>
<tr>
<td>No</td>
<td>26%</td>
<td>30%</td>
<td>20%</td>
<td>27%</td>
</tr>
<tr>
<td>Employers’ Not Involved/Familiar with</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>26%</td>
<td>30%</td>
<td>20%</td>
<td>73%</td>
</tr>
<tr>
<td>No</td>
<td>74%</td>
<td>70%</td>
<td>80%</td>
<td>27%</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No college degree</td>
<td>26%</td>
<td>24%</td>
<td>—</td>
<td>21%</td>
</tr>
<tr>
<td>College degree</td>
<td>74%</td>
<td>76%</td>
<td>100%</td>
<td>79%</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>55%</td>
<td>48%</td>
<td>80%</td>
<td>56%</td>
</tr>
<tr>
<td>Female</td>
<td>44%</td>
<td>52%</td>
<td>20%</td>
<td>44%</td>
</tr>
<tr>
<td>Race/Ethnicity:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caucasian</td>
<td>88%</td>
<td>94%</td>
<td>100%</td>
<td>93%</td>
</tr>
<tr>
<td>Non-Caucasian</td>
<td>10%</td>
<td>6%</td>
<td>0%</td>
<td>7%</td>
</tr>
</tbody>
</table>

Table 24
EBT With Fingerprint Imaging and Frequencies of Policy Implications

<table>
<thead>
<tr>
<th>Cost</th>
<th>Access</th>
<th>Privacy</th>
<th>Policy</th>
<th>Legislation</th>
<th>Training</th>
<th>Accuracy</th>
<th>Benefit Sites</th>
</tr>
</thead>
<tbody>
<tr>
<td>32</td>
<td>25</td>
<td>25</td>
<td>13</td>
<td>7</td>
<td>4</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

were administrative costs, access by individuals other than the authorized recipient, and privacy issues regarding fingerprinting welfare recipients. This section of the study will examine whether these policy implications are consistent between
respondents with similar and differing social and demographic characteristics. Trends and patterns are also identified between the respondents who furnished potential policy implications for alternatives to the Paper-Based Welfare System.

Based on these results, Hypothesis VI was accepted. There is a relationship between social and demographic characteristics and policy implications for alternatives to the Paper-Based welfare system for the purposes of preventing fraud.

The following section of the study will discuss those implications for the EBT system with Fingerprint Imaging, beginning with law enforcement respondents.

Law Enforcement Respondents

The responses from law enforcement respondents to the policy implication question indicate that EBT with Fingerprint Imaging is considered the best alternative to the Paper-Based welfare system for preventing fraud. All of the law enforcement respondents (100%, n = 27), were employed full-time by a county or state government agency; 16 of the respondents (59%, n = 27), had a bachelor’s or graduate degree; 15 (56%) were male and 12 (44%) were female (n = 27); and 20 (74%) of the respondents’ employers were directly involved with either an EBT or Fingerprint Imaging system. Seven (26%, n = 27) worked for employers who were not directly involved but were familiar with systems in other states. Of those respondents, 24 (90%) were Caucasian, 2 (7%) were African American, and 1 (4%) was Hispanic American (n = 27). The median years of experience was 12.4 years, and the mean age was 49 years.

Accessibility. According to law enforcement respondents, application for and accessibility of benefits to homebound recipients (elderly or physically challenged)
was a concern that would impede the implementation of this system. Because the EBT with Fingerprint Imaging requires an exact fingerprint match, law enforcement respondents indicated home health aides would be unable to access benefits for the recipients.

**Administrative Costs.** Law enforcement respondents also raised concerns that the costs to train recipients and caseworkers in Fingerprint Imaging would be prohibitive. There would also be costs for Fingerprint Imaging devices at POS/ATM machines, for EBT cards, and for contracting services. These respondents also identified such costs as service charges and maintenance fees. The respondents indicated these expenses could impede the implementation of the EBT with Fingerprint Imaging system.

**Constitutional Rights of Welfare Recipients.** This group expressed concerns that fingerprinting recipients would be intrusive, demeaning, and judgmental. They felt that the process of fingerprinting recipients should not criminalize the right to receive welfare benefits. This group also indicated that fingerprinting should not invade a person’s privacy. In addition, it was also believed that legislation and policy would have to be developed and implemented to protect biometric data from other agencies. One practitioner pointed out that social service agencies would not be able to exchange database records of fingerprints with law enforcement agencies. Database records can be used only for identification purposes and not for arrests and prosecutions.

In summary, the law enforcement respondents who responded to the policy implication question regarded application, accessibility, costs, intrusive methods regarding privacy issues, and policy changes as important implications when
implementing an EBT with Fingerprint Imaging system. Based on these responses, there appears to be a relationship between respondents' perceptions of potential policy implications (administrative costs, access to benefits, and privacy issues) and their selection of an alternative to the Paper-Based welfare system for the purposes of preventing fraud.

The following section of the study will review the opinions of welfare benefit administrators on potential policy implications.

**Welfare Benefit Administration Respondents**

The responses from welfare benefit administrators indicate that EBT with Fingerprint Imaging is the system chosen by these respondents to deal with welfare fraud. Of the welfare benefit administrators who responded to the policy implication question, all (100%, n = 33) were employed full-time by a county or state agency. Twenty-three (70%, n = 33) of these respondents' employers were directly involved with either EBT or Fingerprint Imaging. Ten of the respondents (30%, n = 33) were not employed by an agency that was directly involved with EBT or Fingerprint Imaging, but they were familiar with such systems in other states. Twenty-five of the welfare benefit administrators (76%, n = 33) had a college degree or graduate degree. Sixteen (48%) were male and 17 (52%) were female (n = 33). Thirty-one (94%) were Caucasian, 1 (3%) respondent was African American, and 1 (3%) was Hispanic (n = 33). The welfare benefit administrators who responded to the policy implication question averaged 12.7 years of experience (n = 33). The median age for welfare benefit administrators who provided policy implications was 48.5.

The following is a summary of concerns by welfare benefit administrators regarding potential policy implications for the EBT with Fingerprint Imaging system.
Administrative Costs. Most often, welfare benefit administrators questioned the investment in terms of administrative costs and funding for sophisticated equipment at ATM/POS machines, especially in rural areas. One welfare administrator believed that without federal funding, the required EBT system would be considered an unfunded mandate placed upon the states by the federal government.

Constitutional Rights of Welfare Recipients. Many of these same respondents perceived that fingerprinting applicants for benefits could be seen as a possible violation of federal rules of eligibility and could be considered an invasion of privacy. Currently, most states require applicants to provide other forms of identification, such as a birth certificate, driver's license, voter registration, or some other form of documentation. Many administrators believed privacy issues raised by fingerprinting welfare recipients would have to be settled by the courts. As with law enforcement respondents, welfare benefit administrators concluded that fingerprinting is often associated with criminal processing. A group of respondents believed fingerprinting individuals would discourage citizens from applying for welfare benefits. The administrators raised issues about how the information would be shared with other public agencies such as law enforcement, health agencies, and the Internal Revenue Service.

Legislation. A number of welfare benefit administrators argued that legislation would have to be passed, requiring an exact fingerprint match before the disbursement of welfare benefits. These welfare professionals pointed out that currently many states have passed laws for the use of fingerprints for the purpose of
Identification. However, no state has passed legislation that would require positive identification before benefits can be distributed.

**Accessibility to Welfare Benefits.** There was consistency between the welfare benefit professionals who are responsible for the disbursement of welfare benefits regarding issues of accessibility to benefits. One of the main themes expressed by these respondents was that only authorized recipients would be able to access benefits, unless every member of a household was fingerprinted. These administrators expressed similar concerns regarding the disabled or mentally handicapped who have home health aides shop for them. The aides would be unable to access benefits from the EBT system with Fingerprint Imaging, because the system requires an exact match between the encoded print on the EBT card and the fingerprint.

