

**Upward Mobility by Los Angeles Immigrants:
Was Progress Accelerated in the 1990s Relative to the 1980s?**

by

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INTRODUCTION

There have been significant changes in the immigrant communities of Los Angeles and California as discussed in Report 1 and Report 2 of the project on “Dynamics of Immigrant Settlement in Los Angeles: Upward Mobility, Arrival, and Exodus”. Immigration trends observed in the 1970s and 1980s did not continue through the 1990s. Report 1 showed that overall there were indications of encouraging progress by immigrants which signified a turnaround for the immigrant population in California. Secondly, Report 2 described a slowdown of new immigrant growth and there was also a rapid exodus of longer settled immigrants.

For the immigrants who have stayed in Los Angeles, how great was their upward mobility in the 1990s? Relative to the native-born, did immigrants fare as well, or better, in the 1990s than in the 1980s? And what does this imply about their likely trajectories for the decade that lies ahead?

The first project report only addressed summary indicators of immigrant progress. Although some of the signs are decidedly mixed, an examination of multiple indicators, such as educational attainment, poverty and homeownership levels, suggests that the foreign born are increasingly better off than in past decades. However, the second project report revealed substantial changes in the flow of immigrants in and out of both Los Angeles and the state as a whole. This created a recomposition of the foreign-born population that included relatively fewer newcomers and more long-settled immigrants. Given the generally higher socioeconomic status of those that have lived here longer, this could explain why the summary indicators shown in Report 1 were so favorable. Even if the long settled immigrants failed to make as much progress as those in earlier decades, their greater numbers than those of newcomers could skew the summary indicators toward more favorable readings.

This report tracks the progress of immigrants in different decades more specifically. We aim to determine if immigrants at similar stages of settlement made as strong an upward socioeconomic advancement in the 1990s as found previously for the 1980s. This requires that we track the progress of newcomers from previous decades as they reside longer in the U.S. We need to verify that in fact the longer settled immigrants are advancing more quickly and not that they have simply become more numerous than the newcomers. A Components of Change methodology will be employed to specifically address whether progress was more due to composition shifts in the immigrant population or to advancements made by previous arrivals who are settling in.

Yet there is one nagging question that remains: What if the apparent gains in progress are due to selective outmigration? In other words, could the observed gains in progress for longer settled immigrants simply be due to greater outmigration of lower status cohort members in the 1990s than the 1980s? To address this concern, the latter part of this report presents multivariate logistic regression models with controls to determine whether immigrants are in fact improving their socioeconomic status over time or if better-off immigrants are more likely to stay in the region while worse-off immigrants are leaving.

SUMMARY OF PROGRESS OVER TIME

In this section we first review the overall changes in poverty status and homeownership of the immigrant population in 1980, 1990, and 2000. Secondly, it compares the socioeconomic status of recent newcomers (those who arrived in the 1990s as measured in 2000) to the newcomers of the past (those who arrived in the 1980s as measured in 1990 and those who arrived in the 1970s as measured in 1980). Next, we consider the progress made over time by each immigrant arrival cohort as it resided in the U.S. for a longer period of time.

We then briefly summarize and track the number of immigrants of each immigrant arrival cohort to gauge whether there have been substantial changes to the size of the cohort. Substantial fluctuations in the number of immigrants may be an indication of sizeable migration in or out of the region which can influence overall socioeconomic status measurements. Lastly, the Components of Change method decomposes the net gains of the decade into separate contributing effects: progress of existing cohorts, improved status of newly arrived cohorts, or a shift in the relative numbers of longer settled versus newly arrived cohorts.

Beyond the overall changes observed for the immigrant population, changes in poverty and homeownership rates over time are also analyzed within immigrant arrival cohorts. This approach allows for the measurement of the status of immigrant arrival cohorts at first observation (initial duration or arrival cohort), followed by changes as each cohort resides in the U.S. longer (growing duration between decades, signifying an assimilation effect). A question on immigrants' year of arrival in the U.S. was asked in censuses of 1970 through 2000 and that is how each immigrant is assigned to an immigrant arrival cohort¹. The distinguishing of various immigrant arrival cohorts helps to control for period effects (changes that are due to various economy effects), possible variations in social and economic capital for certain groups, and the possible variations in the contexts of arrival.

¹ Questions about the accuracy of the resultant data, expressed by a few scholars, prompted a detailed review of the data accuracy (Myers 2004). There is possible confusion over the meaning of “come to the United States to stay” or “to live” (in Census 2000). Unlike migrants from Cuba, for example, Mexican immigrants may come and go a number of times. Also, there is evidence of inconsistency between responses to different questions in the census. Nonetheless, the Census Bureau's own data quality checks show that the year of arrival question has a “low” amount of inconsistency (Singer and Ennis 2003), less than for many other socioeconomic variables (such as education or English speaking ability). A test of external validity also shows that the responses from the year of arrival question are generally consistent for cohorts traced across three census decades (Myers 2004). On the whole, the information derived from the census question on year of arrival appears to be sufficiently unbiased to permit reliable interpretations.

A. Poverty

The poverty of immigrants is one of the major concerns among both immigrant advocates and restrictionists alike. Thus any changes over time in the incidence of poverty are extremely significant.

1. Net Changes in Poverty Rates from Previous Decade

The immigrant population in California experienced an overall increase in its poverty rate each decade from 1970 to 1990. However, after 1990, for the first time since the Post-1965 immigration wave, the poverty rate for immigrants decreased from 19.4% in 1990 to 18.8% in 2000 (see Exhibit 1). This decline in the overall poverty rate was observed not only for the total immigrant population but also for Latino and Asian immigrants, although the decline was more considerable for Asian immigrants (from 15.9% in 1990 to 12.9% in 2000, as seen in Exhibit 2).

This improvement in poverty is due to two major factors. First, the newest immigrants in 2000 have arrived with lower poverty than did newcomers in 1990. The newcomers in 2000 had a poverty rate of 26.2%, slightly lower than for the newcomers in 1980 (27.0%). A similar pattern is seen among Asian immigrants, but the same does not hold true with Latino newcomers. (The newest Latino immigrants arrived with a 32.0% poverty rate in 2000, which is slightly higher than the new arrivals in 1990 — 31.6%.)

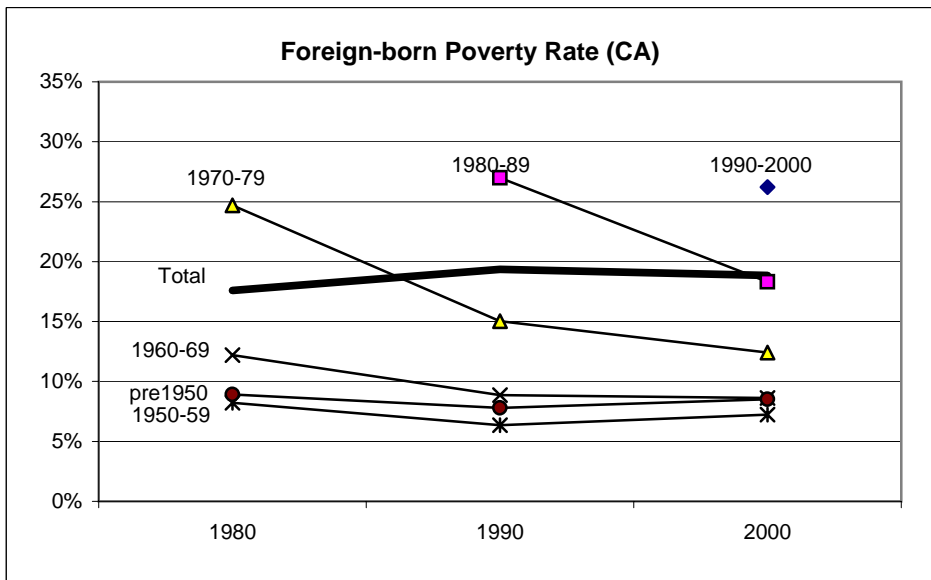
The second contributing factor in the improving poverty rate is the decline in poverty over the decade that was experienced for every arrival cohort that was already resident. For example, the 1970s' arrivals had a poverty rate of 24.7% in 1980. After another decade of residence in the U.S., their poverty rate declined rapidly, reaching 15.0% in 1990 and 12.4% in 2000. Similarly, immigrant arrivals in the 1980s also experienced a rapid decline in their poverty rate, improving from 27.3% in 1990 to 19.4% in 2000. We note that their improvement was not quite as steep in their first full decade of residence as for the previous arrival group. Again, similar patterns are seen when poverty rates are broken out for Latinos and Asians, except that Asian immigrants start with much lower poverty and experience a much more rapid decline of poverty over time than do Latino immigrants (see Exhibit 2).

Patterns observed for California are much more definitive than those for the Los Angeles region² (see Exhibit 3). Although the poverty rate of the region does not actually decline from 1990 to 2000 (it still increases by only 1/10 of a percentage point), it has certainly ceased to deteriorate in the same way it did from 1980 to 1990 (worsening from 18.7% to 20.1% poverty). Although a sharp turnaround in poverty is not observed for the total

² The Los Angeles region includes the six counties of Los Angeles, Orange, Riverside, Imperial, San Bernardino, and Ventura.

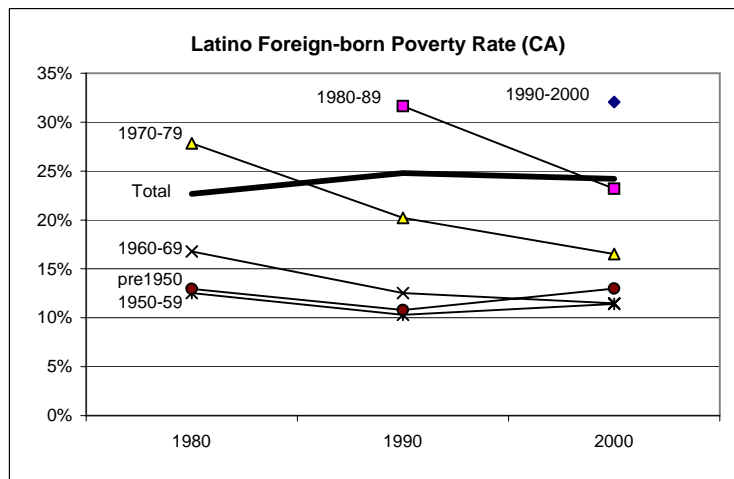
Exhibit 1. Poverty Rate of Immigrants By Arrival Cohort in California

| Year of Arrival | 1980 | 1990 | 2000 |
|-----------------|--------------|--------------|--------------|
| 1990-00 | | | 26.2% |
| 1980-89 | | 27.0% | 18.3% |
| 1970-79 | 24.7% | 15.0% | 12.4% |
| 1960-69 | 12.2% | 8.9% | 8.6% |
| 1950-59 | 8.2% | 6.3% | 7.2% |
| pre1950 | 8.9% | 7.8% | 8.5% |
| Total | 17.6% | 19.4% | 18.8% |

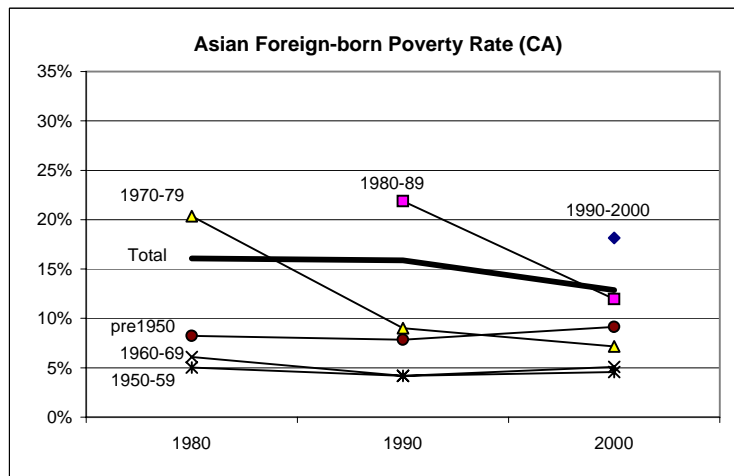


**Exhibit 2. Poverty Rate of Latino and Asian Immigrants
By Arrival Cohort in California**

| Year of Arrival | Latinos | | |
|-----------------|--------------|--------------|--------------|
| | 1980 | 1990 | 2000 |
| 1990-00 | | | 32.0% |
| 1980-89 | | 31.6% | 23.2% |
| 1970-79 | 27.8% | 20.2% | 16.5% |
| 1960-69 | 16.8% | 12.5% | 11.5% |
| 1950-59 | 12.5% | 10.3% | 11.4% |
| pre1950 | 12.9% | 10.8% | 13.0% |
| Total | 22.7% | 24.8% | 24.2% |

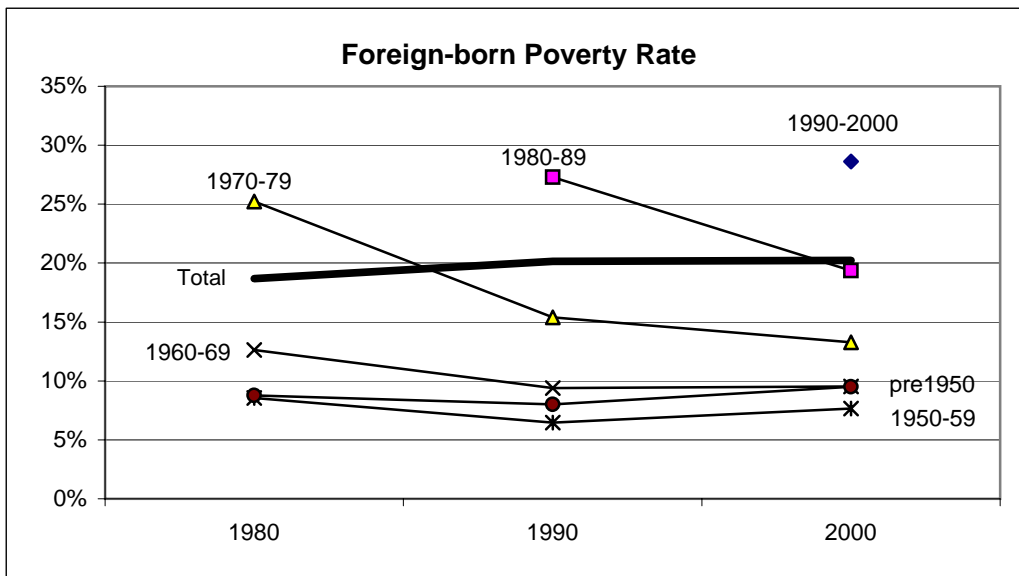


| Year of Arrival | Asians | | |
|-----------------|--------------|--------------|--------------|
| | 1980 | 1990 | 2000 |
| 1990-00 | | | 18.2% |
| 1980-89 | | 21.9% | 12.0% |
| 1970-79 | 20.3% | 9.0% | 7.2% |
| 1960-69 | 6.1% | 4.2% | 5.1% |
| 1950-59 | 5.0% | 4.2% | 4.6% |
| pre1950 | 8.2% | 7.8% | 9.1% |
| Total | 16.1% | 15.9% | 12.9% |



**Exhibit 3. Poverty Rate of Immigrants By Arrival Cohorts
in the Los Angeles Region**

| Year of Arrival | 1980 | 1990 | 2000 |
|-----------------|--------------|--------------|--------------|
| 1990-00 | | | 28.6% |
| 1980-89 | | 27.3% | 19.4% |
| 1970-79 | 25.2% | 15.4% | 13.3% |
| 1960-69 | 12.6% | 9.4% | 9.5% |
| 1950-59 | 8.5% | 6.5% | 7.7% |
| pre1950 | 8.8% | 8.0% | 9.5% |
| Total | 18.7% | 20.1% | 20.2% |



immigrant population, that can be seen once it is broken out separately for Latino and Asian immigrants (see Exhibit 4).³

In addition, the newcomers to the region in 2000 came in with higher poverty (28.6%) than the newcomers of previous decades (25.2% in 1980 and 27.3% in 1990). This is also true for Latino and Asian immigrants. However, just as observed for California as a whole, the established immigrant cohorts in the region did experience rapid improvements in poverty as they lengthened their stay in the U.S.

2. The Changing Number of Immigrants of Each Arrival Decade

The improvements in poverty status may have been due to extreme changes in the number of immigrants in California. Exhibit 5 shows the total number of immigrants and then tracks the number of immigrants who arrived during a specific decade from 1980 to 2000. In California, the number of total immigrants has grown from 3.5 million in 1980 to 6.6 million in 1990 to 9.1 million in 2000. The number of newcomers almost doubled from 1980 to 1990 but the number of newcomers stayed relatively constant from 1990 to 2000. The most noteworthy difference from the 1980s to the 1990s is that newcomers no longer make up half of the total immigrant population. In 2000, newcomers make up a little over one-third of the immigrant population. This compositional shift away from a dominating presence of the newest arrivals creates an opportunity for socioeconomic progress to be revealed for the immigrant population as a whole.

