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EXPLAINING CHURN:  
MASS SOCIETY, SOCIAL CAPITAL, & COMMUNITY CHURN

by

DELORES A. EDELEN  
B.A. University of Central Florida, 2002

A thesis submitted in partial fulfillment of the requirements  
for the degree of Master of Arts Applied Sociology  
in the Department of Sociology & Anthropology  
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## ABSTRACT

Population churn—the population turnover experienced by a community—can have differential effects on a community. Mass society theory suggests that because the churn rate experienced by communities can contribute to their uprooting, fragmentation, and isolation, churn is a potent threat to the stability of our modern day communities. Social capital theory, to the contrary, suggests otherwise.

Social capital theory suggests that churn can have positive effects on communities by bringing new migrants with valuable human capital skills and experiences to communities. These migrants bring to their new communities the potential for creating new jobs, spurring economic development, and for initiating housing starts that expand housing options for the poor and minorities. In so doing, they help create and sustain vibrant, growing modern day communities.

Yet in spite of the significant role churn may play in determining the health and viability of modern day communities, it has been overlooked in the migration literature, which is mostly dominated by individual-level research on the causes and effects of migration, particularly the pecuniary benefits to movers. Using county-level data and multivariate analyses, this research seeks to fill this gap in the literature by examining the relationship between the community and churn, from the perspectives provided by social capital and mass society theories.

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## INTRODUCTION

Research has shown that Americans move a lot (Libbon 2001; Jasper 2000; Fulkerson 1995). This movement of people in and out of communities at any given time produces the population turnover that is referred to as churn. That Americans on the move prefer the south is reflected, most notably in Florida, by the growing portion of the state's total population that is constantly moving through its various communities each year (US Census 2000 Current Population Surveys; Zimmerman 1994).

Researchers have examined why people move (Knapp, White, and Clark 2001; Long 1992; Rossi 1955, 1980), who moves and who stays (Ofek and Merrill 1997), the effects of moving on movers (Lopez-Turley 2002; Rodgers and Rodgers 2000; South and Crowder 1997, 1998; Ofek and Merrill 1997), and where people move (Ofek and Merrill 1997; Tobey, Wetherell, and Brigham 1990). However, they have not examined the rate of mobility turnover, or churn, as measured by the ratio of the sum of people moving in and out of a community (gross migration) and the community's total population. Yet, two theoretical frameworks suggest that churn can have significant implications for communities: mass society and social capital theories.

Mass society theory has a long history stretching back to the early nineteenth century. It was used to explain uprisings like the French Revolution, the falls of Ancient Greece and Rome, and later to explain the rise of fascism in Europe during World War II. Mass society sees these uprisings as the inevitable consequence of the uprooting of stable, traditional ruling structures by charismatic leaders. These "demagogues", from the mass society perspective, promise freedom but deliver instability in the form of "disorder,

destruction, and death”, producing the social isolation, anxiety, and societal breakdown (Hamilton 2001:7) identified by founding social theorist Durkheim, as a state of anomie.

In all its various incarnations throughout history, mass society theory is defined by this anomic view of society; one that portrays society as headed in one direction: from bad to worse. It, in essence, states that the rootlessness and instability that results from the “collapse of...stable, cohesive, and supportive communities” (Hamilton 2001:7), which characterized communities of the pre-modern era, puts our modern society at risk; and thus churn, because it is seen as a catalyst for increased “rootlessness, fragmentation, [and] isolation” (Hamilton 2001:7), is a potent modern day threat.

By contrast, social capital theory, which stresses the importance of trust in building cohesive and supportive communities, suggests the opposite. While the social capital framework acknowledges the benefits of a cohesive and stable community, it also recognizes that too much cohesion can be just as lethal as none. It suggests that a community that is too cohesive will atrophy due to the lack of new knowledge, experiences, talents, skills, broadened perspectives, and social networks that migrants often bring with them; benefits which can invigorate a community and sustain its economic base. Thus, the very “rootlessness” that mass society theory laments as the downfall of modern day communities, when viewed through social capital lens, is necessary for building and sustaining a vibrant, growing community.

This research examines the relationships between population churn, the gross migration, or sum total of those migrating in and out of a population in a given time period (i.e. population turnover), and various indicators of community well-being from the theoretical perspectives of social capital and mass society theories. It conceptualizes

population churn as a characteristic of a community—not of individuals. Thus, using county-level data, multiple data gathering methods, and multivariate analyses, this research seeks to determine how churn is likely to impact a community’s well-being. Three key questions will provide its foci.

1. With what community level indicators does population churn appear to be correlated, and what are the direction and significance of any observed relationships between these indicators and churn (i.e. do these suggest that churn is a risk or a benefit to a community)?
2. How much of any observed relationship(s) can be explained by the rate of churn itself after accounting for other variables that might be producing the noted effects?
3. How strong of a role does churn play in predicting the effects with which it is found to be associated?

In answering these questions, this research will provide an empirical basis for determining the effects of churn on communities like Orange County, FL, and in so doing will help policy makers in these communities to make informed decisions about future needs and services and to avoid the social, economic, and political consequences of failing to plan adequately for those needs.

It will also add to the body of knowledge in the area of mobility research. By filling the gap in this substantive area for research on community-level analyses of population churn, this research aims to also set the stage for future research that can lead to developing



models for identifying and predicting how churn will likely impact various metropolitan statistical areas (MSAs) across the country.

## LITERATURE REVIEW

### **Churn as Threat: The Mass Society Framework**

The mass society framework suggests that churn is a community threat because it erodes the social infrastructures necessary for sustaining a healthy community. As discussed in detail in the sections below, some of the negative effects of this socio-structural erosion that might be attributed to churn include: lack of affordable housing and increased homelessness; low wages, increased poverty, and psychological distress; poor academic performance of public school students; increased sprawl, and with it, traffic congestion; low voter turnout and political activism; and depleted social capital and weakened community spirit. The relationships among the uprooting potential of churn, social capital, and weakened community spirit, are especially noteworthy because it is the trust implicit with high social capital that forms the basis for building the strong social ties between neighbors that are necessary for fostering a sense of community. However, it is clearly difficult to know, trust, and to feel close to one's neighbors when you have new ones moving in every other month. Similarly, the constant turnover of church members, as well as work and school-mates, make establishing and maintaining the friendship networks so necessary for building community cohesion, virtually impossible.

For Orange County Florida, this weakened community spirit is one of the key indicators used by its stakeholders to assess the community's health; for this reason the links between churn, community spirit, and other healthy community indicators are of intense interest to these local stakeholders. The priority that understanding churn has for these stakeholders is evident by its frequent mention in the county's Healthy Community

Initiative of Greater Orlando's (HCI) report for 2000 entitled, *Legacy 2002: Greater Orlando Indicator's Report*, essentially, a "social indicators" compilation released every two years. In building the rationale for these stakeholders' intense interest in churn, the report asserts, but does not demonstrate, that "Orange County continues to experience amazingly high 'churn' in its population—with over 100,000 people either leaving or arriving each year" (P. 9). From the mass society perspective, the implications of such high churn are expected to be severe—and negative.

In view of this expectation, it is obviously important to know (1) whether or not this annual population turnover rate of 100,000 experienced by Orange County is indeed "amazingly high", and (2) how Orange County and Orlando compare to other Florida counties and cities in this respect.

Cashen's (2002) research examined these churn rate questions. For the year 2000, she found that 90,755 people moved into Orange County and 76,212 moved out, for a total gross migration of 166, 967; in this same year, the total population for the county was 896,344. Thus by calculating the gross migration (GM), which is the sum migration in plus the sum migration out, divided by the total population (P) for the year ( $166,967/896,344$ ), the estimated 2000 churn rate for Orange County was found to be nineteen percent (.19).

While this rate of churn is above the mean churn rate of .15 for all 67 counties in Florida, it can hardly be characterized as "amazingly" high, especially when compared to the high churn rate of .40 experienced by Santa Rosa County in the same year (see Table A2 in Appendix A). As indicated in Table A2, eleven Florida counties had churn rates higher than Orange County; this includes Osceola county (at .23), one of the other counties in the Orlando metropolitan statistical area (MSA) of which Orange County is a part. The other

two counties in this MSA, Seminole and Lake counties, at population churn rates of .17 and .19, respectively, had about the same rates of mobility as did Orange County (see also Table A1 in Appendix A).

Nevertheless, in view of this confirmation, that in 2000 Orange County's churn rate was indeed higher than the mean rate for the state, it is important to note any evidence of the expected mass society effects indicated in the most recent HCI indicators report.

Indeed, the HCI report appears to give strong support to mass society expectations. Consistent with what mass society theory would predict for a high-churn city, the report documents: high housing costs and rates of homelessness; depressed wages; increased poverty and psychological distress; poor academic performance; increased sprawl, traffic congestion, and higher transportation costs; low voter turnout and political activism; and low-levels of community spirit or involvement. These trends are discussed in more detail below.

#### Mass Society: Reduced Housing Affordability

Knapp, White, and Clark (2001) and Ofek and Merrill (1997) found that mobility increased the demand for affordable housing. However, consistent with the laws of supply and demand, this increased demand does not result in more affordable housing because, as a community's churn rate increases, housing markets become more dynamic, leading to pricing instability. In this dynamic environment, increased housing supply is continually outpaced by ever-increasing demand; so housing costs do not get a chance to stabilize, thus creating a seller's market. This seller's market results in spiraling housing costs, as developers, sellers,

and landlords face little resistance in getting higher asking prices from a ready supply of buyers and renters.

Other studies suggest that migration patterns tend toward higher affluence and thus higher housing costs in high churn communities. For example, South and Crowder (1997) found that homeowners use the financial gains from the sale of their homes to seek more affluent destinations when they move, and that higher rates of new construction and vacancy turnover increase the likelihood of blacks moving to more affluent neighborhoods. This tendency toward affluence suggests that if a community's churn pattern is characterized by substantial numbers of previous homeowners, compared to renters, the reservation price for homes in the destination community is likely to remain high. It also suggests that the more housing options churn creates across the various socioeconomic strata in a community, the more it will propel higher demand for housing affluence—and with this demand, rising housing and rental costs.