One administrator expressed concern with the accuracy of Fingerprint Imaging, especially for the disabled recipients. This administrator mentioned recipients who were missing fingers or hands, which could prevent citizens from receiving welfare benefits to which they are entitled. Apprehension was expressed about delays pertaining to the efficiency of processing applicants expediently while utilizing the fingerprint imaging process. They expressed concerns about delays in processing benefits to welfare recipients as a result of the fingerprinting process. Each recipient will have to be fingerprinted and then database searches have to be completed.

Welfare benefit administration respondents who responded to the policy implication question all chose the EBT with Fingerprint Imaging option \((n = 33)\). Their concerns were: violation of federal rules, a "big brother" controversy, fingerprinting associated with criminal processing, proposed legislation allowing only
the client to use the system, and the accuracy of fingerprinting and efficiency of operations.

The following section of the study will review responses from EBT administrators to policy implications for the EBT with Fingerprint Imaging.

**EBT Administration Respondents**

The responses to the question regarding policy implications from EBT administrators indicated that EBT with Fingerprint Imaging is considered the best alternative to the Paper-Based welfare system regarding fraud issues. Of those who responded to the policy implication statement, nine were state employees, one was from a county, and one was a federal employee; all were employed full-time \( (n = 10) \). Eight of the respondents’ employers were directly involved with either EBT or Fingerprint Imaging \( (n = 10) \). Two respondents’ employers were not directly involved with EBT or the Fingerprint Imaging system, but these individuals indicated they were familiar with such systems in other states \( (n = 10) \). Seven of the respondents had a college degree \( (n = 10) \). Eight of the respondents were male; all were Caucasian \( (n = 10) \). The mean years of experience for this group was 8.4. The median age was 47.5 years.

**Administrative Costs.** As with the other groups of respondents, administrative costs were a great concern, especially in smaller jurisdictions. In fact, six EBT administrators saw this as a potential policy implication. The system was described as an expensive form of technology that may never pay for itself. There would be high administrative costs for the state, and expenses will bar retailers because the current commercial infrastructure has no fingerprint readers at Point of
Sale machines. There were concerns that cost to retailers might be passed on to recipients, who would be charged for financial transactions, such as ATM charges. This group also maintained that no one but the client can use this system, and that it would exclude family members who are also eligible for benefits, unless the states issued multiple cards to each household. As one EBT administrator stated, "If multiple cards are not issued per household, then the authorized recipient would have to sign an agreement for sole use of the card and benefits, which may not be legally possible." The potential to violate the right to privacy as a result of fingerprinting welfare recipients would be present.

**Constitutional Rights of Welfare Recipients.** One EBT practitioner was concerned with the civil liberties implications and the reaction of the American Civil Liberties Union (ACLU). Some EBT administrators were apprehensive about the misuse of client data. For example, who would have access to the data and with whom would the data be shared? There was also the "Big Brother is Watching" concern (government monitoring citizens). EBT administrators worried about the accuracy of Fingerprint Imaging. Some EBT administrators expressed concerns that clients might be denied benefits because there was not a direct match between the encoded print and the fingerprint.

In summary, all EBT administration respondents chose the EBT with Fingerprint Imaging ($n = 10$). Some of the policy implications provided by this group included: costs, the fact no one but the client can use this system, the potential to violate the right to privacy as a result of fingerprinting welfare recipients, misuse of client data, the advent of "big brother," and the danger of inaccuracy. There does appear to be a relationship between respondents' perceptions of potential policy
implications and their selection of an alternative to the Paper-Based welfare system for the purposes of preventing fraud.

**Summary of the EBT With Fingerprint Imaging System’s Policy Implications**

There appear to be three major policy issues among the respondents concerning the implementation of EBT with Fingerprint Imaging system: administrative costs, access to benefits by authorized representatives (children and home health aides), and privacy issues regarding fingerprinting. These implications were identified by 48 of the 70 respondents who selected EBT with Fingerprint Imaging and provided policy implications.

The responses are consistent across the demographic variables. Of those who identified one of the three implications, 18 were law enforcement respondents, 31 welfare benefit administrators, and 10 were EBT administrators. Forty-five of the respondents were employed by a county or state agency, and three by a federal agency. Forty-one of the respondents had college degrees. Twenty-six were male and 22 were female; 47 were Caucasian; and all but one was a full-time employee. Thirty-three of the 48 worked for an employer who was directly involved with either EBT or Fingerprint Imaging.

The following section of the study will look at the responses concerning the policy implications of implementing an EBT system.
EBT System

Definition of the EBT System

Welfare recipients are issued a plastic card with magnetic tape and a personal identification number. They access benefits at an Automated Teller Machine or a Point of Sale machine.

Three respondents chose the EBT system as the best alternative to the Paper-Based system. One respondent was employed as a welfare benefit administrator, and the other two were EBT administrators. All three were full-time state employees. One respondent’s employer was directly involved with EBT or Fingerprint Imaging. The other two respondents’ employers were not directly involved with EBT or Fingerprint Imaging, but both were familiar with such systems in other states. All three were college graduates and two were males. The median years of experience for this group was 15.2 and the median age was 47.3.

One EBT administrator listed client impact and cost as potential policy implications. The welfare administrator listed as a danger authorized representatives not being able to access benefits. In addition, this practitioner indicated as a policy implication that some smaller retailers would not be able to afford EBT and Point of Sale machines.

The policy implications listed for EBT were very consistent with the implications provided for EBT with Fingerprint Imaging, namely, administrative costs and access to benefits by authorized recipients.
Summary of the EBT System’s Policy Implications

The implications for implementing an EBT system would appear to be similar to those for the EBT with Fingerprint Imaging. The main concerns are access by authorized representatives and administrative costs, especially to smaller retailers. One policy implication that was anticipated for the EBT system but not EBT with Fingerprint Imaging is that it would not prevent fraud. There does not appear to be a relationship between respondents and a selection for an alternative to the Paper-Based system for the purposes of preventing fraud.

Paper-Based System With Fingerprint Imaging

The respondents who selected the Paper-Based with Fingerprint Imaging system for Question 38 did not provide any potential policy implications.

Summary of Potential Policy Implications

Overwhelmingly, the EBT with Fingerprint Imaging system was the one selected when respondents provided policy implications (194 EBT with Fingerprint Imaging, 18 EBT, and 4 Paper-Based with Fingerprint Imaging, $N = 267$). However, of those 216 who selected the EBT with Fingerprint Imaging system, only 74 of the respondents provided policy implications. There appear to be great concerns among respondents about the administrative costs involved in implementing an EBT system with Fingerprint Imaging. Administrative costs were frequently the single most cited policy implication identified by the respondents. The second most frequently cited policy implication was the capacity of family members and authorized recipients to access benefits.
Many of the respondents raised the issue that authorized recipients and entire families would have to be fingerprinted if states implement an EBT with Fingerprint Imaging system. The third most frequently cited implication listed by respondents was the possible violation of rights of welfare recipients required to be fingerprinted. A number of respondents felt fingerprinting welfare recipients might constitute a civil rights violation. Respondents also felt legislation needs to be passed before an EBT with Fingerprint Imaging system could be implemented. There were similarities between the policy implications provided for the EBT with Fingerprint Imaging system and the EBT system. Administrative costs were most cited, followed by access by authorized representatives (someone other than the authorized recipient who may access benefits). No policy implications were provided for the Paper-Based system with Fingerprint Imaging.

Summary of Data Analysis Chapter

The results of the chi-square test results indicate that the EBT with Fingerprint Imaging was selected by law enforcement and welfare administration respondents more often than the Paper-Based with Fingerprint Imaging and the EBT system for preventing the four most common forms of fraud (duplicate assistance fraud, counterfeiting, stolen benefits, and food stamp trafficking). There could be a number of reasons for this.

Law enforcement has had a long history of relying on fingerprints for identification purposes, both in criminal and civil procedures. Combining EBT with a Fingerprint Imaging system also provides positive identification of who accessed the benefits.
Many welfare benefit administrators have witnessed first-hand fraud still occurring in EBT programs. With the implementation of EBT with Fingerprint Imaging, welfare benefit administrators are offered more assurances that benefits will be used for their rightful purpose.