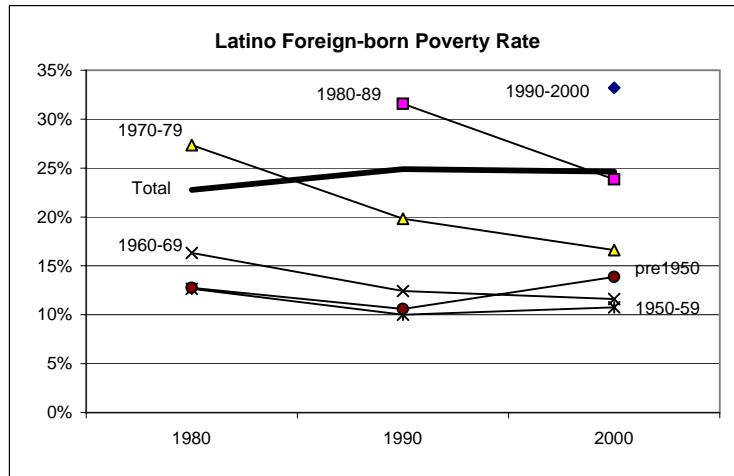
The net number of immigrants in each decade of arrival stays relatively constant with a general trend of becoming slightly smaller over time. This shrinking of the immigrant arrival cohorts is the most noticeable for the longest settled immigrants (those arriving before 1950) and immigrants who arrived in the 1980s. In 1980, those who arrived before 1950 number a little over half a million people in California and these immigrants have already been in the U.S. for over 30 years. By 2000, their number shrank to less than a third of its size twenty years prior. This is less likely due to out migration than to mortality, since by 2000 it has been at least 50 years since they have arrived in the U.S. The more noteworthy decline has been the decrease of approximately 0.4 million 1980s arrivals from 1990 to 2000. This signifies a net out-migration of newcomers out of California as their duration in the U.S. increases. However, it is also important to point out that the decrease is still only 11.9% of the cohort over the course of the decade.

The same slowdown in total new immigration to California is also seen for Latino and Asian immigrants with the decline in Asian newcomers in 2000 especially prominent. Again, we see that the largest declines in cohort size over time are with the immigrants who arrived in the 1980s, especially for Asians who experienced a 16.0% decline.

³ The reason that the two major subgroups both showed improvement while the total did not may be attributed to the growing weight of Latinos among the total, which weighted their higher poverty rates more heavily in the 2000 total than in 1990. Also, white and black immigrants (about 15% of all foreign born in California) are also included in the total and could affect the overall trend.

**Exhibit 4. Poverty Rate of Latino and Asian Immigrants
By Arrival Cohort in the Los Angeles Region**

| Year of Arrival | Latinos | | |
|-----------------|---------|-------|-------|
| | 1980 | 1990 | 2000 |
| 1990-00 | | | 33.2% |
| 1980-89 | | 31.6% | 23.8% |
| 1970-79 | 27.3% | 19.8% | 16.6% |
| 1960-69 | 16.3% | 12.4% | 11.6% |
| 1950-59 | 12.7% | 10.0% | 10.8% |
| pre1950 | 12.7% | 10.6% | 13.9% |
| Total | 22.8% | 24.9% | 24.6% |



| Year of Arrival | Asians | | |
|-----------------|--------|-------|-------|
| | 1980 | 1990 | 2000 |
| 1990-00 | | | 20.2% |
| 1980-89 | | 19.9% | 11.4% |
| 1970-79 | 20.5% | 8.4% | 7.4% |
| 1960-69 | 5.9% | 4.3% | 5.1% |
| 1950-59 | 5.6% | 3.1% | 5.0% |
| pre1950 | 7.7% | 6.6% | 11.8% |
| Total | 17.0% | 14.8% | 13.4% |

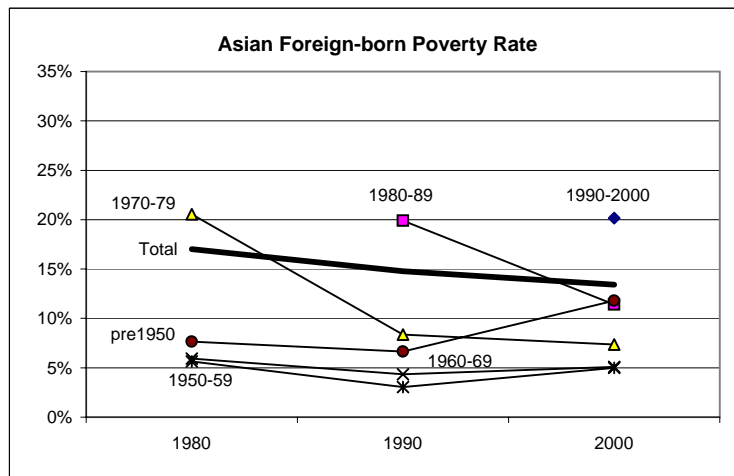


Exhibit 5. Population Size By Arrival Cohort, California

| Year of Arrival | Total Immigrants | | |
|-----------------|------------------|------------------|------------------|
| | 1980 | 1990 | 2000 |
| 1990-00 | | | 3,352,689 |
| 1980-89 | | 3,301,691 | 2,907,474 |
| 1970-79 | 1,783,980 | 1,822,288 | 1,662,832 |
| 1960-69 | 794,560 | 804,141 | 685,350 |
| 1950-59 | 421,340 | 390,084 | 323,048 |
| pre1950 | 508,520 | 326,660 | 170,435 |
| Total | 3,508,400 | 6,644,864 | 9,101,828 |

| Year of Arrival | Latino Immigrants | | |
|-----------------|-------------------|------------------|------------------|
| | 1980 | 1990 | 2000 |
| 1990-00 | | | 1,857,634 |
| 1980-89 | | 1,804,874 | 1,623,317 |
| 1970-79 | 973,940 | 999,140 | 896,686 |
| 1960-69 | 413,420 | 393,317 | 328,979 |
| 1950-59 | 141,860 | 125,304 | 102,766 |
| pre1950 | 119,500 | 83,089 | 43,725 |
| Total | 1,648,720 | 3,405,724 | 4,853,107 |

| Year of Arrival | Asian Immigrants | | |
|-----------------|------------------|------------------|------------------|
| | 1980 | 1990 | 2000 |
| 1990-00 | | | 952,573 |
| 1980-89 | | 1,060,234 | 890,674 |
| 1970-79 | 523,040 | 542,193 | 494,102 |
| 1960-69 | 137,580 | 154,246 | 131,051 |
| 1950-59 | 46,040 | 49,785 | 42,260 |
| pre1950 | 46,000 | 32,351 | 18,789 |
| Total | 752,660 | 1,838,809 | 2,529,449 |

New immigration has declined even more significantly in the Los Angeles region than in California as a whole (Exhibit 6). Not only the number of newcomers ceased doubling each decade, but the number of newcomers in 2000 is actually smaller than in 1990. That is a consistent pattern seen for the Latino and Asian immigrant population as well. Similar patterns of cohort retention appear in the region as in the state as a whole.

3. Components of Change in the Overall Poverty Shift

The overall change in immigrant poverty is a product of the specific changes we have discussed—the difference in the poverty rate of newcomers in the 1990s from that of newcomers in the 1980s, the improvement in poverty status over the decades for established immigrants, and the changing relative size of different arrival cohorts in the immigrant population. Putting all of these factors together, how does each factor contribute to the overall changes observed in immigrant poverty?

The Components of Change method stems from the simple idea that the total poverty rate of immigrants each decade is a weighted average of poverty rates for each cohort of immigrants (as described in detail in Appendix A). The overall change in poverty is created via changes in each of the components in the weighted average, and the relative contribution of each of these changes can be inferred through a series of hypothetical contrasts. First, the effect of recent arrivals' improved initial status can be computed by comparing what would have happened to the overall poverty trend if new arrivals had started with the same initial poverty rate as in the previous decade. Second, the effect of improvements over time for established immigrant cohorts, represented by the downward sloping trajectories, can be demonstrated by comparing what would have happened if all cohorts maintained the same poverty level in 2000 as recorded by those cohorts in 1990 (i.e. trajectories were not downward sloping but flat). Finally, the effect of the growth in numbers of foreign born in different duration statuses can be estimated after controlling for these changes in poverty rates for each of the arrival cohorts.

The decomposition of these effects is displayed in Exhibit 7. Shown at the top is the 1.77 percentage point increase in the poverty rate for all immigrants in California during the 1980s and, in the 1990s, the decline in poverty of -0.52 percentage points.

Among the various contributors to the overall immigrant poverty rate, the established immigrants were responsible for the biggest decline in poverty for both decades (-3.22% in the 1980s and -3.23% in the 1990s). These settled immigrants' impact on the overall poverty rate stayed relatively constant in the two decades. The impact of the settled immigrants is similar for the Latino and Asian immigrant populations in that they contribute the most in bringing down the poverty rate. The one striking change from one decade to another is with the Latino immigrants where the impact of the settled immigrants on reducing poverty was much greater in the 1990s (-3.53%) than in the 1980s (-2.86%).

Exhibit 6. Population Size By Arrival Cohort, Los Angeles Region

| Year of Arrival | Total Immigrants | | |
|-----------------|------------------|------------------|------------------|
| | 1980 | 1990 | 2000 |
| 1990-00 | | | 1,829,574 |
| 1980-89 | | 2,076,893 | 1,744,599 |
| 1970-79 | 1,160,400 | 1,155,418 | 1,015,682 |
| 1960-69 | 470,460 | 454,204 | 376,357 |
| 1950-59 | 222,000 | 195,394 | 158,495 |
| pre1950 | 253,160 | 151,070 | 76,075 |
| Total | 2,106,020 | 4,032,979 | 5,200,782 |

| Year of Arrival | Latino Immigrants | | |
|-----------------|-------------------|------------------|------------------|
| | 1980 | 1990 | 2000 |
| 1990-00 | | | 1,131,778 |
| 1980-89 | | 1,280,805 | 1,078,853 |
| 1970-79 | 723,880 | 715,756 | 619,276 |
| 1960-69 | 284,980 | 260,922 | 219,076 |
| 1950-59 | 82,440 | 71,220 | 57,875 |
| pre1950 | 64,480 | 44,247 | 22,474 |
| Total | 1,155,780 | 2,372,950 | 3,129,332 |

| Year of Arrival | Asian Immigrants | | |
|-----------------|------------------|----------------|------------------|
| | 1980 | 1990 | 2000 |
| 1990-00 | | | 435,846 |
| 1980-89 | | 535,759 | 433,316 |
| 1970-79 | 267,280 | 278,431 | 244,881 |
| 1960-69 | 55,120 | 64,400 | 51,715 |
| 1950-59 | 17,040 | 18,597 | 15,874 |
| pre1950 | 14,640 | 9,070 | 5,995 |
| Total | 354,080 | 906,257 | 1,187,627 |

Exhibit 7. Components of Poverty Rate Change, California

| | Total Immigrants | |
|-----------------------------|--------------------------|---------------|
| | 1980s (80-90) | 1990s (90-00) |
| Total Change in Rate | 1.77% | -0.52% |
| New Immigrants | 1.14% | -0.29% |
| Settled Immigrants | -3.22% | -3.23% |
| Composition Change | 3.84% | 3.00% |
| | Latino Immigrants | |
| | 1980s (80-90) | 1990s (90-00) |
| Total Change in Rate | 2.12% | -0.57% |
| New Immigrants | 2.02% | 0.16% |
| Settled Immigrants | -2.86% | -3.53% |
| Composition Change | 2.96% | 2.81% |
| | Asian Immigrants | |
| | 1980s (80-90) | 1990s (90-00) |
| Total Change in Rate | -0.20% | -3.01% |
| New Immigrants | 0.88% | -1.40% |
| Settled Immigrants | -3.54% | -3.79% |
| Composition Change | 2.46% | 2.18% |

The impact of the new immigrants also was noteworthy. Newcomers' poverty has gone from raising the overall immigrant poverty rate in the 1980s (1.14%) to actually lowering it in the 1990s (-0.29%). This is an important turnaround in the understanding of newcomers and their effect on the total immigrant population. Among total immigrants, the higher poverty of newcomers in 1990 than in 1980 pushed up the overall poverty rate by 1.14 percentage points. However, in the most recent decade, newcomer poverty ceased rising and so had little effect on the overall change in poverty. This effect was especially favorable among Latinos and the change in the newcomer effect on poverty from an increase of 2.02% to 0.16% explains most of the overall improvement in poverty among Latino immigrants. Similarly, among Asians, newcomer poverty also shifted favorably (from an increase of 0.88% to a decrease of -1.40%), accounting for much of the overall improvement in poverty among Asian immigrants. The pattern of decreasing poverty looked very similar for Latino immigrants but Asian immigrants experienced a much larger decline in poverty (-3.01%) than they saw even in the 1980s (-0.20%).

The growing number of immigrants at each stage of settlement—the composition change—was the largest contributor in raising poverty both in the 1980s and the 1990s. However, the composition change was a more considerable factor in raising poverty in the 1980s with 3.84% than it was in the 1990s with 3.00%. This reflects the benefits of the smaller cohort of new arrivals. Were this composition shift to continue another 10 years we would expect to see the composition effect diminish substantially as the large cohorts of arrivals in the high poverty years of early settlement are replaced by ever smaller cohorts of new arrivals.

Much the same dynamics of poverty change occurred in the Los Angeles region as in California as a whole (Exhibit 8). Although poverty did not actually decline in the 1990s for the total immigrant population, it did cease its upward climb. This was enabled by the combination of sustained poverty improvements among settled immigrants, a reduction in the prior trend toward rising poverty for newcomers (at least among Latinos), and a favorable composition change due to slowing numbers of new comers.

In sum, we can learn from this analysis some of the key dynamics of poverty change. Certainly we see the power of upward mobility among immigrants: the effect in the 1990s was even greater for Latino than Asian immigrants. And we can weight the importance of that factor against the smaller changes observed for newcomer immigrants. Yet, this analysis still does not account for age effects or the education level of immigrants. So many different factors are at work in the dynamics of change that we will return to the topic of poverty in a later section where we employ a multivariate statistical analysis.

B. Homeownership

Homeownership is widely regarded as an important indicator of immigrant progress (Logan and Alba 1992; Myers and Lee 1998; Clark 2003). Commonly referred to as the American Dream, attainment of homeownership indicates arrival in the middle class.

Exhibit 8. Components of Poverty Rate Change, Los Angeles Region

| | Total Immigrants | |
|-----------------------------|-------------------|---------------|
| | 1980s (80-90) | 1990s (90-00) |
| Total Change in Rate | 1.46% | 0.08% |
| New Immigrants | 1.07% | 0.47% |
| Settled Immigrants | -3.31% | -3.02% |
| Composition Change | 3.71% | 2.63% |
| | | |
| | Latino Immigrants | |
| | 1980s (80-90) | 1990s (90-00) |
| Total Change in Rate | 2.14% | -0.27% |
| New Immigrants | 2.29% | 0.58% |
| Settled Immigrants | -2.81% | -3.32% |
| Composition Change | 2.65% | 2.47% |
| | | |
| | Asian Immigrants | |
| | 1980s (80-90) | 1990s (90-00) |
| Total Change in Rate | -2.24% | -1.35% |
| New Immigrants | -0.38% | 0.09% |
| Settled Immigrants | -3.92% | -3.23% |
| Composition Change | 2.05% | 1.78% |

This makes it a useful complement to poverty analysis which measures status at a lower economic level.

1. Net Changes in Status from Previous Decade

In California, there was a decline in the homeownership rate for the immigrant population from 1980 (48.0%) to 1990 (46.2%), but it then rebounded to 47.7% in 2000. This is a positive sign that the immigrant population in California is doing better overall. Although homeownership has risen from 1990 to 2000, immigrant homeownership did not fully recover to what it once was in 1980 (see Exhibit 9). Exhibit 10 shows that this rebound pattern is more pronounced for the Latino immigrants who saw a dip from 1980 (35.8%) to 1990 (33.9%) but then rebounded to a much higher homeownership rate of 40.4% by 2000. On the other hand, Asian immigrants in California experienced a small but steady increase in homeownership from 51.7% in 1980 to 53.7% in 2000.

In the case of homeownership, newcomers of each decade are in fact coming with gradually lower rates. (The newcomers in 2000 had a homeownership rate of 21.9%, while the newcomers in 1990 had a 22.7% homeownership rate in 1990, and the newcomers in 1980 had an even higher rate of 25.6%.) This pattern holds true for new Asian immigrants, but for new Latino immigrants, those newcomers in 1990 had an unusually low rate of homeownership (10.4%) which is unlike the newcomers before them or after them. The pattern of declining homeownership for successive waves of newcomers reflects the higher cost of housing facing newcomers in recent decades, although lack of affordability was more acute in 1990 than 2000 (Myers and Gao 2004).

The increase in overall homeownership may be more due to the fact that longer settled immigrant arrival cohorts are increasing their homeownership rates considerably through the decades. For example, the 1970s arrivals began with a 25.6% homeownership rate in 1980. By 1990, their homeownership rose by more than 20 percentage points to 46.3% (and it rose again to 57.9% by 2000). The earlier immigrant arrival cohorts are reaching homeownership rates of over 70.0%. These trajectories of rapid upward mobility are an encouraging sign of immigrant settlement in California.

As seen in Exhibit 11, Southern California's immigrant homeownership trends are very similar to that of California as a whole with slightly lower rates overall (45.5% homeownership for the total immigrant population in 2000, which is up from a steady 43.3% in 1980 and 1990). Latino immigrants saw a larger increase in homeownership from 32.5% in 1990 to 39.5% in 2000 (see Exhibit 12). However, Asian immigrants actually experienced a decrease in their overall homeownership from 53.3% in 1990 to 52.7% in 2000.