#### Mass Society: Low Wages, Increased Poverty & Homelessness

The research of Greenwood, Hunt, and McDowell (1986) and others (Borts and Stein 1964) suggest that any positive relationship between churn and labor market turnover can be attributed to churn's displacement tendency: it is said to displace lower-skilled workers with new migrants who tend to be higher quality residents endowed with financial and human capital resources that local residents lack. These higher quality migrants are then able to occupy higher wage positions, start entrepreneurial activities, or accept lower wages, and still maintain a higher standard of living than the local residents they are displacing. The effect is that these migrants either drive wages lower in the local labor market, or create a

polarized labor market in which very high wage earners and very low wage earners are divided by an insurmountable socio-economic chasm.

One result of this wage divide is increased poverty. As lower-skilled labor-force participants are displaced by newcomers and forced to accept lower wages, they join the ranks of the working poor, or are pushed out of the labor force entirely, into unemployment. As a result, many native locals teeter on the brink of homelessness as they are forced to use a greater portion of their family income for housing, yet are still unable to keep pace with the mounting costs of housing in the seller's market created by high churn.

Typically, these are driven into the rental market, and often become serial movers, moving frequently in search of lower rent or in response to evictions for nonpayment of rent, or to get closer to jobs. Thus churn becomes a catalyst for not only increasing poverty, but also for creating more churn—and socio-economic disadvantage.

*HCI's report on wages, homelessness, and housing affordability for Orange County, FL*

The postulated links between churn, wages, poverty, homelessness, and housing affordability suggested by the body of research just reviewed appears to find support in HCI's Legacy 2002 report. The figures below, from the report, paint a vivid picture of the doom, instability, and distress for the Orange County community predicted by mass society theory. Of course, whether churn itself is responsible for any of these dire facts cannot be said based just on the HCI report, since the report juxtaposes various trends but does not demonstrate a direct empirical connection among them.

Healthy Community Initiative's (HCI) Legacy 2002 reports that (1) at a housing affordability rate of 2.92, the average single family home in Greater Orlando in 2002 cost

almost three times the median annual family income; (2) renters spend approximately 43 percent of their gross income for rent. The standard measure of affordability is that no more than 30 percent of household income should be used for rent; and that (3) approximately 27 percent of the Orlando population earns under \$24K annually, or \$12 per hour; wages that would be considered a windfall for many in this community. Yet even residents at this highly prized wage, after spending 43 percent annually for rent, are left with only approximately 13.7K annually to live on. And, since almost 40 percent of Orlando's population are renters, most with earnings substantially below the prized 24K threshold, a significant segment of this community is always on the brink of socio-economic disaster—and homelessness.

#### Mass Society: Psychological Distress

Social stress theory, emphasizing the social and cultural etiology of mental illness, identifies social stressors such as poverty, unemployment, and homelessness as precursors for psychological distress (Gallagher 2002). Thus mass society theory would lead us to expect to see higher levels of psychological distress in higher churn communities.

#### *HCI's report on psychological distress in Orange County, FL*

Using the rate of arrests for drug abuse as proxies for psychological distress, HCI's Legacy 2002 (pp. 10, 41-42) reports a high level of psychological distress in the Central Florida community. It attributes this distress to the economic stress of shrinking paychecks and higher costs of living. This pattern is consistent with mass society expectations of increased "unhappiness, dissatisfaction....and anxieties" (Hamilton 2001:7-8, 14) as mobility rates—or churn—increase.

### Mass Society: Poor Academic Performance of Public School Students

Another anticipated negative consequence of high churn suggested by mass society theory is a downward drift in school performance; this, as a result of churn's pooling effects on a community: the effects of wages that are driven lower in response to increased churn, and housing costs that become correspondingly higher, forcing low-income residents of a community—and their children—to move often in search of better wages, more affordable housing, or in response to evictions for non-payment of rent. The resulting turbulence in these households, whose frequent household moves are matched by just as frequent changes in the number of public schools attended by the school-aged children in these households, leads to poor academic performance, school failure, and increased risk that these students will become school drop-outs.

Many studies covering a wide range of topics support this mass society expectation. Two Cornell University studies (1993, 1996) of child abuse and neglect, for example, (Brown University Child & Adolescent Behavior Letter 1996) showed that highly mobile students tended to show higher prevalence of abuse and neglect. These abused children had significantly poorer academic performance on standardized exams, more behavioral problems, and they were 2.5 times more likely to repeat a grade—with neglected children performing worst academically, and physically abused children showing higher incidences of disciplinary problems.

Similarly, Moore, Vandivere, and Ehrle (2000) found that highly mobile students were less engaged with school and exhibited more emotional and behavioral problems. Crowley (2003) in a study of the effects of housing status and poverty on educational achievement, found that not only are the highly mobile students adversely affected by school



churn, but so are their teachers and their non-mobile peers who must adjust to frequent interruptions in learning from a steady influx of new students. Thus, Crowley concludes that high rates of school churn results in student underachievement because students are not allowed to “bond with educators or schoolmates” as “their emotional resources are used up just managing change, leaving them depleted of ability to absorb and integrate new learning” (P. 35). Additionally, Rumberger (2003) found that school churn increases the likelihood of school dropout, and had the most negative effects on black students who reside in urban communities, where marked rates of high “transition” and “disorganization” have been noted since Burgess’ Chicago study in the early 1900s (Gallagher 2002:237).

*HCI’s report on public school performance in Orange County, FL*

HCI’s Legacy 2002 finds some of the above negative school performance trends in the Orange County, FL community. The report (P. 63) shows that during the last year for which data were available, 46 percent of students changed schools during the school year; the dropout rate, as of 2001, was 4.9 percent compared to 3.8 percent for the state of Florida; and 51 percent of students are “not reading at their grade level by the fourth grade”, while “just over half” needed remedial help due to low test scores.

Mass Society: Increased Sprawl and Transportation Problems

The relationships between churn, sprawl, and transportation problems, as posited by mass society theory, are connected to “the pathologies of modern life [that] are found in the urban context” (Hamilton 2001:14). The mechanism by which this ‘urban pathology’ creates sprawl and transportation problems is the tendency of new migrants to locate in the outlying

areas of a city. This pattern suggests that high churn communities will be characterized by increased sprawl, which in turn, leads to increased traffic congestion as these widely dispersed residents make their way from outlying areas to inner city workplaces. The expected results are increased traffic congestion and longer commutes, increased pollution due to vehicle idling, and higher public transportation costs for the local community.

Two different studies, one by Ofek and Merrill (1997), and the other by South and Crowder (1997) found these expected linkages between churn, sprawl, and traffic congestion. Ofek and Merrill (1997) found that, in spite of the economic benefits of moving to urban centers where job opportunities are readily available, families were more likely to relocate in suburban areas. One reason for this attraction to suburban areas was offered in South and Crowder's (1997) study of the effects of mobility on the poor. They found that part of the pull of suburban areas was the generally less restrictive land use regulations found in suburban areas compared to central cities. Indeed Downs (1993:255-281) found that "strict zoning and building codes...impede mobility within the inner city."

Ofek and Merrill (1997) offers an additional reason for this suburban preference, of primarily married couples, especially those with children: the "amenities of rural life along with inexpensive space are probably more appealing to families in general, and families with school-age children in particular" (P. 32).

Hence, high churn communities are likely to experience growth in the periphery of their central cities. Yet, because jobs are more likely to be found in the central city areas, long commutes—in terms of distance and time—quickly come to characterize high churn communities, as does traffic congestion and overburdened roads. The HCI report observes these trends in the Orlando, FL community.

*HCI's report on traffic congestion in Orange County, FL*

The report (Pp. 37, 38) finds traffic congestion, vehicle miles traveled, and gasoline consumption for the Orlando metropolitan area rising since the 1990s, which coincides with a similar pattern in the rate of churn experienced by the community. With now close to 30 hours wasted in traffic delays per person in 2000 and commuting distances that average 25 miles per capita, this section of the report concludes that, in Orlando, “we are driving farther, using more gasoline, and wasting more time in traffic” (P. 37, see subtitle entitled, *Status*, under Transportation heading).

Mass Society: Decreased Political Activism, Community Spirit, and Social Capital

Social capital, as originally conceptualized by James S. Coleman (1988) and defined by Wallace and Wolf (1999), is the “social structures that make it easier for people to achieve things.” Social capital, for example, makes commerce possible because commercial activity is based upon trust: trust that goods will be delivered as promised, that financial obligations will be met, and that debts will be repaid. Hence, without social capital, and its currency of trust, the social structure we refer to as ‘commerce’ would not be possible.

Social capital currency is also essential for building a sustained community because only when neighbors trust each other will they be able to walk on the streets at night without fear of harm; or leave their homes to go to work, or to school, or to take a vacation, without fear that their properties will be destroyed or stolen. And it is only when they trust each other, to look out for each other’s children, will they allow their children to play together in local neighborhoods. Hence, from this view, the tighter the social relations or social ties in a community—an indication of high levels of social capital—the more cohesive the

community, the more community spirit will be engendered, and the more likely it is that the members of the community will be civically and politically active.

The mass society framework insists, however, that social isolation rather than social ties is the rule in our modern world, thus the expectation that high churn and social capital would enjoy an inverse relationship: higher churn rates will lead to less social capital.

*HCI's report on activism, community spirit, and social capital in Orange County, FL*

While the relationship between churn and social capital that mass society leads us to expect seems to be realized for the state of Florida as a whole, no real measure of social capital has been made of the Orlando or Orange County, FL areas, specifically. For example, as measured by Robert Putnam's Social Capital Index, HCI reports that Florida ranked 37<sup>th</sup> out of 50 on the most recent index. In response to this low ranking, the report's authors conclude, in a reaction that typifies the mass society worldview, that the "neighborhoods, churches, schools, civic associations, and friendship networks" that support local businesses and facilitate political and civic participation in Florida communities, including Orange County, may be at risk (P. 61).

Yet, the social capital framework offers us another view of churn that is much more optimistic. This framework—and its relationship with churn—is discussed next.

### **Churn as Opportunity: The Social Capital Framework**

A smaller, but no less impressive, body of research on various topics provide evidence that churn can benefit a community by growing its economy, increasing its supply of affordable housing, improving students' academic performance, and by insulating the

community from self-imposed social isolation. The mechanism by which these positive outcomes are associated with churn is social capital. This process is discussed in more detail below.

Since, as discussed earlier, social capital, through its currency of trust, affects the strength of the social ties and level of engagement residents have with each other, and their communities, it is considered essential for building and sustaining stable communities.

However, Granovetter (1973, 1983) points out that that if social ties are too strong, this can isolate a community to the point of inertia, and stunt its growth.