EBT with Fingerprint Imaging would offer welfare benefit administrators positive identification of welfare recipients at the two critical points of the welfare process: at the beginning when an individual applies for benefits, and at the end when the individual accesses benefits. EBT administrators did not select any of the alternatives for preventing the four most common forms of fraud. One reason for this could be that these administrators do not want the added administrative costs and delays when implementing a Fingerprint Imaging system with their current EBT systems.

Noncollege graduates had a higher percentage for selection of the EBT with Fingerprint Imaging than college graduates for the prevention of the four most common forms of fraud. This may be explained by the fact that more law enforcement respondents than any other professionals in the study were noncollege graduates. This profession also has had a history of relying on fingerprinting as a means of identification. The probability is that the majority of noncollege graduates were law enforcement respondents.

None of the respondents selected any of the alternatives that would provide the necessary changes to prevent all fraud in the welfare system. Not much data are available concerning the EBT system's ability to prevent fraud for respondents to review. There are no data available for the EBT with Fingerprint Imaging systems, because no state has implemented such a system. Respondents may be reluctant to present their opinions concerning necessary changes to prevent all fraud until they
have more information available to them. However, they appear to be confident the
EBT with Fingerprint Imaging system would prevent the four most common forms of
fraud.

Respondents who were employed by either a city or county agency were the
only respondents who selected an alternative that would produce fraud prevention
benefits. Most welfare fraud investigations are conducted at the local level by city and
county respondents. Most of these respondents selected the EBT with Fingerprint
Imaging system. Their responses may indicate frustration with the EBT and Paper-
Based with Fingerprint Imaging systems not providing effective security measures.
For example, the EBT system does not provide a means to positively prove who
accessed the welfare benefits, and the Paper-Based with Fingerprint Imaging system
was designed to prevent duplicate assistance but is not a preventive measure for other
forms of fraud.

The majority of city, county, and welfare benefit administrators had the
highest percentages indicating they felt that a fingerprint is the most accurate means
to identify an individual. These results were not surprising since fingerprints have
long been used to identify individuals. It is surprising that city and county
respondents had a higher response rate on this point than state and federal
respondents. Many of these respondents may be directly involved at the local level
with Paper-Based with Fingerprint Imaging systems, so they have a greater
knowledge of fingerprint systems.

City and county administrators and law enforcement professionals had the
most responses concerning the necessity to combine EBT with Fingerprint Imaging
to prevent fraud. There are a number of explanations why these respondents may
have taken this position. Reviews have indicated that EBT pilot projects have failed
to prevent fraud. Many of the city and county respondents may have been involved with these pilot projects. Law enforcement respondents may be drawn to an alternative that offers positive identification because of their reliance on fingerprinting. EBT administrators did not select any of the alternatives for preventing the four most common forms of fraud from the choices that were provided. These administrators may feel changes are not necessary in the EBT system, or they may be unwilling to fund the changes that are necessary. Respondents employed by state and federal as well as EBT administrators did not think that adding Fingerprint Imaging to the Paper-Based system would provide data on each welfare transaction. These responses from the EBT administrators were expected, since this is one strong advantage the EBT system has over the Paper-Based with Fingerprint Imaging system. Responses from state and federal respondents were also not surprising, since most EBT systems have been administered by state and federal agencies.

State and federal respondents and those over 40 years of age were most opposed to the concept that the use of a Personal Identification Number (PIN) would positively prove who accessed the welfare benefits. The responses from the state and federal respondents were surprising since they are the professionals responsible for the EBT programs. Their responses may indicate knowledge or actual experience with crimes committed in the commercial credit card industry. PINs have long been used in the commercial credit card industry with little success in preventing crimes from occurring. These respondents may assume that the use of a PIN does not positively prove who accessed an account. All that is proven with the use of a PIN is that someone had knowledge of the PIN and possession of the credit or debit card. It does not place the recipient or an unauthorized third party at the location where the
benefits were accessed. According to the General Accounting Office, "Investigations have revealed that the PIN is often sold along with the EBT card to trafficking brokers" (U.S. GAO, 1995, p. 1). This may be one of the advantages EBT with Fingerprint Imaging has over the EBT system. No one but the authorized recipient can use the benefit card with the EBT with Fingerprint Imaging system. With the EBT system, anyone with access to the card and knowledge of the PIN can access the benefits.

The results of the open-ended statement were supportive of the findings from the closed-ended responses for Hypotheses I, III, IV, and V in that almost all of the respondents who provided policy implications selected the EBT with Fingerprint Imaging system as the appropriate alternative to the Paper-Based system.

The responses to the open questions (selection of the EBT with Fingerprint Imaging system) do not support the findings for Research Hypothesis II, that no one alternative will provide enough changes to prevent all fraud in the welfare system. The results of the study reveal that a number of policy implications are involved in implementing any of the three alternatives to the Paper-Based system. The major policy implications with the EBT with Fingerprint Imaging are administrative costs, the right to fingerprint recipients, and access to benefits by someone other than the authorized recipient. The major policy implications for the EBT system were administrative costs and inability to prevent fraud. None of the respondents provided policy implications for the Paper-Based with Fingerprint Imaging system.

The next chapter of this study includes a summary, conclusions, and recommendations of the study.
CHAPTER VII

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Introduction

The purpose of this study was to gather perspectives of respondents who are directly involved with welfare fraud. They were asked whether they preferred the Paper-Based system, another alternative that would prevent fraud, or none of the alternatives. Respondents were selected from public welfare directories. A series of questions were posed for these respondents on the Paper-Based system with Fingerprint Imaging, Electronic Benefits Transfer (EBT), and Electronic Benefits Transfer with Fingerprint Imaging. The respondents were grouped according to their social and demographic characteristics and their selection of an alternative that would: (a) prevent the four most common forms of fraud—duplicate assistance fraud, counterfeiting, stolen benefits, and food stamp trafficking; (b) provide the necessary changes to prevent all forms of fraud; (c) pinpoint technologies of the three alternatives in terms of preventing fraud; (d) pinpoint technologies of the three alternatives in terms of not preventing fraud; (e) distinguish which alternative would produce the most fraud prevention benefits; and (f) identify policy implications for each alternative.

The next section will provide a description of the respondents who were sampled.
Description of the Respondents

This section will present a summary of the respondents' characteristics in this study. The characteristics examined in this study were: profession, employer, employer's involvement with welfare systems, gender, education, years of professional experience, and age. Surveys were mailed to 450 respondents who were directly involved with welfare fraud. Of those 450, 267 returned the requested survey (59.3%). Of those respondents who returned the survey, 38% were law enforcement professionals, 46% were welfare benefit administrators, and 16% were EBT administrators. All of the respondents were employed by a public entity: 1% were employed by a city, 49% by a county, 48% by a state, and 2% by a federal agency. Ninety-nine percent were employed full-time and 1% part-time. Of the respondents, 69% worked for an employer who was directly involved with either EBT or Fingerprint Imaging system; 31% worked for an employer who was not directly involved with an EBT or Fingerprint Imaging System but was familiar with such systems in other states. Sixty-three percent of the respondents had a college or graduate degree. The others had some college or a high school diploma. Fifty-seven percent were male, and 43% were female. Ninety-eight percent were Caucasian, and 2% were African American or Hispanic. The median years of experience was 10. The mean age for the respondents was 47.9 years.

The respondents had to meet the following criteria to be considered for the study: employment in law enforcement, welfare benefit administration, or EBT; employment by a public entity; and possession of at least a high school diploma. The respondents had to have some knowledge of the EBT or Fingerprint Imaging systems.
(knowledge coming from either direct involvement or knowledge of other state programs).

Summary

The social and demographic characteristics served as the independent variables. The dependent variables were perceptions of the three alternative systems regarding fraud prevention issues and policy implications for implementing the alternatives. The conceptual framework relates the respondents' characteristics, namely, profession, employer, employer's involvement with a system, education, gender, ethnicity, experience, and age to their selection of an alternative that would prevent welfare fraud. The respondents were categorized on the basis of their social and demographic characteristics to see if their backgrounds led them to view the policy alternatives differently.