Examining the homeownership trajectories of specific arrival cohorts residing in the Los Angeles region, we see that Latinos fared much better in the 1990s than the 1980s. Not only was the initial homeownership rate of newcomers higher, but the upward trajectories of settled cohorts of Latinos were steeper in the 1990s than the 1980s. In contrast, Asians

Exhibit 9. Homeownership Rate of Immigrants By Arrival Cohort in California

| Year of Arrival | 1980 | 1990 | 2000 |
|-----------------|--------------|--------------|--------------|
| 1990-00 | | | 21.9% |
| 1980-89 | | 22.7% | 42.1% |
| 1970-79 | 25.6% | 46.3% | 57.9% |
| 1960-69 | 52.3% | 61.5% | 70.0% |
| 1950-59 | 63.0% | 72.3% | 75.2% |
| pre1950 | 66.2% | 73.0% | 77.9% |
| Total | 48.0% | 46.2% | 47.7% |

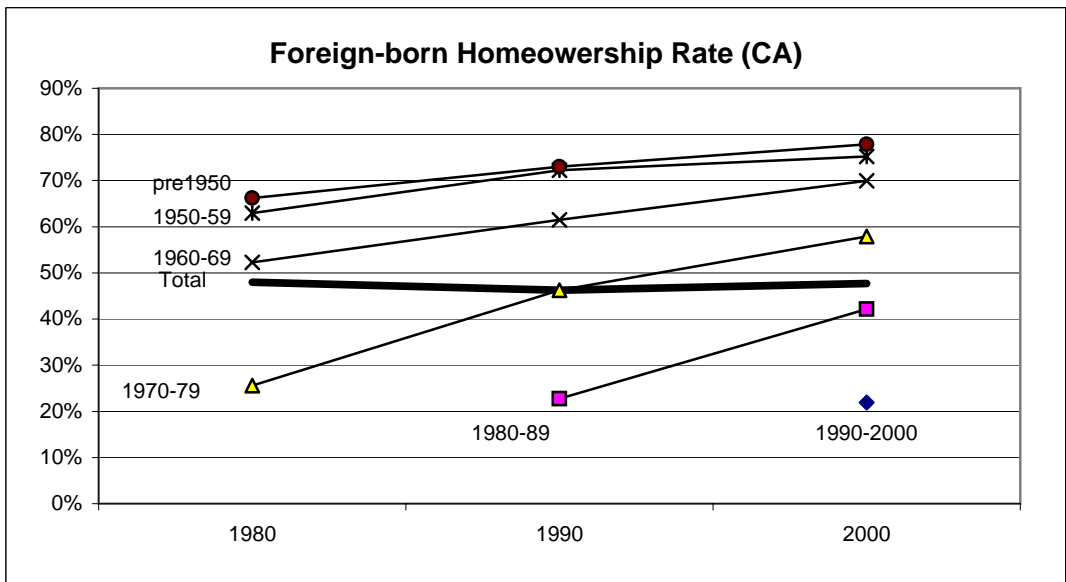
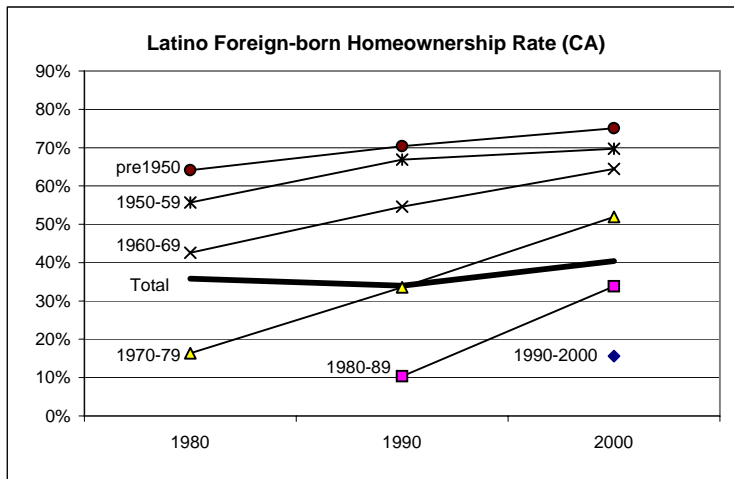
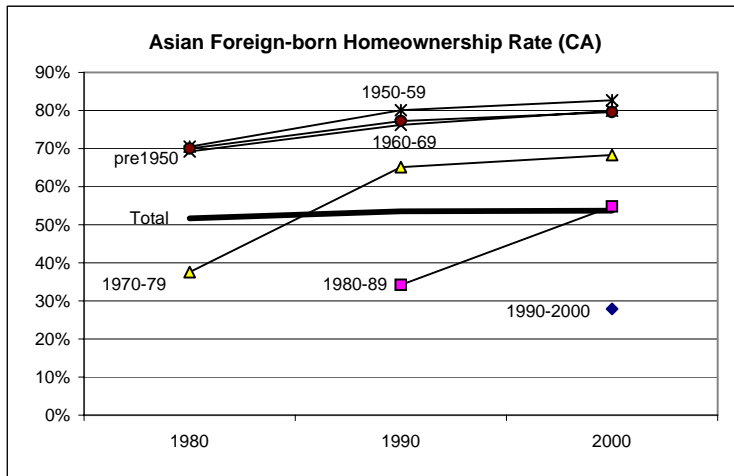


Exhibit 10. Homeownership Rate of Latino and Asian Immigrants By Arrival Cohort in California

| Year of Arrival | Latinos | | |
|-----------------|--------------|--------------|--------------|
| | 1980 | 1990 | 2000 |
| 1990-00 | | | 15.6% |
| 1980-89 | | 10.4% | 33.8% |
| 1970-79 | 16.3% | 33.6% | 51.9% |
| 1960-69 | 42.5% | 54.6% | 64.4% |
| 1950-59 | 55.7% | 66.8% | 69.7% |
| pre1950 | 64.1% | 70.4% | 75.0% |
| Total | 35.8% | 33.9% | 40.4% |

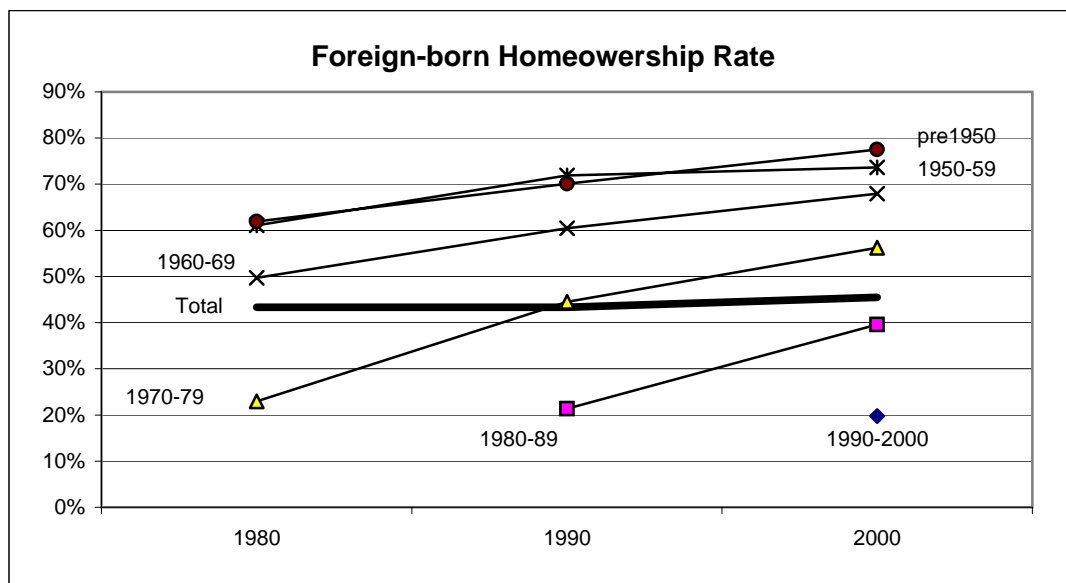


| Year of Arrival | Asians | | |
|-----------------|--------------|--------------|--------------|
| | 1980 | 1990 | 2000 |
| 1990-00 | | | 27.9% |
| 1980-89 | | 34.2% | 54.8% |
| 1970-79 | 37.6% | 65.2% | 68.3% |
| 1960-69 | 69.3% | 76.2% | 79.9% |
| 1950-59 | 70.5% | 80.0% | 82.7% |
| pre1950 | 70.0% | 77.2% | 79.5% |
| Total | 51.7% | 53.5% | 53.7% |



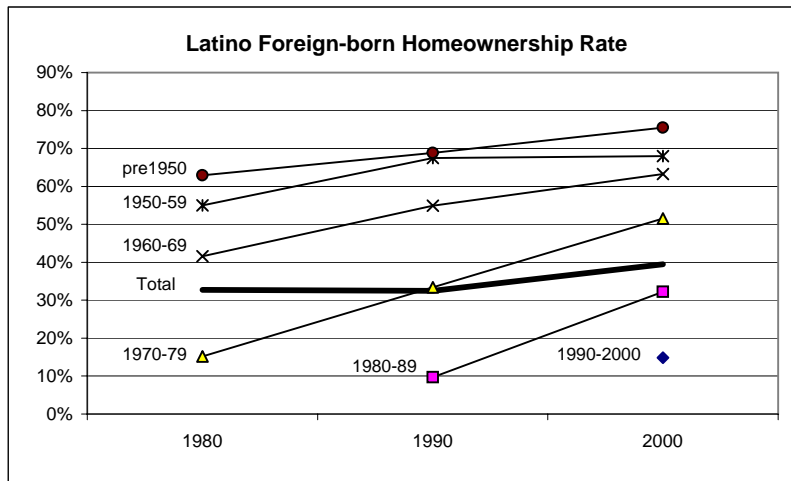
**Exhibit 11. Homeownership Rate of Immigrants By Arrival Cohort
in the Los Angeles Region**

| Year of Arrival | Los Angeles Region | | |
|-----------------|--------------------|--------------|--------------|
| | 1980 | 1990 | 2000 |
| 1990-00 | | | 19.7% |
| 1980-89 | | 21.3% | 39.6% |
| 1970-79 | 23.0% | 44.5% | 56.2% |
| 1960-69 | 49.7% | 60.5% | 68.0% |
| 1950-59 | 61.1% | 71.9% | 73.6% |
| pre1950 | 61.9% | 70.1% | 77.5% |
| Total | 43.3% | 43.3% | 45.5% |

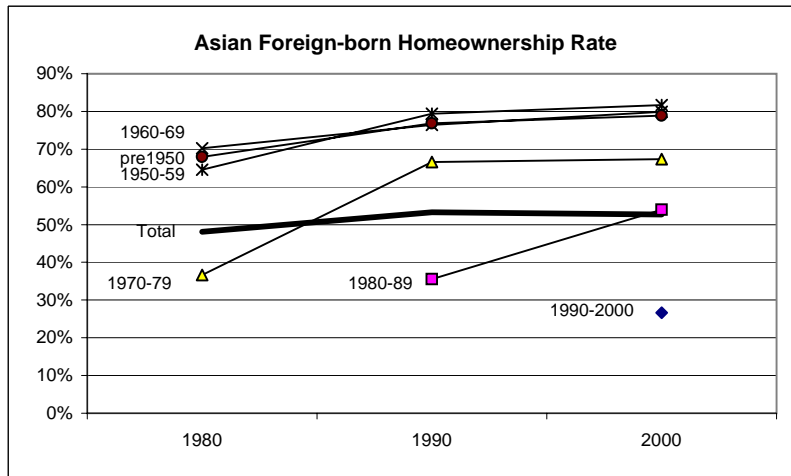


**Exhibit 12. Homeownership Rate of Latino and Asian Immigrants
By Arrival Cohort in the Los Angeles Region**

| Year of Arrival | Latinos | | |
|-----------------|--------------|--------------|--------------|
| | 1980 | 1990 | 2000 |
| 1990-00 | | | 14.8% |
| 1980-89 | | 9.7% | 32.3% |
| 1970-79 | 15.2% | 33.4% | 51.5% |
| 1960-69 | 41.6% | 54.9% | 63.3% |
| 1950-59 | 55.0% | 67.5% | 68.0% |
| pre1950 | 62.9% | 68.8% | 75.5% |
| Total | 32.8% | 32.5% | 39.5% |



| Year of Arrival | Asians | | |
|-----------------|--------------|--------------|--------------|
| | 1980 | 1990 | 2000 |
| 1990-00 | | | 26.6% |
| 1980-89 | | 35.5% | 54.0% |
| 1970-79 | 36.7% | 66.6% | 67.4% |
| 1960-69 | 70.2% | 76.4% | 79.9% |
| 1950-59 | 64.5% | 79.4% | 81.7% |
| pre1950 | 67.9% | 76.9% | 78.9% |
| Total | 48.1% | 53.3% | 52.7% |



fares worse in the 1990s than the 1980s, with much lower initial homeownership rates and much flatter trajectories of improvement.

2. Changing Number of Immigrant Households of Each Duration

Unlike poverty rates, homeownership rates are conventionally calculated using households as the universe⁴. Exhibit 13 shows the total number of immigrant households in California and details these by decade of arrival. This table is then replicated for Latino and Asian immigrants. Similar to that of the total population, the number of immigrant householders grew more slowly in the 1990s than it did in the 1980s: the number of households grew by 66.1% in the 1980s while it grew 46.2% in the 1990s. However, there was a larger absolute number of immigrant households that were added in the 1990s (1.05 million) than in the 1980s (.91 million). The pattern for Latino immigrant households is similar to that of all immigrant households. On the other hand, Asian immigrant households more than doubled in the 1980s (adding more than a third of a million households in a decade) and then added similar numbers again in the 1990s.

The number of newly arrived immigrant households in 2000 does not exceed that of 1990, which is a very different picture from the increases that California experienced from 1980 to 1990. Again, there is evidence of a turnaround in the growth of immigrant households in the state. Parallel trends are seen for Latino and Asian immigrant households.

In addition, the number of households in each immigrant arrival cohort continues to increase over time while the numbers of immigrants in Exhibits 5 and 6 were declining. This is an indication that household formation increases as immigrants increase their duration in the U.S., e.g., as younger members of the cohort advance to age of independence. This is again with the exception of the longest settled immigrants which is most likely due to the mortality of the cohort's members. The most dramatic increases in the number of households are observed for those immigrant householders who arrived in the U.S. during the 1980s.

Exhibit 14 shows the number of immigrant households in the Los Angeles region. Again, the pattern of total growth in immigrant households is comparable to that of California as a whole. The number of households added each decade stays fairly constant for Latino and Asian immigrant households alike.

In California, the number of newly arrived households increased more rapidly in the 1980s and tapered off in the 1990s. The Los Angeles region experienced less dramatic growth in the 1980s and there was more of a marked decline of new households in the 1990s. And lastly, the trends observed for the various immigrant arrival cohorts in the region are relatively the same as those for California.

⁴ The race and nativity status of the household are determined by the attributes of the householder.

Exhibit 13. The Number of Households By Arrival Cohort in California

| Year of Arrival | Total Immigrant Households | | |
|-----------------|----------------------------|------------------|------------------|
| | 1980 | 1990 | 2000 |
| 1990-00 | | | 723,723 |
| 1980-89 | | 748,700 | 1,135,750 |
| 1970-79 | 481,260 | 694,359 | 803,574 |
| 1960-69 | 336,540 | 400,389 | 368,492 |
| 1950-59 | 228,080 | 218,629 | 186,680 |
| pre1950 | 324,520 | 214,476 | 111,024 |
| Total | 1,370,400 | 2,276,553 | 3,329,243 |

| Year of Arrival | Latino Immigrant Households | | |
|-----------------|-----------------------------|------------------|------------------|
| | 1980 | 1990 | 2000 |
| 1990-00 | | | 296,879 |
| 1980-89 | | 340,266 | 622,397 |
| 1970-79 | 245,560 | 377,604 | 432,150 |
| 1960-69 | 172,880 | 192,442 | 168,615 |
| 1950-59 | 76,340 | 68,501 | 55,955 |
| pre1950 | 74,120 | 52,504 | 25,363 |
| Total | 568,900 | 1,031,317 | 1,601,359 |

| Year of Arrival | Asian Immigrant Households | | |
|-----------------|----------------------------|----------------|----------------|
| | 1980 | 1990 | 2000 |
| 1990-00 | | | 250,302 |
| 1980-89 | | 270,523 | 342,226 |
| 1970-79 | 135,820 | 199,768 | 225,814 |
| 1960-69 | 54,120 | 74,181 | 70,145 |
| 1950-59 | 22,340 | 26,693 | 23,127 |
| pre1950 | 30,000 | 21,762 | 12,415 |
| Total | 242,280 | 592,927 | 924,029 |

Exhibit 14. The Number of Households By Arrival Cohort in the Los Angeles Region

| Year of Arrival | Total Immigrant Households | | |
|-----------------|----------------------------|------------------|------------------|
| | 1980 | 1990 | 2000 |
| 1990-00 | | | 386,777 |
| 1980-89 | | 466,510 | 685,453 |
| 1970-79 | 318,340 | 444,191 | 492,586 |
| 1960-69 | 205,520 | 228,166 | 201,671 |
| 1950-59 | 121,800 | 110,547 | 91,392 |
| pre1950 | 161,160 | 99,055 | 48,483 |
| Total | 806,820 | 1,348,469 | 1,906,362 |

| Year of Arrival | Latino Immigrant Households | | |
|-----------------|-----------------------------|----------------|------------------|
| | 1980 | 1990 | 2000 |
| 1990-00 | | | 183,613 |
| 1980-89 | | 238,836 | 413,348 |
| 1970-79 | 184,560 | 270,930 | 294,862 |
| 1960-69 | 121,200 | 127,524 | 111,434 |
| 1950-59 | 44,000 | 38,302 | 30,818 |
| pre1950 | 40,060 | 27,945 | 12,670 |
| Total | 389,820 | 703,537 | 1,046,745 |

| Year of Arrival | Asian Immigrant Households | | |
|-----------------|----------------------------|----------------|----------------|
| | 1980 | 1990 | 2000 |
| 1990-00 | | | 116,074 |
| 1980-89 | | 143,357 | 170,332 |
| 1970-79 | 74,200 | 104,385 | 115,214 |
| 1960-69 | 23,500 | 32,564 | 28,119 |
| 1950-59 | 8,800 | 10,239 | 8,970 |
| pre1950 | 9,420 | 5,932 | 3,813 |
| Total | 115,920 | 296,477 | 442,522 |

3. Components of Change in the Immigrant Homeownership Rate

With a better understanding of the net changes in homeownership rates and the changes in the number of immigrant households, we can begin to explore and unpack which aspects of change contributed to the rise in homeownership and by how much. Exhibit 15 begins with the observed decline in homeownership in the 1980s (−1.77 percentage points) followed by an increase in the 1990s (1.45 percentage points). For all immigrant households, the composition change from 1980 to 1990 had the largest negative effect on homeownership (−10.28%). The largest positive contributor was the advancement of longer settled immigrant households into homeownership (9.46%). The effect of new immigrants was relatively modest but negative on homeownership.

