

ECONOMIC VULNERABILITIES AND OPPORTUNITIES OF
HISPANICS IN NON-METRO MISSOURI

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ABSTRACT

Non-metro Missouri has observed a net in-migration in the last decennial period and a great part of these immigrants are Latinos. This research addresses the factors explaining vulnerabilities and economic opportunities of Latinos in non-metro Missouri, using the 2000 Census as well as county level data on racial profiling, and the Department of Elementary and Secondary Education database. The livelihoods framework, through the capability accumulation and wellbeing theory, is used in order to look into Latinos' economic vulnerability by the practices of local and state enforcement (racial profiling), newcomer's human capital, years of work experience, age, and gender, country of origin and mobility. The regression results show that work experience has the greatest impact on Latino's earning ability as compared to any other factor mentioned, which could be translated to their ability to acquire tangible assets. The interaction effect of education and English proficiency shows a very important factor for both foreign and US born Latinos. On the other hand mobility and racial profiling may have a negative effect on income earning ability suggesting a need for exploring these variables further.

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CHAPTER I

INTRODUCTION

Background

The United States (US) has experienced successive waves of immigration. Currently, in the US, Latinos make up 60 percent of immigrants each year (Lazos, 2002; Census, 2004). In Missouri, 2.3 percent of the total population is of a Latino¹ origin and is still increasing. While this might come across as an unimpressive portion of the population, the reality is very different in some counties in non-metro Missouri². For instance, Sullivan County has observed a 2164.3 percent increase in the Latino population in the last decade and Latinos now make up to 9 percent of the total population in that county alone (Census, 2003; OSEDA, 2004). Their effect on the community can no longer be ignored and it is not something that is going to fade away.

In non-metro Missouri the majority of Latino immigrants aim to improve their livelihood by looking primarily for work opportunities. The most common pull to these areas mentioned in the literature has been the food processing plants and the services located in these areas. The work in these types of jobs is demanding and high turnover rates are common. The Latino arrival in these areas can be translated into a series of new challenges that could affect their ability to earn income and thus their livelihood in non-

¹ Some authors distinguish between Latinos and Hispanics. Here I am using them interchangeably.

² For a lack of a better term non-metro Missouri has been chosen to refer to the whole part of the state of Missouri excluding those areas covered by St. Louis and Kansas City.

metro areas of Missouri. Some of the challenges that they face that are frequently in the literature range from low English proficiency, different cultural capital (fear of police, fear of deportation), to unfamiliarity with the local public services. These challenges increase Latinos' vulnerability to accessing income which could be translated to reduced level of wellbeing for newly arrived Latinos.

Problem Statement

In US society, sources of income generation are closely linked to formal employment. The literature has firmly established that the US labor market relies heavily on education as a dependable indicator of the suitability of a potential future employee. Past and recent studies defended the thesis that Latinos' lower human capital (educational attainment, English proficiency, and work experience) explained their poor record on the labor market. Some authors (see Vasquez-Case & Campbell, 2002; Valdés, 1996) have shown that even alternative forms of income generation, such as those provided by the welfare system, are indirectly linked to employment in one way or another. Other traditional alternative sources of income provided by the welfare services not linked to employment have added requirements that hamper minority groups', such as Latinos', access to them. Other authors contend that it does not really make much difference given that the majority of Latinos that are not proficient in English and are undocumented do not use the services anyway and go to their family and friends for help (Engstrom, 2000; Suárez, 2000; McDonough & Korte, 2000).

Lately, many agribusiness, service, and manufacturing industries have been making strategic moves by relocating their processing plants as close to the primary producer as possible, which basically means building large plants in non-metropolitan

counties. This move has attracted a large number of Latino immigrants looking for a place to generate income. Missouri's heartland has observed a booming of both agribusiness plants and Latino immigrants. However, these industries have been notorious in providing dangerous jobs with lower compensation (e.g., salary) to immigrants such as Latinos. Additionally, there is anecdotal evidence that some large corporations employ 'headhunters', who proceed to recruit Latinos directly from their home countries (Rosenbloom, 2003; Bowe, 2003). Alternatively, it may be that immigrants are the only sector of the work force that will accept the working conditions indicated above.

Another problem for Latinos in non-metro Missouri has been the context of their reception (Dannerbeck, 2002). Government policies and people's attitude towards Latinos in these areas have been considered ambivalent at best (Vazquez-Case & Campbell, 2002; Wirth, 2001). This ambivalence towards Latinos in rural areas has important implications for the formation and the value of social capital, which may be a very important factor when it comes to income generating activities. This ambivalence somehow affects the strength of local institutions and limits the resources needed to build bridges between the newcomers and the local community. To newly arrived Latinos, social capital may help create connections needed to find jobs, social and insurance services, and health care.

It is insightful to consider that immigration patterns have changed. Judging from the literature and the census data from 1990 and 2000, it can be concluded that immigrants are no longer settling in major "traditional" states. "Traditional" states refer to those states that were mostly favored by Latino immigrants upon their arrival in the

US, such as Illinois, New York, Arizona, California, Colorado, New Mexico and Texas. Instead, new migration patterns have been created, with the hinterland now being preferred over the large cities. In Missouri, as of 2000, 49.8 percent of Latinos lived in St. Louis and Kansas City compared with 55 percent in 1990 (Census, 1990; 2000; OSEDA, 2004). Furthermore, an important issue to consider is that these communities are unaccustomed to dealing with immigrants and oftentimes they do not have sufficient resources to support newcomers.

Additionally, previous studies carried out were either too broad (for the whole US) or too narrow (for specific origin of Latinos, e.g., Mexicans in California). In both cases, it is very hard to extrapolate using the results of previous studies given that Latinos are highly heterogeneous. Therefore, the relevance of previous analyses might provide misleading clues if used to predict future outcomes since the conditions that Latinos are facing in non-metro Missouri are different to those considered in previous studies (Wirth, 2001; Vasquez-Case & Campbell, 2002). Additionally, there is the issue of “spurious” correlations of previous studies concerning the impact of Latinos’ educational attainment and English proficiency on industrial and occupational distribution and thus earnings. For example, there might be other factors influencing the high presence of Latinos in the low skill jobs thereby eliminating/reducing the causation implied by prior research. The existence of anecdotal evidence suggesting that employers systematically target Latinos with lower educational attainment, not properly documented, and lower English proficiency through headhunter’s services (Rosenbloom, 2003) supports this argument and warrants further study on the issue.

Valdes (1996) study of Latinos in the US showed that Latinos' cultural capital differs according to Latinos' educational attainment, social status, and place of origin and immigration objectives³. Cultural capital here refers to the wealth of background information that a Latino acquires from his/her home country or inner circle, which influences how he/she views and deals with societal issues. Cultural capital then affects the newcomer's perception of the law and law enforcement agencies such as the police, social services and the U.S. Citizenship and Immigration Services [USCIS formerly INS] (Lazos, 2002).

Finally, even though there has been a proliferation of qualitative and quantitative studies that have analyzed the effects of human capital and immigration on Latinos' income, none so far has incorporated the effects of racial profiling on an empirical model in order to observe its effect alongside other factors affecting income.

Objective

The main objective of this study is to empirically analyze how human capital and specific demographic factors such as nativity and disparity index affect hourly wage and economic success of Latinos in non-metro Missouri, thus contributing to their vulnerability or wellbeing.

Expected contribution of this study to the literature

The results of this study could enrich our knowledge of the impact of human capital and observable demographic factors on Latinos' income generating ability in non-metro Missouri. It could also help establish a new conceptual framework for further

³ According to Valdes, immigration objectives override all others that they might have.

economic research to enhance our understanding of the US society's response towards Latinos in these areas.

The organization of this study is as follows: Chapter 2 reviews existing literature on wellbeing, Latinos' historical immigration patterns and effects of socioeconomic factors on Latinos' vulnerability. Chapter 3 develops a conceptual framework that provides theoretical foundations for the study of Latinos in non-metro Missouri. Chapter 4 describes Latinos' demographic profile in non-metro Missouri. Chapter 5 evaluates results of the model and its implications. Finally, chapter 6 summarizes the key findings of the research and suggests additional research related to Latinos' wellbeing in non-metro Missouri.

CHAPTER II

LITERATURE REVIEW

This chapter discusses the development and limitations of previous research related to Latinos as well as methodology and data problems of these prior studies.

The literature review consists of five sections. The first section briefly describes the historical premises of Latinos in the US and in Missouri. The second section covers the wellbeing, risk, sustainable livelihood and vulnerability literature. The third section introduces the livelihood framework and elaborates on the effect of selected socio-economic factors on Latino communities in the US. The fourth section states the contribution that this research would make to the existing literature.

Historical Premises of Immigration

The history of the US has abundant anecdotes stating that much of the US was populated by immigrants from all over the world. Immigration is a particularly complex issue and objectives that force individuals or groups to immigrate also vary by ethnic group (Roberts, 1995). For Latinos, due to the economic conditions in their home countries, the main objective of immigration has been making as much money as they could in the shortest time possible to send back home for family maintenance and their particular investments (Browning & Rodriguez, 1985). However, the assumption that came along with immigration in the US, which is also embodied in the American

immigration law, is that it should lead to naturalization, which meant abandoning any commitments to the country of origin and becoming fully committed to the US (Roberts, 1995). This is what the majority of west and east European immigrants to the US did. Anecdotal evidence has it that Latinos have been the least likely ethnic group to abandon their commitment to their home country and customs (Roberts, 1995).

The Latino immigration in the US

Some Latinos now residing in the US have ancestors that antedate many Anglo-Saxon residents in this country. The Latino population began to grow with the 1848 Treaty of Guadalupe Hidalgo, in which Mexico ceded to the US the territory that is now Texas, New Mexico, Arizona, California, Nevada, Utah, and Colorado (Acosta-Belén, 1988). Therefore, with the moving of the border many native Mexicans moved to the US automatically. However, today a great part of the Mexican-American population is a direct result of immigration in the 20th century (Davis *et al.*, 1988). At the dawn of the century, Latino immigrants were originally lured to come to work mainly on the farmlands of California and to a lesser extent to build the railroads of the Southwest (Borjas & Tienda, 1985). The onset of the depression era, in the 1930s, prompted a temporary end to this massive immigration program and, actually, started to push into a different direction: more than 400,000 Mexicans were deported during the period (Borjas & Tienda, 1985). As the US joined World War II, the defense industry was developed, much to the detriment of other economic sectors, especially agriculture. Thus, in the 1940s the *braceros*⁴ program was created. The main aim of this program was to bring temporary workers to the US in order to alleviate the shortage of labor created by the

⁴ This could be loosely translated as ‘strong arm’ (Martin, 1999; 2002).

defense industry. This program, until its termination in 1964, brought around 4.8 million Mexicans to the US (Hernandez, 1981). The farm labor program *braceros* helped cement the image that Latinos are essentially temporary, unskilled workers and thus helping to create the image among the locals that they are here only on a temporary basis – even though some of them are legal US citizens. This view has affected their long term economic and social relationships with others in society (Roberts, 1995). Therefore, it is contextually important to analyze Latino wellbeing in the realm of immigration.

After the 1960s much of the immigration to the US has been considered undocumented by many authors. Among many reasons, the following are commonly advanced: the economic deterioration and political upheaval in much of Southern America and the Caribbean, coupled with the *braceros* mentality of ‘*siempre hay trabajo*’ – meaning “there is always work” (Hernandez, 1981; Borjas & Tienda, 1988; Davis *et al.*, 1988; Beck, 1995). This situation is especially so in the case of Cubans and Puerto Ricans. The number of Cubans in the US increased dramatically after Fidel Castro overthrew Fulgencio Batista’s regime in 1959. The increase of Cubans in the US was therefore mostly a result of a political decision (Davis *et al.*, 1988). For instance, there were slightly fewer than 50,000 Cubans in the US by 1959 but by 1980 the combined effect of post-revolution exile, the Johnson agreement with Fidel, and the Mariel boatlift, around 725,000 Cubans were brought to the US, who stayed mostly in Florida, New Jersey and New York (US census bureau, 2000; Davis *et al.*, 1988).

The Puerto Ricans’ situation has been a little different compared to Cubans and other Latin American countries. People of Puerto Rico have been considered citizens of the US since 1917 when the Jones Act was put in place and provided Puerto Ricans a

special political arrangement with the US (Chavez, 1997). However, due to their similar physical appearance and sharing of similar culture with the rest of the Latin world, they too were viewed as Latino “immigrants” and tended to initially suffer the negative effects of immigration until proven otherwise (Valdez, 1996).

The Latino immigration in Missouri

The Latino presence in Missouri is also not new even though their presence was mainly polarized to the urban settings by concentrating initially in Kansas City and later on in St. Louis areas. There is documented evidence that Latinos were present in Missouri as early as 1830 (Kansas State Historic Society [KSHS], 2004). Mexican merchants used the Santa Fe Trail in order to move back and forth in their trading with Missouri and make fortunes (KSHS, 2004). Kansas City, which was connected to Mexico via Atchison, Topeka, and the Santa Fe Railroad, benefited immensely from trading with Mexicans (Lazos & Jeanetta, 2002). During the 1900s, a combination of political instability, poor living conditions in rural areas, job scarcity and the recruitment of cheap labor by US businesses led to an increased mass movement of Mexicans to the US (Valdés, 2002). The main employers of these Latinos were the Santa Fe Railroad, meatpackers in Kansas City, and sugar beet farms in Finney County in Kansas (Lazos & Jeanetta, 2002). Mexicans’ pattern of immigration was mostly circular consisting of back and forth movement of immigrants, i.e., the industries that they were working on were mostly seasonal and during winter time most immigrants would return to Mexico and then come back during the open season (Green & Barham, 2002). Mexicans were not the only ones to arrive in Missouri looking for work. Other Central American countries also

tagged along the Mexican trail moving “north”, even though with great deal of difficulty and at later stages (KSHS, 2004).

Current trends of Latino immigration in Missouri

The current immigration to Missouri has been mostly fueled by the investment of meat packers’ plants in Missouri’s small towns (KSHS, 2004). These small towns have no reservation labor and face a high turnover for plants that are designed for more than 1000 employees (Rosenbloom, 2003). This situation has forced managers to engage the services of ‘headhunters’ to look for employees and encourage employed Latinos to refer others to the company (Rosenbloom, 2003). This relatively recent and fast immigration of Latinos into these small towns has produced ambivalent an response from the local communities on the adjustment to their newly arrived citizens.