Profession

The practitioners' "profession" was found to influence their perceptions towards the selection of an alternative welfare fraud system for preventing duplicate assistance fraud, counterfeiting, stolen benefits, and food stamp trafficking. The differences were statistically significant ($p < .05$).

More respondents in law enforcement than in any other profession selected the EBT with Fingerprint Imaging system for preventing the four most common forms of welfare fraud. Law enforcement professionals have long relied on fingerprinting for identification purposes. Many of the respondents who participated in this study may be directly involved in fingerprinting individuals. These respondents may also be involved with the investigation of welfare fraud in the Paper-Based
system. Their perceptions could potentially be shaped by seeing first-hand the ease with which fraud can occur in the Paper-Based system. Because of this, these respondents seemed less likely to choose an alternative that involves paper benefits. In addition, they are more likely to choose an alternative that utilizes fingerprint identification. Fewer welfare benefit administrators than law enforcement respondents selected the EBT with Fingerprint Imaging system for preventing duplicate assistance fraud, counterfeiting, stolen benefits, and food stamp trafficking. However, 75% of these respondents did select the EBT with Fingerprint Imaging as an alternative that would prevent the four most common forms of fraud. The selection of this system is probably the result of two desired objectives. First, the selection of the EBT with Fingerprint Imaging may be due to the savings in administrative costs the system offers from not processing paper benefits. An EBT with Fingerprint Imaging system would eliminate the need to print, ship, distribute, and destroy paper welfare benefits. This perspective indicates that while EBT with Fingerprint Imaging may reduce fraud, its greater pay-off may occur in the reduction of administrative costs due to not processing paper coupons. Second, by selecting the EBT with Fingerprint Imaging system, these respondents may be convinced that positive identification is necessary when an individual applies for welfare benefits. This perception would be consistent with the findings of the United States General Accounting Office (1993): “EBT alone does not effectively deter fraud in the delivery of benefits. Thus, an EBT program without the enhanced security of biometric verification raises a genuine concern about the potential for increased program costs and losses” (p. 7). Sixty-three percent of the EBT administrators did not select any of the alternatives. One possible explanation why these respondents did not select the EBT with Fingerprint Imaging system is the potential for high administrative costs of purchasing computer
hardware and software that would be needed to implement Fingerprint Imaging with the EBT system. These respondents may not be willing to admit that fraud does exist in the EBT system and that changes are necessary, especially after the system was so heavily promoted by the federal government and private industry in terms of fraud prevention. The fact that these administrators did not select the EBT (a system for which they are responsible) is consistent with the position taken by Deputy Director of the United States Department of Agriculture, Craig Beauchamp: “EBT and use of the Personal Identification Number certainly gives us a great tool to identify the stores and recipients who are trafficking. It will not, however, put an end to it” (Wood & Smith, 1991, p. 12).

Based on the characteristic profession (law enforcement, welfare benefit administrators, and EBT administrators), none of the respondents chose an alternative that would provide the necessary changes or produce fraud prevention benefits. EBT administrators had the highest percentage of respondents who did not choose an alternative. These responses may be because the approach has not been determined (Is EBT or Fingerprint Imaging going to be implemented first, Fingerprint Imaging, or both at the same time?), total costs have not be established, and no prototype has been reviewed. Although fewer law enforcement and welfare benefit administrators opted for “no selection,” there were still a number of respondents who did not select an alternative. This is surprising since these respondents had enough knowledge of the EBT with Fingerprint Imaging alternative to believe the system is capable of preventing the four most common forms of fraud. This indicates that the full potential of the EBT with Fingerprint Imaging system is not yet known.

One’s profession also influenced the perceptions of respondents when identifying technologies that would help prevent fraud, namely, that fingerprinting is
the most accurate means to identify the individual, and the need to combine EBT with Fingerprint Imaging to prevent fraud \((p < .05)\). Professionals in law enforcement were more in favor of using fingerprinting and combining EBT with Fingerprint Imaging than any other profession. Their perspective could be driven by wanting to prove beyond a reasonable doubt that an individual not only committed fraud but received assistance (duplicate assistance fraud, food stamp trafficking).

Fewer welfare benefit administrators than law enforcement respondents strongly agreed or agreed that fingerprinting is the most accurate means to identify an individual. However, almost two thirds strongly agreed or agreed that fingerprinting is the most accurate means to identify an individual and that combining EBT with Fingerprint Imaging was necessary to prevent fraud. The position taken by these respondents may come from the desire to use Fingerprint Imaging to ensure that benefits have been received by the rightful individuals, once the benefits are sent out by the social service agency.

A little more than 50% of the EBT administrators believed that fingerprinting was the most accurate means available to identify an individual. More EBT administrators were undecided or strongly disagreed or disagreed that EBT should be combined with Fingerprinting to prevent fraud. The EBT administrators' perspective may be driven by the fact there is no hard evidence that EBT with Fingerprint Imaging prevents fraud. EBT administrators may also argue that there has never been concrete evidence to indicate exactly how much fraud is occurring. Thus, it would be difficult to justify the added administrative costs that would result from adding Fingerprint Imaging to an established EBT system to prevent fraud.

There were statistically significant differences between the respondents based on their profession when it came to identifying technologies that would not prevent
fraud ($p < .05$). More EBT administrators than any profession indicated "strongly disagree" for the concept that a Paper-Based welfare system combined with Fingerprint Imaging would allow only the authorized recipient to access benefits or provide data on each transaction. Almost two thirds of EBT administrators felt this way. Their responses may be based on the belief that the Paper-Based system must be done away with and replaced with newer technology such as an EBT system.

**Employer**

There is a relationship between the employer and the practitioner's perceptions about the selection of an alternative welfare system for preventing duplicate assistance fraud, counterfeiting, stolen benefits, and food stamp trafficking. The differences were statistically significant ($p < .05$). A higher percentage of city and county respondents than state and federal respondents selected this system. The perspectives of these respondents is consistent with the recommendations of the U.S. General Accounting Office (1995): "A fingerprint secured card could not be used by anyone other than the authorized recipient of the entitled benefits" (p. 6).

State and federal respondents are often far removed from what actually occurs during the application, processing, and disbursement of welfare benefits. City and county respondents are many times on the "front lines" in the welfare systems. State and federal respondents may operate more in theory, while city and county respondents are more involved in program implementation. This may explain the differences in their perspectives regarding the selection of an alternative to the Paper-Based welfare system for preventing fraud. City and county respondents may be somewhat frustrated with the EBT and Paper-Based with Fingerprint Imaging systems in terms of what was supposed to work in theory, but did not in reality.
Significant differences existed between the respondents, based on their employer, in selecting an alternative or no alternative that would provide the necessary changes to prevent fraud \( (p < .05) \). More state and federal respondents thought that none of the alternatives would provide the necessary changes to prevent fraud. This perspective reflects the viewpoint that some changes in the welfare system may take a bite out of fraud but never totally eliminate it. Their responses suggest that even if states choose to implement an EBT with Fingerprint Imaging system, some forms of fraud are still going to occur, or new forms of fraud are going to be committed.

The respondents' employer also appeared to influence respondents in identifying specific technologies of each alternative \( (p < .05) \). A higher percentage of city and county respondents than state and federal respondents either strongly agreed or agreed that fingerprinting is the most accurate means to identify an individual and that it is necessary to combine EBT with Fingerprint Imaging. Many of the city and county respondents are directly involved with EBT systems. Their belief that EBT must be combined with Fingerprint Imaging indicates a lack of confidence in the EBT systems. This view is significant because many of these respondents are involved in this system, with 38 states now having some form of an EBT system.