From 1990 to 2000, the effect of the compositional shift was not as bad as it was for the 1980s (−9.06%) and the settled immigrants made even stronger strides to increase homeownership (10.68%). These positive trends coupled with an even smaller effect of new immigrant households, created an overall increase in homeownership for the 1990s.

Latino immigrant households saw very similar patterns in the 1980s but they made considerable strides in their homeownership rates during the 1990s (an increase of 6.49 percentage points). The biggest contributing and striking factor to this increase was the longer settled immigrant households that contributed 15.21 percentage points to the overall change in homeownership. This finding is a positive one and a clear sign of progress, however, it should also be noted that these Latino householders began with much lower homeownership.

Asian immigrant households did not experience a decline in homeownership in the 1980s and, in fact, they saw a larger increase in the 1980s (1.83 percentage points) than they did in the 1990s (0.20 percentage points). Much of the components of change are similar to that of the total immigrant households with the exception of the longer settled immigrant households. It seems that the longer settled immigrants experienced a larger increase in the 1980s (10.86%) than they did in the 1990s (8.77%).

The components of change for the Los Angeles region yield much the same story as observed for California as a whole (Exhibit 16). The exceptions are that Latinos in Los Angeles made even stronger strides into homeownership during the 1990s while homeownership actually fell for Asian immigrants. Upward mobility of established immigrants was less of a positive force for Asians than Latinos, and the lowered homeownership rate of Asian newcomers contributed −2.34 points to the reduced homeownership rate for Asians in the 1990s. In contrast, among Latinos in the Los Angeles region, settled immigrants experienced enhanced upward mobility into homeownership and newcomers also even contributed a small gain to the overall rate.

Many might be surprised that Asian homeownership exhibited less favorable change than was true among Latinos. That could reflect the higher prices in locations favored by Asians, or it might result from the lower socioeconomic status of Asian immigrants in the 1990s compared to the 1980s. More immigrants arrived from Southeast Asia in the

Exhibit 15. Components of Homeownership Rate Change in California

| | Total Immigrants | |
|-----------------------------|------------------|---------------|
| | 1980s (80-90) | 1990s (90-00) |
| Total Change in Rate | -1.77% | 1.45% |
| New Immigrants | -0.94% | -0.18% |
| Settled Immigrants | 9.46% | 10.68% |
| Composition Change | -10.28% | -9.06% |

| | Latino Immigrants | |
|-----------------------------|-------------------|---------------|
| | 1980s (80-90) | 1990s (90-00) |
| Total Change in Rate | -1.87% | 6.49% |
| New Immigrants | -1.97% | 0.97% |
| Settled Immigrants | 9.63% | 15.21% |
| Composition Change | -9.53% | -9.69% |

| | Asian Immigrants | |
|-----------------------------|------------------|---------------|
| | 1980s (80-90) | 1990s (90-00) |
| Total Change in Rate | 1.83% | 0.20% |
| New Immigrants | -1.53% | -1.72% |
| Settled Immigrants | 10.86% | 8.77% |
| Composition Change | -7.50% | -6.86% |

Exhibit 16. Components of Homeownership Rate Change in the Los Angeles Region

| | Total Immigrants | |
|-----------------------------|-------------------------|----------------------|
| | 1980s (80-90) | 1990s (90-00) |
| Total Change in Rate | -0.02% | 2.15% |
| New Immigrants | -0.57% | -0.32% |
| Settled Immigrants | 10.39% | 10.68% |
| Composition Change | -9.83% | -8.21% |

| | Latino Immigrants | |
|-----------------------------|--------------------------|----------------------|
| | 1980s (80-90) | 1990s (90-00) |
| Total Change in Rate | -0.26% | 7.00% |
| New Immigrants | -1.86% | 0.90% |
| Settled Immigrants | 10.36% | 15.00% |
| Composition Change | -8.76% | -8.91% |

| | Asian Immigrants | |
|-----------------------------|-------------------------|----------------------|
| | 1980s (80-90) | 1990s (90-00) |
| Total Change in Rate | 5.18% | -0.59% |
| New Immigrants | -0.54% | -2.34% |
| Settled Immigrants | 11.90% | 7.60% |
| Composition Change | -6.19% | -5.84% |

1990s, and the 1980s arrivals also drew a higher proportion of better educated immigrants. To explore some of these issues more fully, in the next section we develop a multivariate statistical analysis.

MULTIVARIATE STATISTICAL ESTIMATION

The foregoing analysis has provided a broad overview of changes in poverty and homeownership. Not accounted for are detailed factors such as age and education status, including the interaction of these factors with length of time in the U.S., nor have we attempted an exact estimation of the changing pattern of immigrant progress between the 1980s and the 1990s. For this purpose we must resort to a multivariate statistical analysis.

In view of the limited data available on immigrant progress over time, and given our chief concern for estimating the pace of progress, the preferred method is a form of cohort analysis known as the “double cohort” method. First developed as part of a Haynes Foundation-funded project in early 1990s, applications of the method have since been published in the major social science journals (Myers and Lee, 1996, 1998; Myers and Cranford 1998). The method is extended here to directly compare the rates of progress in two decades.

A. Data and methods

1. Data

This report 3 relies on Public Use Microdata Samples (PUMS) data drawn from three decennial censuses, 1980, 1990 and the 2000. These data are used to measure progress of immigrant cohorts in two recent decades, the 1980s and 1990s. For this purpose, the study creates three data sets, one for each decade and one that combines the two decades. The data sets are distinct because the original data are coded into cohorts that are unique to each data set. This is required to maintain the temporal comparability required to execute our desired comparisons. Details of this data set structure are given below.

The detailed cohort analysis is carried out for the Southern California region, consisting of 6 counties, Los Angeles, Orange, Riverside, San Bernardino, Ventura County, and Imperial. This is identical to the region covered by the Southern California Association of Governments. It also represents a complete economic region and housing market, which is a requirement for cohort analysis, else biases result when cohorts suburbanize from core counties and exit our data but still live in the region.

Different samples are defined for the different outcome variables of interest. For poverty, we include all population (excluding only a small fraction for whom poverty status is not computed, such as those living in group quarters). For homeownership, we include all households, classifying these by the characteristics of the householder (household head), as is standard Census Bureau practice. In addition, for both poverty and homeownership the sample is classified into four racial/ethnic groups, which are non-Hispanic white, non-

Hispanic black, non-Hispanic Asians and Pacific Islanders (Asians), and Latinos or Hispanics.

2. *Double Cohort Method*

In general, the cohort method is standard practice with demographers. Most often the method is applied to birth cohorts, tracing the behavior of groups of people as they grow older together. In immigration analysis, there is a tradition of tracing the progress of arrival cohorts across the decades as the group who arrived in a particular immigration wave resides longer in the U.S. The double cohort method is a specific approach for tracing cohorts on both dimensions at the same time. The following definition was offered by Myers and Lee (1998: p.600):

“The essence of the double cohort procedure is to nest birth cohorts within immigration cohorts (or within native-born status). Given observations at two separate points in time that include identification of duration (or year of immigration) and age (or birth year), such as with data from two census years, the method permits cohort estimation on both the immigration duration and aging dimensions.”

The same individuals are not traced over time; rather the group is traced. Individuals in each census are classified into the cohort based on their age and arrival year that they report in the survey. Thus, it is likely that different individuals are represented in the cohort each decade, because some have moved away or died and others may have relocated from elsewhere in the U.S. Indeed, the PUMS data used for analysis represent only a 5% sample of all residents in the region, and thus the cohort is only a sample of all the people who actually belong to the cohort. Detailed evaluation by the Census Bureau and the authors has shown that the cohorts formed from the census data on arrival year are a relatively unbiased and meaningful representation of immigrant behavior over time (Myers 2004).

Coding by Age (Birth Cohort): Age groups are selected in a staggered fashion that represents the aging of cohorts from one decade to the next. In the beginning of the observation period, age is selected as 15-24, 25-34, 35-44, 45-54, 55-64, and 65-74, and, at the end of the period, one decade later, age groups are selected that are 10 years older. Young persons age 15-24 at the *end* of the period are not selected for analysis because they cannot be traced over time. For similar reason, older persons age 75-84 at the *beginning* of the analysis period are not selected because they will have aged outside our range of interest by the end of the period.

Coding by Arrival Cohort: Arrival cohorts are treated in similar fashion. At the beginning of the period, we select persons who have lived in the U.S. less than 10 years, 10-19 years, and 20 or more years. At the end of the period, a decade later, we select persons with 10 years longer experience. (As a reference group, we also code a category for native-born residents.) Newcomers at the end of the period are not analyzed because they cannot be traced over time.

3. Graphic Trajectories

Double cohort trajectories show clearly the changing of homeownership and poverty rates over time (See Exhibit 17 & 18). A separate row of graphs is provided for each of the immigration cohorts, including a row for native-borns. For each group we present the trajectories of birth cohorts within the 1980s and 1990s.

In the homeownership trajectories, the most distinctive characteristic is that the slopes of the arrows of recent immigrants (MC1) and settled immigrants (MC2) in the decade of 1990s (1990-2000) rise more sharply than that for cohorts in the 1980s (1980-1990). In other words, this means that upward mobility of recent immigrants in the 1990s appears greater than that in the 1980s.

Poverty trajectories show almost the same story as homeownership trajectories. Although the poverty rate of recent immigrants (MC1) in the 1990s is high compared with recent immigrants in the 1980s, the downward trend of the arrows shows sharp improvement. In the case of recent immigrants, they appear to have experienced greater upward mobility in the 1990s than in the 1980s. In sum, these descriptive trajectories deserve to be tested statistically.

4. Single Decade and Two Decade Statistical Models

Our dependent variables for the statistical analysis are homeownership (Owner=1, Renter=0) and poverty (Below poverty=1, Above poverty =0) status. These two variables are used to investigate upward mobility of each cohort. We have two types of models which are based on data sets such as single decade model and two decade model. Exhibit 19 shows variables used in the single decade model especially from 1990 to 2000. The single decade model of 1980s is same as that of 1990s; only difference is that time is lagged by 10 years. The variables of two decade model are explained in Exhibit 20. Both exhibits describe variable names, categories and reference groups which are used in the logistic regressions. This Report 3 particularly emphasizes temporal variables and interaction between temporal variables. The detailed logic of the regression specifications is explained in Appendix B.

The independent variables consist of two cohort variables, two temporal variables, interaction variables and one covariate. First, two key cohort variables are Immigration cohort (MC) and Birth cohort (BC). The reference cohort for these variables are Native-born and Age 45-54 at the beginning year of two decade (e.g., Age 45-54 in 1980 or Age 45-54 in 1990). Second, two temporal variables are Year(Y) and Period(P), the latter of which is used in only the two decade model. The reference of Year(Y) variable is beginning year of two decade, for instance, 1980 is the reference year of 1980s model and 1990 is that of 1990s, and the reference of Period is 1980s.

All interaction variables are made up of two cohort variables and two temporal variables. Finally, education variables are used as a covariate in both single and two decade model. The reference of Education is the group of below high school.

Exhibit 17. Double Cohort Plot of Poverty in the Los Angeles Region

Poverty

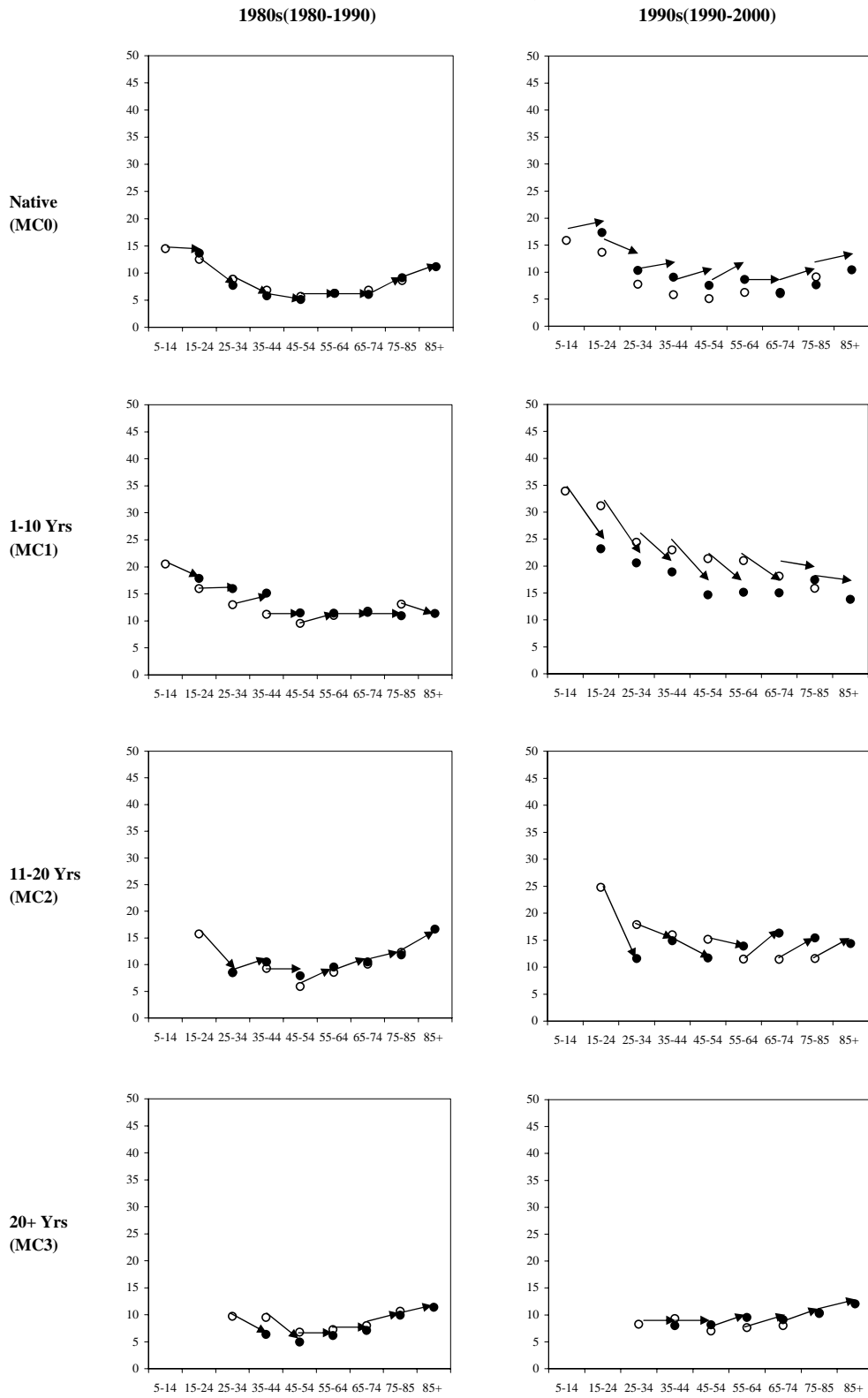


Exhibit 18. Double Cohort Plot of Homeownership in the Los Angeles Region

Homeownership

1980s(1980-1990)

1990s(1990-2000)