This is likely to occur when community social ties are so strong that community members view outsiders with suspicion—not trust. This lack of trust will inhibit interaction between newcomers and long time residents of a community; hence only those already established in the community's tightly knit social networks will benefit from these close social ties. In these communities therefore, neighbors—and neighborhoods—tend to be segregated along well-established lines of demarcation. For example, business relationships among the privileged in these communities remain privileged, as they have been built on their closed informal social ties, and the community poor, without access to these informal social networks, remain shut out—and poor; thus a sort of informal caste system develops.

In this community environment, new business owners moving into these communities, with their already established, overly cohesive, social networks, will struggle to establish an economic base for their new goods and services, while the established businesses cannot grow because the market for new goods and services remains stagnant. Technological advances in these overly tight knit communities are also likely to be rejected by residents as too disruptive to the status quo; and, like any other newcomer, change—in

the form of new ideas, perspectives, talents, and skills from outside of the community—is also resisted.

Granovetter's (1973, 1983, 1985) research suggests then that churn, by weakening such pathologically cohesive social ties, can create healthier communities. His study of effective and preferred job search strategies used by professional, technical, and management-level workers underscore the benefits of this weakening social capital potential of churn. First, not surprisingly, he found that, at 56 percent, more than half of the workers in his study obtained their new jobs from personal contacts—but more significantly, he also found that *over 80 percent* of their new jobs came from *distant acquaintances*—not from the workers' closest personal contacts (Wallace and Wolf 1999:349). So since the vast majority of new jobs located by these managers and professionals came from persons outside of the primary and secondary social groups with whom they enjoy the strongest social ties, his findings suggest that a constricted social network can inhibit job opportunities. Hence, negative economic effects are likely to be in store for communities that are too cohesive; these effects can include less diverse economies and fewer available jobs, resulting in higher rates of unemployment and increased numbers of working poor in these communities.

Wallace and Wolf (1999) provides an example of how this can occur in their discussion of the significance of Granovetter's findings:

If information is being shared within a tight-knit group, then, by definition, everyone will know it. New information—such as a possible job opening for someone with your particular skills—has to come from outside the group, through *weak links* [emphasis added] with outsiders. One of the reasons why ghetto dwellers find it so hard to find work is that they live in a society with relatively few such [loose] ties; instead, theirs is a dense and constricted social network. (P. 349)

Such “constricted” social networks, and its resulting isolation from the larger community, can therefore lead to provincialism; it can restrict a community’s access to new information; it can retard the community’s knowledge-base; and it can narrow its scope of influence.

Churn, from the social capital perspective, mitigates the negative effects of such destructively dense social ties in communities by bringing the fresh skills, talents, and the varying viewpoints of new migrants, to communities. These human capital skills serve to broaden the community’s knowledge-base and experience, widen its social networks, and expand its scope of influence.

By thus forcing a community to make more productive use of its social capital, churn can accelerate and diversify local communities and create thriving economies, especially since thriving economies require a steady supply of new customers with new needs and wider social networks with whom to share the goods, products, and services it produces. Without the development of these wider social networks, the by-product of churn induced community social capital, a vibrant, growing, and diversified local economy is not likely to be sustained.

Next is a discussion of some of the specific benefits that churn, in its role as a catalyst for the productive use of community social capital, can bring to a community.

#### Social Capital: The Economic Benefits of Churn

An established body of research on various topics in the migration literature have reached the same conclusion: when compared to local residents, migrants tend to be more affluent (Steele & Price 2004:88); have a wider range—and higher quality—of human capital skills, including: higher educational attainment, a larger inventory of employment skills,

greater entrepreneurial talent, and a higher propensity for saving (Greenwood, Hunt, and McDowell 1986). As a result, Rodgers and Rodgers (2000) found that movers are over-represented in higher-paying professional, technical, managerial, and administrative occupations.

Other research demonstrates that the positive social capital impact of these migrant skills, talents, and resources on host communities can include: job creation (Greenwood, Hunt, and McDowell 1986); increased employment opportunities, especially for married men (Ofek and Merrill 1997); narrowed gender wage gap (Ofek and Merrill 1997); increased real hourly and annual earnings (Rodgers and Rodgers 2000); and improved odds of blacks and single-parent households escaping poor neighborhoods (South and Crowder 1997, 1998).

#### Social Capital: The Wage Benefits of Churn

One particularly noteworthy potential social capital benefit, which accompanies the influx of new high-quality talents and experiences that churn can bring to a community, is increased wages; although, admittedly, the literature findings on this potential impact has so far been mixed. While Rodgers and Rodgers (2000) in a study of the effects of moving on married-women finds, for example, that overall, churn-related wage increases primarily benefited the highly skilled newcomers, Lichter (1983), using more individual-level analyses, found that this observed advantage varied by gender (the higher educational and occupational statuses of women in this study did not result in higher wages for them). By contrast, other researchers have concluded that the migrants whom churn bring to a community “ha[ve] little direct impact on local wages” (Greenwood, Hunt, and McDowell 1986:230).



A possible explanation for these contradictory findings is offered by Muth's (1968, 1971) finding of a one-to-one relationship between churn and job creation. Muth found that because migrants increase the supply of—and demand for—workers in the local labor market by a one-to-one ratio, they essentially stabilize the supply of workers in the local market to the level of demand they create. Migrants thus offset the very negative impact on local wages that mass society theory leads us to expect them to bring to communities; the labor market effect then is flat rather than higher—or lower—wages. But perhaps more important than actual wage increase is the ancillary effects of the labor market supply shifts that Muth finds migrants bring to a community. They bring shifts in the local labor market supply that lifts the economic boat of the entire local community: they create increased labor-market participation, more diverse employment opportunities, and wider distributions of income among the various socioeconomic strata of the local community.

#### Social Capital: The Housing Benefits of Churn

Contrary to the mass society implications of the HCI finding that churn makes housing less affordable, some researchers (South and Crowder 1997) have found that the high levels of new construction associated with churn can increase the housing options available to the poor and minority residents of a community, under certain conditions: (1) if increased housing starts are matched by similar increases in vacancies, and (2) if new housing construction is designed to create racially diverse and mixed income neighborhoods, clearly a social capital benefit of churn.

In a related finding, Farley and Frey (1994) found an inverse relationship between the new housing construction associated with churn and the incidence of racial segregation

in neighborhoods: as housing construction increases, racial segregation decreases. This finding suggests, as social capital theory would lead us to expect, that churn can lead to more racially diverse communities. And since, as noted above, this is one of the necessary pre-conditions identified by South and Crowder (1997) if churn is to lead to increased housing options for minorities and the poor, Farley and Farley's (1994) research, therefore, also demonstrate that churn can improve housing availability for those most often disadvantaged in a robust housing market: the poor and racial minorities.

However, if churn widens the housing options available to less affluent and minority residents, but, as mass society theory would assert, makes the now more widely available housing unaffordable to these disadvantaged residents, then the social capital benefit of churn: increased housing availability, is essentially negated.

Ofek and Merrill (1997) indirectly address this issue. They found that when compared to affluent families, moving yields higher increases in the real annual earnings of less affluent families, at levels that is statistically significant. While this study, like much of the literature on migration, was focused on individual level analyses, it does have broader implications for the community at-large because it suggests that churn is more likely to raise the income-levels of those who need it most: low-income residents. Thus, as anticipated by the social capital theoretical framework, higher levels of churn can offer disadvantaged members of a community increased housing options—and the income to afford these newly available homes.

#### Social Capital: The Educational Benefits of Churn

Contrary to what social capital theory might lead us to expect though, there is general consensus in the literature that high churn has a generally negative impact on

academic performance, as posited by the mass society framework (Pribesh and Downey 1999; Brown University Child & Adolescent Behavior Letter 1996). However, a growing body of current research suggests that it is not the rate of churn—but the type and frequency of churn—that brings the negative effects long associated with it.

One example of this emerging body of research is Rumberger's (2003) study of the causes and effects of student mobility. While his research did show that, at 58 percent, moving accounted for most student churn, he also found that a significant portion of student churn occurred for other reasons, including: student initiated transfers, school initiated transfers, and changes in, or type of, family structure (whether two-parent or single-parent or step-family household, for example). In fact, Rumberger found that single-parent households accounted for higher student mobility than two-birth-parent families, and that school characteristics such as quality of teachers, levels of teacher salaries, and the concentrations of retained and minority students play significant roles in determining a community's rate of student churn.

The significance of these various causes of student churn rests with their differential effects on student achievement. Rather than leading to solely negative educational outcomes, Rumberger's research demonstrated that student churn can improve academic performance—if it is the result of a strategic rather than a reactive move; a strategic move is defined as one that the student initiates to seek better educational or social advantages, a productive exercise of social capital resources; and a reactive move is one that is imposed on the student for a variety of reasons, most notably among them are school initiated withdrawals.

Even more significantly, Moore et al. (2000) found that it is the turbulence in a child's life, overall, that produces the detrimental behavioral problems and academic failings that is usually attributed to churn. The researchers define turbulence as (1) the types of changes a child experiences (in family income, residence, family structure, the work or work schedules of parents, or the declining health of parent or child), and (2) the multiplicity of those changes (the frequency with which these disruptive events occur) in a child's life during a given period of time. Thus, a child was said to be experiencing turbulence if he or she experienced two or more of these disruptive events in a 12-month period. By this measure, turbulence proved to be a stronger predictor of low academic performance for these students than churn.

These findings demonstrate that the relationship between churn and academic performance is complex; yet, the emerging evidence suggests that the productive use of social capital skills to make strategic moves can mediate the negative effects on academic performance that has been associated with churn.

*HCI's report on potential social capital benefits of churn in Orange County, FL*

In addition to the negative mass society-like views of churn in HCI's Legacy 2002 report, the well-being section of the report also points to some of the community benefits that, from the social capital framework, could be attributed to churn. Of the several trends used as indicators of community well-being in the report, the most relevant to expected social capital benefits are highlighted below.

### School Performance

This indicator demonstrates that, while the Orange County school dropout rate is still high compared to the state of Florida overall, it has remained constant for the last 8 years, as churn rates have increased. Similarly, standardized scores, though still relatively low for the county, have risen, especially within the last 5-years, which also coincides with similar increases in the rate of churn.