Statistically significant differences existed between respondents based on their employer and identification of technologies that will not prevent fraud \( (p < .05) \). Many more state and federal respondents strongly disagreed or disagreed that the Paper-Based with Fingerprint Imaging systems would provide data on each welfare transaction and positively prove who accessed the welfare benefits. These results reflect the differences in perspectives on the Paper-Based system. More state and federal respondents were strongly opposed to any form of paper benefits being
utilized by welfare agencies. City and county respondents’ responses reflected more confidence in the Paper-Based system than those of their counterparts employed by state and federal agencies. More state and federal respondents did, however, recognize some shortcomings in the EBT system. Over 90% strongly disagreed or disagreed that the use of a Personal Identification Number (needed with the EBT system) would positively prove who accessed welfare benefits. A slightly lower percentage (83%) of city and county respondents felt the same. State and federal respondents may realize that the EBT system is needed to save administrative costs, but that the potential for fraud will still be present.

**Education**

There is a relationship between the respondents’ education and their perceptions on the selection of an alternative welfare system for preventing duplicate assistance fraud, counterfeiting, stolen benefits, and food stamp trafficking. The differences were statistically significant ($p < .05$). More noncollege than college graduates selected the EBT with Fingerprint Imaging as an alternative to the Paper-Based welfare system for preventing the four most common forms of fraud, namely, duplicate assistance fraud, counterfeiting, benefits being stolen, and food stamp trafficking. Many of the noncollege graduates could be respondents who work on the front lines in the investigation of fraud, processing of clients, and distribution of benefits. Their perspective may be based on observing the failure of the Paper-Based with Fingerprint Imaging and the EBT systems to prevent fraud, as well as the firm belief that a more stringent system is needed. For example, eligibility workers may have suspicions that someone is applying twice for benefits with the EBT system but have no method to prove it, while welfare fraud investigators may have witnessed an
increase in food stamp trafficking with the Paper-Based with Fingerprint Imaging system.

Education also influenced respondents in their selection of an alternative that would provide the necessary changes to prevent fraud. The differences were statistically significant ($p<.05$). A higher percentage of college graduates than noncollege graduates perceived that none of the alternatives to the Paper-Based system would provide the necessary changes to prevent fraud. This may suggest that college graduates are more likely to be administrators who, because of their education and experience, have a more complete understanding of the complexity of fraud issues facing the welfare system. However, over half of the noncollege graduates also believed that none of the alternatives provide enough change to prevent fraud.

Experience

The respondents’ experience was found to influence their perceptions towards the selection of an alternative welfare system for providing the necessary changes to prevent fraud ($p < .05$). There was a stronger preference for no selection by respondents with 10 or less years of experience than those with 10 or more years of experience. Younger respondents may be more knowledgeable about the limits of technology in preventing fraud. This perception is consistent with the findings of Glickman et al. (1994): “It appears that selling of benefits for cash under the EBT system is much more difficult than under the Paper-Based system, although it is still possible” (p. 139).
Age

Age was found to influence perceptions in identifying technologies that would not prevent fraud \( (p < .05) \). Many more respondents over the age of 40 years strongly disagreed or disagreed that the use of a Personal Identification Number (a requirement with the EBT system) would positively prove who accessed the welfare benefits. Younger respondents may have more knowledge and experience with electronic financing (the use of credit cards) than older respondents. Older respondents may be more fearful than their younger colleagues of crimes that have occurred in the credit card industry.

Statistical differences were not found in the case of the following social and demographic variables \( (p > .05) \): employer’s involvement with either EBT or Fingerprint Imaging, gender, and ethnicity.

Policy Implications

Some of the respondents provided benefits for the EBT with Fingerprint Imaging system when asked to supply policy implications for the alternative of their choice. The major benefits the respondents provided were: positive identification by law enforcement respondents, improved control for delivering benefits by welfare benefit admonition respondents, and having real time data available by EBT administration respondents. When asked to choose a policy alternative to the Paper-Based welfare system and indicate the resulting policy implications, 74 respondents provided a response. Seventy of the 74 choose the EBT with Fingerprint Imaging system. Three critical policy implications were identified by the respondents in implementing the EBT with Fingerprint Imaging system. Although there were some
differences between the respondents, these policy implications appeared to transcend all social and demographic variables. The three policy implications most frequently identified by respondents were: access to benefits by authorized representatives such as home health aides and members of the immediate family, administrative costs, and the right to fingerprint welfare recipients. Four respondents selected the EBT system and pinpointed that administrative costs, access to benefits by authorized representatives, and the system’s inability to prevent fraud were potential policy implications. None of the respondents set forth potential policy implications for the Paper-Based with Fingerprint Imaging system.

Summary of Findings

Data were collected and analyzed for the three policy alternatives to the Paper-Based system, namely, the Paper-Based system with Fingerprint Imaging, EBT, and EBT with Fingerprint Imaging. They were examined with particular reference to fraud that has commonly occurred in the Paper-Based welfare system. The information regarding the alternative systems was gathered from a survey that utilized nominal and ordinal level data. The data with respect to policy implications were obtained from one open-ended statement that requested the respondents to indicate their selection of an alternative to the Paper-Based system and their estimate as to policy implications of implementing that system.

Summary for the Prevention of the Four Most Common Forms of Welfare Fraud

There were not enough selections of the Paper-Based with Fingerprint Imaging and EBT to apply the chi-square test. The respondents who selected "undecided," "don’t know," or “none” were categorized as making no selection.
Those results were compared to the respondents who selected the EBT with Fingerprint Imaging system through a chi-square analysis. The highest percentage of law enforcement, city, county, and noncollege graduates selected the EBT with Fingerprint Imaging system. For the purposes of Section 1, welfare fraud was defined as duplicate assistance fraud, counterfeiting, stolen benefits, and food stamp trafficking.

**Summary of Findings for Preventing All Fraud**

There were not enough selections of the Paper-Based with Fingerprint Imaging and EBT to apply the chi-square test. The respondents who selected "undecided," "don't know," or "none" were categorized as making no selection. Those results were compared to the respondents who selected the EBT with Fingerprint Imaging system for the chi-square analysis. Only experience was found to be statistically different. These experienced respondents opted for no selection rather than select any of the alternatives.

A higher percentage of respondents with 10 years or less experience than those with 10 or more years of experience selected no preference. Based on these results, it would appear that most of the respondents do not believe any of the alternatives would provide all the changes that are necessary to prevent fraud.

**Summary of Findings for Benefits Produced as a Result of Preventing Fraud**

There were not enough selections of the Paper-Based with Fingerprint Imaging and EBT policy alternatives to apply the chi-square test. The respondents who selected "undecided," "don't know," or "none" were categorized as making no selection. Those results were compared to the respondents who selected the EBT
with Fingerprint Imaging system by doing a chi-square analysis. City and county respondents selected the EBT with Fingerprint Imaging system 50% of the time for questions concerning administrative savings, effectiveness of preventing fraud, and benefits produced as a result of preventing fraud. State and federal respondents did not select any one of the three alternatives.

The following section of the study will review the findings for of study, regarding the technologies for Paper-Based with Fingerprint Imaging, EBT, and EBT with Fingerprint Imaging system.

**Summary of Findings Regarding Technologies of the Three Alternatives for Preventing Fraud**

The highest percentage of respondents, who were employed in law enforcement and employed by a city or county agency, strongly agreed or agreed that fingerprinting is the most accurate means to identify an individual, and that combining EBT with Fingerprint Imaging is necessary to prevent fraud in the welfare system. The differences between the groups were statistically significantly ($p < .05$). The findings for Section 4 also indicate that respondents did identify technologies that would not prevent fraud. EBT administrators, and state and federal respondents had the highest percentage of those who opposed the use of any form of the Paper-Based welfare system being combined with Fingerprint Imaging. These results demonstrate that combining the paper benefit process with Fingerprint Imaging would not prevent fraud.
Summary of Findings Regarding Technologies of the Three Alternatives That Will Not Prevent Fraud

EBT administrators had the highest percentage of responses for "strongly disagree" or "disagree" that the Paper-Based with Fingerprint Imaging would allow only authorized recipients to access benefits. State and federal professionals as well as EBT administrators had the highest response rate indicating that this same system would provide real time data. State and federal respondents and those over 40 years of age strongly disagreed or disagreed more often than any of the other professionals regarding the use of the PIN providing positive identification. The differences were statistically significant ($p < .05$).