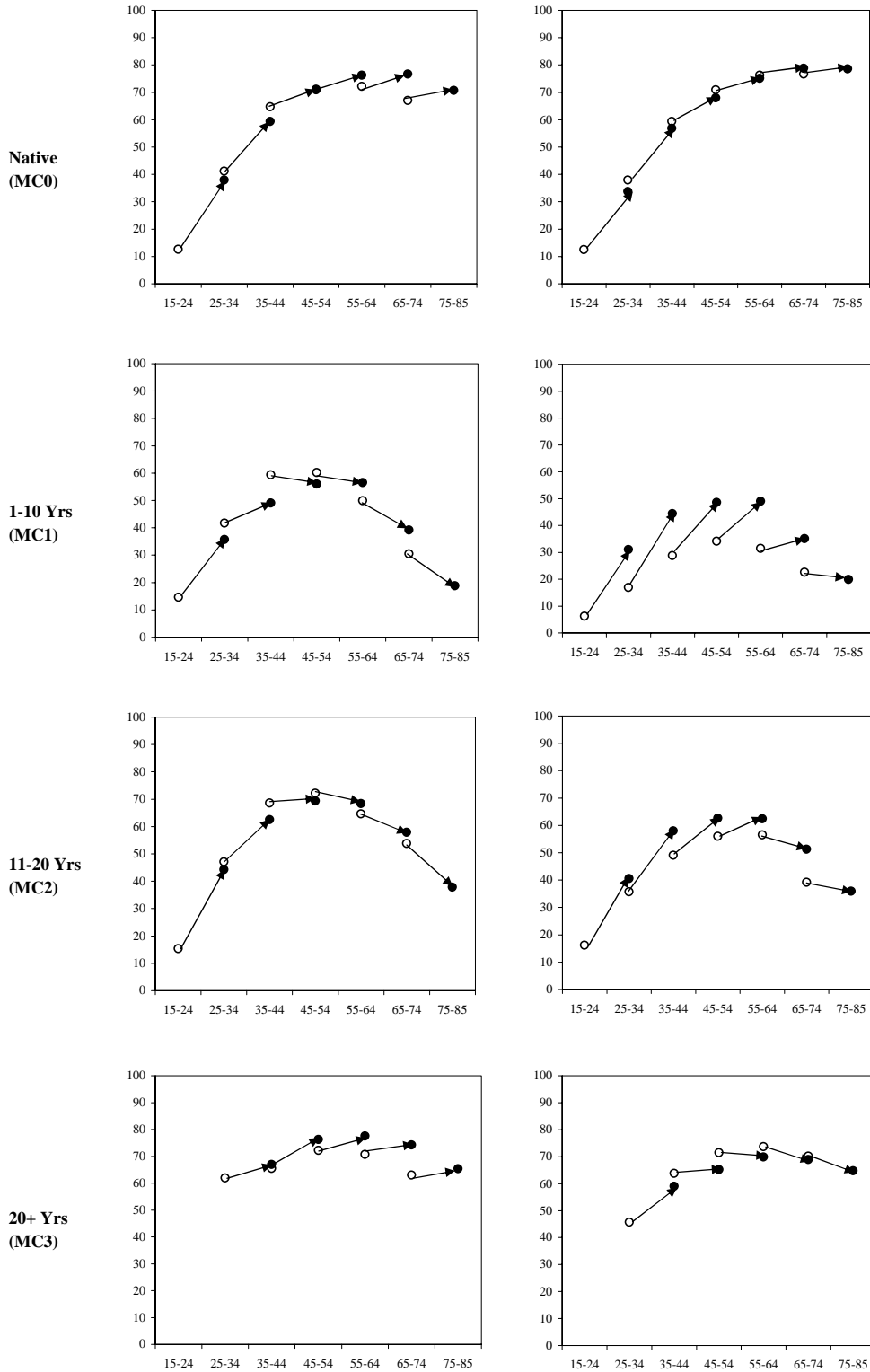


Exhibit 19. Description of Variables Used in Single Decade Model, 1990-2000

| Variable | | Explanation | | Variable | | Explanation | |
|-------------------------|------------------------------------|-------------|---------------------|----------|--|-------------|--|
| DEPENDENT 1 | Own Rent | Ref. | | | | | |
| DEPENDENT 2 | Below Poverty Above Poverty | Ref. | | | | | |
| YEAR | year | 2000 | | | | | |
| | | Ref. | 1990 | | | | |
| IMMIGRATION (MC) | mc0 | Ref. | Native-Borns | | | | |
| | mc1 | | 1980s (1980-89) | | | | |
| | mc2 | | 1970s (1970-79) | | | | |
| | mc3 | | 1960s (1960-69) | | | | |
| | mc4 | | pre60 | | | | |
| AGE (BC) | bc1 | | 15-24 in 1990 | | | | |
| | bc2 | | 25-34 in 1990 | | | | |
| | bc3 | | 35-44 in 1990 | | | | |
| | bc4 | Ref. | 45-54 in 1990 | | | | |
| | bc5 | | 55-64 in 1990 | | | | |
| | bc6 | | 65-74 in 1990 | | | | |
| INTERACTIONS | ymc0 | Ref. | 2000*Native-born | | | | |
| | ymc1 | | 2000*1980s | | | | |
| Y*MC | ymc2 | | 2000*1970s | | | | |
| | ymc3 | | 2000*1960s | | | | |
| | ymc4 | | 2000*pre60 | | | | |
| | ybc1 | | 2000*15-24 in 1990 | | | | |
| | ybc2 | | 2000*25-34 in 1990 | | | | |
| Y*BC | ybc3 | | 2000*35-44 in 1990 | | | | |
| | ybc4 | Ref. | 2000*45-54 in 1990 | | | | |
| | ybc5 | | 2000*55-64 in 1990 | | | | |
| | ybc6 | | 2000*65-74 in 1990 | | | | |
| MC*BC | mc1bc1 | | 1980s*15-24 in 1990 | | | | |
| | mc1bc2 | | 1980s*25-34 in 1990 | | | | |
| | mc1bc3 | | 1980s*35-44 in 1990 | | | | |
| | mc1bc4 | Ref. | 1980s*45-54 in 1990 | | | | |
| | mc1bc5 | | 1980s*55-64 in 1990 | | | | |
| | mc1bc6 | | 1980s*65-74 in 1990 | | | | |
| | mc2bc1 | | 1970s*15-24 in 1990 | | | | |
| | mc2bc2 | | 1970s*25-34 in 1990 | | | | |
| | mc2bc3 | | 1970s*35-44 in 1990 | | | | |
| | mc2bc4 | Ref. | 1970s*45-54 in 1990 | | | | |
| | mc2bc5 | | 1970s*55-64 in 1990 | | | | |
| | mc2bc6 | | 1970s*65-74 in 1990 | | | | |
| | mc3bc1 | | 1960s*15-24 in 1990 | | | | |
| | mc3bc2 | | 1960s*25-34 in 1990 | | | | |
| | mc3bc3 | | 1960s*35-44 in 1990 | | | | |
| | mc3bc4 | Ref. | 1960s*45-54 in 1990 | | | | |
| | mc3bc5 | | 1960s*55-64 in 1990 | | | | |
| | mc3bc6 | | 1960s*65-74 in 1990 | | | | |
| | mc4bc1 | | pre60*15-24 in 1990 | | | | |
| | mc4bc2 | | pre60*25-34 in 1990 | | | | |
| | mc4bc3 | | pre60*35-44 in 1990 | | | | |
| | mc4bc4 | Ref. | pre60*45-54 in 1990 | | | | |
| | mc4bc5 | | pre60*55-64 in 1990 | | | | |
| | mc4bc6 | | pre60*65-74 in 1990 | | | | |
| | ymc1bc1 | | 1980s*15-24 in 1990 | | | | |
| Y*MC*BC | ymc1bc2 | | 1980s*25-34 in 1990 | | | | |
| | ymc1bc3 | | 1980s*35-44 in 1990 | | | | |
| | ymc1bc4 | Ref. | 1980s*45-54 in 1990 | | | | |
| | ymc1bc5 | | 1980s*55-64 in 1990 | | | | |
| | ymc1bc6 | | 1980s*65-74 in 1990 | | | | |
| | ymc2bc1 | | 1970s*15-24 in 1990 | | | | |
| | ymc2bc2 | | 1970s*25-34 in 1990 | | | | |
| | ymc2bc3 | | 1970s*35-44 in 1990 | | | | |
| | ymc2bc4 | Ref. | 1970s*45-54 in 1990 | | | | |
| | ymc2bc5 | | 1970s*55-64 in 1990 | | | | |
| | ymc2bc6 | | 1970s*65-74 in 1990 | | | | |
| | ymc3bc1 | | 1960s*15-24 in 1990 | | | | |
| | ymc3bc2 | | 1960s*25-34 in 1990 | | | | |
| | ymc3bc3 | | 1960s*35-44 in 1990 | | | | |
| | ymc3bc4 | Ref. | 1960s*45-54 in 1990 | | | | |
| | ymc3bc5 | | 1960s*55-64 in 1990 | | | | |
| | ymc3bc6 | | 1960s*65-74 in 1990 | | | | |
| | ymc4bc1 | | pre60*15-24 in 1990 | | | | |
| | ymc4bc2 | | pre60*25-34 in 1990 | | | | |
| | ymc4bc3 | | pre60*35-44 in 1990 | | | | |
| | ymc4bc4 | Ref. | pre60*45-54 in 1990 | | | | |
| | ymc4bc5 | | pre60*55-64 in 1990 | | | | |
| | ymc4bc6 | | pre60*65-74 in 1990 | | | | |

Note: Single Decade Model for 1980-1990 is same with variables for 1990-2000, but base year is 1980

**Exhibit 20. Description of Variables Used in Double Cohort Model,
1980-1990 & 1990-2000 in the Los Angeles Region**

| Parameter | | |
|---------------------|--------|--|
| Intercept | | |
| YEAR | year | Last year of two decade |
| | | Beginning year of two decade Ref. |
| PERIOD | period | 1990-2000 |
| | | 1980-1990 Ref. |
| IMMIGRATION (MC) | mc0 | Native-Borns Ref. |
| | mc1 | 1-10 years (in 1980 or 1990) |
| | mc2 | 11-20 years (in 1980 or 1990) |
| | mc3 | 20+ years (in 1980 or 1990) |
| AGE (BC) | bc1 | 15-24 (in 1980 or 1990) |
| | bc2 | 25-34 (in 1980 or 1990) |
| | bc3 | 35-44 (in 1980 or 1990) |
| | bc4 | 45-54 (in 1980 or 1990) Ref. |
| | bc5 | 55-64 (in 1980 or 1990) |
| | bc6 | 65-74 (in 1980 or 1990) |
| INTERACTIONS | | |
| Y*MC | ymc0 | Last year*Native-born Ref. |
| | ymc1 | Last year*(1-10yr) |
| | ymc2 | Last year*(11-20yr) |
| Y*BC | ybc1 | Last year*15-24 (in 1980 or 1990) |
| | ybc2 | Last year*25-34 (in 1980 or 1990) |
| | ybc3 | Last year*35-44 (in 1980 or 1990) |
| | ybc4 | Last year*45-54 (in 1980 or 1990) Ref. |
| | ybc5 | Last year*55-64 (in 1980 or 1990) |
| | ybc6 | Last year*65-74 (in 1980 or 1990) |
| MC*BC | mc1bc1 | (1-10yr)*15-24 (in 1980 or 1990) |
| | mc1bc2 | (1-10yr)*25-34 (in 1980 or 1990) |
| | mc1bc3 | (1-10yr)*35-44 (in 1980 or 1990) |
| | mc1bc4 | (1-10yr)*45-54 (in 1980 or 1990) Ref. |
| | mc1bc5 | (1-10yr)*55-64 (in 1980 or 1990) |
| | mc1bc6 | (1-10yr)*65-74 (in 1980 or 1990) |
| | mc2bc1 | (11-20yr)*15-24 (in 1980 or 1990) |
| | mc2bc2 | (11-20yr)*25-34 (in 1980 or 1990) |
| | mc2bc3 | (11-20yr)*35-44 (in 1980 or 1990) |
| | mc2bc4 | (11-20yr)*45-54 (in 1980 or 1990) Ref. |
| | mc2bc5 | (11-20yr)*55-64 (in 1980 or 1990) |
| | mc2bc6 | (11-20yr)*65-74 (in 1980 or 1990) |
| | mc3bc1 | (20+yr)*15-24 (in 1980 or 1990) |
| | mc3bc2 | (20+yr)*25-34 (in 1980 or 1990) |
| | mc3bc3 | (20+yr)*35-44 (in 1980 or 1990) |
| | mc3bc4 | (20+yr)*45-54 (in 1980 or 1990) Ref. |
| | mc3bc5 | (20+yr)*55-64 (in 1980 or 1990) |
| | mc3bc6 | (20+yr)*65-74 (in 1980 or 1990) |

| Parameter | | |
|-----------|---------|--|
| P*MC | pmc0 | (1990-2000)*Native-born Ref. |
| | pmc1 | (1990-2000)*(1-10yr) |
| | pmc2 | (1990-2000)*(11-20yr) |
| | pmc3 | (1990-2000)*(20+yr) |
| P*BC | pbc1 | (1990-2000)*15-24 (in 1980 or 1990) |
| | pbc2 | (1990-2000)*25-34 (in 1980 or 1990) |
| | pbc3 | (1990-2000)*35-44 (in 1980 or 1990) |
| | pbc4 | (1990-2000)*45-54 (in 1980 or 1990) Ref. |
| | pbc5 | (1990-2000)*55-64 (in 1980 or 1990) |
| | pbc6 | (1990-2000)*65-74 (in 1980 or 1990) |
| P*Y*MC | pymc0 | (1990-2000)*Last year*Native-born Ref. |
| | pymc1 | (1990-2000)*Last year*(1-10yr) |
| | pymc2 | (1990-2000)*Last year*(11-20yr) |
| | pymc3 | (1990-2000)*Last year*(20+yr) |
| P*Y*BC | pybc1 | (1990-2000)*Last year*15-24 (in 1980 or 1990) |
| | pybc2 | (1990-2000)*Last year*25-34 (in 1980 or 1990) |
| | pybc3 | (1990-2000)*Last year*35-44 (in 1980 or 1990) |
| | pybc4 | (1990-2000)*Last year*45-54 (in 1980 or 1990) Ref. |
| | pybc5 | (1990-2000)*Last year*55-64 (in 1980 or 1990) |
| | pybc6 | (1990-2000)*Last year*65-74 (in 1980 or 1990) |
| P*MC*BC | pmc1bc1 | (1990-2000)*(1-10yr)*15-24 (in 1980 or 1990) |
| | pmc1bc2 | (1990-2000)*(1-10yr)*25-34 (in 1980 or 1990) |
| | pmc1bc3 | (1990-2000)*(1-10yr)*35-44 (in 1980 or 1990) |
| | pmc1bc4 | (1990-2000)*(1-10yr)*45-54 (in 1980 or 1990) Ref. |
| | pmc1bc5 | (1990-2000)*(1-10yr)*55-64 (in 1980 or 1990) |
| | pmc1bc6 | (1990-2000)*(1-10yr)*65-74 (in 1980 or 1990) |
| | pmc2bc1 | (1990-2000)*(11-20yr)*15-24 (in 1980 or 1990) |
| | pmc2bc2 | (1990-2000)*(11-20yr)*25-34 (in 1980 or 1990) |
| | pmc2bc3 | (1990-2000)*(11-20yr)*35-44 (in 1980 or 1990) |
| | pmc2bc4 | (1990-2000)*(11-20yr)*45-54 (in 1980 or 1990) Ref. |
| | pmc2bc5 | (1990-2000)*(11-20yr)*55-64 (in 1980 or 1990) |
| | pmc2bc6 | (1990-2000)*(11-20yr)*65-74 (in 1980 or 1990) |
| | pmc3bc1 | (1990-2000)*(20+yr)*15-24 (in 1980 or 1990) |
| | pmc3bc2 | (1990-2000)*(20+yr)*25-34 (in 1980 or 1990) |
| | pmc3bc3 | (1990-2000)*(20+yr)*35-44 (in 1980 or 1990) |
| | pmc3bc4 | (1990-2000)*(20+yr)*45-54 (in 1980 or 1990) Ref. |
| | pmc3bc5 | (1990-2000)*(20+yr)*55-64 (in 1980 or 1990) |
| | pmc3bc6 | (1990-2000)*(20+yr)*65-74 (in 1980 or 1990) |

5. Comparison of Model Fit

Statistically significant effects are estimated by comparing the improvements in model fit that are generated when more detailed model terms are added to the estimation. A series of alternative models are estimated and compared, as summarized in Exhibit 21. Models 1 to 10 pertain to the single decade model with each model testing the improvements in explanatory power or various temporal terms. Models 11 to 13 takes the model terms from Model 9 and adds additional terms for the two decade models.

A summary comparison of model fit is provided in Exhibit 22 & 23. The measurement of unexplained variance is contained in the term “-2 Log Likelihood,” a form of chi square statistic. The “model chi square” is defined as the unexplained variance for the Intercept-only model less the unexplained variance of the respective models. The best-fitting model is indicated by the BIC statistic which takes account of both variances explained and the degree of freedom consumed in the model. The lower the BIC statistic (i.e., the larger its negative value), the better-fitting is the model (Raftery 1995).

According to this criterion for the homeownership analysis, Model 9 (a single decade model) is the best-fitting model for both the 1980s and 1990s. The full Model 10 had the second best-fitting model but according to the BIC statistic, the Y*MC*BC terms do not significantly add more explanatory power for the number of terms being added to the model. For the two decade models, Model 13 is the best-fitting model which is the simplest of the 3 two decade models.

For the poverty analysis, there are different best-fitting single decade models for each of the two decades. The best model is Model 10 for the 1990-2000 decade while Model 8 is the best-fitting model for the 1980-1990 decade. This is an indication that age at arrival (as measured by the MC*BC terms) and the change for each of these age at arrival groups (as measured by the Y*MC*BC terms) are significant in explaining poverty in the 1990s while they were less of a factor in the 1980s. Model 13 is again the best-fitting for the two decade model. Although, Model 8 is the best-fitting model for the 1980s, Model 10 is used to facilitate the comparison with Model 10 for the 1990s.

B. Two Decade Model Estimation Results

Complete best-fitting model estimation results for the single decade and two decade models are detailed in Appendix C for both poverty and homeownership. The best-fitting models are run for the total population and then replicated for each of the 4 major race/ethnic groups. This is then replicated once again with the addition of education covariates (Appendix C). Due to the enormous size of these model estimation results, this section will focus on key model terms from the two decade model to address the driving research question for this report: Was Progress Accelerated in the 1990s Relative to the 1980s in Los Angeles?