Wellbeing and Risk

Wellbeing in any part of the world is all about being able to accumulate enough assets that will allow a given individual or household to cope with future risk thus reducing the probability of going in a downward spiral of poverty (Rupasingha & Goetz, 2003). The development economics literature abounds with examples of risk minimizing strategies, mostly from developing countries, whereby households and individuals usually adopt myriad strategies in order to escape risk (Davis, 1996; Morduch, 1995; Binswanger & Rosenzweig, 1993; Corbett, 1988; Valdivia *et al*, 1996). The strategies that have been used thus far in order to cope with economic risk have been divided into two main groups: income smoothing and consumption smoothing (Morduch, 1995; Valdivia *et al*, 1996). The ability to smooth income and/or consumption relates directly to

different capabilities that a given household or individual possesses. These capabilities are broken down into different types of “capital” that could be created/acquired, i.e., social, financial, human, cultural and physical (Valdivia & Gilles, 2001; Ximenes, 2001; Chambers & Conway, 1992). The bulk of research in coping with risk in developed countries places more emphasis on consumption smoothing after shocks, even though there is income smoothing going on concomitantly, which is done chiefly through choice of occupation, diversification, and access to credit (Morduch, 1995).

Income smoothing refers to the ability of a given household or individual to engage in income generating activities that will allow it to accumulate enough financial/liquid assets needed to mitigate risks (Morduch, 1995; Blaikie & White, 1994). Normally, in economies with well functioning markets, access to different types of insurance mechanisms such as savings, and credit markets reduces the impact of the outcome that a given risk might pose to the population (Morduch, 1995). Consumption smoothing refers to the ability of a given household or individual to acquire enough consumption goods needed to maintain its previous consumption level in a risky environment. In developed market economies, these two concepts are intrinsically linked because, as said above, the ability to command enough income could be translated to the ability to acquire enough goods to consume (Morduch, 1995).

The majority of citizens in the developed world tend to take jobs, early in life, that provide a comfortable balance of expected earnings and risk; and thereafter stochastic elements in the society affect the occupational situation accordingly. Additionally, the citizens over-rely on their employment and the existing formal institutions for income provision, which is later used for (smoothing) consumption (Morduch, 1995). This

creates a quasi-unidentifiable separation between income and consumption smoothing – the lack of variation and high dependence suggests that income smoothing may also mean consumption smoothing (Morduch, 1995).

In the US there are many alternative forms of income smoothing used by the population. These mechanisms are mainly provided by the social welfare system supervised by the government (McDonough & Korte, 2000). However, the extremely high eligibility requirements and the rigid and bureaucratic way that most of these programs operate alienate those who need it the most (McDonough & Korte, 2000). The social welfare mechanism is mostly used by minority groups whose poverty incidence is relatively high. Ironically, in the 1990s the majority of poor Latino families had at least one member working and not all of them were being assisted by the welfare system (McDonough & Korte, 2000). This latter situation shows the inefficiency and insufficiency of trusting solely on the social welfare system to alleviate poverty of poor minority people in the US.

The Livelihood Framework

Chambers & Conway (1992) defined livelihood as “means of gaining a living” (p.6). The livelihood framework combines the concepts of capabilities, equity and sustainability, which makes it very conducive to analyzing vulnerabilities and opportunities.

The means of living included in the livelihood concept concerns mostly people and incorporates income and assets. Tangible assets are stores of value whereas intangible assets are mostly claims and access. A livelihood is environmentally sustainable when it maintains or enhances the local and global assets on which

livelihoods depend, and has net beneficial effects on other livelihoods. A livelihood is socially sustainable when it can cope with and recover from stress and shocks, and provide for future generations (Chambers & Conway, 1992).

The livelihoods approach seeks to gain a realistic understanding of people's strengths (assets or capital endowments) and how they make an effort to translate these into positive livelihood outcomes (CARE, 2004). The approach postulates that people require a range of assets to achieve positive livelihood outcomes; no single category of assets on its own is sufficient to yield all livelihood outcomes that people strive to achieve (CARE, 2004).

The livelihood framework identifies six types of capital upon which livelihoods are built. A capital is the product of investment which yields a flow of benefits over time. The five capitals are: human, financial, natural, physical, cultural and social⁵ (DFID, 2003).

In the context of Latinos, human capital refers mostly to English proficiency and educational attainment. Financial capital, which is the level of income a given individual is able to command, can generate multiple benefits and can also determine the level of multiple capitals. For instance a secure, high paying job may provide enough income to acquire land (natural capital) and may also allow the acquisition of a house (physical capital) and status and connectedness in the community (social capital). Therefore, for Latinos the four most important capitals assessed are human, financial, cultural, and social.

⁵ Some authors identify cultural capital as a building block of social capital others use it as a stand alone category.

English proficiency

Good command of the English language has been considered one of the most important factors influencing the adjustment of the Latino immigrant in the US. Abalos (1984) stated that for immigrants moving to the US it should be expected that the ability to use printed material be given special consideration, and thus the great substance that research has given to the ability to read and write in the English language, as a significant factor influencing economic success in US society. However, studies carried out on the subject of English ability/literacy of Latino immigrants have produced mixed results at best. For instance, Borjas (1984), Reimers (1983, 1985) using data from the census, the department of commerce, and Rivera-Batiz (1991), using results of a standardized test of reading comprehension, did not find a significant impact of English ability/literacy on the earning capacity of Latinos in the US. However, these studies were also hampered by the limited data used. For instance, Reimers concentrated only on urban Latinos and Rivera-Batiz had a very limited sample size. These authors have suggested that this might indicate that English proficiency is not the only factor that influences Latinos' earnings in the US economy. On the other side, studies that have used different set of data containing extensive measures of English proficiency have concluded that lack of a good command of the English language does hold back the ability to enter into the mainstream job market thus higher earnings (Grenier, 1984; McManus, Gould and Welch, 1983; Tainer, 1988).

Wirth (2001) carried out studies in southwest Missouri, which were subdivided into three distinct types of respondents: Latino adults, Latino youth and social workers serving Latinos in that area. The results showed that Latinos have a genuine concern in

learning English but its quantitative effect on Latinos' earnings was never established. Vasquez-Case & Campbell's (2002) study in selected non-metropolitan counties in Missouri provide mostly qualitative evidence that the ability to properly speak English does affect Latinos' social integration in local community; however no quantitative evidence was ever offered in order to establish a direct link between English ability and earnings in these counties.

Educational attainment

Latinos have long been stereotyped as having lower educational levels as compared to other ethnic minorities in the US (Melendez, Rodriguez & Figueroa, 1991). In order to understand this phenomenon, a thesis has been advanced that most Latinos are young, able bodied, and motivated individuals whose main drive for immigration is to make as much money as possible, therefore they naturally gravitate towards the job market rather than continuing their education (Melendez, Rodriguez & Figueroa, 1991). Nonetheless, the level of education has been positively correlated to upward mobility in US society, which is not the same in the Latinos' countries of origin. For instance, Roderick (2001) argued that education has historically been the most important determining factor of social mobility for immigrants and non-immigrants alike because it enables immigrants to gain access to better paying jobs, and enhance the ability to make important cultural and intellectual contributions and gain access to the political process.

However, Roberts (1995) argued that, like most immigrants before them, these new Latino immigrants face some barriers towards improving their educational level and of reaping the benefits that it brings. In US, some of these barriers are: unfamiliarity with the American educational system, language, overcrowding in urban and rural schools,

low quality education (National Council of La Raza report, 2004), poverty, familial and social disruption, and discrimination by schools and teachers who are unfamiliar with the new group's cultural norms. As an illustration, quantitative studies have generally found that the combination of low parental education, low family income, and family language status explains much of the poorer school performance and lower educational attainment of Latinos as compared to other minority groups (Figueroa, 1991). The reason advanced was that children are most likely to emulate their parents' achievements; and/or is difficult for parents to offer an environment that is conducive to higher levels of education if they haven't achieved these levels because they do not have the experience of what it entails to get to these levels of education.

On the other hand concerns should also be raised that Latinos low educational attainment may not be totally due to barriers that they face in US society. For instance they might bring their own experiences of low expectations or returns to their investment in education; or they could not get beyond a certain level of education due to affordability and or availability of school facilities.

In Missouri, data analysis carried out by the Office of Social and Economic Data Analysis (OSED, 2004) shows that on one side Latinos have lower levels of educational attainment and on the other side there has been an overwhelming increase of Latinos' enrollment in Missouri's rural schools.

The literature has, most of the time, concentrated on the single effects of language and education. The interaction effect of Latinos' language and education to wages *per se* has been given scant attention by prior research. Reimers (1985), introduced the interaction effect of foreign education and foreign born. The assumption made by her was

that the foreign born variable, besides measuring the effect of foreign education to wage, was also supposed to capture the effect of language. The study results showed that the interaction effect increased the returns to income for all major groups but Cubans and Other Hispanics.

Industrial distribution

Associational patterns and frequency studies done lately have tended to link Latinos mostly with agricultural industry and any other industry that demands higher physical input rather than intellectual input (Portes & Rumbaut, 2001). The logical link, according to these authors, has been the lower educational attainment, poor English proficiency, and, for some, documentation. However, other studies have provided results that would tend to weaken the former thesis by showing that the number of Latinos in industries that require high intellectual input have been increasing all over the US (Ortiz, 1991); even though their vast majority was still represented in the service industry with 22 percent (Hurst & Cheswick, 2000).

Another interesting feature in industrial distribution that the literature has not been in agreement on regards the differences that arise due to nativity of Latinos. Hurst & Cheswick (2000) stated that Latinos born in the US tend to prefer urban, comparatively less physical jobs, and compared to foreign born they have an advantage in sectors such as public administration because of citizenship requirements. Foreign born Latinos tend to be mostly represented in the highly demanding jobs such as meatpacking and construction.

Occupational distribution

By 1988, the occupational distribution of Latinos started to reflect the changing occupational structure in which lower-level, blue-collar jobs (e.g. farmers, laborers, and operatives) had diminished in importance and availability for the greater US (Melendez, Rodriguez & Figueroa, 1991). Even though there has been a changing pattern in the occupational distribution, Latinos continue to be underrepresented in white-collar occupations and are still overrepresented in blue-collar-occupations (Hurst & Chiswick, 2000). According to Sullivan (2000), there has been a long held myth that Latinos are mostly farm workers and prefer blue-collar work. Her explanation of this long held “myth” is that this comes partly from Latinos’ historic association with agriculture and partly because of their relatively low levels of formal education.

It is also important to note that Latinos are far from a homogenous group; and if this group is broken down by origins, interesting patterns arise that could better explain the variability in their occupational distribution. For example, Cubans had the highest percent representation in white collar jobs while Mexicans had the lowest representation in both in the US and in Missouri (OSEDA, 2004; Hurst & Chiswick, 2000).

Social Networks and Capital

Portes (1995) defined social networks as “sets of recurrent associations between groups of people linked by occupational, familial, cultural, or affective ties” (p.8). The size and densities of these networks are very important in regulating individual’s activity in the society. Size refers to the number of participants in a network and density to the number of ties between them (Portes, 1995). These networks provide avenues for acquisition of information, scarce resources and capital that an individual could otherwise

not have gotten access to. Among the most important forms of capital that an individual could gain access to is social capital.

Putnam (1993b, cited by Flora 2001) described social capital as “features of social organization, such as networks, norms, and trust that facilitate coordination and cooperation for mutual benefit; social capital enhances the benefits of investment in physical and human capital” (p. 45). Social capital gained such an emphasis because it refers to the collective value of all informal and formal networks that are created to serve the purposes of many individuals. Thus, social capital enables individuals to command scarce resources by virtue of being members of a network. These resources may include, but not limited to, tips about employment, interest-free loans, best schools for children, access to welfare programs, acquisition of formal documents and the like (Portes, 1995). Putnam’s definition of social capital, as de Haan (2001) noted, works mostly at the societal level. This is clear when he states that social networks lubricate social life, which enables people to work together and achieve more. An individual works to cultivate the use of the resources provided by the social capital structure, which could later on evolve into a network. Fukuyama (1999), mentions that social capital takes many forms, but the most visible ones are the bonding (exclusive) and bridging (inclusive). Bonding is also viewed as having a narrow focus, this has to do with associations between people, consisting of social networks and associated norms that have an effect on community productivity and well-being. Bonding associations are normally related to people who have a tight relationship such as kinship, very close friends that are also referred to as strong ties. Bridging social capital refers to a much broader relationship, whereby people are connected by weak ties such as work-related clubs and church groups.

Immigration is seldom an individual activity; it involves a collective effort of many individuals within a well established social network. Thus when an individual moves from one place to another, it is actually its network that is moving because he/she uses the information and resources created by the network in order to leave the place of origin and settle safely at the destination (Roberts, 1995). These resources created by the network in the form of social capital will enable the individual or family to quickly get access to a job, affordable housing and channels to send money back home.

Poverty and Alternative Sources of Income

Latinos in the US experience many social problems because of poverty levels, marginalization, and discrimination. For instance McDonough and Korte (2000) stated that the Latino population grew five times as fast as the total population and eight times as fast as the white non-Latino population in 1990. Even though the Latino population was young (averaged 36.6 years in 1990), there were signs that other categories (children, and the elderly) were projected to have a phenomenal increase in the period from 1990 to 2030 (Cubillos & Prieto, 1987). Poverty incidence among Latinos is not uniform. Female headed-household, the working poor, infants and children, young school dropouts, and the elderly poor who worked in jobs that built up no social security are the ones that were considered severely affected. As an illustration, in 1990 Latinos were among those with a high probability of living below the poverty line with 28.7%, second only to blacks with 32.7% (Perez & Martinez, 1993).

In US society, a large proportion of income comes from employment wage, which might come from a single or multiple sources (Frisk, 1998). In the absence of employment, many rely on the welfare system. However, the welfare system as a source

of alternative income generation is very much related to nativity, race and length of permanence in the US (Frisk, 1998), as well as documentation status. Vazquez-Case & Campbell (2002) found that health care and Women with Infant Children (WIC) were the services mostly used by Latinos while other services, such as unemployment insurance, had extremely low levels of usage. WIC was being used mostly by women that had US born children. For unemployment insurance and other welfare services, the USCIS requirements to provide those services to citizens acted as the main hindrance for most Latino immigrants to qualify for coverage. In light of this, Wirth (2001) found that for the majority of Latinos in southwest Missouri, close family members and friends were still the best safety net in case of an emergency (see Vazquez-Case & Campbell, 2001).

The relative increase in immigration to rural areas by Latinos has prompted various sectors of the society to raise a plethora of questions. One very important question that might need answering is: how are Latinos doing economically and what is affecting their earnings or what are the impacts/magnitudes of the often cited factors on Latinos' earning ability. Vazquez-Case and Campbell (2002) tried to address a different version of these questions through their survey by answering the question concerning the issue of whether or not Latinos were getting any wage increases. Their conclusion was that there were some observable progress in economic conditions, some wage increases at different levels of settlement and adjustment. However, the factors affecting their wage increases, which they refer to as improvement, are not really discussed and the impact and or magnitude of these factors are still eluding many researchers.