### Psychological Distress

Because drug usage is often related to how individuals perceive their quality of life, their available employment options, the strength of their social ties, and their social value, it is used in the Legacy 2002 report (p. 55) as an indicator of community psychological well-being. By this indicator, community psychological health is sound because drug arrests have continued to decline over the last 5 years—even as churn rates have shown sharp increases. Underscoring this positive trend in psychological well-being are the results of two surveys conducted by the University of Central Florida (UCF) in 1996 and 1999 (see Berman’s, “Orange County (FLA): Citizen Survey”, Florida Institute of Government & Department of Public Administration, University of Central Florida). These surveys showed that, at 86 percent, Orange County residents overwhelmingly perceived their quality of life as good—and getting better. This optimism is contrary to the mass society expectation that churn would lead to social isolation, breakdown of community ties, and generalized distress. To the contrary, this trend toward optimism is consistent with the expected social-psychological benefits that social capital theory would attribute to churn.

### Poverty and Income Distribution

As discussed earlier, the research of Muth (1968, 1971) found that churn can reduce poverty by creating increased labor-market participation, more diverse employment opportunities, and by producing wider income distribution across all levels of the socioeconomic strata. Consistent with these findings, as churn rates in Orange County have moved sharply upward over the last decade, HCI reports that Florida state in general, have not only showed “falling poverty rates” over this same period, but this increased “prosperity” has also become more evenly spread among Orange County residents (P. 31).

### Economic Diversity

Similar to the patterns of less poverty and more widely distributed affluence, and as predicted by social capital theory, the Orange County community also shows evidence of benefiting from the higher quality migrants that churn can bring to a community. Among the talents and skills that Greenwood, Hunt, and McDowell (1986) found among migrants are high educational attainment, large inventory of employment skills, and greater endowment of entrepreneurial talent. These skills and talents are, presumably, reflected in the growth of small businesses experienced by Orange County as churn rates have peaked, and in the corresponding increases in wages and economic diversity which have accompanied this small business growth (P. 30). However, it bears repeating here that these reported trends have not been empirically demonstrated to be correlated with churn; thus a causal link between churn and these indicators of well-being has yet to be established.

As evident from this review of the literature and as suggested by the HCI’s Legacy 2002 report, it is safe to say that the relatively high rate of churn experienced by Orange

County Florida may have had both positive social capital benefits as well as negative mass society effects on this community. It is therefore important to establish empirically whether churn is the threat asserted by mass society theory or an unexploited opportunity, as suggested by social capital theory. Just as important is determining whether there are indicators that can be used to predict the direction of any impact churn might have on high churn communities like Orange County, Florida. For example, it might simply be that a little churn is good but beyond a certain point it is bad; or that a little is bad but beyond a certain point is good; or, there may be other factors whose presence or absence in a community make churn good in some places and bad in others. Accordingly, this research will seek to answer the following three questions:

1. With what community level indicators does population churn appear to be correlated, and what are the direction and significance of any observed relationships between these indicators and churn (i.e. do these suggest that churn is a risk or a benefit to a community)?
2. How much of any observed relationship(s) can be explained by the rate of churn itself after accounting for other variables that might be producing the noted effects?
3. How strong of a role does churn play in predicting the effects with which it is found to be associated?

## METHODS AND DATA

### Data

#### Independent Variables

As outlined in Table 1 below, this research will examine county-level data from a variety of sources. Using multivariate analyses it will seek to determine if an empirical basis exists for accepting or rejecting either the mass society or social capital expectations of the effects of high churn.

As Table 1 illustrates, the independent variable will be the county churn rates. This rate is calculated for each county as the sum of people moving in and out in 2000, which is the gross migration (GM), divided by the total county population (P) for the same year (or, GM/P).

Since churn is a community—not individual—feature, the units of analyses for this study are the 67 counties in Florida, which will serve as proxies for the community.

Although churn rate is the primary independent variable of interest for this study, it may be obvious, and should be pointed out, that in other research contexts it could be the dependent variable. For example, if the question of interest is what causes churn rather what churn causes, which is the central question for this study, churn would of course be more appropriately designated a dependent variable. With this in mind, it should also be acknowledged that some of the dependent variables being analyzed here as possible effects of churn (income and educational levels, for instance) could just as easily be considered its cause. In fact, in the multiple regression models used to test for spurious relationships with



churn, many of the dependent variables in this study were used as possible explanatory variables. Accordingly, many of them served in the dual capacities of dependent variables and independent control variables in this study.

**Table 1**

**List of Population Churn Study Variables and Data Sources**

<b>Independent Variables</b>	<b>Data Source</b>
Churn Rate	Cashen (2002)
<b>Dependent Variables</b>	<b>Data Source</b>
F-CAT Failures	FL Dept of Education
Households in Poverty	US Census Small Area Income and Poverty Estimates for Counties
Median Household Income	US Census 2000 Florida Quick Facts
Per Capita Income	US Census 2000 Florida Quick Facts
Suicide Rates	FL Dept of Health’s Community Health Assessment Resource Tool Set (CHARTS)
Total Charitable Contributions	Anft & Lipman (2003), The Chronicle of Philanthropy
Total Self Employed	US Census 2000 Nonemployer Statistics
Voter Turnout	FL Department Of State Division Of Elections

**Dependent Variables**

As also indicated in Table 1, the key dependent variables to be analyzed are public school academic performance, operationalized as the percentage of failing scores on Florida’s standardized public school state exam, the Florida Comprehensive Academic Test (F-CAT), given at the fourth, fifth, eighth, and tenth-grade levels. Students are currently required to take both the exams (for reading and for math) at the tenth and eighth grade

levels, but at the fourth and fifth grade levels only one content area is tested at each of these test periods: in the fourth grade it is reading achievement, in the fifth grade it is math achievement. Thus, in this study, high academic performance is measured by low FCAT failures and low performance by high rates of failures on this standardized exam.

The other dependent variables to be analyzed are household and personal wages, operationalized, respectively, by the levels of median household and per capita income; economic diversity, operationalized as the rate of self-employment; human capital skills, operationalized as the percentage of adults with Bachelor degrees or higher; poverty, operationalized as the percentage of households in poverty; political activism, operationalized as rates of voter turnout for local (not national) elections, as measured by the percentage of registered voters who vote in primary elections; psychological distress, operationalized as the crude suicide rate (the rate per 100, 000); and civic engagement, operationalized as the rates of charitable giving, as a percentage of discretionary income.

To meet either mass society or social capital theoretical expectations, these variables are expected to have significant relationships with the rate of churn. If significant relationships with churn are found in any of the expected directions that these two frameworks predict, this will lend empirical support to either the mass society prediction that high churn puts a community at significant risk for rootlessness and instability by producing effects such as citizen disengagement, poverty, psychological distress, and poor academic performance; or to the social capital expectation that churn benefits a community by producing effects like economic diversity, increased wages, and better quality human capital skills.

The evidence from this study will therefore provide an empirical basis for predicting the likely effects of churn on the Orange County, FL community; accordingly it will be able to suggest, with empirical support, whether churn is likely to have positive or negative effects on this and similar communities.

## **Methods**

The study begins with a bi-variate crosstabulation of each of the dependent variables above and the independent variable, churn, to explore the linearity patterns of the associations between each of them and churn. The cases of dependent and independent variables were recoded and categorized as low, medium, or high, forming a 3x3 contingency table for each dependent variable, with the re-coded churn rates as the independent variable. Using the column percentages, the linearity patterns between the distributions of the two recoded variables were analyzed.

Once linearity was established, the strengths and directions of the associations observed in the crosstabulation analyses were examined using a zero-order correlation matrix to examine the correlations among all the variables when not recoded. The strengths and directions of the associations were computed with Pearson's  $r$  correlation coefficients as the measure of association, and correlations at both the .01 and .05 levels (2-tailed) noted as significant.

In order to rule out other possible explanations for the significant relationships observed between churn and the community variables of interest, a multiple regression analysis of each of the significant bi-variate relationships was conducted next to determine if

churn remained a significant predictor of the dependent variables of interest after controlling for other possible explanatory independent variables. In this context, as noted earlier, several of the dependent variables in this study were also used as independent, social, economic, psychological, and demographic, control variables; this because in some cases, they could, just as easily as churn, produce the effects noted between the dependent variables of interest and churn.

## FINDINGS AND DISCUSSION

### **Crosstabulation Findings**

#### Community-Level Indicators With Positive and Linear Relationships With Churn

As illustrated in Tables B1-B3 (See Appendix B), the crosstabulation results found positive and linear relationships between churn and each of the following community-level indicators:

- Human capital skills
- Rate of High School graduates among adults in the community
- Household wages

#### Community-Level Indicators With Negative and Linear Relationships With Churn

Tables B4-B7 (Appendix B) illustrate that churn also had negative and linear relationships with the following community-level indicators:

- Poverty
- FCAT failures in 4<sup>th</sup> grade reading, 5<sup>th</sup> grade math, and 8<sup>th</sup> eighth grade math.

These positive and negative associations indicate that high community churn may be correlated with low rates of poverty, higher quality human capital skills, high rates of high school graduates among community adults, higher household wages, and with higher levels of academic achievement for public school students at the 4<sup>th</sup> grade reading, and 5<sup>th</sup> and 8<sup>th</sup> grade math levels.

### Community-Level Indicators With Non-Linear Relationships With Churn

The non-linear relationships between churn and the community-level indicators in Tables B8-B15 (Appendix B), were less clear-cut. While there was no association between churn and psychological distress (Table B15), there were indications that high churn, as posited by the social capital framework, could have a strong positive association with higher personal wage income (Table B8), under certain conditions. This because, at the highest levels of churn the personal wage income levels were concentrated at the moderate (38.1%) to high levels (61.9%), with no cases represented at the lowest wage levels.

As the non-linear relationships in Tables B9-B14 (Appendix B) also illustrate, the relationships between churn and civic engagement, political activism, economic diversity, and academic performance, were a bit more complex. There was some indication that high community churn may be associated with low civic engagement when it reaches its highest levels (see Table B9). At this highest level of churn, high civic engagement drops from its height of 47.4% at the lowest levels of churn, to a low of 4.8% when churn is at its highest levels. Moderate levels of churn, by contrast, seemed to produce fairly flat levels of civic engagement (from a low engagement rate of 29.6% to a high of 37%). Similar to this pattern of association between churn and civic engagement, churn also seemed to be associated with the lowest political activism when it is at its height (Table B10), where political activism, at its highest levels is also only 4.8% (down from a high of 68.4% at the lowest levels of churn); at moderate levels of churn, political activism, like civic engagement, remains fairly constant (from 29.6% to 37%).

As was the case with political activism and civic engagement, Table B11 shows that economic diversity also seems fairly stable at moderate levels of churn (also ranging from

29.6% to 37%), but as churn peaks, economic diversity seemed more widely dispersed, as indicated by its concentration at levels in the moderate to high range (where it ranged from a low of 4.8% to equal rates of 47.6% of both moderate and high levels of economic diversity, when churn is at its highest).