Summary of Findings for Policy Implications

Respondents were asked to select an alternative and provide policy implications. They chose the EBT with Fingerprint Imaging system ($n = 194$), followed by the EBT system ($n = 18$), and, finally, Paper-Based with Fingerprint Imaging ($n = 4$). Of those 216 who selected the EBT with Fingerprint Imaging system, only 74 of the respondents provided policy implications. Those providing such policy implications were most concerned about the administrative costs involved in implementing an EBT system with Fingerprint Imaging. The second most frequent policy implication was the issue of access to benefits by family members and authorized recipients (home health aides). Many of the respondents raised the issue that authorized recipients as well as family members would have to be fingerprinted if states implemented an EBT with Fingerprint Imaging system.

The third most frequently cited implication was the rights of welfare recipients, who would be fingerprinted. A number of respondents felt fingerprinting
welfare recipients might be a civil rights violation. Respondents also felt legislation would need to be passed to fingerprint welfare recipients before an EBT with Fingerprint Imaging system could be implemented. There were similarities between the policy implications provided for the EBT with Fingerprint Imaging system and the EBT system. Here, too, administrative costs were cited most frequently, followed by access by authorized representatives (someone other than the authorized recipient who may access benefits). No policy implications were provided for the Paper-Based system with Fingerprint Imaging.

Unexpected Findings

Although many of the findings were expected (that one system may be selected over the others), some of the findings were unexpected.

Unexpected Findings for Preventing Common Forms of Fraud

The EBT system with Fingerprint Imaging was selected as the best alternative to the Paper-Based system by law enforcement and welfare benefits administration respondents. It was not, however, selected by EBT administrators in terms of preventing duplicate assistance fraud, counterfeiting, benefits being stolen, and food stamp trafficking. EBT administrators were the only professionals who did not choose the EBT with Fingerprint Imaging system, nor did these respondents select the EBT system. This was surprising, since all EBT administrators are employed by states which have EBT, and these respondents are responsible for the administration of these systems.
Unexpected Findings Regarding the Prevention of All Fraud

The majority of the respondents indicated that none of the three alternative systems would provide all the necessary changes to prevent fraud in the welfare system, even though they preferred the EBT with Fingerprint Imaging system. These results are surprising, since one would assume that a system which prevents the four common forms of fraud would also provide the necessary changes to prevent all forms of fraud. This could mean that the alternatives might prevent common forms of fraud but could also create opportunities for new forms of fraud (debit card fraud, card passing, and electronic fraud). There could also be fears that the fraud created by these new systems may go undetected.

Unexpected Findings for Alternatives That Provide Welfare Fraud Benefits

Only city and county respondents selected an alternative to the Paper-Based system for providing welfare fraud prevention benefits. It was anticipated that one of the systems would be selected based on its ability to eliminate the need for surveillance cameras and undercover investigations by providing positive identification. However, only respondents employed by city or county agencies selected the EBT with Fingerprint Imaging as a system that would provide welfare fraud benefits such as lowering administrative costs and reducing the number of investigations. The literature promotes the EBT system as a very desirable alternative based on its ability reduce administrative costs.
Unexpected Findings for Technologies That Would Prevent Fraud

Only two technologies were identified by respondents that would help prevent fraud. The majority of the respondents (with the exception of EBT administrators) strongly agreed or agreed that fingerprinting was the most accurate means to identify an individual and that it is necessary to combine EBT with Fingerprint Imaging to prevent fraud. This was surprising because much of the literature argues that the use of the EBT card with a Personal Identification Number would prevent fraud in the welfare system. However, this belief was not shared by the respondents.

Unexpected Findings for Technologies That Would Not Prevent Fraud

The results of identifying technologies unlikely to prevent fraud were not unexpected. The Paper-Based welfare system with Fingerprint Imaging was identified by more respondents than any other alternative. That system would not deny access to unauthorized individuals or provide data concerning each transaction. The use of the Personal Identification Number was also identified by respondents as a nuance that would not provide positive identification. The results of testing concerning potential policy implications were expected.

Much of the literature endorsed the EBT system as a means to prevent the types of fraud that have occurred in the Paper-Based system. However, the data collected and analyzed for this study identify that this system was not selected as the best alternative for preventing fraud. The following section outlines the conclusions of this study on the system that was selected by the respondents.
Conclusions

Conclusions Related to Alternatives to the Paper-Based System Regarding Prevention of Fraud

Based on the responses from respondents, one can conclude there is a need for using encoded fingerprints for identification purposes when attempting to prevent duplicate assistance fraud, counterfeiting, stolen benefits, and food stamp trafficking. It would appear that EBT with Fingerprint Imaging requires positive identification at two critical stages in the welfare process: first, when an individual applies for welfare benefits; and second, when the benefits are accessed. None of the other alternatives requires positive identification at these two critical stages. This may help explain why so many respondents selected the EBT with Fingerprint Imaging system for preventing the four most common forms of fraud.

By selecting this alternative, respondents are indicating their lack of support and confidence in the Paper-Based with Fingerprint Imaging and EBT systems. By selecting the EBT with Fingerprint Imaging option, law enforcement officials are indicating that some form of biometric measurement is needed at the points of application and disbursement in order to prevent any illegal transaction from going forward. This is critical under EBT, particularly to ensure that benefits are transacted and received by the rightful beneficiary. However, it can also be concluded that EBT administrators do not believe that any of the alternatives offer the mechanisms needed to prevent duplicate assistance fraud, counterfeiting, stolen benefits, and food stamp trafficking. It would appear that EBT is not a fraud control panacea, but rather more of an improved efficiency service delivery system. It can be further concluded that EBT administration respondents have the strongest belief that fraud will continue no
matter what system is chosen, and that there may be higher priorities in the welfare system than the prevention of fraud (savings gained by not processing paper benefits).

Respondents generally do endorse the EBT with Fingerprint Imaging as a means to prevent duplicate assistance fraud, counterfeiting, benefits being stolen, and food stamp trafficking. Law enforcement professionals, city and county respondents, and noncollege graduates are the strongest supporters of the EBT with Fingerprint Imaging system.

When respondents were asked to identify an alternative that would prevent the four most common forms of fraud, the majority selected the EBT with Fingerprint Imaging system. However, when asked to select an alternative that would provide the necessary changes to prevent fraud, the majority of the respondents made no selection. The respondents felt that none of these alternatives would provide enough changes to significantly prevent fraud. Many respondents may think EBT or EBT with Fingerprint Imaging cannot be limited by state boundaries. It can be concluded that without a nationwide system EBT with Fingerprint Imaging system, an individual could receive welfare benefits in two different states at the same time: in one state under his or her own name, and in another state under an assumed name. Also, the EBT with Fingerprint Imaging system may be susceptible to other forms of fraud and manipulation other than duplicate assistance fraud, counterfeiting, benefits being stolen, and food stamp trafficking. Some forms of fraud that could possibly occur under the EBT with Fingerprint Imaging system are: recipient purchases of nonfood items, recipients claiming illegal dependents, and recipients working and receiving welfare benefits at the same time.
One of the primary reasons many states want to prevent fraud is to reduce administrative costs. In terms of preventing fraud, administrative costs could be reduced by eliminating surveillance cameras and undercover investigations. Based on the views of these respondents, one can conclude that none of the alternatives will greatly reduce administrative costs in terms of fraud prevention.

Of the policy technologies offered by these alternatives, it can be concluded that it is helpful to combine EBT with Fingerprint Imaging to prevent fraud. It can be further concluded that these respondents viewed the technologies offered by the other alternatives, such as Paper-Based with Fingerprint Imaging and Personal Identification Number, as not offering much of a deterrence to fraud prevention.