The capability theory has been extensively used worldwide. de Haan (2001) used the capability approach in order to study technology transfer and livestock adoption in

rural areas in Tanzania. de Haan found that the level of individual social and human capital determined the level of technology transfer and asset acquisition in the community. Flora (2001) used it in her analysis of the difference that gender made in terms of access and control over key resources in a sustainable agriculture and natural resource management program in rural areas of Burkina Faso, Ecuador and Philippines. Flora's results showed that engendering social capital in these areas was crucial for successful development of sustainable strategies needed to deal with resource management. In the US there has also been extensive use of the capability theory in the analysis of access to and use of resources by minorities. Chiswick & Hurst (2000) used capability approach in order to assess the Latino performance in the labor market. They concluded that Latinos' lower hourly wages was mainly due to their lower human capital as compared to non-Hispanics. Reimers (1991; 1985) analyzed the effect that human capital had on Latinos in the main cities in the US and arrived at similar conclusions as the Chiswick and Hurst study. Rodriguez (1991) used a more selective approach by studying the effect of human capital on male and female Puerto Ricans residing in New York. Rodriguez' selective approach yielded some interesting results. For instance she found that race did not have an effect on returns to wage and with the exception of manufacturing blue collar work, gender also did not influence returns to wage. The practicability and wide use of the capability theory in assessing the opportunities, vulnerability, and the effects of different capitals on earnings makes this theory suitable for this study. Use of use the same methodology also allows comparison with other studies.

CHAPTER III

RESEARCH METHODOLOGY

This chapter will focus on the description of the area covered by the research, the data, and the development economic theory necessary for hypothesis derivation and interpretation of the results presented in the following chapters. The theoretical framework focuses mainly on the development of the capability theory as it relates to vulnerability and wellbeing response.

Theoretical Framework

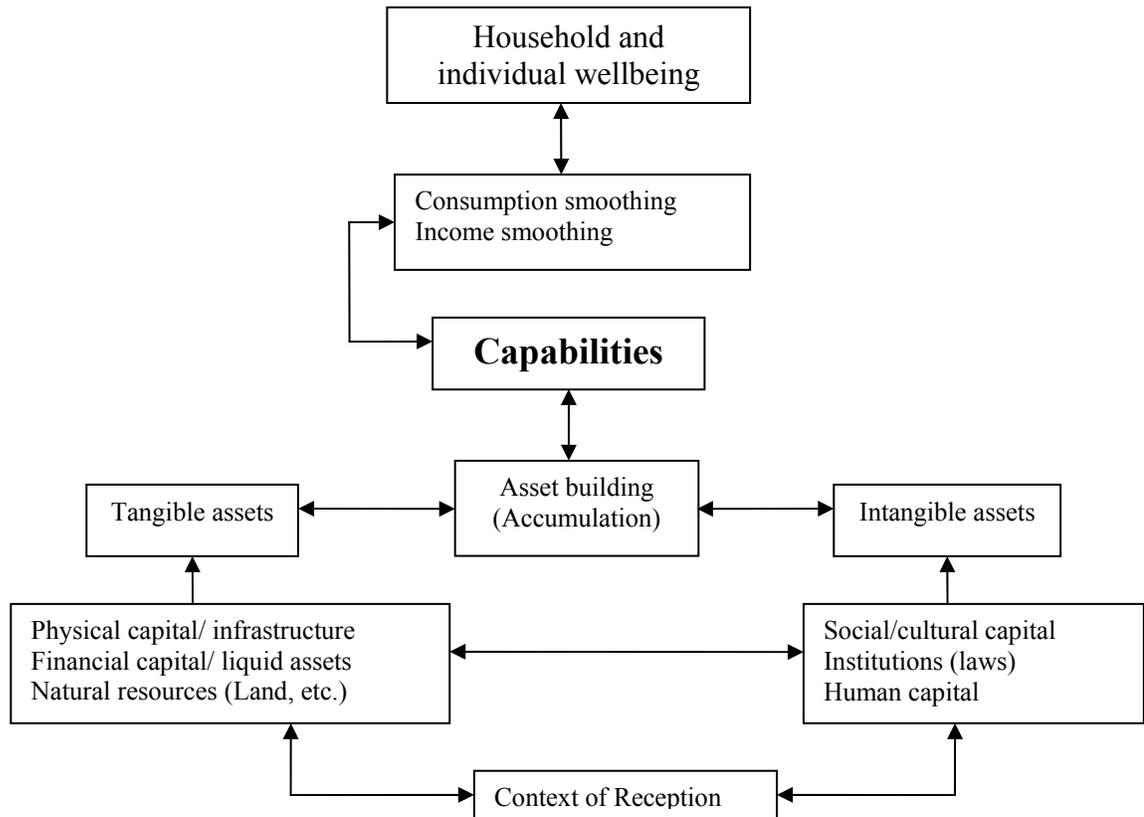
In the development economics literature, Sen (1981) was among the first to engender a new approach to analyze vulnerability and wellbeing. In his seminal work on entitlements, he laid foundations for the sustainability, equity, and capability theories. Sustainability refers to “accepted” or “good⁶” development methodologies, even though at times it is somewhat ambiguous (Lele, 1991). Equity refers to the level of income, and assets distribution as well as capabilities and opportunities that a given set of the population possesses (Chambers & Conway, 1992). The principle of capability refers to the ability to perform certain basic functions, to what a person is capable of doing and being (Sen 1984; Dreze and Sen, 1989). Issues such as the ability to lead a comfortable life, avoid preventable morbidity and mortality, be adequately nourished and live a life

⁶ Refers to methods that are non destructive of the local environmental conditions while at the same time provide for the future generations.

without shame, to be able to visit and entertain family and friends, and to be comfortably clothed are included in this concept. Quality of life is seen in terms of generating enough capital in order to acquire the ability to choose and perform those activities that are valued by the chosen population (Chambers & Conway, 1992).

The principle of capability incorporates the ability to cope with stress and shocks, and being able to find and make use of livelihood opportunities. The important lesson arising from this is that the elements embodied in the capability theory are not just “reactive”. These elements can also be “proactive and dynamically adaptable”, in which case might include “gaining access to and using services and information, exercising foresight, experimenting and innovating, competing and collaborating with others and exploiting new conditions and resources” (Chambers & Conway, 1992 p. 5). Using the aforementioned elements to develop an analytical wellbeing framework, Swift (1989) suggested three main categories to focus on: intangible and tangible assets, and investments. Chambers & Conway (1992) argued that these three categories could be grouped into two main types of assets: stores and resources, and claims and access. Figure 1 depicts a flow chart with these elements and their implied interrelationships in a livelihood and wellbeing framework. Stores and resources refer to the tangible assets that a given individual is able to get access to, which includes food stocks, and stores of value such as jewelry and cash savings in banks and or credit schemes. Resources relates to physical assets such as land, water, and animals, and equipment, tools and domestic utensils.

Figure 1 Conceptual Framework of Wellbeing



Source: adapted from Chambers and Conway (1992)

Claims and access on the other hand are intangible assets that an individual can count on to use material or other forms of practical support. Furthermore access will provide rights to a given individual to obtain information, materials, technology and training, employment, use a resource, and to acquire food and income.

The level of tangible assets is dictated by the aggregation of physical and financial capital, and natural resources that an individual is able to command. Physical capital includes all the properties and infrastructure except natural resources that an individual or household possesses title to and can be redeemed to income. Financial capital refers to all sources of income that an individual or household has access to such

as employment, welfare system, and remittances to mention but a few. Natural resources, due to their different legal status in many countries, are separated from the other physical capital; and these include land, mining concessions, timber concessions, and common property resources.

Intangible assets however, do not depend only on the individual or household. They also include a certain participation of external societal effects such as institutions, laws and social capital (Flora, 2001; Valdivia, 2001; Bebbington, 1999; Putnam, 1993). Intangible resources refer to acquired capital (human), created capital (social), and facilitating capital (institutions). Human capital refers to qualities such as educational attainment, language proficiency, and relevant or potential work experience that a given individual is able to command. Social capital is a much more difficult terminology to explain. However, most authors seem to agree that social capital refers to “features of social organization, such as networks, norms, and trust that facilitate coordination and cooperation for mutual benefit” (Flora, 2001 pp.45). Institutions are the sources of norms and laws that prescribe and coordinate behavior in a given society (Douglass, 1990). Therefore, they can facilitate or destabilize wellbeing for a given individual or household in a specific society.

The level of assets that an individual will be able to command in a given society will depend or be enabled by the context of reception that he or she will encounter in the community selected.

The combination of both types of assets will enable a given individual or household to build the resources necessary to secure sufficient capability that would enable consumption and income smoothing that leads to wellbeing.

Latinos' Context of Reception

As with most issues concerning the law, our (human) bounded rationality does not help us to fully specify provisions that would cover all possible future outcomes (Furubotn & Richter, 1995), thus clever minded businessmen will always try and, most of the time, find ways to circumvent the existing law. Latino immigration to the US has been affected by ambivalent principles, which has been aptly termed “legal inconsistency” (Lazos, 2004). Unfortunately, the issue of documentation is a very delicate and complicated one. The elusiveness of this issue has made it hard to find concrete evidence to back up most of the assertions made by most authors. Most of the evidence supporting or opposing the increase or decrease of undocumented/documented immigrants and their effects on different industries have been circumstantial (Rosenbloom, 2003).

On the other side of the spectrum, the government has been trying to push forward new and more vigorous efforts to police immigrants in the community. The move has consisted of passing tough laws such as voluntary public reporting of existing (known) undocumented immigrants, extending the authority of the police force to encompass some aspects of immigration and passing “tough” penalties to those industries that knowingly employed undocumented immigrants (De Colores, 2004; Lazos, 2004). Some of these laws fall in the realm of what has been called “racial profiling” (De Colores, 2004; Lazos, 2004).

The ‘legal inconsistency’ clearly manifests itself in the apparent contradiction on the application of the laws stated above. Some industries have been employing immigrants without proper documentation and have gone unmolested by the authorities

(Bowe, 2003). The service and agricultural sectors have been the leading industries in recruiting Latino immigrants to carry out physically intensive jobs thus helping these industries to reduce operating costs (Bowe, 2003). Additionally, Sylvia Lazos (2004) quotes Tom Donahue, the President of US Chamber of Commerce, as saying that immigrants have been the backbone of these industries and if these immigrants were actually sent home, the US economy would virtually stop dead in its tracks.

Area of Interest

The study will exclude St. Louis and Kansas City area counties and will incorporate all the remaining counties in Missouri. For a lack of a better term, the area covered was called “non-metro Missouri”; although some authors have called it “rural Missouri”. The counties excluded in the Kansas City area are: Jackson, Clay and Platte. In the St. Louis area the counties excluded are: Lincoln, Warren, Franklin, Jefferson, St. Charles, St. Louis, and St. Louis City. Reasons for the exclusion of the two large metropolitan areas are mainly twofold: they have long experience in dealing with Latino population and immigrants and they possess more extensive resources to serve incoming immigrants. Second, the rates of growth have been higher in non metro areas. Ability to respond to this growth may reflect on the factors that affect income earning capacity. In other words, context of reception and social, cultural, and human capital of the newcomers may play a critical role in non-metro communities.

Data

The main source of data used in this research is the national 2000 census survey, which is conducted decennially. It is a very exhaustive data bank containing myriad

variables and many participants, which makes it suitable for statistical analysis. A very exciting feature of this database is that it has recently made available (as of April 2003) the Public Use Microdata both at 5 and 1 percent sample (PUMS⁷). The driving force behind the choice of PUMS is that it lets us gain access to the raw survey data exposing individual housing units' and persons' responses after they have been edited for confidentiality. These files hold the responses to the questionnaire as the respondents themselves answered. All the data is strictly based on the long form questionnaire. The advantage that PUMS holds over summary files Tables provided by the census bureau is that it allows for the creation of custom summary Tables and measures that are not usually found on the Summary Files. The 1 percent PUMS file chooses 1 in a 100 persons in the population whereas the 5 percent file chooses 1 in 20 persons in the population (for the household file, households are chosen instead of persons). In order to estimate the total population from the PUMS database, the frequencies are multiplied by the weight field which is embedded in the file.

This study will be using the 5 percent sample *persons* file of the PUMS with their respective weights. Therefore, the numbers reported in the study will represent the estimated total Latino population residing in the study area and not the number of persons in the sample. This data will be complemented by the Department of Elementary and Secondary Education (DESE) data, which spans from 1990 up to 2004, to examine the patterns of Latino educational attainment in non-metro Missouri. A third source of data is the racial profiling data obtained from the Assistant Attorney General's website. The website provides data on the number of traffic stops and what number of these stops

⁷ For detailed information about Public Use Microdata Sample files please see the OSEDA website at: <http://mcde2.missouri.edu/pub/data/pums2000/Readme.html>

resulted in searches, and/or arrests by race and counties. However, in the case of Latinos the data is not broken down into different groups or origin (e.g. Mexicans, Cubans, etc.), therefore is not possible to find specific degrees of racial profiling related to these different groups, only to Latinos as a group.

The PUMS and racial profiling database were merged (combined) through the use of a specially created crosswalk file. The crosswalk file consists of county codes (DESE), PUMA designations (PUMS) and the respective county names (for the racial profiling). The DESE database was not merged with the other two due to the overlapping character of PUMS codes. The racial profiling data collected was merged with the selected part of the PUMS extracted from the master file using the crosswalk file. This was possible because the racial profiling data used was the average and the “worse case scenario”, therefore the overlapping⁸ of county codes was not much of an issue.

The main focus of the study is on the labor market and subsequent generation of capital. Therefore, unless indicated, all results will be based on persons that were at least 16 years or above at the time that the data was collected by the Census Bureau.

Limitations

As useful the PUMS database is, it does not apply for small geographic areas, because of the lack of detailed geography. Because we are using a sample, there is some measurement and estimation error that is introduced when extrapolating to the total population. Additionally, while it allows for analysis at the individual level, it does not allow for an identification of clear cut patterns and segregation of the effects of specific variables along county lines.

⁸ There are some PUMS codes that do include more than one county. Therefore, some of them were bound to clash with one another.

Again, one very important factor is that the official character of the census scares away those Latinos that are not properly documented. Therefore, it is almost expected that Latinos in this situation would not fill out the questionnaire, leading to the undercounting of that segment of the population. This fact might make the findings of this study at best conservative.

Empirical Framework

Procedures

At the onset, the study carries out correlations and frequencies analysis, in order to provide an initial demographic profile of Latinos in rural Missouri. A probit regression analysis is subsequently performed with the purpose of determining the representativeness and a probability of a Latino to be present in either the labor market or in the academic arena given a specific set of human capital and other selected observable characteristics. And finally a semi-log wage equation is estimated in order to “see” the effect that human capital and selected societal factors have on the Latinos’ ability to generate income. The equations used and their respective variables as well as the rationale for the selection of the variables included are specified below.