Exhibit 21. Double Cohort Regression Model Summary

| | Variables |
|----------|--|
| Model 1 | $Dep = Year$ |
| Model 2 | $Dep = Year + MC$ |
| Model 3 | $Dep = Year + MC + Year*MC$ |
| Model 4 | $Dep = Year + MC + BC + Year*MC$ |
| Model 5 | $Dep = Year + BC$ |
| Model 6 | $Dep = Year + BC + Year*BC$ |
| Model 7 | $Dep = Year + MC + BC$ |
| Model 8 | $Dep = Year + MC + BC + Year*MC + Year*BC$ |
| Model 9 | $Dep = Year + MC + BC + Year*MC + Year*BC + MC*BC$ |
| Model 10 | $Dep = Year + MC + BC + Year*MC + Year*BC + MC*BC + Year*MC*BC$ |
| Model 11 | $Dep = Year + Period + MC + BC + Year*MC + Year*BC + MC*BC +$ $Period*MC + Period*BC + Period*Year*MC + Period*Year*BC +$ $Period*MC*BC$ |
| Model 12 | $Dep = Year + Period + MC + BC + Year*Period + Year*MC + Year*BC +$ $MC*BC + Period*MC + Period*BC + Period*Year*MC + Period*Year*BC +$ $Period*MC*BC$ |
| Model 13 | $Dep = Year + Period + MC + BC + Year*Period + Year*MC + Year*BC +$ $MC*BC + Period*MC + Period*BC + Period*Year*MC + Period*Year*BC$ |

Exhibit 22. Comparison of Model fit Using the BIC Statistics, Homeownership

| Homeownership, 1990-2000, Southern California | | | | | | | | | | | |
|--|-----------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|
| | Intercept Only | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 | Model 6 | Model 7 | Model 8 | Model 9 | Model 10 |
| -2 Log Likelihood | 613,674 | 718 | 19,753 | 21,149 | 58,493 | 48,504 | 51,317 | 56,911 | 61,018 | 64,214 | 64,310 |
| N | 451,301 | 451,301 | 451,301 | 451,301 | 451,301 | 451,301 | 451,301 | 451,301 | 451,301 | 451,301 | 451,301 |
| d.f. | 0 | 1 | 4 | 7 | 12 | 6 | 11 | 9 | 17 | 32 | 47 |
| BIC | | -705 | -19,701 | -21,058 | -58,337 | -48,426 | -51,174 | -56,794 | -60,796 | -63,797 | -63,698 |

| Homeownership, 1980-1990, Southern California | | | | | | | | | | | |
|--|-----------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|
| | Intercept Only | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 | Model 6 | Model 7 | Model 8 | Model 9 | Model 10 |
| -2 Log Likelihood | 541,145 | 2,815 | 11,849 | 12,930 | 49,298 | 43,928 | 46,768 | 48,221 | 51,966 | 53,573 | 53,603 |
| N | 398,499 | 398,499 | 398,499 | 398,499 | 398,499 | 398,499 | 398,499 | 398,499 | 398,499 | 398,499 | 398,499 |
| d.f. | 0 | 1 | 4 | 7 | 12 | 6 | 11 | 9 | 17 | 32 | 47 |
| BIC | | -2,802 | -11,797 | -12,839 | -49,143 | -43,850 | -46,626 | -48,105 | -51,747 | -53,161 | -52,997 |

| Homeownership, 1980-90 & 1990-00, Southern California | | | | |
|--|-----------------------|-----------------|-----------------|-----------------|
| | Intercept Only | Model 11 | Model 12 | Model 13 |
| -2 Log Likelihood | 1,154,825 | 117,743 | 117,794 | 117,763 |
| N | 849,800 | 849,800 | 849,800 | 849,800 |
| d.f. | 0 | 64 | 65 | 50 |
| BIC | | -116,870 | -116,906 | -117,081 |

Exhibit 23. Comparison of Model fit Using the BIC Statistics, Poverty

| Poverty, 1990-2000, Southern California | | | | | | | | | | | |
|--|-----------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|
| | Intercept Only | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 | Model 6 | Model 7 | Model 8 | Model 9 | Model 10 |
| -2 Log Likelihood | 644,125 | 151 | 24,934 | 26,112 | 30,037 | 8,753 | 10,018 | 28,891 | 30,923 | 31,554 | 31,930 |
| N | 940,047 | 940,047 | 940,047 | 940,047 | 940,047 | 940,047 | 940,047 | 940,047 | 940,047 | 940,047 | 940,047 |
| d.f. | 0 | 1 | 4 | 7 | 12 | 6 | 11 | 9 | 17 | 32 | 47 |
| BIC | | -137 | -24,879 | -26,016 | -29,872 | -8,670 | -9,867 | -28,767 | -30,689 | -31,114 | -31,284 |

| Poverty, 1980-1990, Southern California | | | | | | | | | | | |
|--|-----------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|
| | Intercept Only | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 | Model 6 | Model 7 | Model 8 | Model 9 | Model 10 |
| -2 Log Likelihood | 470,158 | 1,912 | 12,509 | 12,678 | 15,460 | 5,978 | 6,887 | 15,290 | 16,288 | 16,467 | 16,684 |
| N | 789,131 | 789,131 | 789,131 | 789,131 | 789,131 | 789,131 | 789,131 | 789,131 | 789,131 | 789,131 | 789,131 |
| d.f. | 0 | 1 | 4 | 7 | 12 | 6 | 11 | 9 | 17 | 32 | 47 |
| BIC | | -1,898 | -12,455 | -12,583 | -15,297 | -5,897 | -6,737 | -15,168 | -16,057 | -16,033 | -16,045 |

| Poverty, 1980-90 & 1990-00, Southern California | | | | |
|--|-----------------------|-----------------|-----------------|-----------------|
| | Intercept Only | Model 11 | Model 12 | Model 13 |
| -2 Log Likelihood | 1,116,248 | 49,790 | 49,985 | 49,932 |
| N | 1,729,178 | 1,729,178 | 1,729,178 | 1,729,178 |
| d.f. | 0 | 64 | 65 | 50 |
| BIC | | -48,871 | -49,052 | -49,214 |

Exhibits 24 to 26 show the regression coefficients for key terms in the two decade model such as $Y*MC$, $P*Y*MC$, MC , $P*MC$ for the poverty analysis, while Exhibits 27 to 29 then follow the same logic for the homeownership analysis. In each exhibit, results are shown for the total population, Latinos, and Asians. In order to more accurately interpret these results, it is important to keep in mind that these coefficients are always relative to the reference group.

In each exhibit, there is also a second table which shows the odds ratio values of the first table. These values are the exponentiation of coefficients (β) and give the expected change of having an event occurring versus not occurring, other things being equal. For example, an odds ratio greater than 1 indicates an increased chance of an event occurring versus not, and an odds ratio less than 1 indicates a decreased chance of an event occurring versus not occurring.

Before interpreting the two decade model estimation results, we need to refresh about the definition of upward mobility in terms of poverty and homeownership. Upward mobility is the progress out of poverty and the improvement of homeownership. Thus, we should be careful when we interpreting coefficient because negative coefficients for poverty and positive coefficients for homeownership are the signs of upward mobility. In other words, negative coefficients of poverty results mean escape from poverty, but positive coefficients mean movement into homeownership.

1. Poverty Estimations: Two Decade Model of Progress Out of Poverty

Exhibit 24 shows the results of poverty progress throughout the two decades (1980s and 1990s). $Y*MC$ is the interaction of year of observation and immigration cohort, signifying growing duration of residence in the U.S. (reference= MC_j at beginning of decade). And $P*Y*MC$ is the effect of Period on top of the effect of $Y*MC$. A negative poverty trend means more upward mobility.

According to the results, the most recent immigrants ($MC1$) experienced progress out of poverty in each decade. And the progress out of poverty of recent immigrants ($MC1$) and settled immigrants ($MC2$) in the decade of 1990s (1990-2000) was greater than that for cohorts in the 1980s (1980-1990). In other words, the odds for recent immigrants ($MC1$) to be below poverty at the end of the decade are estimated to be 0.86 times as high as for native-born ($MC0$). For recent immigrants in the 1980s experienced a steeper decline in poverty than the native-borns. During the 1990s, the $P*Y*MC$ shows us that the recent immigrants experienced an even steeper decline than in the 1980s (relative to native-borns).

These poverty trends are relative to each cohort's starting position at the beginning of the decade. The probabilities of being below poverty for all immigrants ($MC1$, $MC2$, $MC3$) are higher than that for the reference group (Native-born) regardless of race/ethnicity (See Exhibit 25). For example, the odds for recent immigrants ($MC1$) to be in poverty are

**Exhibit 24. Two Decade Model Estimation Results for Below Poverty,
1980-1990 & 1990-2000 in the Los Angeles Region (Part of Model 13)**

| Parameter | | Total | Latino | Asians |
|------------------|----------------------|---|------------|------------|
| DEPENDENT | Below Poverty | | | |
| | Above Poverty | Ref. | | |
| Y*MC | ymc0 | Beginning of decade*Native-born | Ref. | |
| | ymc1 | End of decade*(1-10yr) | -0.146 *** | -0.044 |
| | ymc2 | End of decade*(11-20yr) | 0.055 * | -0.024 |
| | ymc3 | End of decade*(20+yr) | -0.040 | -0.083 |
| P*Y*MC | pymc0 | (1980-1990)*Beginning of decade*Native-born | Ref. | |
| | pymc1 | (1990-2000)*End of decader*(1-10yr) | -0.316 *** | -0.208 *** |
| | pymc2 | (1990-2000)*End of decader*(11-20yr) | -0.305 *** | -0.101 * |
| | pymc3 | (1990-2000)*End of decade*(20+yr) | -0.086 | 0.002 |

*** p<0.01 ** p<0.05 *p<0.1

| Odds Ratio | | Total | Latino | Asians |
|---------------|-------|---|-----------|-----------|
| Y*MC | ymc0 | Beginning of decade*Native-born | Ref. | |
| | ymc1 | End of decade*(1-10yr) | 0.864 *** | 0.957 |
| | ymc2 | End of decade*(11-20yr) | 1.056 * | 0.977 |
| | ymc3 | End of decade*(20+yr) | 0.961 | 0.920 |
| P*Y*MC | pymc0 | (1980-1990)*Beginning of decade*Native-born | Ref. | |
| | pymc1 | (1990-2000)*End of decader*(1-10yr) | 0.729 *** | 0.812 *** |
| | pymc2 | (1990-2000)*End of decader*(11-20yr) | 0.737 *** | 0.904 * |
| | pymc3 | (1990-2000)*End of decade*(20+yr) | 0.918 | 1.002 |

**Exhibit 25. Two Decade Model Estimation Results for Below Poverty,
1980-1990 & 1990-2000 in the Los Angeles Region (Part of Model 13)**

| Parameter | | Total | Latino | Asians | |
|------------------|----------------------|-------------------------------|-----------|-----------|-----------|
| DEPENDENT | Below Poverty | | | | |
| | Above Poverty | Ref. | | | |
| MC | mc0 | Native-Borns | Ref. | | |
| | mc1 | 1-10 years (in 1980 or 1990) | 1.203 *** | 0.893 *** | 1.965 *** |
| | mc2 | 11-20 years (in 1980 or 1990) | 0.537 *** | 0.458 *** | 0.701 *** |
| | mc3 | 20+ years (in 1980 or 1990) | 0.156 *** | 0.176 *** | 0.399 ** |
| P*MC | pmc0 | (1980-1990)*Native-born | Ref. | | |
| | pmc1 | (1990-2000)*(1-10yr) | 0.242 *** | 0.305 *** | -0.086 |
| | pmc2 | (1990-2000)*(11-20yr) | 0.342 *** | 0.287 *** | 0.182 |
| | pmc3 | (1990-2000)*(20+yr) | 0.164 *** | 0.052 | -0.377 ** |

*** p<0.01 ** p<0.05 *p<0.1

| Odds Ratio | | Total | Latino | Asians | |
|-------------|------|-------------------------------|-----------|-----------|-----------|
| MC | mc0 | Native-Borns | Ref. | | |
| | mc1 | 1-10 years (in 1980 or 1990) | 3.331 *** | 2.443 *** | 7.135 *** |
| | mc2 | 11-20 years (in 1980 or 1990) | 1.711 *** | 1.581 *** | 2.015 *** |
| | mc3 | 20+ years (in 1980 or 1990) | 1.169 *** | 1.192 *** | 1.490 ** |
| P*MC | pmc0 | (1980-1990)*Native-born | Ref. | | |
| | pmc1 | (1990-2000)*(1-10yr) | 1.274 *** | 1.356 *** | 0.918 |
| | pmc2 | (1990-2000)*(11-20yr) | 1.408 *** | 1.333 *** | 1.199 |
| | pmc3 | (1990-2000)*(20+yr) | 1.178 *** | 1.053 | 0.686 ** |

estimated to be 3.33 times as high as for native-born (MC0). Especially, the poverty gap between native-born and recent immigrants of Asian is bigger than that of Latino.

As seen in Exhibit 25, P*MC represents the differential starting level of poverty change observed in the more recent period relative to the preceding period. The results show that all immigrants groups' poverty gap is little bit higher at the beginning of the 1990s relative to the beginning of the 1980s except Asians (MC3).

Education has a big effect on poverty: compared to those who have not completed high school, the odds of being in poverty for those who have a high school degree are .437 as great, and they are .210 as high for those with a bachelors degree. If the poorly educated residents left the region more than the better educated, poverty would be expected to go down. Accordingly, we have controlled education and re-estimated the trends to eliminate this confounding factor. Exhibit 26 shows progress out of poverty adjusted for education compared to the unadjusted trends. There is a very slight decrease in the rate of progress out of poverty when education is controlled. This reflects the fact that poorly educated as well as well-educated immigrants left the region in the same proportions, and the rate of progress out of poverty is not biased by differential out-migration.

2. Homeownership Estimations: Two Decade Model of Progress of Homeownership

We now turn to estimations of movement into homeownership. Exhibit 27 shows the results of homeownership progress comparing two decades. Only among the newest immigrants, is there progress into homeownership that is dramatically greater than for native-borns in the 1980s (Y*MC). In the 1990s, there is no appreciable change in this pattern relative to the 1980s.

This overall pattern differs for Latinos and Asians. Among Asians, there is the same sharp degree of progress among the most recent immigrants but for the longer settled immigrants (MC2), progress is substantially slower than for native-borns. This pattern is no different in the 1990s than in 1980s. Among Latinos, however, progress relative to the native-borns is even more dramatic among the newest arrivals and it continues to be substantially greater for longer settled cohorts (MC2 and MC3). In the 1990s, Latino immigrant progress escalated still further relative to the native-borns for both the new arrivals and the settled.

Exhibit 29 replicates the trends into homeownership with controls for education (for reasons described in the poverty section). With education controlled, progress into homeownership is virtually unchanged. This again suggests that any differential migration by any one education group in the region was sufficient to bias the observed trends in immigrant progress.

Exhibit 26. Two Decade Model Estimation Results for Below Poverty, 1980-1990 & 1990-2000 in the Los Angeles Region, Controlled For Education or Not

| Parameter | | Total | Latino | Asians | |
|--|----------------------|---|------------|------------|--------|
| DEPENDENT | Below Poverty | | | | |
| | Above Poverty | Ref. | | | |
| P*Y*MC | pymc0 | (1980-1990)*Beginning of decade*Native-born | Ref. | | |
| | pymc1 | (1990-2000)*End of decader*(1-10yr) | -0.316 *** | -0.208 *** | -0.056 |
| | pymc2 | (1990-2000)*End of decader*(11-20yr) | -0.305 *** | -0.101 * | -0.123 |
| | pymc3 | (1990-2000)*End of decade*(20+yr) | -0.086 | 0.002 | 0.078 |
| P*Y*MC (Controlled for Education) | pymc0 | (1980-1990)*Beginning of decade*Native-born | Ref. | | |
| | pymc1 | (1990-2000)*End of decader*(1-10yr) | -0.306 *** | -0.218 *** | -0.101 |
| | pymc2 | (1990-2000)*End of decader*(11-20yr) | -0.300 *** | -0.113 ** | -0.155 |
| | pymc3 | (1990-2000)*End of decade*(20+yr) | -0.096 * | -0.015 | 0.088 |

*** p<0.01 ** p<0.05 *p<0.1

| Odds Ratio | | Total | Latino | Asians | |
|--|-------|---|-----------|-----------|-------|
| P*Y*MC | pymc0 | (1980-1990)*Beginning of decade*Native-born | Ref. | | |
| | pymc1 | (1990-2000)*End of decader*(1-10yr) | 0.729 *** | 0.812 *** | 0.946 |
| | pymc2 | (1990-2000)*End of decader*(11-20yr) | 0.737 *** | 0.904 * | 0.884 |
| | pymc3 | (1990-2000)*End of decade*(20+yr) | 0.918 | 1.002 | 1.081 |
| P*Y*MC (Controlled for Education) | pymc0 | (1980-1990)*Beginning of decade*Native-born | Ref. | | |
| | pymc1 | (1990-2000)*End of decader*(1-10yr) | 0.736 *** | 0.804 *** | 0.904 |
| | pymc2 | (1990-2000)*End of decader*(11-20yr) | 0.741 *** | 0.893 ** | 0.856 |
| | pymc3 | (1990-2000)*End of decade*(20+yr) | 0.908 * | 0.985 | 1.092 |

**Exhibit 27. Two Decade Model Estimation Results for the Homeowner per household,
1980-1990 & 1990-2000 in the Los Angeles Region (Part of Model 13)**

| Parameter | | Total | Latino | Asians |
|------------------|-------------|---|-----------|-----------|
| DEPENDENT | Own | | | |
| | Rent | Ref. | | |
| Y*MC | ymc0 | Beginning of decade*Native-born | Ref. | |
| | ymc1 | End of decade*(1-10yr) | 0.512 *** | 0.564 *** |
| | ymc2 | End of decade*(11-20yr) | 0.060 ** | 0.179 *** |
| | ymc3 | End of decade*(20+yr) | 0.042 | 0.121 ** |
| P*Y*MC | pymc0 | (1980-1990)*Beginning of decade*Native-born | Ref. | |
| | pymc1 | (1990-2000)*End of decader*(1-10yr) | -0.048 | 0.367 *** |
| | pymc2 | (1990-2000)*End of decader*(11-20yr) | 0.039 | 0.145 *** |
| | pymc3 | (1990-2000)*End of decader*(20+yr) | -0.080 * | -0.092 |
| *** p<0.01 | ** p<0.05 | *p<0.1 | | |

| Odds Ratio | | Total | Latino | Asians |
|---------------|-------|---|-----------|-----------|
| Y*MC | ymc0 | Beginning of decade*Native-born | Ref. | |
| | ymc1 | End of decade*(1-10yr) | 1.668 *** | 1.757 *** |
| | ymc2 | End of decade*(11-20yr) | 1.062 ** | 1.196 *** |
| | ymc3 | End of decade*(20+yr) | 1.043 | 1.129 ** |
| P*Y*MC | pymc0 | (1980-1990)*Beginning of decade*Native-born | Ref. | |
| | pymc1 | (1990-2000)*End of decader*(1-10yr) | 0.953 | 1.444 *** |
| | pymc2 | (1990-2000)*End of decader*(11-20yr) | 1.040 | 1.156 *** |
| | pymc3 | (1990-2000)*End of decader*(20+yr) | 0.923 * | 0.912 |