When it comes to academic achievement in 8<sup>th</sup> grade reading (Table B12), failures appear to stabilize at low to moderate levels when churn is at its highest (where FCAT failures drop from a high of 57.9% at the lowest levels of churn, to be concentrated in the low to moderate failure range of 38.1% to 47.6%, at the highest levels of churn). A similar pattern occurs with achievement in 10<sup>th</sup> grade math and reading performance. For math, FCAT failures drop from a high of 73.7% at the lowest level of churn, to be concentrated in the low to moderate failure range of 38.1% to 52.4% at the highest level of churn (Table B13); while for 10<sup>th</sup> grade reading, failures go from a high of 68.4% at the lowest level of churn, to a low to moderate range of 42.9% to 47.6% when churn is at its height (Table B14).

### **Bi-Variate Correlation Findings**

With linearity established, an examination of the zero-order bi-variate correlations among the independent and dependent variables, when not recoded, showed that, with the exception of economic diversity and psychological distress, all the community-level variables examined in the crosstabulation tables were significantly correlated with churn. Table C1 (see Appendix C), displays the strengths and directions of these significant correlations.

As indicated by the correlation coefficients and levels of significance in Table C1, the variables with strong and significant negative relationships with churn (in descending order) are 10<sup>th</sup> grade FCAT math failures (-.461), political activism (-.437), 8<sup>th</sup> grade FCAT reading failures (-.429), 10<sup>th</sup> grade reading failures (-.428), poverty (-.425), 8<sup>th</sup> grade FCAT math failures (-.418), 5<sup>th</sup> grade FCAT math failures (-.354), 4<sup>th</sup> grade FCAT reading failures (-.296), and civic engagement (-.291).

These results appear to lend empirical support to both mass society and social capital views of churn, as they suggest that high churn is a statistically significant predictor of the following negative community effects: (1) decreased political activism, and (2) decreased levels of civic engagement; and the following positive community effects: (1) higher academic achievement, and (2) decreased poverty. However, the mass society expectation that high churn would bring increased psychological distress to communities does not find empirical support here, nor did the social capital expectation of increased economic diversity.

By contrast, the variables enjoying the strongest positive relationships with churn (in descending order) are personal wages (.425), household wages (.411), high school graduate rate (.343), and human capital skills (.326). These results, unlike the mixed effects indicated by the negative correlations above, give strong empirical support exclusively to the social capital expectations of high churn. They suggest that high churn offers the following community benefits:

- Higher personal and household wages
- Higher rates of adults with high school education in the community
- Higher quality human capital skills



While the strengths of these correlations are impressive, they are not able, in of themselves, to rule out other possible explanations for the community effects just noted above as the effects of high churn. In the section to follow, a multiple regression analysis of the relevant variables was conducted to determine whether the relationships, between churn and the community effects it appears correlated with, hold up after accounting for other variables that may be better predictors of these effects than churn.

### **Multiple Regression Findings**

Tables D1.0-D1.3 (see Appendix D), show the churn effects that remained significant after controlling for various social, psychological, economic, and demographic factors with the potential to predict the community effects found to be correlated with churn. Each of the tables include the independent variables used to control for these various psychological, socio-economic and demographic factors. The socio-economic and demographic factors controlled for, were:

- Age (over 65; under 18)
- Population size
- Presence of military bases
- Education (Bachelor degree or above and HS graduates)
- Median household income
- Per capita income

The social and psychological controls were:

- Poverty
- Psychological distress
- Crime rate
- Rate of Domestic Violence
- Economic Diversity
- Housing stability (5 years or more in the same home)
- Civic Engagement
- Political Activism
- FCAT failures

The results (see Tables D1.0-D1.3) indicated that when these various factors acted as controls, churn remained a significant predictor of political activism (Table D1.0), poverty (Table D1.0), human capital skills (Table D1.1), and academic performance at all grade levels except 5<sup>th</sup> grade math (Table D1.2-D1.3). It was no longer significantly associated with civic engagement (Table D1.0), the rate of high school graduates in the adult population (Table D1.1), 5<sup>th</sup> grade-level FCAT math failures (Table D1.3), and household (Table D1.1) nor personal wages (Table D1.2). In addition, it remained not significantly associated with economic diversity (Table D1.0) and psychological distress ((Table D1.1). A summary of how these relationships relate to mass society and social capital expectations is detailed below, in Table 2; as summarized in this table, the regression results give overwhelming empirical support to social capital expectations, by a three-to-one margin.

**Table 2**

**Summary Comparison between Mass Society and Social Capital Theoretical Expectations of the Effects of Churn**

	Social Capital			Mass Society		
	Churn Expectations	Results Found	Supported? (Y/N)	Churn Expectations	Results Found	Supported? (Y/N)
<b>Political Activism</b>	Increase	Decrease	N	Decrease	Decrease	<b>Y</b>
<b>Poverty</b>	Decrease	Decrease	<b>Y</b>	Increase	Decrease	N
Civic Engagement	Increase	No Effect	N	Decrease	No Effect	N
Economic Diversity	Increase	No Effect	N	N/A	N/A	N/A
Psychological Distress	N/A	N/A	N/A	Increase	No Effect	N
<b>Human Capital Skills</b>	Improve	Improve	<b>Y</b>	N/A	N/A	N/A
High School Graduates	N/A	N/A	N/A	N/A	N/A	N/A
Household Wages	Increase	No Effect	N	Decrease	No Effect	N
Personal Wages	Increase	No Effect	N	Decrease	No Effect	N
<b>Academic Performance</b>	Improve	Improve	<b>Y</b>	Worsen	Improve	N

Social Capital Supported Findings

*Poverty*

As shown in Table D1.0, high churn remained a significant precursor for reducing poverty levels in a community (-.264), along with increased per capita income (-.379), even after controlling for all the other social, psychological, economic, and demographic factors considered in this study. This provides empirical support for the social capital expectation that churn is likely to be a catalyst for reducing poverty in high churn communities. As the

literature suggests, it likely does so by bringing new talents and skills to the workforce in the form of highly skilled newcomers, which the literature also demonstrates tend to lead to the development of a more diverse labor market, accompanied by wider income distribution; this thus fuels the wide dispersion of prosperity throughout the various socioeconomic strata in a community—even if wages remain flat (*See the section in this report entitled, Social Capital: The Wage Benefits of Churn*). The result is that wages may not increase substantially, but more people will be able to find work.

#### *Human capital skills*

As indicated in Table D1.1, after controlling for other possible social, psychological, economic, and demographic factors, high churn remained significantly correlated with higher quality human capital skills (.300). This finding also lends empirical support to the social capital expectation that high churn can offer communities new talents, skills, experience, and perspectives in the form of new highly endowed migrants (as just discussed above) who tend to be more highly educated, earn higher wages, and who also show a higher propensity for saving and entrepreneurship.

#### *Academic achievement*

When it comes to academic achievement (Tables D1.2-D1.3), high churn continued to be negatively associated with FCAT school failures in 10<sup>th</sup> grade math (-.335) and reading (-.330); 8<sup>th</sup> grade reading (-.314) and math (-.314); and in 4<sup>th</sup> grade reading (-.296), for which it remained the best predictor of academic performance after accounting for all other social, economic, psychological, and demographic factors. Generally, churn and per capita income

had the strongest impact on how public school students performed on the standardized FCAT exams, with psychological distress (at, .267), predictably (since performance at this grade-level determines whether students will be awarded their high school diplomas), also playing a significant role on student performance at the 10<sup>th</sup> grade reading level (see Table D1.2). The only grade level academic performance that was not shown to be impacted by churn was 5<sup>th</sup> grade math performance (Table D1.3); at this grade level a community's per capita income (-.396) emerged as the single best predictor of performance. This finding suggests that increasing a community's per capita income levels will likely do more to improve math performance at the 5<sup>th</sup> grade-level than containing churn.

In spite of the lack of impact that churn had on 5<sup>th</sup> grade academic performance, these findings do provide empirical support to the social capital expectation that high churn can lead to improved academic performance by public school students. They suggest that, overall, high churn communities can expect to see improved academic performance from their public school students, especially if per capita income is able to keep pace with the churn rate.

### Mass Society Supported Findings

#### *Political activism*

The only finding to lend empirical support to the mass society expectations of churn was the finding on political activism (Table D1.0). This result showed that high churn continued to have a significant negative relationship with political activism (-.323), even after controlling for other possible psychological, socio-economic, and demographic factors;

high churn is therefore likely to result in decreased political activism. This finding empirically supports the mass society expectation that high churn has the potential for weakening the social ties that are necessary for stabilizing communities, for igniting the public's community spirit, and for engaging them in political action in support of local community causes.

#### Community Effects Found Not to be Associated with Churn

As shown in Tables D1.0-D1.3, six of the community-level variables examined for churn effects did not show any significant relationships with churn after accounting for the various psychological, socio-economic, and demographic variables that served as controls for this study. These six were:

- Civic Engagement
- Economic Diversity
- Psychological Distress
- Rate of High-School Graduates
- Wages (Household and Personal)
- Academic Performance of 5<sup>th</sup> Grade Public School Students

Therefore, as the summary in Table 2 highlights, neither the social capital nor mass society expectations of churn's effect on wages, civic engagement, psychological distress, or economic diversity were met in this study.

### *Personal and household wages*

Churn's lack of impact on personal and household wage-income (see Tables D1.1-D1.2) was not surprising, as the powerful influence that education was shown to exert (.462, for college-level education and above) on increasing personal wages is well documented, and the positive impact that increased per capita income (.430) was shown to have on increasing household income, is self-evident. What is worth noting about these findings is that they indirectly support Muth's (1968, 1971) finding that new migrants tend to fill the labor market demands they create in a community on a one-to-one ratio, thus the effect they have on the labor market is to produce flat—rather than higher or lower wages (*see the section in this report entitled, Social Capital: The Wage Benefits of Churn*).

### *Civic engagement*

While Table D1.0 shows, contrary to mass society expectations, that community civic engagement was better predicted by education (at -.459, for college-level education and above) than churn, the negative direction was unexpected. It was surprising to see that a highly educated community was likely to be more civically disengaged. While an in-depth treatment of the reasons for this counterintuitive finding is beyond the scope of this study, it may simply be a definitional artifact due to how civic engagement was operationalized. Instead of being measured by charitable giving for the year 2000 (the point in time for this study's cross-sectional snapshot of churn), it was measured by the levels of charitable giving for 1997, three years before 2000, because this was the only time data on this community indicator was made available.