Empirical analysis

Through the literature review, it was established that the largest single contributor to the global earnings for Latino immigrants is their salary/wage. Therefore, it is logical to use this variable as a proxy for earnings. Empirically, the typical ordinary least squares earnings equation estimated in the literature is in the non-linear form. The dependent variable is normally transformed to a linear logarithm because of the skewed

distribution of earnings. The relationship of wages and explanatory variables is specified below (Hayashi, 2000):

$$W_{ij} = \exp(\beta_j S_j) \exp(\delta' \mathbf{h}) \exp(\varepsilon_{ij}) \quad i = 1 \dots n \quad (1)$$

By taking linear logarithms on both sides of the equation we obtain the equation in (2) below, which is said to be in the semi-log. The nonconstant regressors (S and \mathbf{h}) are not in log form because it has been established in the labor economics literature that in large cross-section data, the relationship between these variables and wage is linear (Card, 1995). Therefore, earnings and its determinants will be in the form given by:

$$\ln W_{ij} = \beta_j S_j + \delta' \mathbf{h}_j + \varepsilon_{ij} \quad i = 1 \dots n \quad (2)$$

Where $\ln W$ is the natural logarithm of the wage rate for the individual i in group j , where j consists of 2 different groups: US and foreign born Latinos. β is a vector of coefficients to be estimated, S_i is a matrix of human capital and \mathbf{h} represents the vector observable demographic characteristics and institutional environment influencing the wage rate of individual i , δ is the associated vector of coefficients, and ε is the unobservable error term with zero mean and variance σ^2 . The model will be estimated using the data from PUMS 5% described supra. The equation is said to be in semi-log form because only the dependent variable is in log form. The rationale for the selection of the variables used in the model is given below and a summary of the variables is given in the Table 1.

The coefficients have the interpretation of percent changes, not changes in absolute levels, e.g., a value of 0.09 for β_1 implies that an additional year of education has the effect of raising the wage by 9 percent. The difference in interpretation comes about

because the dependent variable is the logarithm wage rate, not the wage rate itself, and the change in logs equals the percent change in levels.

However, given that the study aims at assessing the impact of the Latino population, it is important to know the representativeness of the selected sample among the universe of Latinos in non-metro Missouri. Heckman (1979) has postulated a two stage binary probit approach, whereby if a person is in the wage sample is given a value of 1 and 0 if otherwise. For instance, an individual could choose to participate in the labor market or to be a full-time/part-time student. Thus, the probability that an individual i , participates in the wage sample is represented by:

$$P_i = F(\alpha + \gamma \mathbf{S}_i) = F(Z_i) \quad (3)$$

Where \mathbf{F} is a cumulative probability function and \mathbf{S} is a vector of individual characteristics and is stochastic; and γ represents the vector of unknown coefficients. In this case an assumption is made that Z_i is a theoretical index determined by explanatory variables represented by \mathbf{S} vector. The index Z_i is assumed to be continuous and normally distributed in order to satisfy the Best Linear Unbiased Estimator (BLUE) requirements. Therefore, the index will be written as:

$$Z = \alpha + \gamma \mathbf{S}_i \quad (4)$$

Therefore, the probit specification thus established can be interpreted as an estimate of the conditional probability that an individual will participate in the wage sample, as long as that individual possesses the set of characteristics specified in the vector \mathbf{S} .

If we take the expected values of equation (4) above conditional on wage rate, we will get the following specification:

$$\ln W_i = (W_i | \mathbf{S}_i, W_i > 0) = \beta' \mathbf{S} + E(\varepsilon_i | W_i > 0) \quad (5)$$

Where \mathbf{S} is the vector of human capital and demographic characteristics needed to derive the semi-log model specified in (2) above.

This study, as specified above, included only those Latinos that have been working up to the time that the census survey was done and reported information on *all explanatory variables*. The technical specifications of the statistical software used does not allow for an inclusion of respondents with some missing values to be included in the calculations. Students working part-time were excluded from the study given that they might introduce distortions in the study's results because they choose jobs based on convenience and not necessarily based on the full human potential (Reimers, 1985).

The variables included in the model, which are in turn represented by vector \mathbf{S}_i , are defined using human capital theory (Willis, 1986 cited in Rivera-Batiz, 1991). The theory suggests that human capital can be used to explain individual's skills, which can subsequently be used as a proxy for determining productivity and thus labor market earnings. Individual skills can be acquired through a myriad of activities that include: formal schooling, vocational and onsite training programs, all of which are measured in years.

Educational attainment will be measured in years of schooling that each individual has accumulated over time, which will be obtained directly from the 2000 Census.

Another important skill is **English proficiency**, which could enable a given individual to navigate in the society and understand the particulars of his/her job. Therefore, English proficiency is likely to have an influence on the productivity of the Latino immigrant and, consequentially, on earnings. The census survey has asked two questions related to the ability to speak English: one that asks the individual to directly rate his/her level of English ability and the other question asks if they speak English at their home. For this study, and for the sake of degrees of freedom, only the first question will be used to represent the level of English ability by the Latino.

Special skills and some vocational training cannot be measured solely by using years of academic training, therefore a measure reflecting *potential work experience* should be introduced, which would reflect those skills learned outside the formal academic arena. For this variable, it will be assumed that the years that a person spent working in an industry would have enabled the acquisition of some specific set of professional knowledge about that industry. The variable will be measured by age of the person minus preschool years (5) and school years (reflected in educational attainment). In order to eliminate those without any industrial experience from the sample, this variable will be defined only for those that have indicated that they have been working in the past 10 years.

Mobility is another important variable to be included in the study. This comes in because one of the indirect objectives of the study is to gauge how newcomers are faring as compared to those that have been in the area for a longer period. Therefore, by introducing this variable it is being assumed that newcomers have fewer connections and lower knowledge of the area that will enable them to get better paying jobs and settle in

the community without many problems (compared to those who have been in the area longer). The 2000 Census contains a variable that identifies Latinos who have moved into the area in the previous 5 years as opposed to those that have not moved, which allows for the possibility to capture the effect of immigration of Latinos on earnings in these areas of study.

Latinos have been identified in the literature as being more likely to be found doing highly unskilled jobs that are physically demanding and also are a very young group. Thus, from the type of work they do, it would be expected that diminishing wage returns to age will set in as they get older. Therefore, there is need to factor **age** as another important variable in the analysis. The main assumption being made here is that the Latino is healthy enough to participate in the labor force. The variable will be obtained from the Census data, which records respondent age directly.

Gender is another variable that has important bearing on the ability of Latinos to generate income in non-metro Missouri and is closely related to the type of work that Latinos do; the recruiting process, the immigration rigor, and the age group. These mentioned characteristics will tend to favor males. Gender will be captured through the sex variable of the respondent, which has been recorded directly in the 2000 Census.

Racial profiling data will be used as a proxy for the law in non-metro Missouri. The specific data extracted from the database is the average '**disparity index**' of each county specified in the area of interest. These averages were merged with the main census database by matching the major areas using county level indicators. However, given the high importance of this variable, two variants are used in the analysis: the "worse case" scenario and the "normal" level. For the worse case scenario, the highest

level of disparity index reported in each major area will be used instead of an average level. The Assistant Attorney General keeps a database that is available to the public, which reports the racial profiling activity in the whole of Missouri. The database basically reports on the number of traffic stops, searches and arrests made to a specific race/ethnic group; “disparity index” relates to the ration of stops made to a member of a specific ethnic group over the total number of that ethnic group living in the same area. The rationale for the inclusion of disparity index into the analysis is given by the societal reality in non-metro Missouri, which is very different to that of the urban areas. The industries that immigrants normally work in, by their very nature, are located mostly on the peripheries of these towns – separated from the living areas. Furthermore, public transportation in these areas is almost non-existent. Thus, the ability to be mobile, e.g., having a car is very important. However, the ability to be mobile can be severely constrained if the law is not very favorable to some type of citizens. So, racial profiling basically indicates the degree of over-representation or under-representation bias that the law enforcement have over a given race/ethnic group, which can severely hinder (or foster, in case of under representation) their ability to move around and thus generate income or stay in a given place.

Finally, **nativity** makes a difference (US born vs. foreign born) and is a very important factor for Latinos that are moving into non-metro areas of Missouri. Research has shown that those Latinos born in the US have different perceptions about their future, education and the choice of jobs (see Valdéz, 1996; Roderick, 2000). The rights and privileges that accrue to each are different, i.e., citizens’ rights far outweigh those of the foreign born. The objective here will be to run two separate regression analyses, one for

US born, and another one for foreign born Latinos in order to capture the variability brought about by the difference in nativity⁹. The nativity variable will be extracted directly from the 2000 Census.

Therefore, the wage rate (thus earnings) will be a function of educational attainment, English language proficiency, work experience, age, mobility, racial profiling, and nativity. A point to be made is that individual or household wage level is being used as the indicator of earnings because an overwhelming majority of Latino immigrants have indicated that they do not make much use of other sources of income generating activities besides their own work or other insurance mechanisms (Census, 2000; Wirth, 2001; Vazquez-Case & Campbell, 2002).

The variables that were specified above are those considered to influence the wage rate of Latinos in rural Missouri and empirically should be given by:

$$\ln W_i = \alpha + \beta_1 E_i + \beta_2 E_{-1}_i + \beta_3 E_{-2}_i + \beta_4 W_i + \beta_5 M_i + \beta_6 A_i + \beta_7 RP_i + \beta_8 G_i + \varepsilon_i \quad (6)$$

Where $\ln W$ in the linear logarithm wage rate, E is the educational attainment of individual i measured in years of schooling. E_{-1} and E_{-2} are binary variables representing English language proficiency of individual i . If an individual speaks very well or well English E_{-1} is 1 and 0 otherwise and if an individual does not speak English well E_{-2} is given 1 and 0 otherwise; and both variables are 0 if an individual does not speak English at all. W is the *potential* work experience of individual i that was calculated as explained above (i.e., age minus academic schooling and preschool years). M represents the mobility variable for individual i , which is 1 if moved to the county in the past 5 years and 0 otherwise. A represents age of individual i . RP is a variable

⁹ For more see the above discussion on the research done on the nativity difference.

representing racial profiling for county i . G is a binary variable representing gender, which is 1 if male and 0 otherwise. ε is the stochastic term that reflects unknown influences on the wage rate for individual i . α is the unknown intercept and β s are unknown coefficients that are common to the Latinos community in the rural areas.

Table 1 Definition of Variables Used in the Maximum Likelihood Probit and Semi-Log Analyses.

Variable	Description
Age	= Age in years
E_1	= English ability (1 if speaks English very well or well and 0 otherwise)
E_2	= English ability (1 if speaks English not well and 0 otherwise)
Ed_Att	= Highest level of educational attainment in years
Gender	= 1 if female and 0 otherwise
Ed_X_Eng_1	= Interaction effect of educational attainment and good English ability
Ed_X_Eng_2	= Interaction effect of educational attainment and poor English ability
NPF	= Number of Persons in the Family
Rac_Prfl	= Racial Profiling (disparity index - the level of over or under representation in traffic stops)
Wrk_Exp	= Potential Work Experience
Mov	= Mobility

Hypotheses

Human Capital

The literature states that skills of individuals determine their productivity and thus their labor market earnings (Batiz-Rivera, 1991). Roderick (2000), observed that, generally, present low parental education, low family income and low command of English language by the family helps explain much of the Latinos' low school performance, which later becomes a problem for the adults in the job market. Therefore, parental status related to these three main categories (education, English ability and work experience) is more likely to affect the future economic success of their children, i.e., if they are all low then it will affect the future negatively and vice-versa. This is stated because bad economic performance will affect the type of education that they will give to

their children due to the limited (or abundant) resource endowment, past experience and recursive interrelation that these factors have to each other. Therefore, identifying the factors that affect economic performance and gauging the percent increase to income is very important. Therefore, one would expect educational attainment and English ability to have a positive effect on Latinos earning ability.

Secondly, there is a need to include work experience as a variable that might possibly affect Latinos income generating capacity. For instance, there is anecdotal evidence that some Latinos working in Missouri's poultry industry were recruited directly from outside Missouri and/or their home country provided that they had been working before in their home country's *haciendas*. Even though some of them were not doing the same type of work, it signals their willingness to carry out menial labor (Bowe, 2003). These Latinos would have been hired on the basis of their willingness and ability to work rather than on some measure of literacy. Therefore, I would expect that the higher the *potential*¹⁰ work experience the higher the earning ability of a given Latino in non-metro Missouri.

The literature identifies Latinos mostly with menial jobs in service and agricultural industries and portrays the Latino as a very young ethnic group (Rosenbloom, 2003; Bowe, 2003; Hurst & Cheswick, 2000). The high turnover rate and physical requirements of these jobs and the characteristics of the Latino population would lead us to expect that age will have negative returns after a certain period. And naturally, capital accumulation (especially social, human and financial) also has an effect of

¹⁰ work experience is deemed potential because it might be the case that a given individual has not worked all the years that he/she has been outside school – therefore there might be some overestimation error on this variable.

improving the ability of individuals to make choices about the type of jobs to be involved with.

Gender will definitely affect the income generating ability of Latinos in non-metro Missouri. It should be considered that immigration has tough psychological effects and, given that most immigrants do not know the area, this requires the movement of one person first, usually the male. Another fact to consider is that the types of job that most immigrants initially get in the agricultural industry are more likely to be accepted by males due to their grueling routines. Finally, there is the possibility that some immigrants are directly recruited from their home countries, which is likely to favor males due to local cultural capital. Therefore, I would expect the labor market in non-metro Missouri be biased towards male Latinos rather than females.

Mobility, Nativity and the Law

In addition to the above human capital variables specified, I intend to look at the effect of mobility, nativity and the law on the income generating ability of Latinos in non-metro Missouri.

Studies on Latinos' income generation have proven that urban residents have slight advantage in getting jobs and thus earnings as compared to those residing in rural areas (Tienda, 1985; Borjas, 1983). Further, Slack & Jensen's (2002) study on minorities in non-metropolitan US showed that minorities are positively associated with underemployment. Therefore, it is important to capture the effect of urban to rural movement on Latinos' income. The mobility (movement, immigration) variable will be created by controlling for those that have immigrated in the past five years. This will provide the basis to determine the effect of mobility the income generating opportunity of

Latinos in non-metro Missouri. It is expected that the constant movement of Latinos will have a negative effect on income because they are not moving as a result of work contracts but to look for work, thus they are more likely to start at a lower level and have lower earnings.

The majority of Latinos moving to non-metro Missouri areas bring along their cultural capital, which is very different from that of local citizens. Their perception of the law is not the same as an American might have. For instance, a foreign born Latino might not know that he/she has the right to decline a search request to his/her car by the police. Additionally, Latinos might have a perception that the police are there to make their life miserable as opposed to protect them. Lately, many counties have stepped up their requirements for obtaining legal documents such as driver's license. The combination of these factors would severely limit Latinos' mobility and thus Latinos' ability to get to their place of work and thus generate income. Disparity Index will be used as a proxy for the law enforcement in non-metro Missouri.