**Exhibit 28. Two Decade Model Estimation Results for the Homeowner per household,
1980-1990 & 1990-2000 in the Los Angeles Region (Part of Model 13)**

| Parameter | | Total | Latino | Asians | |
|------------------|-----------------|-------------------------------|------------|------------|------------|
| DEPENDENT | Own Rent | | | | |
| | | Ref. | | | |
| | mc0 | Native-Borns | Ref. | | |
| MC | mc1 | 1-10 years (in 1980 or 1990) | -1.532 *** | -2.008 *** | -1.397 *** |
| | mc2 | 11-20 years (in 1980 or 1990) | -0.519 *** | -0.889 *** | 0.155 |
| | mc3 | 20+ years (in 1980 or 1990) | 0.026 | -0.136 *** | 0.219 * |
| | pmc0 | (1980-1990)*Native-born | Ref. | | |
| P*MC | pmc1 | (1990-2000)*(1-10yr) | -0.060 ** | -0.395 *** | -0.189 ** |
| | pmc2 | (1990-2000)*(11-20yr) | -0.166 *** | -0.259 *** | -0.257 *** |
| | pmc3 | (1990-2000)*(20+yr) | -0.024 | -0.026 | 0.192 |

*** p<0.01 ** p<0.05 *p<0.1

| Odds Ratio | | Total | Latino | Asians | |
|-------------|------|-------------------------------|-----------|-----------|-----------|
| | mc0 | Native-Borns | Ref. | | |
| MC | mc1 | 1-10 years (in 1980 or 1990) | 0.216 *** | 0.134 *** | 0.247 *** |
| | mc2 | 11-20 years (in 1980 or 1990) | 0.595 *** | 0.411 *** | 1.167 |
| | mc3 | 20+ years (in 1980 or 1990) | 1.026 | 0.872 *** | 1.245 * |
| | pmc0 | (1980-1990)*Native-born | Ref. | | |
| P*MC | pmc1 | (1990-2000)*(1-10yr) | 0.942 ** | 0.673 *** | 0.828 ** |
| | pmc2 | (1990-2000)*(11-20yr) | 0.847 *** | 0.772 *** | 0.774 *** |
| | pmc3 | (1990-2000)*(20+yr) | 0.976 | 0.975 | 1.211 |

**Exhibit 29. Two Decade Model Estimation Results for the Homeowner per household,
1980-1990 & 1990-2000 in the Los Angeles Region, Controlled For Education or Not**

| Parameter | | Total | Latino | Asians |
|------------------------|-------------|---|-----------|-----------|
| DEPENDENT | Own | | | |
| | Rent | | | |
| | | Ref. | | |
| | | | | |
| | | | | |
| P*Y*MC | pymc0 | (1980-1990)*Beginning of decade*Native-born | Ref. | |
| | pymc1 | (1990-2000)*End of decader*(1-10yr) | -0.048 | 0.367 *** |
| | pymc2 | (1990-2000)*End of decader*(11-20yr) | 0.039 | 0.145 *** |
| | pymc3 | (1990-2000)*End of decade*(20+yr) | -0.080 * | -0.210 |
| | | | | |
| P*Y*MC | pymc0 | (1980-1990)*Beginning of decade*Native-born | Ref. | |
| (Controlled for | pymc1 | (1990-2000)*End of decader*(1-10yr) | -0.050 | 0.353 *** |
| Education) | pymc2 | (1990-2000)*End of decader*(11-20yr) | 0.016 | 0.110 ** |
| | pymc3 | (1990-2000)*End of decade*(20+yr) | -0.095 ** | -0.123 * |
| | | | | |
| *** p<0.01 | ** p<0.05 | *p<0.1 | | |

| Odds Ratio | | Total | Latino | Asians |
|------------------------|-------|---|----------|-----------|
| | | | | |
| | | | | |
| | | | | |
| P*Y*MC | pymc0 | (1980-1990)*Beginning of decade*Native-born | Ref. | |
| | pymc1 | (1990-2000)*End of decader*(1-10yr) | 0.953 | 1.444 *** |
| | pymc2 | (1990-2000)*End of decader*(11-20yr) | 1.040 | 1.156 *** |
| | pymc3 | (1990-2000)*End of decade*(20+yr) | 0.923 * | 0.811 |
| | | | | |
| P*Y*MC | pymc0 | (1980-1990)*Beginning of decade*Native-born | Ref. | |
| (Controlled for | pymc1 | (1990-2000)*End of decader*(1-10yr) | 0.951 | 1.423 *** |
| Education) | pymc2 | (1990-2000)*End of decader*(11-20yr) | 1.016 | 1.117 ** |
| | pymc3 | (1990-2000)*End of decade*(20+yr) | 0.910 ** | 0.884 * |
| | | | | |

SUMMARY AND CONCLUSION

In the Los Angeles region, immigrant progress out of poverty and into homeownership was substantial in the 1980s. The main question addressed in this study was whether that rate of progress was sustained in the 1990s. This report has approached the comparison of progress in the 1980s to the 1990s in multiple ways: overall change for all immigrants, changes for each immigrant arrival cohort, the components of change, and finally, measurements of change with logistic regression analysis. Overall, our finding is immigrant progress was not only sustained but increased substantially in the last decade.

Overall, immigrant poverty in California as well as in the Los Angeles region was rising in the 1980s, largely due to a large influx of new immigrants. In the 1990s, immigrant poverty did not rise in Los Angeles and California experienced a decline in poverty for the first time in decades. The decline is due to multiple factors. The influx of new immigrants to California and the region has slowed down for the first time in decades which has allowed the longer settled to become a larger proportion of the immigrant population. Secondly, it used to be that new immigrants would come in with increasingly higher levels of poverty, but that has not held true anymore for California. (New immigrants in Los Angeles still came in with higher poverty in the 1990s than in the 1980s.) And finally, as new immigrants arrived in the U.S., they would have elevated levels of poverty but as they become longer settled, their poverty decreases at a rapid pace (as seen in the Exhibits 1 to 4).

The components of change analysis more definitively explained which factors of change noted above had the largest impact in lowering poverty. The rapid decline in poverty by the longer settled immigrants was the biggest contributor to changes in overall poverty. The biggest shift in the components of change from one decade to the other was the poverty rate of the newest immigrant arrivals. The new arrivals in the 1990s made a more positive contribution to the immigrant population as a whole than the new arrivals did in the previous decade.

We have previously used a double cohort method to track immigrant progress in Los Angeles in the 1980s. Our statistical task is now to compare the rate of progress between two decades. Accordingly, the double cohort method was extended from a single decade analysis to a two decade analysis to more directly compare the progress of immigrants in the 1980s to that of the 1990s. In general, there was more rapid progress out of poverty for both new arrivals and longer settled immigrants in the 1990s than in the previous decade. Controls for education were used to minimize the effect of differential out-migration and the results changed very little.

Poverty serves as a proxy of the most dire of economic circumstances for these immigrants and the observed decline in poverty is a positive indication that immigrants are becoming more economically stable. On the other end of the spectrum, homeownership measures not only escaping economic hardship but the achievement of the American dream. Again, we observed more positive trends in homeownership in the 1990s than in the 1980s.

After decline in immigrant homeownership in the 1980s, there was a rebound for both California and the Los Angeles region. In fact, Los Angeles experienced a larger percentage point increase than the state as a whole. The new immigrant arrivals of the 1990s came in with lower homeownership than in previous decades but this was offset by the longer settled immigrants and the population composition shift. Again, the movement into homeownership by the longer settled immigrants was the biggest contributing factor to the overall rise in homeownership. The statistical analysis also confirms that immigrants did in fact do better in the 1990s than in the 1980s. Even with controls for differential out-migration, the trends into homeownership were unhampered.

It is very good news to California and particularly, the Los Angeles region that immigrants are not only continuing in the 1990s their progress out of poverty and into homeownership from the 1980s, but also that their progress is more accelerated in the 1990s than the previous decade. Coupled with the compositional shifts in the immigrant population towards a slow down of new immigrant growth and a growing share of longer settled immigrants, there is a genuine opportunity for the region to build on the positive momentum of its immigrants.

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Appendix A

COMPONENTS OF CHANGE METHOD FOR IMMIGRANT PROGRESS: Decomposition Method for Cohort Components that Contribute to the Total Change in an Outcome Prevalence Rate of a Population Group

The Outcome Prevalence Rate is the proportion of a subgroup that experiences a particular outcome X. Let this prevalence be designated P.

Time points of observation are t_0 and t_{-10} .

Cohorts are designated $C_{i\dots n}$.

Newly entered cohorts are designated C_{new0} and C_{new-10} .

The population size of cohorts is designated N (used to establish each cohort's weight in contributing to the overall prevalence rate).

The Outcome Prevalence Rate for the Total Population at One Point in Time (0) is given by:

$$P_0 = \sum_i (P_{ci, t_0} \times (N_{ci, t_0} / \sum_i N_{ci, t_0})) \quad (1)$$

The change from t_{-10} to t_0 in the Outcome Prevalence Rate for the Total Population is given by:

$$P\Delta = P_0 - P_{t-10} \quad (2)$$

The contribution to the total change stemming from a difference in the Outcome Prevalence Rate for the newly entered cohort is given by:

$$P\Delta_{new} = (P_{c_{new0}, t_0} - P_{c_{new-10}, t-10}) \times (N_{c0, t_0} / \sum_i N_{ci, t_0}) \quad (3)$$

The contribution to the total change stemming from a change in the Outcome Prevalence Rates of the existing cohorts is given by:

$$P\Delta_{existing} = \sum_i (P_{ci, t_0} - P_{ci, t-10}) \times (N_{ci, t_0} / \sum_i N_{ci, t_0}) \quad (4)$$

The contribution to the total change stemming from a change in the growth and cohort composition of the population is given by:

$$P\Delta_{composition} = (2) - (3) - (4) \quad (5)$$

Appendix B

DETAILED SPECIFICATION OF DOUBLE COHORT MODEL

Demographic behavior is often conceptualized through use of incidence rates, and these are well described by a logistic expression that models the log odds of attaining a given status. The present analysis adopts such a specification, including each of the temporal variables, as well as the higher-order interactions among each of those variables. In addition, included here is a vector of covariates to represent human capital endowments of the immigrants and native-borns.

The key to the model of changes over a single decade is its interactive structure with a series of higher-order effects constructed relative to lower order effects. A central element of this design is placement of the native-borns as the reference group for the immigration cohorts (MC_j). Interactions with immigration cohort force the main effects of the other variables to assume the values for native-borns, and the interactions measure the differential effect for immigrants. A second key feature is placement of the beginning of the decade, e.g., 1980, as the reference category for the period variable (YEAR). Interactions with period force the main effects of the other variables to assume the values for the beginning of decade, and the interactions then measure the rate of change for each of the birth or immigration cohorts.

The single decade model is expressed as follows:

$$\begin{aligned}
 L(O) = & B_0 + B_1X + \sum B_2BC_i + \sum B_3MC_j + \sum \sum B_4BC_i \times MC_j + \\
 & B_5YEAR + YEAR \times \left[\sum B_6BC_i \right] + YEAR \times \left[\sum B_7MC_j \right] + \\
 & YEAR \times \left[\sum \sum B_8BC_i \times MC_j \right] \tag{1}
 \end{aligned}$$

where

$L(O)$ = log odds of criterion status;

X_i = a vector of human capital covariates such as education;

BC_i = birth cohort (reference=45-54 at beginning of decade, 55-64 at the end of the decade);

MC_j = immigration cohort, defined by decade of entry for immigrants (reference=ative-born);

$BC_i \times MC_j$ = interaction of immigration and birth cohort membership, signifying age at arrival (reference= BC_i for the native born);

$YEAR$ = period of observation, or census year (reference=beginning of decade).

$YEAR \times BC_i$ = interaction of year of observation and birth cohort, signifying aging of birth cohorts (reference= BC_i at beginning of decade);

$YEAR \times MC_j$ = interaction of year of observation and immigration cohort, signifying growing duration of residence in the U.S. (reference= MC_j at beginning of decade);

$YEAR \times BC_i \times MC_j$ = interaction of $YEAR \times BC_i$ with MC_j , signifying the differential aging effect for birth cohorts conditional on year of arrival; and

the B_i are parameters to be estimated.

This single-decade model of immigrant progress can be extended to a two-decade model through the addition of a new variable, *Period*, to represent the two periods. For example, when the 1990s are compared to the 1980s, *Period* has the values of 1=1990s and 0=1980s. This variable can then be interacted with each of the other factors in the model.

Interpretation of the Model Parameters

While the estimation of this hierarchically structured logistic model is parsimonious, interpretation requires a certain amount of “unpacking.” The entire model structure is anchored by a common reference group, defined by the intersection among the base birth cohort (45-54), the base migration cohort (native-borns), and the base observation year (e.g., 1980). Thus the intercept term reflects the native-born cohort age 45-54 at the beginning of decade.

The terms for immigration cohort (MC_j) represent initial differences between native-borns and members of respective immigration cohorts (measured at the base birth cohort). The terms for birth cohort (BC_i) represent initial differences between the 15-24 birth cohort and other birth cohorts at the beginning of decade. Unique relationships among birth cohort and immigration cohort are captured by the interaction of MC_j and BC_i . These may be described as “age at migration” effects.⁵

Changes between the beginning and end of decade are represented by coefficients for $YEAR$ and interactions with $YEAR$. The $YEAR$ coefficient represents changes for the base birth and migration cohort, i.e., as the native-born cohort passes from age 45-54 to 55-64 between the beginning and end of decade. Differential changes by immigration cohorts

⁵ The potential importance of this factor was overlooked in Myers and Lee (1996a). Subsequent tests found that the interaction of immigration and birth cohort was marginally significant as a predictor of that study’s criterion variable—residential overcrowding—in only one of the three ethnic groups studied. This factor was overlooked because it did not appear to impact the rate of change of either birth or immigration cohorts. However, in logistic regression, unlike hierarchical log-linear models, higher-order interactions do not automatically include lower-order components. Those must be specifically introduced.

(duration effects) are captured by terms for $YEAR \times MC_j$. These effects represent relative convergence with native-born cohorts, often termed assimilation, or divergence and increasing disadvantage. Differential changes by birth cohorts (aging effects) are indicated by terms for $YEAR \times BC_i$. These represent the relatively greater or lesser effects of 10 years added age experienced by birth cohorts that are initially positioned at different ages. Finally, the most detailed effects in the single decade model are differential duration effects for respective birth cohorts, reflected by $YEAR \times BC_i \times MC_j$.

The two-decade model joins the single decade models representing, for example, the 1980s and 1990s, and adds the *Period* variable to distinguish them. Of key interest in all the interactions between *Period* and the other factors is $YEAR \times MC_j \times Period$. This term measures the relative rate of progress from beginning to end of decade in the 1990s compared to that in the 1980s. This estimation is carried out for each category of *MC*, which in turn is expressed relative to changes observed for the native-born reference group each decade, as described above. Thus the interactions with *Period* represent the differential rate of change observed in the more recent period relative to the preceding period.

Significance of Different Temporal Parameters

Significance testing for the contribution of each of the above-named effects is conducted by comparison of model fit with and without each effect. The entire set of dummy variables representing a common term is tested as a group, e.g., MC_2 through MC_4 . Following a hierarchical procedure, terms are successively removed from more complex models until a minimum set remains that is sufficient to describe the actual data. That set of significant terms describes the temporal structure of immigrant changes for a particular criterion variable. What is important to observe are the omitted terms found to be insignificant and therefore left absent from the best-fitting model.

- Absence of $YEAR \times BC_i \times MC_j$ implies that changes occur equally for all immigration cohorts and native-borns within birth cohorts, i.e., as specified by the addition of separate $YEAR \times BC_i$ and $YEAR \times MC_j$ effects.
- Absence of $YEAR \times MC_j$ implies that change occurs equally for immigrants and native-borns (no convergence or divergence).
- Absence of $YEAR \times BC_i$ indicates that change occurs equally for all birth cohorts.
- Absence of $YEAR$ indicates no changes at all.
- Absence of $BC_i \times MC_j$ implies no age-at-arrival effects, or no differential effects of birth cohorts for particular immigration groups; instead, the BC_i and MC_j effects are simply additive.

—Absence of MC_j implies no initial differences between native-borns and different immigration cohorts.

—Absence of BC_i implies no initial differences among birth cohorts.