### *Psychological distress*

As for the mass society expectation that high churn will likely increase psychological distress in a community, the results of this study did not find support for this expectation (see Table D1.1). Instead the results found that academic performance had the strongest impact on levels of distress (with FCAT failures in 10<sup>th</sup> grade reading having the most impact, at .942). It is particularly salient to Central Florida stakeholders to find that the single best predictor of community distress was not churn, but students' performance on the state's high-stakes standardized exams, especially at each of the key school transitional years which determine whether students will qualify for promotion and graduation to the next school level (from elementary to middle-school to high-school and beyond).

The high toll that students' failing these high-stakes exams takes on communities, in the form of increasing psychological distress, is not surprising given the extreme social and economic pressures that failing them places on communities' families, and their children.

### *Economic diversity*

In view of the social capital expectation that churn can bring economic diversity to communities in the form of well-endowed migrants (also hinted at in the Table D1.0 results that show churn's potential for decreasing community poverty), the finding that economic diversity had no significant relationship with churn was also surprising (Table D1.0). As was the case with the proxy for civic engagement, this finding too may be the result of definitional limitations. For this study, economic diversity was measured by the total self-employed in a community. This approach was taken in recognition of the consensus found in the literature that new migrants tend to be more highly educated, more affluent, and more



entrepreneurial, thus more likely to start small business ventures that would diversify the economies of high churn communities. However, using this single proxy as a measure of economic diversity may be limiting because it does not account for small businesses that report having paid employees of any number (See introductory text describing methodology for US Census Non Employer Statistics 2000). This limitation may therefore have hidden the effects of intervening variables that must be teased out in order to more fully understand the effect of churn on this variable of interest.

#### *Academic performance*

While churn's lack of impact on the academic performance of 5<sup>th</sup> grade students in math (Table D1.3) was contrary to the findings of its positive impact on academic performance in other grades, it was not entirely surprising in view of two things:

1. What the literature tells us about the disproportionate impact that childhood turbulence (Moore et al. 2000), family structure (single-parent, two-parent, and so on), and the type of school mobility (whether it is a strategic or reactive type move) can have on academic achievement (Rumberger 2003), especially so, one can infer, for students in the developmentally transitional middle school years (*See the section in this report entitled, Social Capital: The Educational Benefits of Churn*).
2. The fact that per capita income (-.396) was the single best predictor of academic performance at this grade level after controlling for the other socio-economic and demographic factors.

The finding that pecuniary advantage is the stronger predictor of school performance at this grade level indirectly lends additional support to Rumberger's (2003) and Moore's et al. (2000) hypotheses about the impact that turbulence, family structure, and mobility type can have on the academic performance of public school students. This is so because it suggests that if community churn is characterized by increases in personal wages (especially salient for single-parent families, who Rumberger found was disproportionately represented among highly mobile students, and who are more likely to benefit from increases in personal wage incomes), it is likely to be experienced as a strategic move. Hence, such churn is likely to have no impact on student achievement, at this grade level, compared to the overwhelmingly powerful salutary impact that their improved economic status would likely have on their school performance. This of course assumes that these pecuniary benefits are not accompanied by increased childhood turbulence, such as from divorce or other adverse changes that can disrupt the family life of these students, who are at key developmental ages for school performance.

#### *High school graduates*

As Table D1.1 shows, similar with the academic performance of 5<sup>th</sup> grade public students, it is per capita income (.279), not churn, that is the best predictor of the rates of high school graduates to be found among a community's adult population. And, predictably for Florida communities, the second best predictor is performance on the reading section of the state's standardized 10<sup>th</sup> grade FCAT exam (-.275). The impact that failing this exam has on the rate of high school graduates found among community adults is predictable because Florida State currently mandates that students with failing FCAT scores at this grade level,

cannot be awarded high school diplomas unless they pass the exam on subsequent attempts. However, the stronger impact that failing to pass the reading section is seen to exert, compared to the apparently benign effect of failing the math section, may be attributed to the relative importance Americans give to reading literacy compared to math literacy.

## CONCLUSION

By providing empirical evidence that churn can indeed have both salutary and negative effects on a community, the findings of this study demonstrate that, as might be expected, the effects of churn on a community are complex. However, notwithstanding this acknowledged complexity, the study finds that, overall, high churn may have more social capital benefits to offer communities than the dire mass society consequences more commonly attributed to it.

For example, contrary to the mass society expectation that high churn generally puts modern day communities at risk due to its pooring and uprooting potential, this research suggests that churn can strengthen communities. In fact, with the exception of the negative relationship that was found between high churn and political activism, high churn seems to offer benefits that have the potential to grow, invigorate, and sustain communities. These are:

- Improved academic performance in the key areas of math and reading on the part of public school students
- Lower rates of poverty, especially if per capita income keeps pace.
- Higher quality human capital skills, which form the basis for building and sustaining local economies.

As one of the first studies to examine, empirically, the effects of churn on communities, the results of this study offers stakeholders, in high churn communities like Central Florida, insight into this important indicator of community health. For these stakeholders, this study's biggest contribution is that it provides empirical evidence to debunk the prevailing view that the high churn experienced by this community, and others

like it, is one of the biggest threats to its continued viability. To the contrary, the evidence suggests that Central Florida stakeholders may be able to manipulate this feature of its community for immediate benefit by re-shifting urban planning priorities. Rather than continuing to focus on containing churn, planning efforts may be more productively directed at encouraging the development of amenities that attract and support the lifestyles enjoyed by highly educated and highly skilled migrants, and that will allow Central Florida to make full use of the high quality human capital that churn deposits into its communities each year.

Additionally, since this study of churn effects is among the first basic research in this neglected substantive area of research, it will also contribute to filling the gap in the migration literature for studies on the effects of churn, or population turnover, on communities. The findings suggest that there is yet much to learn. For example, the limitations of the data and the data set used for this study did not permit more sophisticated study of the impact of intra and inter-county churn, as compared to interstate churn, so this study could not look at the differential impact of various types of churn on communities. Yet, there are indications that studies on the differential effects of different types of churn on communities have the potential to reveal rich theoretical and practical insights that can markedly improve our understanding of churn, and the mechanisms by which it produces various community effects.

Future studies, therefore, should explore some of the questions that were beyond the scope of this study:

1. Is there a time dimension to the effects of churn that will determine whether some of the benefits found in this study are negated over time?

2. Are there intervening variables that interact with churn rate or type of churn to produce certain effects, such as indicated by the indirect support found for Rumberger's finding that the type of churn may more significantly impact school performance than churn rate or other socio-economic factors alone?
3. What are, not only the consequences, but also the causes of churn—not at the individual level—as has already been established in the migration literature, but at the community and MSA- levels of analyses, and by churn-type?
4. What impact, if any, does churn or churn type have on other key community indicators, such as affordable housing, domestic violence, and healthcare costs—and who are the winners and losers of the social changes these other churn effects are likely to visit upon communities?

Further examination of these and similar questions aimed at the community and metropolitan statistical area-levels of analyses, are key areas for future research that this study suggests begs for the attention of future migration researchers.

APPENDIX A

ORDERED TABLES OF COUNTY CHURN RATES FOR 2000

**Table A1****Alphabetical List of Counties with Churn Rates for 2000**

Alachua	0.16
Baker	0.12
Bay	0.2
Bradford	0.1
Brevard	0.25
Broward	0.13
Calhoun	0.09
Charlotte	0.19
Citrus	0.16
Clay	0.25
Collier	0.17
Columbia	0.14
Dade	0.07
De Sota	0.12
Dixie	0.14
Duval	0.16
Escambia	0.22
Flagler	0.23
Franklin	0.11
Gadsden	0.12
Gilchrist	0.14
Glades	0.2
Gulf	0.16
Hamilton	0.13
Hardee	0.13
Hendry	0.16
Hernando	0.16
Highlands	0.14
Hillsborough	0.15
Holmes	0.15
Indian River	0.15
Jackson	0.11
Jefferson	0.14
Lafayette	0.09
<b>Lake</b>	<b>0.19</b>
Lee	0.15



Leon	0.16
Levy	0.16
Liberty	0.1
Madison	0.09
Manatee	0.17
Marion	0.15
Martin	0.19
Monroe	0.25
Nassau	0.18
Okaloosa	0.26
Okeechobee	0.14
<b>Orange</b>	<b>0.19</b>
<b>Osceola</b>	<b>0.23</b>
Palm Beach	0.13
Pasco	0.17
Pinellas	0.14
Polk	0.13
Putnam	0.12
St. Johns	0.21
St. Lucie	0.18
<b>Santa Rosa</b>	<b>0.40</b>
Sarasota	0.14
<b>Seminole</b>	<b>0.17</b>
Sumter	0.16
Suwannee	0.14
Taylor	0.1
Union	0.1
Volusia	0.15
Wakulla	0.14
Walton	0.15
Washington	0.15

**Source:** Cashen (2002)

**Table A2**

**Churn Rates for 2000 in Ascending Order by County**

<b>Dade</b>	<b>0.07</b>
Calhoun	0.09
Lafayette	0.09
Madison	0.09
Bradford	0.1
Liberty	0.1
Taylor	0.1
Union	0.1
Franklin	0.11
Jackson	0.11
Baker	0.12
De Sota	0.12
Gadsden	0.12
Putnam	0.12
Broward	0.13
Hamilton	0.13
Hardee	0.13
Palm Beach	0.13
Polk	0.13
Columbia	0.14
Dixie	0.14
Gilchrist	0.14
Highlands	0.14
Jefferson	0.14
Okeechobee	0.14
Pinellas	0.14
Sarasota	0.14
Suwannee	0.14
Wakulla	0.14
Hillsborough	0.15
Holmes	0.15
Indian River	0.15
Lee	0.15
Marion	0.15
Volusia	0.15
Walton	0.15
Washington	0.15

Alachua	0.16
Citrus	0.16
Duval	0.16
Gulf	0.16
Hendry	0.16
Hernando	0.16
Leon	0.16
Levy	0.16
Sumter	0.16
Collier	0.17
Manatee	0.17
Pasco	0.17
<b>Seminole</b>	<b>0.17</b>
Nassau	0.18
St. Lucie	0.18
Charlotte	0.19
<b>Lake</b>	<b>0.19</b>
Martin	0.19
<b>Orange</b>	<b>0.19</b>
Bay	0.2
Glades	0.2
St. Johns	0.21
Escambia	0.22
Flagler	0.23
<b>Osceola</b>	<b>0.23</b>
Brevard	0.25
Clay	0.25
Monroe	0.25
Okaloosa	0.26
<b>Santa Rosa</b>	<b>0.40</b>