The respondents identified a number of policy implications that may prevent the implementation of an EBT with Fingerprint Imaging System. The most frequently cited ones were: high administrative costs to install computer hardware and software, limited access to authorized representatives, and the constitutional rights of welfare recipients not to be fingerprinted.

Table 25 indicates the statistical significant differences between the respondents for social and demographic characteristics. This table indicates the highest responses for each group of respondents in relationship to the hypotheses.

**Summary of Conclusions**

The major conclusion drawn from this study then is that the respondents indicate that EBT with Fingerprint Imaging is the best alternative to the Paper-Based welfare system for preventing duplicate assistance fraud, counterfeiting, the theft of welfare benefits, and food stamp trafficking. One can also conclude that fingerprinting is the most accurate means available to identify an individual and that it
Table 25
Quantat Results for the Highest Responses

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Social or Demographic Group With Highest Response</th>
<th>Statistically Significant Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Common forms prevented by EBT with Fingerprint Imaging system</td>
<td>City, county, noncollege graduates, law enforcement</td>
<td>Yes</td>
</tr>
<tr>
<td>Prevention of all fraud (No selection)</td>
<td>EBT administrators, state, federal, college graduates, less than 10 years of experience</td>
<td>Yes</td>
</tr>
<tr>
<td>Produce fraud prevention benefits</td>
<td>State and federal</td>
<td>Yes</td>
</tr>
<tr>
<td>Technologies that will prevent fraud</td>
<td>40 years or older</td>
<td>Yes</td>
</tr>
<tr>
<td>Magnetic stripes</td>
<td>40 years or older</td>
<td>Yes</td>
</tr>
<tr>
<td>Fingerprint is the most accurate means to identify an individual</td>
<td>City, county, welfare benefit administrators</td>
<td>Yes</td>
</tr>
<tr>
<td>It is necessary to combine both EBT and Fingerprint Imaging</td>
<td>City, county, law enforcement</td>
<td>Yes</td>
</tr>
<tr>
<td>Technologies that will not prevent fraud</td>
<td>State and federal</td>
<td>Yes</td>
</tr>
<tr>
<td>Paper-Based with Fingerprint Imaging</td>
<td>State and federal</td>
<td>Yes</td>
</tr>
<tr>
<td>EBT with Personal Identification Number</td>
<td>State, federal, and professionals older than 40 years</td>
<td>Yes</td>
</tr>
</tbody>
</table>

must be combined with EBT to help prevent fraud. Even when EBT and Fingerprint Imaging are combined to prevent fraud, however, these technologies may not be enough to prevent all forms of fraud. The EBT with Fingerprint Imaging system may still be vulnerable to other forms of fraud besides duplicate assistance fraud.
counterfeiting, stolen benefits, and food stamp trafficking. In the event states choose to implement EBT with Fingerprint Imaging, there will be high administrative costs as well as other issues relating to access to benefits and the constitutional rights of individuals to be fingerprinted.

Recommendations

Implications for Public Policy

The implications for public policy that can be inferred from these respondents' responses encompass issues pertaining to the distribution of any government benefits to the appropriate recipients. The findings of this research can be applied to Social Security benefits, veterans benefits, railroad retirement, and Medicare, to name a few. It has been recommended that to make EBT most cost-effective, the card would have to provide several benefits. For example, the EBT card will be used for child support, Medicaid, and Women, Infants and Children (WIC) programs. An individual will be able to receive benefits from all of these programs using the same EBT card. If any one of these federal and state programs is susceptible to fraud, then millions of dollars are at risk.

Once public policy respondents have decided upon an alternative, the potential of the system to prevent fraud must at that point be determined. Before millions of dollars are invested in alternative systems, it must be determined whether these systems are capable of preventing fraud, or simply change fraud from one form to another.
The benefits of fraud prevention must be compared to the cost of implementing a particular policy. Any agency planning such a change must consider whether these savings outweigh the administrative costs.

States that choose to change their welfare benefit distribution systems must also consider the constitutional rights of recipients before investing taxpayers dollars. If the courts determine that the means of identifying an individual are intrusive and thus unconstitutional, the alternative system would have to be abandoned.

Recommendations for Future Research

The results of this study suggest the need for continued investigation of issues relating to government benefit systems and fraud. In addition, the results of this study support the need to consider major changes in welfare systems in this country. Several implications for future research can be drawn from this study.

1. Future research should continue to focus on identifying the several forms of vulnerability in welfare system, specifically, where fraud can occur in the system and what can be done to prevent it. One example is preventing recipients from receiving welfare benefits while they are employed.

2. Additional research needs to be completed that examines positive identification of applicants and recipients during the application and disbursement of benefits. Alternatives such as retina scanning and voice identification should be compared to other identification methods to find the best system in terms of efficiency, effectiveness, and cost.

3. A longitudinal study should be instituted to monitor welfare fraud referrals, fraud complaints, fraud investigations, and fraud convictions stemming from all three alternatives to judge which system would best prevent crimes in the welfare system.
4. A study should be completed that compares aggregate data from the states that have implemented the Paper-Based with Fingerprint Imaging, EBT, and EBT with Fingerprint Imaging systems to gather data for research purposes.

5. Focus groups should be formed to evaluate these three systems and other alternatives that might emerge from such discussions. These groups should include professionals from law enforcement, welfare benefit administration, and EBT administration in states that have all three systems.

Closing Comments

Public agencies across this country have recognized that welfare assistance is an appropriate undertaking of government on behalf of persons less fortunate. In fact, the courts have made it a legal requirement. In *Goldberg v. Kelly*, the United States Supreme Court (1970) stated that “welfare benefits are a matter of statutory entitlement for persons to receive them” (n.p.). Welfare, by meeting the basic demands of subsistence, can help bring within the reach of the poor the same opportunities that are available to others to participate meaningfully in the life of the community (United States Supreme Court, 1970). And this is why the proper use of welfare benefits is so vitally important.

The purpose of this study was to review three alternatives to the Paper-Based Welfare system for the purposes of preventing fraud. Based on the results, one can infer that combining EBT with Fingerprint Imaging, more than any alternative currently available, may help prevent the four most common forms of fraud and provide some fraud prevention benefits. This conclusion is based on premise that some form of biometric must be used with an EBT system to combat fraud. However, the EBT with Fingerprint Imaging will not prevent all fraud. The
implementation of the EBT with Fingerprint Imaging system may involve high administrative costs, prompt constitutional challenges to fingerprinting, and prevent welfare recipients with physical challenges from accessing benefits.
Appendix A

Protocol Clearance From the Human Subjects
Institutional Review Board
Date: 4 May 1998

To: Peter Kobrak, Principal Investigator
    Timothy Cole, Student Investigator

From: Richard Wright, Chair

Re: HSIRB Project Number 98-02-13

This letter will serve as confirmation that your research project entitled “Practitioner’s Perceptives of Changes in the Paper-Based System for Preventing Welfare Crimes” has been approved under the exempt category of review by the Human Subjects Institutional Review Board. The conditions and duration of this approval are specified in the Policies of Western Michigan University. You may now begin to implement the research as described in the application.

Please note that you may only conduct this research exactly in the form it was approved. You must seek specific board approval for any changes in this project. You must also seek reapproval if the project extends beyond the termination date noted below. In addition if there are any unanticipated adverse reactions or unanticipated events associated with the conduct of this research, you should immediately suspend the project and contact the Chair of the HSIRB for consultation.

The Board wishes you success in the pursuit of your research goals.

Approval Termination: 4 May 1998
Appendix B

Contact Letter Sent to Respondents
Dear Participant:

A study is being conducted under the sponsorship of the Michigan Family Independence Agency, Office of Inspector General, and Western Michigan University. The purpose of this study is to examine the best possible system to distribute benefits.

Soon you will be mailed a survey. You will be asked to complete the survey and return it by: _______________. Michigan is one of many states in the process of developing an Electronic Benefits Transfer (EBT) pilot project. Because not enough attention has been given in the prevention of fraud your response is of the utmost importance.