Summarizing, the hypotheses of this study are:

- Educational level and English proficiency have positive impacts on the income generation;
- Work experience has a positive impact on income generating ability;
- Mobility and age have negative impact on income generating ability;
- Males have a better opportunity in employment in non-metro Missouri than females; and
- Context of reception has a negative effect on income generating ability.

The proxy variable is racial profiling.

The study will carry out separate regressions for US born and foreign born Latinos. Much of individual's human capital is country specific and, as the social science literature contends, foreign born Latinos tend to be disadvantaged because their cultural and social capital does not readily fit in the US labor market (Bean & Tienda, 1988). An additional rationale for this separation comes from both the supply and demand side of the labor market. In the supply side, the economic integration of many non-Latino groups in the US has been influenced by their places of origin (Gordon, 1964). Furthermore, Reimers (1985) suggested that within the Latino population there are significant differences which have some bearings on their success in the labor market. For instance, Valdes (1996) argued that Latinos' perception towards the future and the means to achieve their objectives varied by nativity: foreign born were more driven to work, less selective on the type of work, and their benchmark of success was much lower as compared to US born Latinos. On the demand side, Roberts (1995) argued that foreign born Latinos are viewed by their employers as temporal workers therefore not worthy of positions with a high degree of responsibility. On the other side, Rosenbloom (2001) argued that most employers tend to prefer foreign born Latinos over US born for their low skilled work given that they work hard for the same or even lower pay. Therefore, it is expected that the majority of these variables will behave differently for US and foreign born Latinos. The discrepancy will not be correctly captured if we introduce the nativity variable only as a dummy identifier.

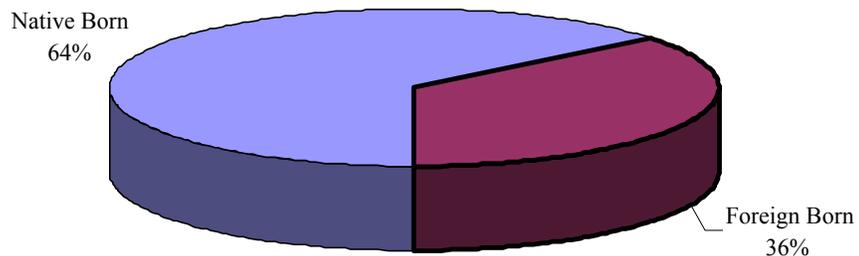
CHAPTER IV
LATINO DEMOGRAPHIC PROFILE

Descriptive statistics

This chapter presents Latinos' basic profile in non-metro Missouri as well as characteristics that are relevant for the labor market.

Figure 2 below shows the distribution of Latinos in non-metro Missouri by nativity in 2000. Contrary to many expectations, the majority of Latinos present in non-metro Missouri are actually US born and only a third of them are foreign born. However, it should be noted that the data represented in figure 2 may be subject to a selection bias since undocumented workers are underrepresented in the census. Also, some foreign born Latinos may have infants born in US, who are classified as native born.

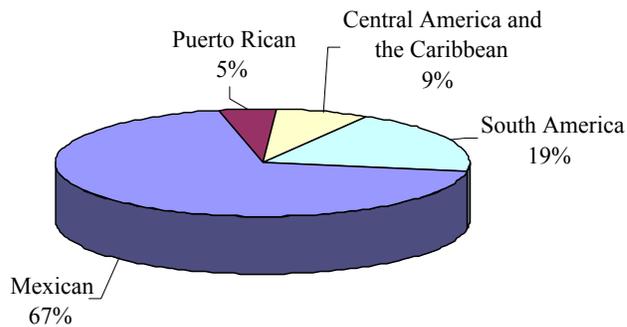
Figure 2 Distribution of Latinos by Nativity in Non-Metro Missouri in 2000



Source: 2000 Census PUMS 5% person file

The Latino population in non-metro Missouri has had a phenomenal increase in the past decade with, as might be expected, Mexicans being the dominant country of origin of immigrants. Figure 3 depicts the overwhelming presence of Mexicans in non-metro Missouri as compared to other South¹¹ and Central American countries.

Figure 3 Composition of the Latino Community in Non-Metro Missouri by Country of Origin in 2000



Source: 2000 Census PUMS 5% persons file.

Table 2. Latinos 16 Years and Above in Non-metro Missouri by the Place of Birth in 2000

Origin	US born	Foreign Born	Total	US born	Foreign Born
Mexican	22272	16016	38288	58%	42%
Puerto Rican	2491	98	2589	96%	4%
Cuban	548	1140	1688	32%	68%
Dominican	47	214	261	18%	82%
Guatemalan	36	834	870	4%	96%
Honduran	11	739	750	1%	99%
Salvadoran	78	1125	1203	6%	94%
Other Central American	113	528	641	18%	82%
Colombian	200	446	646	31%	69%
Argentinean	52	95	147	35%	65%
Other South American	82	298	380	22%	78%
Spaniard	167	66	233	72%	28%
Other Spanish or Latino	8018	1759	9777	82%	18%
Total	34115	23358	57473	59%	41%

Source: 2000 Census, Public Use Microdata Sample 5% (PUMS).

The numbers and percentages presented in the table above and those hereafter are not sample estimates but total values based on the use of the weighting variable categorized in the PUMS database.

¹¹ The South American Group includes also those Latinos/Hispanics that have identified themselves as “Other”.

Table 1 breaks down the statistics of Latinos in non-metro Missouri by major countries of origin and nativity.

This is done in order to have a clearer picture of the Latino presence in non-metro Missouri. Mexican dominance comes out clearly with 67 percent, which is more than all other countries combined.

The US born Latinos, due to large number of Latinos of Mexican origin, make up 59 percent of the total. Here the category “Other Central or South American” includes those countries located in these areas as well as the Caribbean that speak Spanish but have few representatives, which makes it impractical to give them their own group listing. In order to avoid the technicalities of citizenship dynamics, persons born in Puerto Rico are considered Latinos due to the common linguistic bond that they share with the rest of the Latin American countries; additionally they have livelihoods similar to those of foreign born Latino immigrants rather than otherwise (Cardenas, 1988).

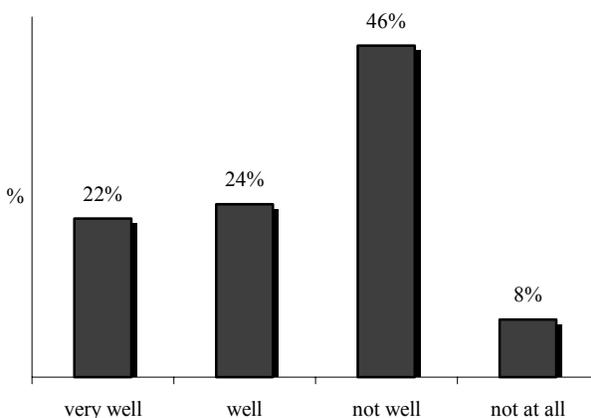
Human Capital

English Ability

Even though there are heated debates about the bilingual case, English is still the main language used in this society and many authors (Cafferty, 2000; Roderick, 2000; Zavella, 1997; Tatalovich, 1997; Cárdenas, 1988) have stated that English proficiency has a direct influence on an immigrant’s success in the educational field and thus indirectly influencing their success in the labor market. Figure 4 below shows the frequencies of Latinos’ English ability in non-metro Missouri discriminated in five subgroups for the combination of foreign and US born Latinos. It can be seen that a little bit over 50 percent of Latinos in Missouri do not have a good English ability. Even

though a degree of variability within the Latino population is thus masked, it nevertheless provides an indication of the patterns of English ability among Latinos in non-metro Missouri.

Figure 4 English Ability Among Latinos in Non-Metro Missouri in 2000



Source: 2000 population census, Public Use Microdata Sample 5%.
 Note: Graph data does not sum to 100 due to rounding effect.

Table 3 below provides Latinos' level of English proficiency discriminated by origin and for income earning persons, i.e., 16 years and above. The data shows some level of variation in the English ability across groups; however a simple analysis of variance carried out revealed that there is a significant difference only between Mexicans and Other Spanish or Latino groups; and that there is no significant difference between very well and well levels of English proficiency.

Table 3. English Ability Among Latinos by Place of Birth in Non-metro Missouri, in 2000

Origin	Very Well	Well	Not very well	Not at All
Mexican	28%	20%	43%	8%
Puerto Rican	23%	24%	41%	10%
Cuban	21%	25%	48%	6%
Other South American	20%	25%	46%	9%
Other Spanish or Latino	18%	23%	51%	8%

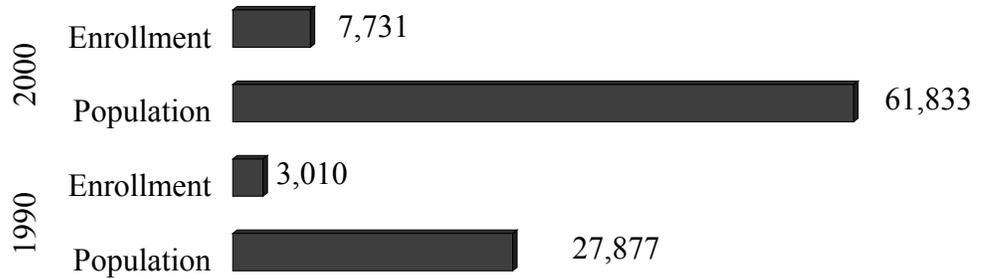
Source: 2000 Census, Public Use Microdata Sample 5% (PUMS).
 Note: data presented in the Table does not include Kansas City and St. Louis areas.

The Table above does not show clear-cut pattern on the trends of English ability among countries. However, Central American and the cluster of other Spanish or Latinos countries have slightly lower levels of English proficiency. Mexicans have the highest average percent of good English ability with 48 percent as compared to Puerto Ricans with 47 percent, and Cubans with 45 percent. These findings are not consistent with other studies carried out elsewhere, whereby Mexicans are on the lowest side and Cubans and Puerto Ricans are on the highest side (Chiswick & Hurst, 2000). One of the main reasons might be that Mexicans are among the youngest groups in the region thus having a high probability to learn English as compared to other groups. On the other hand, the type of work that most Central and South American Latinos have (see Table 4 below) and how they gain access to this type of work and the skill level does not require great command of the English language.

Educational Level

Educational level has been identified as one of the most important factors influencing the level of success and wellbeing for any group in the US and more so for Latinos. Given that education is a “future capital investment” and the census data is collected decennially, it is well worth looking at the change in population as it correlates to enrollment levels. The reason behind this exercise is that some of the persons counted as being in school in the period of 1990-2000 might now be in the labor market. The correlation of population and school enrollment increase in the interval of 1990-2000 is presented in the figure 5 below. The correlation shows an increase of 2 percent in the enrollment of Latinos (11 percent of the Latino population was enrolled in 1990 as compared to 13 percent in 2000).

Figure 5 1990-2000 Population and Enrollment in Non-Metro Missouri



Source: 2000 census, Public Use Microdata Sample 5% and DESE database.
 Note: The graph does not include Latinos from Kansas City and St. Louis.

The increase in the percentage of Latinos enrolled in schools might reflect two things: the proportionate increase in the Latino population (e.g. extended family, children) and the importance that this group is currently attaching to education.

Table 4 Latinos' Educational Attainment in Non-metro Missouri by Place of Birth, in percent (15 years and above)

Origin	8 grade and below	8 grade to high school	College	Advanced degree
Mexican				
Native	14	51	32	2
Foreign	47	38	13	2
Puerto Rican				
Native	8	41	46	5
Foreign	-	40	60	-
Cuban				
Native	7	30	44	19
Foreign	30	43	20	8
Other South American				
Native	-	-	67	33
Foreign	13	13	69	6
Other Spanish or Latino				
Native	14	47	36	3
Foreign	29	36	27	7

The dash represents unreported categories or the specific Latino group was unrepresented in that particular area.

Source: 2000 Census, Public Use Microdata Sample 5%.

Table 4 above provides the average level of education for Latinos in Missouri discriminated by origin and limited to the income earning population of 16 years and above. The pattern presented in the Table above shows that for US born Latinos around 58 percent have at least some years of college education and for foreign born Latinos, less than half (43%) have college education.

Intuitively, it is somehow difficult to conjecture the reason why a person with low levels of schooling will immigrate to a society that apparently relies heavily on high levels of schooling for success. But after considering some anecdotal evidence, the difficulty in understanding this issue dissipates and it becomes clearer why and how, at least in principle, this happens. For instance Beacon (2003) provides this illustration about Villatoro, a Guatemalan working for Evergreen Forestry Services as a headhunter:

" He began working ... for Evergreen Forestry Services, a large labor contractor ... planting trees ... In 1996 immigration reform created a new visa category -- H2-B -- that companies could use to bring seasonal workers to the United States for jobs. Evergreen and Villatoro made a deal. "When the company saw that Guatemalans work hard, they gave us an increase in the number of visas," he explains. "The next year we took 10 people and 15 the next. Forty-five traveled in the group last year. This year [2003] we are up to 70." (p.1)

The above exposition is just an illustration of how some Latinos get access to their jobs in the US. The majority of immigrants that access these "opportunities" are those that have enough resources to pay their way out (Beacon, 2003). However, some recruiters do not go that far and do not even use visas – they just circle in metropolitan areas that have a high concentration of Latino immigrants and convince them to join these companies. The latter proposition comes to an unemployed Latino as a better alternative than no income at all (Beacon, 2003).

Industrial Distribution

Another very important dimension that could be used to understand the sources of wellbeing of the Latino community and its success in the labor market is their distribution according to different industries. As Milton and Jensen (2001) argued, industry categories are related, but not limited, to skill levels. For instance, in the service industry it is possible to have hotel room service providers as well as university professors; in the agricultural sector there are tree trimmers as well as highly trained plant breeder specialists.

The 2000 Census shows that the service and agricultural sectors have been the two most important job providers to Latinos in non-metro Missouri. On the other hand, the data shows that comparatively, foreign born Latinos are more likely to be in agriculture than the US born. By comparison, US born Latinos are more likely to be represented in the service industry and not very much in the agricultural sector. This outcome may be unsurprising given that most immigrants have as a prime priority the acquisition of a job as soon as possible. Table 5 below shows the distribution of Latinos in different industries in non-metro Missouri. Compared to the rest of the US, Missouri presents some similarities and differences. For instance, in relation to the leading industry in employment of Latinos there are similarities – the service¹² industry employs 40 percent of Latinos nationwide (Chiswick & Hurst, 2000), and in non-metro Missouri it employs nearly half of the Latino population (48 percent). However, for the second and third leading industries in the US there are differences. In the US, the manufacturing sector with 21 percent, and the construction industry with 13.2 percent come second and

¹² The service industry includes trade, wholesale and retail jobs.

third respectively. In the case of Missouri, agriculture with 16 percent and manufacturing with 13 percent come second and third respectively. Mexicans and Central Americans are the major contributors of manpower in the agricultural industry with 26.4 and 23 percent respectively.