**Source:** Cashen (2002)

APPENDIX B  
CROSSTABULATION TABLES

## Tables Showing Positive & Linear Relationships With Churn

**Table B1**

### Percentage Distributions of Human Capital Skills Showing Positive and Linear Association with Churn

Human Capital Skills	Churn Levels			Total
	Low	Medium	High	
Low (N)	<b>63.2</b> (12)	25.9 (7)	4.8 (1)	29.9 (20)
Moderate (N)	21.1 (4)	<b>44.4</b> (12)	28.6 (6)	32.8 (22)
High (N)	15.8 (3)	29.6 (8)	<b>66.7</b> (14)	37.3 (25)
Total N=	100% 19	100% 27	100% 21	100% 67

**Table B2**

### Percentage Distributions of High School Grad Rate Showing Positive and Linear Association with Churn

High School Grad Rate	Churn Levels			Total
	Low	Medium	High	
Low (N)	<b>77.8</b> (14)	20.0 (5)	10.5 (2)	33.9 (21)
Moderate (N)	11.1 (2)	<b>44.0</b> (11)	10.5 (2)	24.2 (15)
High (N)	11.1 (2)	36.0 (9)	<b>78.9</b> (15)	41.9 (26)
Total N=	100% 18	100% 25	100% 19	100% 67

**Table B3**

**Percentage Distributions of Household Wages  
Showing Positive and Linear Association with Churn**

Household Wages	Churn Levels			Total
	Low	Medium	High	
Low (N)	<b>47.4</b> (9)	40.7 (11)	9.5 (2)	32.8 (22)
Moderate (N)	31.6 (6)	<b>37.0</b> (10)	28.6 (6)	32.8 (22)
High (N)	21.1 (4)	22.2 (6)	<b>61.9</b> (13)	34.3 (23)
Total N=	100% 19	100% 27	100% 21	100% 67

**Tables Showing Negative & Linear Relationships With Churn**

**Table B4**

**Percentage Distributions of Poverty  
Showing Negative and Linear Association with Churn**

Poverty	Churn Levels			Total
	Low	Medium	High	
Low (N)	21.1 (4)	22.2 (6)	<b>66.7</b> (14)	35.8 (24)
Moderate (N)	21.1 (4)	<b>51.9</b> (14)	23.8 (5)	34.3 (23)
High (N)	<b>57.9</b> (11)	25.9 (7)	9.5 (2)	29.9 (20)
Total N=	100% 19	100% 27	100% 21	100% 67

**Table B5****Percentage Distributions of 4<sup>th</sup> Grade Reading FCAT Failures Showing Negative and Linear Association with Churn**

4 <sup>th</sup> Grade Reading FCAT Reading Failures	Churn Levels			Total
	Low	Medium	High	
Low (N)	26.3 (5)	33.3 (9)	<b>47.6</b> (10)	35.8 (24)
Moderate (N)	15.8 (3)	<b>37.0</b> (10)	33.3 (7)	29.9 (20)
High (N)	<b>57.9</b> (11)	29.6 (8)	19.0 (4)	34.3 (23)
Total N=	100% 19	100% 27	100% 21	100% 67

*Note:* Low FCAT failures represent high academic achievement; high FCAT failures represent low academic achievement.

**Table B6****Percentage Distributions of 5<sup>th</sup> Grade Math FCAT Failures Showing Negative and Linear Association with Churn**

5 <sup>th</sup> Grade Math FCAT Failures	Churn Levels			Total
	Low	Medium	High	
Low (N)	15.8 (3)	25.9 (7)	<b>52.4</b> (11)	31.3 (21)
Moderate (N)	31.6 (6)	<b>44.4</b> (12)	28.6 (6)	35.8 (24)
High (N)	<b>52.6</b> (10)	29.6 (8)	19.0 (4)	32.8 (22)
Total N=	100% 19	100% 27	100% 21	100% 67

*Note:* Low FCAT failures represent high academic achievement; high FCAT failures represent low academic achievement.

**Table B7****Percentage Distributions of 8<sup>th</sup> Grade Math FCAT Failures Showing Negative and Linear Association with Churn**

8 <sup>th</sup> Grade Math FCAT Failures	Churn Levels			Total
	Low	Medium	High	
Low (N)	10.5 (2)	22.2 (6)	<b>47.6</b> (10)	26.9 (18)
Moderate (N)	36.8 (7)	<b>48.1</b> (13)	28.6 (6)	38.8 (26)
High (N)	<b>52.6</b> (10)	29.6 (8)	23.8 (5)	34.3 (23)
Total N=	100% 19	100% 27	100% 21	100% 67

*Note:* Low FCAT failures represent high academic achievement; high FCAT failures represent low academic achievement.

**Tables Showing Non-Linear Relationships With Churn****Table B8****Percentage Distributions of Personal Wages Showing Non-Linear Association with Churn**

Personal Wages	Churn Levels			Total
	Low	Medium	High	
Low (N)	63.2 (12)	37.0 (10)		32.8 (22)
Moderate (N)	26.3 (5)	37.0 (10)	<b>38.1</b> (8)	34.3 (23)
High (N)	10.5 (2)	25.9 (7)	<b>61.9</b> (13)	32.8 (22)
Total N=	100% 19	100% 27	100% 21	100% 67

**Table B9**

**Percentage Distributions of Civic Engagement  
Showing Non-Linear Association with Churn**

<b>Civic Engagement</b>	<b>Churn Levels</b>			<b>Total</b>
	<b>Low</b>	<b>Medium</b>	<b>High</b>	
Low (N)	21.1 (4)	<b>33.3</b> (9)	52.4 (11)	35.8 (24)
Moderate (N)	31.6 (6)	<b>29.6</b> (8)	42.9 (9)	34.3 (23)
High (N)	<b>47.4</b> (9)	<b>37.0</b> (10)	<b>4.8</b> (1)	29.9 (20)
Total N=	100% 19	100% 27	100% 21	100% 67

**Table B10**

**Percentage Distributions of Political Activism  
Showing Non-Linear Association with Churn**

<b>Political Activism</b>	<b>Churn Levels</b>			<b>Total</b>
	<b>Low</b>	<b>Medium</b>	<b>High</b>	
Low (N)	15.8 (3)	<b>29.6</b> (8)	52.4 (11)	32.8 (22)
Moderate (N)	15.8 (3)	<b>37.0</b> (10)	42.9 (9)	32.8 (22)
High (N)	<b>68.4</b> (13)	<b>33.3</b> (9)	<b>4.8</b> (1)	34.3 (23)
Total N=	100% 19	100% 27	100% 21	100% 67



**Table B11**

**Percentage Distributions of Economic Diversity  
Showing Non-Linear Association with Churn**

<b>Economic Diversity</b>	<b>Churn Levels</b>			<b>Total</b>
	<b>Low</b>	<b>Medium</b>	<b>High</b>	
Low (N)	68.4 (13)	<b>29.6</b> (8)	<b>4.8</b> (1)	32.8 (22)
Moderate (N)	10.5 (2)	<b>37.0</b> (10)	<b>47.6</b> (10)	32.8 (22)
High (N)	21.1 (4)	<b>33.3</b> (9)	<b>47.6</b> (10)	34.3 (23)
Total N=	100% 19	100% 27	100% 21	100% 67

**Table B12**

**Percentage Distributions of 8<sup>th</sup> Grade Reading FCAT Failures  
Showing Non-Linear Association with Churn**

<b>8<sup>th</sup> Grade Reading FCAT Failures</b>	<b>Churn Levels</b>			<b>Total</b>
	<b>Low</b>	<b>Medium</b>	<b>High</b>	
Low (N)	5.3 (1)	29.6 (8)	<b>47.6</b> (10)	28.4 (19)
Moderate (N)	36.8 (7)	33.3 (9)	<b>38.1</b> (8)	35.8 (24)
High (N)	<b>57.9</b> (11)	37.0 (10)	14.3 (3)	35.8 (24)
Total N=	100% 19	100% 27	100% 21	100% 67

*Note:* Low FCAT failures represent high academic achievement; high FCAT failures represent low academic achievement.

**Table B13****Percentage Distributions of 10<sup>th</sup> Grade Math FCAT Failures Showing Non-Linear Association with Churn**

10 <sup>th</sup> Grade Math FCAT Failures	Churn Levels			Total
	Low	Medium	High	
Low (N)	5.3 (1)	29.6 (8)	<b>52.4</b> (11)	29.9 (20)
Moderate (N)	21.1 (4)	37.0 (10)	<b>38.1</b> (8)	32.8 (22)
High (N)	<b>73.7</b> (14)	33.3 (9)	9.5 (2)	37.3 (25)
Total N=	100% 19	100% 27	100% 21	100% 67

*Note:* Low FCAT failures represent high academic achievement; high FCAT failures represent low academic achievement.

**Table B14****Percentage Distributions of 10<sup>th</sup> Grade Reading FCAT Failures Showing Non-Linear Association with Churn**

10 <sup>th</sup> Grade Reading FCAT Failures	Churn Levels			Total
	Low	Medium	High	
Low (N)	5.3 (1)	40.7 (11)	<b>47.6</b> (10)	32.8 (22)
Moderate (N)	26.3 (5)	29.6 (8)	<b>42.9</b> (9)	32.8 (22)
High (N)	<b>68.4</b> (13)	29.6 (8)	9.5 (2)	34.3 (23)
Total N=	100% 19	100% 27	100% 21	100% 67

*Note:* Low FCAT failures represent high academic achievement; high FCAT failures represent low academic achievement.