The responses remain confidential. No one will know how you responded to the statements.

The questions utilize likert scale. You will simply have to indicate if you, Strongly Agree {SA}, Agree {A}, are Undecided {U}, Disagree {D}, or Strongly Disagree {SD} with the statement provided. The survey will take approximately 10 minutes to complete. I am the principal investigator and will be your contact person if you have any questions. The study also constitutes my doctoral dissertation in Western Michigan University's Doctoral Program in Public Administration.

Should you have any questions, please feel free to contact me at (517) 335-3902 week days from 8:00 AM to 5:00 PM.

Sincerely

Timothy J. Cole
Michigan Family Independence Agency
Office of Inspector General
235 S. Grand
Lansing Michigan 48909
Appendix C

Survey
Selection of an alternative to the Paper-Based System.
Based on your perceptions, please circle the response that indicates your choice. Definitions are provided.

DEFINITIONS
Electronic Benefits Transfer (EBT): Recipients are issued a plastic card with magnetic tape on the back and a personal identification number. They access benefits at an automotive teller machine or retailer by using a point of sale terminal connected to a central database. If the transaction is approved, the account transfers the benefit amount.

Duplicate Assistance Fraud: A welfare recipient applies for benefits twice; once under their own name and again under an assumed name, while providing false identification.

Paper Based with Fingerprint Imaging System: Welfare benefits are distributed by coupon or check. Benefits are normally mailed to the recipient’s last known address. During the application process the applicant’s live fingerprint is compared to those that have been recorded on the social service’s computer data base.

EBT with Fingerprint Imaging System: During benefit enrollment, live scan fingerprint capture allows for a comparison to be made between the live scan and prints recorded on the data base. Welfare benefits are disbursed at either an ATM or Point of Sale machine. This system allows for self verification by using a fingerprint reader to compare a live scanned fingerprint with the same print encoded on the EBT card.

Stolen Benefits: Welfare benefits are taken without consent by an unauthorized third party.

Counterfeiting of Benefits: Coupons, checks and benefit cards are fraudulently replicated and then passed on to unknowing store owners or sold on the street.

Food Stamp Trafficking: The illegal sale and purchase of food stamp coupons.

Section I. Fraud Prevention
1. Paper-Based with Fingerprint Imaging (PBw/FPI) 2. Electronic Benefit Transfer (EBT) 3. EBT with Fingerprint Imaging (EBTw/FPI) 4. Undecided 5. Don’t Know 6. None

<table>
<thead>
<tr>
<th></th>
<th>PBw/FPI</th>
<th>EBT</th>
<th>EBTw/FPI</th>
<th>Undecided</th>
<th>Don’t Know</th>
<th>None</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
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<td>6</td>
</tr>
</tbody>
</table>

OVER
Section 2. Changes in the Welfare System. Based on your perceptions, please circle the response that indicates your selection as the best changes to welfare systems to prevent fraud.

<table>
<thead>
<tr>
<th></th>
<th>PBw/FPI</th>
<th>EBT</th>
<th>EBTw/FPI</th>
<th>Undecided</th>
<th>Don’t Know</th>
<th>None</th>
</tr>
</thead>
<tbody>
<tr>
<td>16. Provide the best positive identification of recipients.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>17. Makes stolen benefits useless.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>18. Will guarantee benefits are delivered from the Social Service Agency to the recipient.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>19. Will prove the recipient actually received the benefits.</td>
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<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>20. Would allow only the authorized recipient to access benefits.</td>
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<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>21. Will not require eye witness testimony for investigative purposes.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>22. Provide benefits that are impossible to duplicate.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>23. Will not increase the amount of time recipients have to wait to receive benefits.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>24. Recipients will not be mailed benefits.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>25. Will make it possible to trace each transaction.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>26. Will eliminate the need for surveillance cameras.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>

Section 3. Features of Alternative Systems. Based on your perceptions, please circle the response that best describes how you feel about the statement.

1. Strongly Agree (SA) 2. Agree (A) 3. Undecided (U) 4. Disagree (D) 5. Strongly Disagree (SD)

<table>
<thead>
<tr>
<th></th>
<th>(SA)</th>
<th>(A)</th>
<th>(U)</th>
<th>(D)</th>
<th>(SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>27. Magnetic stripes imprinted on EBT cards will prevent counterfeiting.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>28. EBT cards with an encoded fingerprint cannot be duplicated.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>29. Benefits cannot be accessed unless there is an exact match between the live fingerprint and the fingerprint image on the EBT card.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>30. The use of a Personal Identification Number will prevent anyone except the authorized recipient from using the EBT card.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
31. A fingerprint is the most accurate means available to identify an individual.

32. It is necessary to combine EBT and Fingerprint Imaging to prevent fraud.

33. Implementing Fingerprint Imaging with the Paper-Based system will allow only the authorized recipient to access benefits.

34. The EBT with Fingerprint Imaging will allow only the authorized recipient to access benefits.

35. Adding fingerprinting to the Paper-Based system will provide data on each welfare transaction.

36. The use of a PIN number will positively prove who accessed the welfare benefits.

37. The Paper-Based system used with Fingerprint Imaging will positively prove who accessed the welfare benefits.

Section 4. Policy Implications involved with the selection of an alternative to the Paper-Based system.

38. In my opinion, I perceive the best alternative to the Paper-Based system to be (Please circle one) Paper-Based with Fingerprint Imaging, EBT, EBT with Fingerprint Imaging. The policy implications with selecting this system are:

1._______________________________________________________________________________________________________________________________________________

2._______________________________________________________________________________________________________________________________________________

PLEASE CHECK ONE RESPONSE TO EACH QUESTION.

A. Professionally, I am directly involved in: I. Law Enforcement_____ 2. Welfare Benefit Administration____ 3. EBT Administration _____ 4. Other (specify)________________________


C. I am employed 1. Full time_____ 2. Part Time_____ 3. Retired_____ 4. Other____

D. My employer is directly involved with an EBT or Fingerprint System: 1. Yes_____ 2. No_____ 3. Don’t Know____

E. My employer is not directly involved with an EBT or Fingerprint System but I am familiar with such systems in other states. 1. Yes_____ 2. No_____ 3. Don’t Know____


G. I am: 1. Male_____ 2. Female____


I. I have been employed in my current position for____ years.

J. My age at my last birthday was____ years.

THANK YOU FOR RESPONDING TO THIS QUESTIONNAIRE
Appendix D

Food Stamp Trafficking Model
FOOD STAMP TRAFFICKING UNDER EBT

PROOFS

U/C sells to store

Testifies to transaction

EBT record of transaction and amounts

(note) This case will be easier to prosecute under EBT

Recipients sells to store

Scenerio #1

- Recipients observed to walk in ABC store and walk out without bag
- Video tape by surveillance crew outside of store.
- Match time with EBT record of transaction & amount.
- Photograph of recipients taken from surveillance may be matched with photo in case file.
- Proof of fraud against store and recipients

Scenerio #2

- Recipients observed to walk in ABC store without bag but leaves with bag

Scenerio #3

- Recipients use EBT card to obtain cash rather than to purchase food
- No witness
- No video
- EBT printout of card debited but no proof of food not being sold
- No way to identify the user of the EBT card
- Fraud may exist but cannot be proven

This case will be easier to prosecute under EBT
TRADITIONAL FOOD STAMP TRAFFICKING
NSA 750:300 (A)

(Elements) A person who knowingly uses, transfers, acquires, alters, purchases, possesses, presents for redemption or transports food stamps or coupons or access devices other than is authorized by the Food Stamp Act of 1977 is guilty of food stamp trafficking.

- Runners sells food stamps to a store for 50¢ to 70¢ on a dollar
- Recipients sell to a store
- Undercover officer sells to a store
- Runner buys Food Stamps from Recipients

PROOFS

1. Witness testifies to selling stamps for cash.
2. Undercover agent testifies to selling stamps.
3. Do buy/bust and then recover stamps at scene and determine transaction amount.

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