As expected, in the public administration sector there is low representation of the Latino population; and in this area there is similarity with the US trends. A major hindering factor is that most jobs in the public sector demand citizenship and good English proficiency.

Table 5 Latinos' Industrial Distribution in Non-Metro Missouri by Place of Birth in 2000 (in percent)

Origin	Agric. ^d	Services ^a	Health services	Public ^b Admin.	Constr.. ^c	Manufac
Mexican						
US born	25	47	4	4	6	13
Foreign Born	28	43	1	1	7	20
Puerto Rican						
US born	8	51	7	9	16	8
Foreign Born	8	42	4	15	10	20
Cuban						
US born	3	56	5	15	15	5
Foreign Born	2	45	4	15	20	13
Other Spanish or Latino						
US born	20	53	6	3	8	10
Foreign Born	26	47	5	1	6	14

Source: 2000 Census, Public Use Microdata Sample 5% and Summary File 3 (SF3).

Note: Rows' percent do not sum up to 100 due to rounding effect.

^a Service includes: transportation, communications, utilities, retail and wholesale trade, finance, insurance, education.

^b Public Administration includes civilian and the military.

^c Construction includes mining.

^d Agriculture includes extension services, landscaping, meatpacking, forestry and fishing. .

Even though Cubans have higher educational levels as compared with the rest of Latino groups, they also have special provisions that allow them to be properly documented in the US. If we remove Boone and Cole counties the service sector drops behind agriculture and manufacture for non-Hispanics, Mexicans, and other Latinos.

Occupational distribution

Occupational distribution is perhaps as important as the industrial distribution of Latinos. Occupational distribution shows the position that Latinos occupy in whatever industry they happen to be employed. The occupational distribution, more than anything else, dictates how much a person could earn throughout the year. Presumably, this category, more than the others, relies heavily on legal status, mobility, educational level and English ability. For ease of representation, the occupational distribution was grouped three main skill classes: low (laborer, and operative professions); medium (clerical, trades people and expertise); and high (executives, professional and managers). In order to capture the nativity effect Latinos are separated by origin.

Table 6. Skill Levels Distribution of Major Latino Groups and Non-Hispanics in Non-Metro Missouri in 2000

Origin	High Skill	Medium Skill	Low Skill
Non-Hispanic			
US born	56%	20%	24%
Foreign Born	14%	9%	77%
Mexican			
US born	22%	9%	69%
Foreign Born	13%	7%	80%
Puerto Rican			
US born	42%	13%	45%
Foreign Born	37%	4%	59%
Cuban			
US born	49%	15%	36%
Foreign Born	37%	10%	53%
Other Hispanics			
US born	28%	6%	66%
Foreign Born	8%	3%	89%

Structural organization adapted from Chiswick and Hurst (2000), data source is from 2000 Census, Public Use Microdata Sample 5%.

Note: Columns do not add up to 100 percent due to rounding effect.

US born Latinos tend to be mostly in medium and high skilled jobs as compared to foreign born Latinos that are mostly in low skilled jobs.

It can be seen that Cubans and Puerto Ricans have the highest percentage in the high skill class with an average of 38 and 30 percent respectively; on the other end of the spectrum are the Mexicans who have the highest average percentage of people in the low skill class with almost 58 percent. The relative success of Puerto Ricans and especially Cubans in the labor market can be partly attributed to their higher educational level, and their strong informal support base (Cheswick & Hurst, 2000).

On the other hand, as was emphasized before, Cubans, until recently, had a certain comparative advantage in relation to the rest of Latino immigrants due to the preferential treatment that they received. Another reason for the Cuban relative advantage in the industrial distribution that might be very important but controversial has to do with the hiring of undocumented immigrants through the use specific agents. For instance, Rosenbloom (2003) provides a quote from a former Tyson employee saying that:

“Anchondo-Rascon may not have been the only employee recruiting illegal aliens. During the late 1990s, buses occasionally transported as many as 200 Hispanics from Texas to a plant in Sedalia, Mo., according to Kelly Englert, a former nurse at the facility.” (p.1)

Income Distribution

When it comes to total earnings it makes a great deal of difference if we are considering permanent jobs or temporary ones. An assumption was made that those Latinos that did not move from their previous residence must have had some sort of long-term or stable work contracts.

The Table 7 shows the average total personal income of Latinos by mobility and their origin in non-metro Missouri.

At first sight, it can be seen that those who did not move had almost consistently higher income earnings as compared to those who did move; even though most of them earned lower than the state average of \$27,000.

Table 7. Average Earnings of Major Latino Groups in Non-Metro Missouri in 2000 by Place of Birth and Mobility

	Origin	Never moved	Moved in the past 5 years
Mexican	US Born	\$19,066	\$17,187
	Foreign Born	\$15,959	\$11,787
Puerto Rican	US Born	\$22,564	\$17,371
	Foreign Born	\$18,443	\$15,673
Cuban	US Born	\$17,376	\$18,407
	Foreign Born	\$16,285	\$26,235
Other South American	US Born	\$31,610	\$24,800
	Foreign Born	\$13,417	\$23,418
Other Spanish or Latino	US Born	\$26,002	\$17,107
	Foreign Born	\$19,448	\$19,448

Source: 2000 Census, Public Use Microdata Sample 5%.

Therefore, an argument could be put forward that mobility has a negative effect on Latinos' earning ability. However, personal earnings actually lend themselves to empirical testing. So, this variable was included in the regression model specified and the results and discussion on this variable are reported in the next chapter.

Housing Distribution

Another very important dimension of vulnerability is related to housing ownership and the types of houses that Latinos occupy. From the data presented in Table 8 below, we can easily see that only 9.8 percent actually own their houses. For the rest, 42.1 percent do not own the houses that they live in (still paying mortgage); and 39.5 percent are renting. These results provide very important information on the objectives and future plans of Latinos and local residents in these counties.

For instance, some Latinos moving into non-metro Missouri might consider staying in these areas as long as they still have a job and move to some other place if they

get a better offer or lose current job; almost 40 percent of Latinos that are renting their houses fall into this category.

Table 8. Type of House Occupancy by Major Latino Groups in Non-metro Missouri, in 2000

Ethnic Group	Fully Owned	Owned	Rented	Occupied
		w/Mortgage Payment		without Rent Payment
US Born				
Mexican	12.5%	25.5%	59.3%	1.8%
Puerto Rico	0.0%	65.3%	30.6%	4.1%
Cuban	9.9%	59.4%	30.7%	0.0%
Other Hispanics	6.0%	32.1%	58.4%	1.6%
Foreign Born				
Mexican	13.4%	42.7%	35.5%	2.6%
Puerto Rico	4.9%	35.9%	43.1%	2.2%
Cuban	18.4%	35.0%	25.4%	0.0%
Other Hispanics	13.3%	40.9%	32.6%	3.2%

Source: Public Use Microdata Sample, 5% File, 2000 Census.

Note: The Table does not include the unknown category or missing values.

These Latinos might be considered as temporary immigrants, a situation that could limit their ability to exploit the full economic potential that these areas could possibly offer them.

Table 9. Average Rent paid by Major Latino Groups in Non-metro Missouri in 2000

Ethnic Group	US Born	Foreign born
Mexican	\$354.35	\$399.11
Puerto Rico	\$430.00	\$416.92
Cuban	\$327.83	\$434.10
Other Hispanics	\$415.32	\$383.29

Source: Public Use Microdata Sample, 5% File, 2000 Census.

On the other side, as Roberts (1995) points out, those newcomers that have an intention to settle in a specific place are more likely to establish local long term social relationships and economic investments than those who have different intentions – and acquisition of permanent housing, which is being done by 52 percent of Latinos, is one of these intentions. For those Latinos that are renting, the average monthly rent paid, which

does not include utilities, by different ethnic group is depicted in Table 9 above. The average rent for the US born was \$381 and \$408 for the foreign born Latinos for an average of 2 bedroom house. If we consider the yearly incomes of this group and put it in tandem with what they have to spend, the most logical conclusion would be that foreign born Latinos are in a much higher vulnerability position as compared to their US born counterparts.

Public Assistance

The American mentality towards Latino immigrants and their US born counterparts have been negatively affected in recent years by mass-media “stories”. The major news makers usually run stories on how low income Latinos are draining taxpayers’ contributions to social welfare programs such as food stamps, unemployment insurance, hospital emergency services, and social security. In reality, the data collected supports just the opposite: according to the 2000 Census, public assistance to Latinos in rural Missouri averaged \$56 for foreign born and \$76 for the US born. If we compare this amount with the white non-Hispanic who averaged \$206 it can be seen that some discrepancies exist on the information reported. The issue at hand is that undocumented workers are afraid to expose themselves to the network of authorities overseeing these social programs, given that proof of citizenship is required for services to be rendered.

CHAPTER V

EMPIRICAL RESULTS

Two stages of the analysis are presented. First the probability that Latinos possessed a specific set of human capital given that they were working, studying full/part-time, or unemployed was calculated. The probability analysis might raise questions concerning representativeness of the sample and also the impact of Latinos in the community and what could be the possible avenues to address potential problems. Thus, a multinomial probit model was specified in order to test for the probability that a Latino would participate in the labor market or not. In the second stage is a semi-log regression was performed in order to test the hypotheses.

Effects of human capital and demographic factors on the Probability of employment

The multinomial probit model was segregated by nativity, e.g., US born and foreign born Latinos and the results are presented in Table 10 below. The dependent variable considered was participation in the labor market. The dependent variable was constructed from two variables in the census database: Employment Status Recode (ESR) and Grade. The ESR is a straightforward variable that reports the employment status of the Latino at the time the census was done. Grade reports the school grade that a Latino was attending at the time the census was done. The assumption here is that if a Latino reported a grade it means he/she was still at school at that time therefore excluded from

the sample. As shown, the results for US and foreign born immigrants differ in English proficiency and gender variables. Foreign born Latinos show a slightly higher propensity of being in the wage sample (68%) as compared to US born Latinos (54%). The rest of the variables show similar patterns although with different magnitudes between the two groups.

For the US born Latinos educational attainment was significant and increased the probability of being in the wage sample by 14 percent, which is consistent with the literature.

Table 10 Binary Probit Analysis on the Likelihood of Latino Being in the Wage Sample in Non-metro Missouri in 2000

Variables	US Born		Foreign Born	
	Estimate	Std. Error	Estimate	Std. Error
Intercept	0.5381*	0.2302	0.6786*	0.0481
Gender	-0.0022	0.5041	-0.0621*	0.0311
Age	-0.0122*	0.0088	-0.0093*	0.0072
Eng_1	0.0101	0.0633	-0.0176*	0.0188
Eng_2	0.0014	0.0191	0.0189*	0.0319
Ed_Att	0.1399*	0.0183	0.0691*	0.0455
NPF	0.0163*	0.0831	0.0211*	0.0121
Likelihood Ratio	112.95		136.75	
Number of Observations	3086		809	

* Significant at 5 percent level.

Source: 2000 Census, Public Use Microdata 5% Sample (PUMS).

The results presented in the Table 10 were estimated using the individual (person) weight imbedded in the PUMS data file. The relative low number of observations in both groups of Latinos stems from the missing values issues alluded in the methodology section. Basically, the procedure excludes all respondents that do not have values in the whole set of variables included in the estimation.

This result suggest that, all things being equal, an increase in education by 1 year has high probability of increasing the Latino's confidence in participating in the wage sample, which goes as high as 65 percent¹³.

It could be said, therefore, that education is a good indicator that Latinos themselves use in order to participate in the labor market. Age provides an interesting case by being significantly negative. However the significant decrease on the age variable is very low, which accounts for only 1 percent of the probability of not being in the wage sample as they get older. A probable explanation of this effect might be that as Latinos grow older they become less active thereby cutting down on physical activities, which leads to increasingly lower income returns. An alternative explanation is tied to their ability to access extra income sources given their citizenship status, e.g. social security income or other forms of welfare assistance. The level of English ability does not seem to have a big influence for US born Latinos, which is intuitive given that it is almost impossible to find an adult US born Latino that could not speak English. Also their ability to access jobs is mostly defined by their citizenship status rather than anything else. The number of persons in the family, which averages 3, proved to be a significant factor influencing Latinos in being in the wage sample. The revelation about the last variables seems intuitive.

Foreign born results also seem reasonable. Compared with the US born Latinos, foreign born Latinos' the educational attainment, English proficiency, and gender variables are significant. Educational attainment, even though significant for both groups, accounted for only 7 percent of the increase in the probability of a foreign born Latino

¹³ This high percentage includes the intercept, which represents the initial propensity of being in the wage sample.

being in the wage sample. Latino males have a 6 percent higher probability of being in a wage sample as compared to females, which could be tied up with the dynamics of immigration and the highly demanding physical jobs available more than anything else. Age, even though significantly negative, accounts virtually for less than 1 percent in decreasing foreign born Latino's probability of being in the wage sample. English ability is much more of a factor for foreign born Latinos as compared to US born Latinos, which is intuitive. However, the situation here is reversed: those foreign born Latinos that speak English well and very well¹⁴ have almost a 2 percent lower probability of being in the wage sample. This situation could represent the case that they would prefer being in school rather than participating in the labor market given their high English proficiency.

The number of persons in the family increases the probability of a Latino of being in the wage sample by 2 percent. I would suspect that for some foreign born Latinos, who already left some family back home, the decision to participate in the wage sample was what brought them here in the first place. Therefore, the results of these variables may not mean much because the less understood *motivation* effect is not captured in these variables.

Determinants of Hourly Wage for Latinos in Non-metro Missouri

The second part of the study concentrated on determining the effects of human capital and some selected effects¹⁵ on earning ability. Two ordinary least squares models (separated by nativity) with transformed dependent variables in the form of a linear

¹⁴ These two categories of English proficiency were combined because there was no significant statistical difference between them.

¹⁵ Please refer to chapter III for model specification and the description of the variables used.

logarithm were estimated. The means of the variables used in the estimations are given in Table 11.

These differences were expected to provide consistently lower/negative estimates for foreign born Latinos' variables as compared to those of US born Latinos. Results obtained in both the means (Table 11) and regression (Table 12) show that this assumption about foreign and US born Latinos, does not always hold true. From the Table 11 it can be seen that, even though US born Latino variables' means are consistently higher than those of foreign born Latinos, there are some exceptions. US born Latinos have \$9.8 wage rate, which is higher than foreign born who have \$8.6. Average educational attainment is almost 11 years for US born Latinos and 9.3 for foreign born Latinos.