**Tables Showing No Relationships With Churn**

**Table B15**

**Percentage Distributions of Psychological Distress  
Showing No Association with Churn**

<b>Psychological Distress</b>	<b>Churn Levels</b>			<b>Total</b>
	<b>Low</b>	<b>Medium</b>	<b>High</b>	
Low (N)	52.6 (10)	18.5 (5)	42.9 (9)	35.8 (24)
Moderate (N)	26.3 (5)	33.3 (9)	42.9 (9)	34.3 (23)
High (N)	21.1 (4)	48.1 (13)	14.3 (3)	29.9 (20)
Total N=	100% 19	100% 27	100% 21	100% 67

## APPENDIX C

### TABLES OF BI-VARIATE CORRELATIONS

**Table C1**

**Zero-Order Correlations between Churn and Variables when Not Re-coded**

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<b>Correlation Coefficients for Churn and Various Community-level Indicators</b>	
Gr 10 FCAT Math Failures	<b>-.461**</b>
Political Activism	<b>-.437**</b>
Gr 8 Reading FCAT Failures	<b>-.429**</b>
Gr 10 Reading FCAT Failures	<b>-.428**</b>
Poverty	<b>-.425**</b>
Gr 8 Math FCAT Failures	<b>-.418**</b>
Gr 5 Math FCAT Failures	<b>-.354**</b>
Gr 4 Reading FCAT Failures	<b>-.296*</b>
Civic Engagement	<b>-.291*</b>
Economic Diversity	-.134
Psych Distress	.042
Human Capital Skills	<b>.326**</b>
HS Graduates	<b>.343**</b>
HH Wages	<b>.411**</b>
Personal Wages	<b>.425**</b>

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\*Correlation is significant at the .01 level (2-tailed)

\*\*Correlation is significant at the .05 level (2-tailed)

*Note:* Low FCAT failures represent high academic achievement; high FCAT failures represent low academic achievement.

APPENDIX D  
MULTIPLE REGRESSION TABLES

**Table D1.0**

**Table of Churn Effects Regressed on Various Social, Psychological, Economic, and Demographic Factors**

<b>Dependent Variables=</b>	<b>Political Activism</b>	<b>Poverty</b>	<b>Civic Engagement</b>	<b>Economic Diversity</b>
Constant	50.571	22.766	15.448	-1.499E-03
R <sup>2</sup>	.638	.298	.315	.966
R <sup>2</sup> adjusted	.609	.276	.294	.965
<b>Churn (Bi-Variate)</b>	<b>-.437**</b> -129.451*** (33.026)	<b>-.425**</b> 37.683*** (9.956)	<b>-.291*</b> -13.392*** (5.460)	<b>-.134</b> -7.868E-02*** (.072)
<b>Churn (Multiple)</b>	<b>-.323*</b> -95.657*** (25.838)	<b>-.264*</b> -23.401*** (10.258)	-----	-----
Over 65	<b>-.273*</b> -34.606*** (9.814)	-----	-----	-----
Under 18	-----	-----	-----	-----
Total Population	<b>-1.387*</b> -5.242E-05*** ((0.00)	-----	-----	<b>.636*</b> 4.756E-08*** (.000)
Military Bases	-----	-----	-----	-----
Bachelor Degree or above	-----	-----	<b>-.459*</b> -9.502*** (2.156)	-----
High School Graduate	-----	-----	<b>-.384*</b> -7.509*** (2.040)	-----
Median HH Income	-----	-----	-----	-----
Per Capita Income	-----	<b>-.379*</b> -2.650E-04*** (.000)	-----	-----
Poverty	<b>.271*</b> .904*** (.292)	-----	-----	-----
Psychological Distress	-----	-----	-----	-----
Crime	-----	-----	-----	<b>.353*</b> 3.841E-04*** (.000)
Domestic Violence	-----	-----	-----	-----
Economic Diversity	<b>.948*</b> 479.134*** (199.599)	-----	-----	-----
Housing Stability	-----	-----	-----	-----
Civic Engagement	-----	-----	-----	-----

Political Activism	----	----	----	----
Academic Achievement	----	----	----	----

*Note:* Values used are standard  $\beta$  regression coefficients; Numbers in parentheses are standard errors  
*Note:* Low FCAT failures represent high academic achievement; high FCAT failures represent low academic achievement.

\*P $\leq$ .05      \*\*P=.01      \*\*\*Unstandardized regression coefficients

**Table D1.1**

**Regression of Churn Effects Regressed on Social, Economic, and Demographic Factors**

	Psychological Distress	Human Capital Skills	High School Graduates	Household Wages
Constant	5.341	.528	.788	24895.77
R <sup>2</sup>	.437	.652	.219	.343
R <sup>2</sup> adjusted	.401	.604	.195	.323
<b>Churn (Bi-Variate)</b>	<b>.042</b> 6.362*** (18.618)	<b>.326**</b> .726*** (.261)	<b>.343**</b> .806*** (.274)	<b>.411**</b> 51525.24*** (14165.782)
<b>Churn (Multiple)</b>	-----	<b>.300*</b> .668*** (.213)	-----	.188 ----- -----
Over 65	-----	<b>.234*</b> .223*** (.078)	-----	----- ----- -----
Under 18	-----	-----	-----	-----
Total Population	-----	<b>.322*</b> 9.162E-08*** (.000)	-----	----- ----- -----
Military Bases	-----	-----	-----	-----
Bachelor Degree or above	-----	-----	-----	<b>.237*</b> 13353.88*** (6585.37)
High School Graduate	-----	<b>-.689*</b> -.652*** (.091)	-----	----- ----- -----
Median HH Income	-----	-----	-----	-----
Per Capita Income	-----	<b>.418*</b> 7.334E-06*** (.000)	<b>.279*</b> 5.166E-06*** (.000)	<b>.430*</b> .425*** (.116)
Poverty	-----	-----	-----	-----
Psychological Distress	-----	-----	-----	-----



Crime	----	----	----	----
Domestic Violence	----	----	----	----
Economic Diversity	----	----	----	----
Housing Stability	----	----	----	----
Civic Engagement	----	----	----	----
Political Activism	----	----	----	----
Gr 10 FCAT	<b>.942*</b>	<b>-.576*</b>	<b>-.275*</b>	----
Reading Failures	.831*** (.166)	-7.527E-03*** (.002)	-3.794E-03*** (.002)	----
Gr 10 FCAT	<b>-.594*</b>	<b>.526*</b>	----	----
Math Failures	-.563*** (.206)	7.388E-03*** (.003)	----	----
Gr 8 FCAT	<b>-.683*</b>	<b>-.247*</b>	----	----
Reading Failures	-.537*** (.119)	-2.875E-03*** (.001)	----	----
Gr8 FCAT	----	----	----	----
Math Failures	----	----	----	----
Gr5 FCAT	<b>.501*</b>	----	----	----
Math Failures	.421*** (.117)	----	----	----
Gr4 FCAT	----	----	----	----
Reading Failures	----	----	----	----

Note: Values used are standard  $\beta$  regression coefficients; Numbers in parentheses are standard errors  
Note: Low FCAT failures represent high academic achievement; high FCAT failures represent low academic achievement.

\*P $\leq$ .05      \*\*P=.01      \*\*\*Unstandardized regression coefficients

**Table D1.2**

**Regression of Churn Effects Regressed on Social, Economic, and Demographic Factors**

	Personal Wages	Gr 10 FCAT Math Failures	Gr 10 FCAT Reading Failures	Gr 8 FCAT Reading Failures
Constant	2565.01	40.437	46.241	48.450
R <sup>2</sup>	.504	.284	.329	.245
R <sup>2</sup> adjusted	.480	.262	.297	.221
<b>Churn</b>	<b>.425**</b>	<b>-.461**</b>	<b>-.428**</b>	<b>-.429**</b>
(Bi-Variate)	53887.22*** (14235.49)	-73.047*** (17.441)	-72.960*** (19.083)	-82.034*** (21.395)
<b>Churn (Multiple)</b>	----	<b>-.335*</b>	<b>-.330*</b>	<b>-.314*</b>
	----	-53.129*** (18.513)	-56.155*** (19.521)	-59.958*** (22.918)

Over 65	----	----	----	----
Under 18	----	----	----	----
Total Population	----	----	----	----
Military Bases	----	----	----	----
Bachelor Degree or above	<b>.462*</b> 26321.31*** (5623.68)	----	----	----
High School Graduate	<b>.406*</b> 21873.39*** (5028.56)	----	----	----
Median HH Income	----	----	----	----
Per Capita Income	----	<b>-.296*</b> -3.696E-04*** (.000)	<b>-.259*</b> -3.476E-04*** (.000)	<b>-.272*</b> -4.097E-04*** (.000)
Poverty	<b>-.228*</b> -325.84*** (143.29)	----	----	----
Psychological Distress	----	----	<b>.267*</b> .303*** (.118)	----
Crime	----	----	----	----
Domestic Violence Rate	----	----	----	----
Economic Diversity	----	----	----	----
Housing Stability	----	----	----	----
Civic Engagement	----	----	----	----
Political Activism	----	----	----	----
Academic Achievement	----	----	----	----

*Note:* Values used are standard  $\beta$  regression coefficients; Numbers in parentheses are standard errors

*Note:* Low FCAT failures represent high academic achievement; high FCAT failures represent low academic achievement.

\*P $\leq$ .05

\*\*P=.01

\*\*\*Unstandardized regression coefficients

**Table D1.3**

**Regression of Churn Effects Regressed on Social, Economic, and Demographic Factors**

	<b>Gr 8 FCAT Math Failures</b>	<b>Gr 5 FCAT Math Failures</b>	<b>Gr 4 FCAT Reading Failures</b>
Constant	43.377	36.749	37.257
R <sup>2</sup>	.224	.157	.088
R <sup>2</sup> adjusted	.200	.144	.074
<b>Churn (Bi-Variate)</b>	<b>-.418**</b> -74.725*** (20.131)	<b>-.354**</b> -63.224*** (20.732)	<b>-.296*</b> -49.432*** (19.767)
<b>Churn (Multiple)</b>	<b>-.314*</b> -56.161*** (21.737)	-----	<b>-.296*</b> -49.432*** (19.767)
Over 65	-----	-----	-----
Under 18	-----	-----	-----
Total Population	-----	-----	-----
Military Bases	-----	-----	-----
Bachelor Degree or above High School Graduate	-----	-----	-----
Median HH Income	-----	-----	-----
Per Capita Income	<b>-.244*</b> -3.445E-04*** (.000)	<b>-.396*</b> -5.579E-04*** (.000)	-----
Poverty	-----	-----	-----
Psychological Distress	-----	-----	-----
Crime	-----	-----	-----
Domestic Violence	-----	-----	-----
Rate Economic Diversity	-----	-----	-----
Housing Stability	-----	-----	-----
Civic Engagement	-----	-----	-----
Political Activism	-----	-----	-----
Academic Achievement	-----	-----	-----

*Note:* Values used are standard  $\beta$  regression coefficients; Numbers in parentheses are standard errors

*Note:* Low FCAT failures represent high academic achievement; high FCAT failures represent low academic achievement.

\*P $\leq$ .05

\*\*P=.01

\*\*\*Unstandardized regression coefficients

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