Table 11 Means of Variables Used in the Semi-Log Wage Estimations for Latinos in Non-metro Missouri in 2000

Variables	US Born	Foreign Born
Log Wage	9.8701	8.5701
Age	33	36
Eng_1	0.8549	0.6516
Eng_2	0.1156	0.1842
Ed_Att	10.98	9.32
Gender	0.6341	0.5655
NPF	3	4
Wrk_Exp	17.03	19.89
Ed_X_Eng_1	9.3977	6.6994
Ed_X_Eng_2	1.2901	1.9451
Rac_Prfl	1.65	1.92
Mov	0.4694	0.3041

Source: 2000 Census, Public Use Microdata 5% Sample).

On average the US born Latinos are younger in the labor force than their foreign born counterparts with 33 and 36 years respectively. Around 63 percent of the US born Latinos in the wage sample is female as compared to 56 percent for the foreign born Latinos. The average results of the percentage of US and foreign born Latinos proficient in English is almost intuitive. There is almost 96 percent of US born Latinos with good

English proficiency and 65 percent of foreign born Latinos in the same category. The third category, not reported in the Table, concerning those Latinos who did not speak English at all¹⁶ is larger for foreign born Latinos, averaging almost 17 percent. Average work experience proved to be the area that the assumption laid out above does not hold true. US born Latinos have on average 17 years of work experience whereas foreign born Latinos have on average 19.9 years of work experience. Not surprisingly, on average, foreign born racial profiling variable is 1.92, which is higher than that reported for US born, which is 1.65. And finally, on average, US born Latinos migrate 16 percent more (Mob variable) than the foreign born Latinos who average 30 percent.

The regression results depicted in the Table 12 show that, all things equal, US born Latinos have a higher hourly wage as compared to foreign born Latinos. Both wage rates reported are an improvement from the rates found in previous studies by Reimers (1988) and Rivera-Batiz (1991) with mean hourly wage of \$ 6 and \$7.8 respectively.

Table 12 Results of the Semi-Log Wage Estimations on the Effect of Human Capital and Demographic factors on Latinos in Non-metro Missouri in 2000

Variables	US Born		Foreign Born	
	Estimate	Std. Error	Estimate	Std. Error
Intercept	9.3046*	0.3709	8.0191*	0.6217
Ed_Att	0.0631*	0.0977	0.0371*	0.0165
Eng_1	0.0012	0.4505	-0.0501	0.1249
Eng_2	0.0001	0.0089	0.0452	0.4501
Ed_X_Eng_1	0.1611*	0.0781	0.0911*	0.0114
Ed_X_Eng_2	0.0112	0.0055	0.0502*	0.0291
Age	0.0231	0.1175	0.0406	0.0881
Gender	0.0012	0.0544	-0.0188*	0.0461
Wrk_Exp	0.0921*	0.0442	0.1409*	0.0049
Rac_Pr ¹⁷	-0.0181	0.0033	-0.0116*	0.6278
Mov	0.0211*	0.0187	-0.0497*	0.0072
F		19.5		8.33
R ²		0.28		0.32

* Significant at 5 percent level; Source: 2000 Census, Public Use Microdata 5% Sample.

¹⁶ This category includes all those that did not report their proficiency status.

¹⁷ When modeled for the worse case scenario (the highest values of disparity index) US born = - 0.0188*; Foreign born = - 0.0588*.

As expected, the effect of education on hourly wages was found to be significant and positive. This finding is in agreement with the literature, which has emphatically stated the importance of education for Latinos in the US (Reimers, 1985; 1988; 1991; Borjas & Tienda, 1985; Roderick, 2000). Each additional educational year has the effect of increasing the returns to hourly wage by 6 percent for US born and 4 percent for the foreign born Latinos.

English proficiency however was found not to be significant for either US or foreign born Latinos. Even though this result does not agree with the hypothesis, it nonetheless seems reasonable. Firstly, the marginal contribution of English proficiency in reducing the error sum of squares is comparatively small because educational level could contain much of the same information as English proficiency does. Secondly, the interpretation of independent variables is almost conceptually impossible because it might be difficult in practice to hold English proficiency constant when changing the educational level and vice-versa. Furthermore, there are studies that have found similar results before. For instance, Tienda (1983) found that the influence of English proficiency varies depending on the group being considered; and Garcia (1984) stated that lack of English proficiency has little if any effect on hourly wages of Latinos.

Summarizing, having sufficient grasp of English language might help improve returns to earnings, however, it does not ensure by itself access to high status or higher hourly wages in the US labor market (Tienda & Neidert, 1984). The literature's position on this issue is, at best, not firm on the effects of English proficiency on earnings of Latinos in the US, and from the results of this study, it looks like this issue merits further research. The effect can best be identified if we study selected groups in specific

occupations rather than collapsing them all together. Additionally, the problem with English proficiency might arise because the variable is a self-reported one rather than based on a formal test of some kind. This means the score reported depends on what the respondent perceives his/her level of English proficiency is.

Therefore, an effort was made in order to correct this discrepancy by creating two new variables that could capture the interaction effect of educational attainment and English ability. These two variables were educational attainment and good English proficiency (abbreviated as Ed_att_X_Eng_1), and educational attainment and poor English proficiency (abbreviated as Ed_att_X_Eng_2). The interaction effect of educational attainment and good English proficiency had a significantly large positive effect on Latinos hourly wage for both US (16%) and foreign born (9%). On the other side, the interaction effect of educational attainment and poor English proficiency, as expected, had a lower impact on hourly wages. For the US born even though positive, is not significant and for the foreign born is also less expressive but is significant. However, care should be taken when interpreting the results of these interactions. The existence of an interaction means, the effect of educational attainment on wages depends on the level of English proficiency and vice-versa.

On a positive note, the coefficients of these interactions are positive, which means they reinforce each other or are synergistic. The results mean that an increase in earnings with a unit increase in educational attainment is greater, the higher the level of English proficiency. In summary, Latinos possessing a high school diploma or equivalent gain more from it if he/she speaks English well rather than otherwise. A similar effect occurs if we consider a unit increase in English proficiency instead of educational attainment. A

significant finding of this study is that for foreign born Latinos educational attainment has the effect of boosting earnings for those whose English proficiency is poor. The explanation here might be that US employers have the perception that educational attainment signals other economically productive qualities such as discipline, perseverance, and occupationally specific skills (Bishop, 1989). The proposition is that Latinos who have poor English skills stand a better chance if they increase their educational attainment.

Female is the gender modeled in the regression analysis. For foreign born Latinos, being female has an estimated effect of decreasing hourly wage by 2 percent when compared to men. This is related to the terms of employment, the temporary and permanent, which most Latinos have access to. In the case of the US born Latinos we should take into consideration that the service/retail industry mostly employs women on a temporary basis – this could explain the observed results. These temporary low skilled jobs tend to pay comparatively low hourly wages and are inherently very unstable. Employers may prefer women in the service sector due to the gender roles attached to most of these jobs. For the foreign born Latinos a very important issue arises: almost 56 percent of the group is female and employment discrimination might imply that a majority of the group is vulnerable, making less income. However, this situation has also been documented on different ethnic groups such as non-Hispanics. Nevertheless, in the context of the Hispanic population this might increase their vulnerability due to added negative effects that they are subjected to.

Potential work experience has the greatest impact on hourly wage for both US and foreign born Latinos, with 9 and 14 percent respectively. These results support the

hypothesis stated. This result is somehow comforting and supports the anecdotal evidence that most employers engage scouts to search for those Latinos with work experience wherever they are (Rosenbloom, 2003). However, the importance of potential work experience in boosting Latinos hourly wage rate is also another point of contention and it has not been clearly examined in the literature. Reimers, (1985) for instance claimed that for foreign born Latinos there is no appreciable increase in hourly wage rate observed from potential or previous work experience whereas Tienda (1988) claimed exactly the opposite.

A very important pattern arises if we put into perspective some of the results. US employers, especially those located in non-metro Missouri, are trying to reduce their costs to the lowest level possible. Thus the decision to conveniently locate their operations closer to the source of raw materials (Green & Barham, 2001); erecting basic housing facilities closer to the factory thus eliminating housing and transport allowances (Ziebarth, 2004); and finally there is the issue of industrial and functional training that most employers simply do not want to deal with (Green, 2004). These issues raise questions about discrimination against women, especially for foreign born Latinos. Employers contend that foreign born Latinos have different cultural capital, which makes women less of a stable investment (e.g., training) as compared to men; because women can leave anytime and are not likely to accept working those grueling hours under harsh conditions as men do (Green, 2004).

A dummy variable identifying those individuals that have moved into/from the area in the past 5 years, Mobility produced split results between US and foreign born Latinos. Mobility provides a boost of 2 percent in hourly wage of US born Latinos and

was significant. The effect is opposite and significant for foreign born Latinos, reducing their hourly wage by more than 4 percent. The reason for this phenomenon may be the entry level type of work the majority of these separate groups do once in these areas. If we look at the occupational distribution, we find that there is a considerable percentage of US born Latinos that occupy positions requiring higher skill (37%). On the other hand there is a considerable percent of foreign born Latinos that occupy relatively low skill positions (41%).

Age has a positive effect on hourly wage and is non significant. Both results do not support the stated initial hypothesis. This may not be surprising because employers might be interested in Latinos' experience rather than their age per se.

Racial profiling, represented as a disparity index, it had a negative effect on Latinos hourly wage for both US and foreign born, but was not significant in either instance. The variable, as described in chapter IV, is reported from each police department and sheriff station around Missouri. In order to derive county disparity indexes, police departments and county sheriff's data were pooled together and an average was found, which represented the county. However, another regression carried out using the highest registered disparity index value of each county (which was assumed to be the worse case scenario) the estimates for the variables ended up being significantly negative for both US born (2.1%) and foreign born Latinos (3.4%) in non-metro Missouri. Therefore, an alternative case confirmed the hypothesis that the variables are significantly negative even at 1 percent level.

The impact of Latino immigration into non-metro Missouri

The main objective of this study inevitably leads us to extrapolate the possible impact that the incoming of Latinos in the non-metro Missouri had on locals. Sassen (1995) tells us that spatial correlations have confirmed that immigrants have no measurable effects on particular markets they move into. However, Filer (1992) found that the local population, mostly white natives, with skill levels similar to those of immigrants were more likely to move out of an area receiving high levels of immigration and they were less likely to move into such an area. Therefore, he concludes, massive immigration prompts almost a substitution effect of the locals by the new immigrants in the labor market. These effects could be interpreted in two different contexts of the society: globally (Sassen) where there are no variations and within the economy (Filer) where there are some changes happening.

Table 13 Population Employed in Non-metro Missouri in 1990 and 2000, by Skill Level and County of Origin

Years	Skill Level	Origin				
		Non-Hispanics	Mexicans	Puerto Ricans	Cubans	Other Hispanics
1990	High	418,954	2,468	429	164	1018
	Medium	430,059	1,736	150	41	639
	Low	669,450	7,407	462	151	4,407
2000	High	566,710	3,991	695	166	2,085
	Medium	227,487	868	138	43	489
	Low	804,702	16,872	900	168	9,362
% Change	High	35.3	61.7	62.0	1.2	104.8
	Medium	-47.1	-50	-8	4.9	-23.5
	Low	20.2	127.8	94.8	11.3	112.4

Source: 1990 and 2000 Census, Public Use Microdata 5% Sample (PUMS).

However, economics postulates that labor market compositional shifts are tangled with industrial transformations, which means that the demand for different products signals industrial concentration, and production variability, which then creates demand for workers that most of these rural towns do not have. In this process, the influx of new population should not be seen as worker displacement (Kandel & Parrado, 2002).

The population employed has been grouped in different occupation categories as defined by the PUMS 1990. Therefore, some categories for 2000 had to be recoded. This was done to obtain homogenous groupings and thus facilitate comparison. The downside of the recoding process is that it somehow inflates the numbers of the employed/unemployed people during this period given their different classification. Another issue to consider is the reorganization of PUMS geographical categorization allocates some employed people in different areas in both periods (1990 and 2000).

Following the above line of reasoning and continuing with the assumption that employment generates income needed for wellbeing, comparative frequencies for the non-metro Missouri were obtained and are presented in Table 13 using data from the 1990 and 2000 census (PUMS 5%). A combination of natural increase¹⁸ of the population and net migration¹⁹ helped produce an overall increase in total population for the period of 1990-2000 (OSED, 2004).

A first look at Table 13 corroborates this information by reflecting gains in both high and low skilled occupations for virtually all ethnic groups. However, with the exception of Cubans, there was a decrease in the medium skilled occupations for all other

¹⁸ More births than deaths

¹⁹ More people came in than left

groups. Therefore, increase in population alone cannot explain the gains in high and low level occupations.

Most importantly, the results of Table 13 suggest a very important finding: the Latinos' arrival in non-metro Missouri did not inhibit the ability of the local non-Hispanic group to get access to jobs – on the contrary, with their arrival just the opposite happened. The new organizational structure that most modern manufacturing companies have been adopting could be advanced to explain Table 13. These results include seemingly large metro areas outside the Kansas City and St. Louis area because there was a need to capture the effect that Latinos are having in the service sector, which are mostly found in these areas.

Lately, many firms have been implementing changes in their operations, which fall along the notion of network, whereby each unit of a firm concentrates on a single core competency, e.g., production or research and development. These changes have allowed most of these firms to maximize returns to investment and reduce transaction costs. This system has enabled the standardization of necessary procedures and thus the increase of throughput of many firms.

Standardization has enabled many manufacturing firms to lay off workers and thus reduce bureaucratic structures and middle managers have been the most affected. Large agribusiness companies have added one more feature: the *informalization*²⁰ of the production process (Sassen, 1995). Non-metro Missouri has observed investment of sizeable manufacturing agribusiness firms, which employ fairly large numbers of low skilled operators and some of high level managers. By examining the results, it may

²⁰ This is the processes whereby most of the physical work is done by low wage minorities using mostly low tech processes.

appear that non-Hispanics had the lowest increases among the three largest groups, however they had the largest increases in absolute numbers as compared to the other 2 groups [from Table 13, the difference in numbers from 1990-2000: 147,756 in high skill and 135,252 in the low skill levels].

Table 14 Population Employed in 1990 and 2000 in Non-metro Missouri, by Industry type.

Type of Occupation	1990	2000	% Change
Managerial And Professional Specialty	278,991	288,672	3.5
Technical, Sales, and Administrative Support*	422,320	441,536	4.6
Service*	254,825	287,519	12.8
Agricultural and Related Fields*	88,521	93,885	6.1
Precision Production, Craft, and Repair*	182,313	186,014	2.0
Operators, Fabricators, and Laborers*	308,855	337,050	9.1

Source: 1990 and 2000 Census, Public Use Microdata 5% Sample (PUMS).

** These occupations do not include managers; all managers have been grouped in the top.*

Latino groups had phenomenal increases in both levels. Mexicans had an increase of 61.7 percent in high, and 127.8 percent in low skill levels. Other Hispanics had an increase of 104 percent and 112.4 percent in the high and low skill levels respectively. Puerto Ricans had an increase of 62 percent in the high skill level and 94.8 percent in the low skill levels; and Cubans had the lowest percent increase with 1.2 percent and 11.3 percent in the high and low levels respectively.

For these Latino groups, their phenomenal increase in these occupation levels is related to their increased presence in non-metro Missouri and also to the gradual change in the employers' attitudes towards hiring minorities in these positions. The results presented in Table 14 help gauge changes across the economy in non-metro Missouri.

Data comparison of both decennial census shows that there have been in fact increases in jobs in non-metro Missouri. Managerial occupations have increased 3.5 percent and gauging from the increases in the skill levels of different major ethnic

groups, it could be concluded that mostly non-Hispanics got these jobs; services (12.8%), Operators (9.1%) and Agricultural and related fields (6.1%) have produced the highest percent changes over the last decade. Herein lays the big issue: immigration happens mostly as a reaction to the existing conditions and taking advantage of opportunities. Net in-migration observed in Missouri for all ethnic groups in general and for Latinos in particular (for the last decade) comes in as a result of propitious economic conditions offered by the locale of destination. Missouri's non-metro areas, as mentioned above and illustrated in Table 14, have observed some economic investments in different sectors. However, the majority of jobs offered are not as attractive to local non-Hispanics as they are to Latinos, given the lower reservation wage for the same type of jobs that the latter group has (Green & Barham, 2001; Sassen, 1995).

CHAPTER VI

CONCLUSIONS AND IMPLICATIONS

Conclusions

The main purpose of this research was to look at the opportunities and vulnerabilities of Latinos in the greater part of Missouri, through the lenses of the immigration, well-being, and capability building literatures. The option to use this set of literature relates to the majority of Latinos' cultural capital and the public impression about Latinos, which tends to group all Latinos under the umbrella of immigrants even though most are actually US born.

Census results showed that the majority of Latinos in Missouri are US born and only a third of them are actually foreign born. However, more than 50% of them do not have good English proficiency and have an average educational attainment just below the high school level. US born Latinos living in Missouri have higher yearly wages when compared to foreign born Latinos. However, the assertion that low English proficiency and educational levels are the main causal factors explaining Latinos' occupational and industrial distribution did not hold and thus missing the big picture. The latter assertion is justified by the large percentage of Latinos with at least some high school and college education and good English proficiency found in low skilled jobs. This situation suggests that Latinos tend to gravitate to a lower level of skill in order to secure a job.

Alternatively, this might reflect a case of an informal institutional set up whereby long-

term, high skill jobs are not offered to Latinos due to the immigrant stigma. However, this is an issue that this research was ill equipped to assess and could very well be suitable for future research. For those Latinos that are already in the lower skill category it is assumed that they are less demanding on the type of jobs that they take. The scenarios described above position Latinos with a lower reservation wage as compared to non-Hispanics and provide the former group with competitive advantage in accessing lower skilled jobs and not the high skill ones.

English proficiency by itself turned out to not be significant determinant of earning ability by Latinos in non-metro Missouri. There seem to be many reasons for this finding. First, most Latinos acquire their jobs through common existing networks of headhunters and perform mostly menial jobs, which do not require high levels of English proficiency (Rosenbloom, 2003). Secondly, English proficiency in the census questionnaire is a self reported variable rather than objectively tested through a formal test. Therefore, some Latinos may assess their English skills by comparing themselves to non-Hispanic US citizens and conclude that they do not speak English well or Mexicans may compare their English skills with Hondurans and conclude that theirs is higher. Thirdly, much of the information contained in the English proficiency variable is also found in the educational attainment variable and thus being partially stripped of its importance. With the exception of the last problem described, these issues can not be solved by simply looking at the census data; they need to be surveyed with the Latino group in their locale of work.

Potential previous work experience has the most important influence on wages, thus wellbeing, of Latinos in Missouri. This is so because the type of work that most

Latinos perform in non-metro Missouri does not require strict technical skills and is easily learned, which is also linked to the jobs that most Latinos have been doing all along.

The notion of informalization of the production process summarizes the opportunities and vulnerabilities of Latinos in non-metro Missouri. The recent drive for low labor costs and a continuous pursuit of high profit and low operational costs by large, mostly agribusiness and service/trade, firms have been providing the premises for an increased influx of Latinos in non-metro Missouri. Latinos, due to their low reservation wage, have been seen as a secure source of inexpensive labor by most employers.

The high turnover nature of low skilled jobs suggests that Latinos have to keep on moving in order to secure work that will allow them to get access to income – and mobility has been shown to have a negative influence on the income generating capacity of Latinos. This might lead to the conclusion that Latinos do not move from one job to another or one county to another due to a better job offer but to merely have a source of income. However, the results of this study are, as described above, at best conservative because they do not include the undocumented Latinos. If we extrapolate the interpretation of this result and include the undocumented Latinos in the picture, the negative effect might have been even larger. The reasons for this are twofold: absence of proper documentation and financial burdens that most incur when embarking on their journey.

One of the most important findings of this research is related to the racial profiling issues, which at the worse case scenario might negatively influences the ability

of Latinos to generate income in non-metro Missouri. Even though the disparity index reported in the study was modeled for the worse case scenario, this is still a novel way in terms of looking at the effects of the law enforcement agencies on Latinos. However, care should be taken in order to not interpret this as unidirectional causality effect; that is only from the police to the Latinos. This information cannot be obtained from statistics alone; ethnocentric studies should be used to complement the trends that regression results have determined, which could better inform the causality factor in this case.

In terms of impact to the community, the trends found in this study corroborate those found in studies carried out in previous years on the Latino population in the US (see Reimers, 1985; Tienda, 1985; Sassen, 1995). For instance, many towns that have been targeted with investments by large production/manufacturing plants do not have enough/willing labor to supply the lower skilled positions. Latinos are providing the low-skilled manpower necessary to support huge operations of large meatpacking plants, as well as the construction, and service sectors, which in turn help secure the continuous operation of these enterprises and thus the existence of higher skilled jobs and revenues to these towns.

On the other hand, the study also showed that the majority of Latinos moving into these areas should not be considered temporary immigrants any longer. The housing ownership provides evidence to support this conclusion. It could be seen that more than 50 percent of Latinos now residing in these counties either own their houses or are in the process of owning them, which means that they are making long term investments in the counties that they are immigrating to. This result has serious repercussions for town planning and public assistance for these areas.

Implications

Educational attainment does not seem to be a clear enough explanatory variable for Latinos' wellbeing in non-metro Missouri. The prospect of improvement of their livelihood does not center so much on how much education they get but more on what type of education they get and how society values the education they possess in order to improve the returns to their investment and thus their livelihood. Therefore, professionals and decision makers should concentrate on creating avenues of improving Latinos' access to better paying jobs by valuating their skills.

There seem to be a problem with the issue of racial profiling. Most Latinos have different cultural capital and most law enforcement agents have their own stereotypes which the study has proven have a negative effect on foreign born Latinos and the worse case scenario has negative effects on either group. This "law", in the eyes of most Latinos implies inhibition of normal activities and thus the law enforcement agencies should try to use less ambivalent policies in order to uphold the law. Additionally, officers could be offered education and training on cultural sensitivity which would enable them to understand Latinos and also perform their work better.

Thirdly, there is the issue of vulnerability of Latinos in these areas. Results from this study seems to suggest that Latinos' vulnerability is also tied to the "glass ceiling"²¹ effect and the low average wage paid by the industries that they work in. These issues have to be resolved through a drastic change of mentality by the employers towards Latinos, and policy makers can play a very important role in this respect.

²¹ This refers to the highest professional level that a minority can go in certain industries and areas in spite of his/her educational level and effort.

Finally, even though the census provides a very comprehensive database on which to base a study, it still does not offer a “complete” picture of what is going on with Latinos in Missouri. It is also understandable that a major limitation to the study is that the PUMS data file set up did not allow the study to identify demographic patterns that are county specific. Additionally, the use of an average in the context of reception variable might have eliminated some variation in each area. The next logical step would be to carry out a comparative study using this model but with data from survey research, which could include Latinos not properly documented that are not captured by the census.

APPENDIX A

Equivalency Report of Pumas to Counties

Equivalency Report of Pumas to Counties

County Code	County Name	PUMA5	Pop. 2000 Census	allocation factor*	
				county to puma5	puma5 to county
29001	Adair	300	24977	1	0.238
29003	Andrew	200	16492	1	0.161
29005	Atchison	100	6430	1	0.059
29007	Audrain	500	25853	1	0.144
29009	Barry	2600	34010	1	0.203
29011	Barton	1200	12541	1	0.077
29013	Bates	1200	16653	1	0.102
29015	Benton	1200	17180	1	0.105
29017	Bollinger	2000	12029	1	0.062
29019	Boone	600	135454	1	1
29021	Buchanan	200	85998	1	0.839
29023	Butler	2200	40867	1	0.372
29025	Caldwell	100	8969	1	0.082
29027	Callaway	500	40766	1	0.227
29029	Camden	1300	37051	1	0.241
	Cape				
29031	Girardeau	2000	68693	1	0.353
29033	Carroll	700	10285	1	0.079
29035	Carter	2200	5941	1	0.054
29037	Cass	902	82092	1	0.464
29039	Cedar	1200	13733	1	0.084
29041	Chariton	700	8438	1	0.065
29043	Christian	2400	54285	1	0.312
29045	Clark	300	7416	1	0.071
29047	Clay	800	99997	0.543	0.632
		1001	84009	0.457	0.708
29049	Clinton	800	18979	1	0.12
29051	Cole	500	71397	1	0.397
29053	Cooper	500	16670	1	0.093
29055	Crawford	1400	22804	1	0.165
29057	Dade	2600	7923	1	0.047
29059	Dallas	1200	15661	1	0.096
29061	Daviess	100	8016	1	0.073
29063	DeKalb	100	11597	1	0.106
29065	Dent	1400	14927	1	0.108
29067	Douglas	2300	13084	1	0.109
29069	Dunklin	2100	33155	1	0.261

Equivalency Report (continued)

County Code	County name	PUMA5	Pop 2000 census	allocation factor*	
				county to puma5	puma5 to county
29071	Franklin	1500	93807	1	0.596
29073	Gasconade	1400	15342	1	0.111
29075	Gentry	100	6861	1	0.063
29077	Greene	2400	88815	0.369	0.51
		2500	151576	0.631	1
29079	Grundy	100	10432	1	0.096
29081	Harrison	100	8850	1	0.081
29085	Hickory	1200	8940	1	0.055
29087	Holt	100	5351	1	0.049
29089	Howard	500	10212	1	0.057
29091	Howell	2300	37238	1	0.312
29093	Iron	2000	10697	1	0.055
29095	Jackson	901	123836	0.189	0.687
		902	94950	0.145	0.536
		1002	105662	0.161	1
		1003	114495	0.175	1
		1004	102649	0.157	1
		1100	113288	0.173	1
29097	Jasper	2700	104686	1	0.665
29099	Jefferson	1900	198099	1	1
29101	Johnson	700	48258	1	0.371
29103	Knox	300	4361	1	0.041
29105	Laclede	1300	32513	1	0.212
29107	Lafayette	901	32960	1	0.183
29109	Lawrence	2600	35204	1	0.211
29111	Lewis	300	10494	1	0.1
29113	Lincoln	1500	38944	1	0.248
29115	Linn	300	13754	1	0.131
29117	Livingston	100	14558	1	0.133
29119	McDonald	2600	21681	1	0.13
29121	Macon	300	15762	1	0.15
29123	Madison	2000	11800	1	0.061
29125	Maries	1400	8903	1	0.064
29127	Marion	400	28289	1	0.276
29129	Mercer	100	3757	1	0.034
29131	Miller	1300	23564	1	0.153
29133	Mississippi	2100	13427	1	0.106
29135	Moniteau	500	14827	1	0.082
29137	Monroe	400	9311	1	0.091
29139	Montgomery	400	12136	1	0.119
29141	Morgan	1300	19309	1	0.126

Equivalency Report (continued)

County Code	County name	PUMA5	Pop 2000 census	allocation factor*	
				county to puma5	puma5 to county
29143	New Madrid	2100	19760	1	0.156
29145	Newton	2700	52636	1	0.335
29147	Nodaway	100	21912	1	0.201
29149	Oregon	2300	10344	1	0.087
29151	Osage	1400	13062	1	0.095
29153	Ozark	2300	9542	1	0.08
29155	Pemiscot	2100	20047	1	0.158
29157	Perry	2000	18132	1	0.093
29159	Pettis	700	39403	1	0.303
29161	Phelps	1400	39825	1	0.288
29163	Pike	400	18351	1	0.179
29165	Platte	800	39155	0.531	0.248
		1001	34626	0.469	0.292
29167	Polk	1200	26992	1	0.165
29169	Pulaski	1300	41165	1	0.268
29171	Putnam	300	5223	1	0.05
29173	Ralls	400	9626	1	0.094
29175	Randolph	400	24663	1	0.241
29177	Ray	901	23354	1	0.13
29179	Reynolds	2200	6689	1	0.061
29181	Ripley	2200	13509	1	0.123
29183	St. Charles	1601	142422	0.502	1
		1602	141461	0.498	1
29185	St. Clair	1200	9652	1	0.059
	Ste.				
29186	Genevieve	2000	17842	1	0.092
29187	St. Francois	2000	55641	1	0.286
29189	St. Louis	1701	130072	0.128	1
		1702	135192	0.133	1
		1703	118417	0.117	1
		1704	108842	0.107	1
		1705	119318	0.117	1
		1706	114732	0.113	1
		1707	160962	0.158	1
		1708	128780	0.127	1

Equivalency Report (continued)

County Code	County name	PUMA5	Pop 2000 census	allocation factor*	
				county to puma5	puma5 to county
29195	Saline	700	23756	1	0.183
29197	Schuyler	300	4170	1	0.04
29199	Scotland	300	4983	1	0.047
29201	Scott	2100	40422	1	0.319
29203	Shannon	2300	8324	1	0.07
29205	Shelby	300	6799	1	0.065
29207	Stoddard	2200	29705	1	0.27
29209	Stone	2600	28658	1	0.171
29211	Sullivan	300	7219	1	0.069
29213	Taney	2600	39703	1	0.237
29215	Texas	2300	23003	1	0.193
29217	Vernon	1200	20454	1	0.125
29219	Warren	1500	24525	1	0.156
29221	Washington	1400	23344	1	0.169
29223	Wayne	2200	13259	1	0.121
29225	Webster	2400	31045	1	0.178
29227	Worth	100	2382	1	0.022
29229	Wright	2300	17955	1	0.15
29510	St. Louis city	1801	111779	0.321	1
		1802	100814	0.29	1
		1803	135596	0.389	1

Source: OSEDA (2003):

<http://mcdc2.missouri.edu/webrepts/geography/cnty2puma.html>

* The allocation factor refers to the percent part of the area that is included

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