**Appendix C1. (Model 10) Estimation Results for Below Poverty,
1980-1990, Los Angeles Region**

| Parameter | | | Total | NH White | NH Black | Hispanic | NH AsianPI |
|-------------------|---------|--------------------------|------------|------------|------------|------------|------------|
| Intercept | | | -2.836 *** | -3.200 *** | -1.701 *** | -2.398 *** | -3.762 *** |
| YEAR | year | 1990 | 0.080 *** | 0.110 *** | -0.047 | 0.210 *** | 0.026 |
| | | 1980 | Ref. | | | | |
| MC | mc0 | Native-Borns | Ref. | | | | |
| | mc1 | 1970s (1970-79) | 1.513 *** | 1.794 *** | 0.279 | 1.199 *** | 2.246 *** |
| | mc2 | 1960s (1960-69) | 0.577 *** | 0.139 | -0.245 | 0.594 *** | 0.440 |
| | mc3 | pre60 | 0.083 | -0.127 | -0.004 | 0.216 ** | 0.536 * |
| BC | bc1 | 15-24 in 1980 | 0.880 *** | 0.891 *** | 0.630 *** | 0.697 *** | 1.413 *** |
| | bc2 | 25-34 in 1980 | 0.488 *** | 0.553 *** | 0.202 *** | 0.423 *** | 0.797 *** |
| | bc3 | 35-44 in 1980 | 0.204 *** | 0.189 *** | 0.041 | 0.249 *** | 0.127 |
| | bc4 | 45-54 in 1980 | Ref. | | | | |
| | bc5 | 55-64 in 1980 | 0.115 *** | 0.197 *** | 0.080 | 0.348 *** | -0.037 |
| | bc6 | 65-74 in 1980 | 0.204 *** | 0.364 *** | 0.118 * | 0.308 *** | 1.082 *** |
| Y*MC | ymc0 | 1990*Native-born | Ref. | | | | |
| | ymc1 | 1990*1970s | -0.842 *** | -1.152 *** | 0.236 | -0.644 *** | -1.211 *** |
| | ymc2 | 1990*1960s | -0.048 | 0.013 | 0.351 | -0.236 * | 0.400 |
| | ymc3 | 1990*pre60 | -0.039 | 0.153 | -0.774 | -0.275 ** | -0.089 |
| Y*BC | ybc1 | 1990*15-24 in 1980 | -0.662 *** | -0.761 *** | -0.416 *** | -0.610 *** | -0.899 *** |
| | ybc2 | 1990*25-34 in 1980 | -0.591 *** | -0.731 *** | -0.284 *** | -0.531 *** | -0.524 |
| | ybc3 | 1990*35-44 in 1980 | -0.460 *** | -0.472 *** | -0.356 *** | -0.481 *** | -0.156 |
| | ybc4 | 1990*45-54 in 1980 | Ref. | | | | |
| | ybc5 | 1990*55-64 in 1980 | -0.170 *** | -0.213 *** | 0.068 | -0.383 *** | 0.419 |
| | ybc6 | 1990*65-74 in 1980 | 0.210 *** | 0.219 *** | 0.177 | 0.082 | 0.487 |
| MC*BC | mc1bc1 | 1970s*15-24 in 1980 | -0.547 *** | -0.324 *** | 0.117 | -0.525 *** | -0.869 *** |
| | mc1bc2 | 1970s*25-34 in 1980 | -0.518 *** | -0.609 *** | 0.005 | -0.446 *** | -0.986 *** |
| | mc1bc3 | 1970s*35-44 in 1980 | -0.200 *** | -0.258 * | -0.466 | -0.124 | -0.339 |
| | mc1bc4 | 1970s*45-54 in 1980 | Ref. | | | | |
| | mc1bc5 | 1970s*55-64 in 1980 | -0.241 *** | -0.139 | -0.555 | -0.417 *** | -0.177 |
| | mc1bc6 | 1970s*65-74 in 1980 | -0.439 *** | -0.276 | -0.083 | -0.506 *** | -1.463 *** |
| | mc2bc1 | 1960s*15-24 in 1980 | -0.306 *** | -0.167 | 0.082 | -0.388 *** | -0.029 |
| | mc2bc2 | 1960s*25-34 in 1980 | -0.145 * | 0.026 | -0.741 | -0.322 *** | -0.519 |
| | mc2bc3 | 1960s*35-44 in 1980 | -0.032 | -0.086 | 0.126 | -0.103 | -0.055 |
| | mc2bc4 | 1960s*45-54 in 1980 | Ref. | | | | |
| | mc2bc5 | 1960s*55-64 in 1980 | 0.036 | 0.184 | 1.078 | -0.379 *** | 1.251 ** |
| | mc2bc6 | 1960s*65-74 in 1980 | 0.010 | 0.538 ** | 0.218 | -0.557 *** | 0.480 |
| | mc3bc1 | pre60*15-24 in 1980 | 0.128 | 0.342 | 0.159 | -0.134 | -0.490 |
| | mc3bc2 | pre60*25-34 in 1980 | -0.114 | 0.218 | 0.195 | -0.410 *** | -0.522 |
| | mc3bc3 | pre60*35-44 in 1980 | 0.255 *** | 0.392 ** | 0.708 | 0.043 | -0.145 |
| | mc3bc4 | pre60*45-54 in 1980 | Ref. | | | | |
| | mc3bc5 | pre60*55-64 in 1980 | 0.142 | 0.155 | -0.454 | -0.006 | 0.750 |
| | mc3bc6 | pre60*65-74 in 1980 | 0.141 | 0.330 ** | 0.893 | -0.097 | -0.519 |
| Y*MC*BC | ymc1bc1 | 1990*1970s*15-24 in 1980 | 0.744 *** | -0.184 | -1.553 ** | 0.640 *** | 0.466 |
| | ymc1bc2 | 1990*1970s*25-34 in 1980 | 0.972 *** | 0.473 ** | -0.691 | 0.824 *** | 0.644 |
| | ymc1bc3 | 1990*1970s*35-44 in 1980 | 0.494 *** | 0.040 | -0.695 | 0.388 *** | 0.352 |
| | ymc1bc4 | 1990*1970s*45-54 in 1980 | Ref. | | | | |
| | ymc1bc5 | 1990*1970s*55-64 in 1980 | 0.372 *** | 0.280 | -0.845 | 0.467 ** | 0.191 |
| | ymc1bc6 | 1990*1970s*65-74 in 1980 | 0.002 | -0.141 | -0.772 | 0.006 | 0.212 |
| | ymc2bc1 | 1990*1960s*15-24 in 1980 | -0.069 | 0.051 | -0.421 | 0.014 | -0.824 |
| | ymc2bc2 | 1990*1960s*25-34 in 1980 | 0.359 *** | -0.030 | 1.063 | 0.423 *** | -0.371 |
| | ymc2bc3 | 1990*1960s*35-44 in 1980 | 0.076 | -0.077 | -0.520 | 0.180 | -0.698 |
| | ymc2bc4 | 1990*1960s*45-54 in 1980 | Ref. | | | | |
| | ymc2bc5 | 1990*1960s*55-64 in 1980 | 0.043 | 0.268 | -1.981 | 0.323 | -1.583 ** |
| | ymc2bc6 | 1990*1960s*65-74 in 1980 | -0.174 | -0.691 * | -10.728 | 0.212 | -0.666 |
| | ymc3bc1 | 1990*pre60*15-24 in 1980 | -0.452 * | -0.251 | 0.281 | -0.425 | -0.627 |
| | ymc3bc2 | 1990*pre60*25-34 in 1980 | 0.185 | -0.382 | -0.532 | 0.632 *** | 0.367 |
| | ymc3bc3 | 1990*pre60*35-44 in 1980 | -0.278 * | -0.565 ** | -9.725 | -0.030 | -0.917 |
| | ymc3bc4 | 1990*pre60*45-54 in 1980 | Ref. | | | | |
| | ymc3bc5 | 1990*pre60*55-64 in 1980 | 0.055 | -0.027 | 1.734 | 0.185 | -0.106 |
| | ymc3bc6 | 1990*pre60*65-74 in 1980 | -0.030 | -0.163 | 0.356 | 0.103 | -0.711 |
| -2 Log Likelihood | | | 16683.54 | 4696.01 | 768.30 | 3780.10 | 2078.48 |
| DF | | | 47 | 47 | 47 | 47 | 47 |
| Pseudo R-Square | | | 0.0466 | 0.0268 | 0.0198 | 0.0379 | 0.1092 |

*** p<0.01 ** p<0.05 *p<0.1

**Appendix C2. (Model 10) Estimation Results for Below Poverty,
1990-2000, Los Angeles Region**

| Parameter | | | | Total | NH White | NH Black | Hispanic | NH AsianPI | |
|-------------------|---------|--------------------------|--------------------------|------------|------------|------------|------------|------------|-----------|
| Intercept | | | | -3.012 *** | -3.373 *** | -2.063 *** | -2.419 *** | -3.766 *** | |
| YEAR | year | 2000 | | 0.591 *** | 0.624 *** | 0.558 *** | 0.412 *** | 1.010 *** | |
| | | 1990 | Ref. | | | | | | |
| MC | mc0 | Native-Borns | Ref. | | | | | | |
| | mc1 | 1980s (1980-89) | | 1.691 *** | 1.915 *** | -0.312 | 1.377 *** | 2.230 *** | |
| | mc2 | 1970s (1970-79) | | 0.965 *** | 0.424 *** | -0.645 | 0.820 *** | 1.048 *** | |
| | mc3 | pre70 | | 0.434 *** | -0.070 | -0.443 | 0.333 *** | -0.005 | |
| BC | bc1 | 15-24 in 1990 | | 1.119 *** | 1.143 *** | 0.866 *** | 0.752 *** | 1.687 *** | |
| | bc2 | 25-34 in 1990 | | 0.474 *** | 0.412 *** | 0.529 *** | 0.320 *** | 0.543 ** | |
| | bc3 | 35-44 in 1990 | | 0.153 *** | 0.104 *** | 0.233 *** | 0.124 ** | 0.302 | |
| | bc4 | 45-54 in 1990 | Ref. | | | | | | |
| | bc5 | 55-64 in 1990 | | 0.256 *** | 0.282 *** | 0.315 *** | 0.232 *** | 0.029 | |
| | bc6 | 65-74 in 1990 | | 0.201 *** | 0.266 *** | 0.462 *** | 0.197 ** | 0.412 | |
| Y*MC | ymc0 | 2000*Native-born | Ref. | | | | | | |
| | ymc1 | 2000*1980s | | -1.038 *** | -1.246 *** | 0.719 | -0.703 *** | -1.727 *** | |
| | ymc2 | 2000*1970s | | -0.395 *** | -0.147 | 0.312 | -0.300 *** | -0.663 ** | |
| | ymc3 | 2000*pre70 | | -0.277 *** | 0.118 | 0.028 | -0.261 *** | -0.258 | |
| Y*BC | ybc1 | 2000*15-24 in 1990 | | -0.913 *** | -1.037 *** | -0.678 *** | -0.764 *** | -1.505 *** | |
| | ybc2 | 2000*25-34 in 1990 | | -0.430 *** | -0.415 *** | -0.508 *** | -0.364 *** | -0.850 *** | |
| | ybc3 | 2000*35-44 in 1990 | | -0.316 *** | -0.277 *** | -0.392 *** | -0.330 *** | -0.647 * | |
| | ybc4 | 2000*45-54 in 1990 | Ref. | | | | | | |
| | ybc5 | 2000*55-64 in 1990 | | -0.600 *** | -0.714 *** | -0.501 *** | -0.411 *** | -0.252 | |
| | ybc6 | 2000*65-74 in 1990 | | -0.354 *** | -0.382 *** | -0.557 *** | -0.072 | -0.269 | |
| MC*BC | mc1bc1 | 1980s*15-24 in 1990 | | -0.612 *** | -0.581 *** | 0.286 | -0.469 *** | -1.178 *** | |
| | mc1bc2 | 1980s*25-34 in 1990 | | -0.307 *** | -0.492 *** | -0.012 | -0.202 *** | -0.764 *** | |
| | mc1bc3 | 1980s*35-44 in 1990 | | -0.054 | -0.243 ** | 0.270 | 0.092 | -0.419 | |
| | mc1bc4 | 1980s*45-54 in 1990 | Ref. | | | | | | |
| | mc1bc5 | 1980s*55-64 in 1990 | | -0.284 *** | -0.197 | 0.411 | -0.425 *** | 0.091 | |
| | mc1bc6 | 1980s*65-74 in 1990 | | -0.435 *** | -0.362 ** | 0.446 | -0.268 * | -0.679 ** | |
| | mc2bc1 | 1970s*15-24 in 1990 | | -0.614 *** | -0.364 ** | -0.279 | -0.535 *** | -0.741 *** | |
| | mc2bc2 | 1970s*25-34 in 1990 | | -0.097 * | -0.291 | -0.276 | -0.150 ** | -0.416 | |
| | mc2bc3 | 1970s*35-44 in 1990 | | 0.161 *** | 0.082 | 0.474 | 0.114 | -0.354 | |
| | mc2bc4 | 1970s*45-54 in 1990 | Ref. | | | | | | |
| | mc2bc5 | 1970s*55-64 in 1990 | | -0.293 *** | 0.218 | 1.161 * | -0.264 ** | -0.012 | |
| | mc2bc6 | 1970s*65-74 in 1990 | | -0.163 * | 0.358 | -0.239 | -0.213 | 0.002 | |
| | mc3bc1 | pre70*15-24 in 1990 | | -0.386 *** | 0.018 | -0.846 | -0.410 *** | 0.384 | |
| | mc3bc2 | pre70*25-34 in 1990 | | -0.324 *** | 0.123 | 0.195 | -0.384 *** | -0.057 | |
| | mc3bc3 | pre70*35-44 in 1990 | | 0.156 ** | 0.066 | 0.675 | 0.078 | 0.030 | |
| | mc3bc4 | pre70*45-54 in 1990 | Ref. | | | | | | |
| | mc3bc5 | pre70*55-64 in 1990 | | -0.159 ** | 0.138 | 0.245 | -0.162 | 0.661 * | |
| | mc3bc6 | pre70*65-74 in 1990 | | -0.085 | 0.315 ** | 0.577 | -0.141 | 0.862 ** | |
| | Y*MC*BC | ymc1bc1 | 2000*1980s*15-24 in 1990 | | 0.819 *** | 0.381 ** | -0.707 | 0.653 *** | 0.879 *** |
| | | ymc1bc2 | 2000*1980s*25-34 in 1990 | | 0.560 *** | 0.372 ** | -0.875 | 0.393 *** | 1.067 *** |
| | | ymc1bc3 | 2000*1980s*35-44 in 1990 | | 0.208 *** | 0.390 ** | -1.264 * | 0.043 | 0.758 ** |
| | | ymc1bc4 | 2000*1980s*45-54 in 1990 | Ref. | | | | | |
| | | ymc1bc5 | 2000*1980s*55-64 in 1990 | | 0.664 *** | 0.785 *** | -11.000 | 0.574 *** | 0.469 |
| | | ymc1bc6 | 2000*1980s*65-74 in 1990 | | 0.821 *** | 1.104 *** | -1.450 | 0.185 | 1.103 *** |
| ymc2bc1 | | 2000*1970s*15-24 in 1990 | | 0.247 *** | 0.132 | -0.195 | 0.283 *** | 0.123 | |
| ymc2bc2 | | 2000*1970s*25-34 in 1990 | | 0.160 ** | 0.228 | 0.215 | 0.141 | 0.573 * | |
| ymc2bc3 | | 2000*1970s*35-44 in 1990 | | -0.171 ** | -0.045 | -0.493 | -0.135 | 0.152 | |
| ymc2bc4 | | 2000*1970s*45-54 in 1990 | Ref. | | | | | | |
| ymc2bc5 | | 2000*1970s*55-64 in 1990 | | 0.824 *** | 0.861 *** | -0.341 | 0.618 *** | 0.483 | |
| ymc2bc6 | | 2000*1970s*65-74 in 1990 | | 0.399 *** | 0.200 | 1.661 | 0.080 | 0.295 | |
| ymc3bc1 | | 2000*pre70*15-24 in 1990 | | -0.142 | -0.426 | -9.296 | 0.028 | -0.868 | |
| ymc3bc2 | | 2000*pre70*25-34 in 1990 | | 0.092 | -0.251 | -0.494 | 0.156 | -0.118 | |
| ymc3bc3 | | 2000*pre70*35-44 in 1990 | | -0.156 * | -0.112 | -0.462 | -0.139 | 0.022 | |
| ymc3bc4 | | 2000*pre70*45-54 in 1990 | Ref. | | | | | | |
| ymc3bc5 | | 2000*pre70*55-64 in 1990 | | 0.440 *** | 0.024 | 0.202 | 0.374 *** | -0.026 | |
| ymc3bc6 | | 2000*pre70*65-74 in 1990 | | 0.326 *** | -0.083 | 0.094 | 0.205 | -0.148 | |
| -2 Log Likelihood | | | | 31930.32 | 4965.81 | 554.70 | 9899.66 | 3244.32 | |
| DF | | | | 47 | 47 | 47 | 47 | 47 | |
| Pseudo R-Square | | | | 0.0673 | 0.0294 | 0.0142 | 0.0543 | 0.0745 | |

*** p<0.01 ** p<0.05 *p<0.1

**Appendix C3. (Model 13) Estimation Results for Below Poverty,
1980-1990 & 1990-2000, Los Angeles Region**

| Parameter | | | Total | NH White | NH Black | Hispanic | NH AsianPI | |
|-------------------|--------|------------------------------|---|------------|------------|------------|------------|------------|
| Intercept | | | -2.796 *** | -3.200 *** | -1.705 *** | -2.290 *** | -3.581 *** | |
| YEAR | year | Last year of two decade | -0.013 | 0.114 *** | -0.037 | 0.008 | -0.111 | |
| | | Beginning year of two decade | Ref. | | | | | |
| PERIOD | period | 1990-2000 | -0.137 *** | -0.159 *** | -0.364 *** | -0.040 | 0.078 | |
| | | 1980-1990 | Ref. | | | | | |
| MC | mc | mc0 | Ref. | | | | | |
| | | mc1 | Native-Borns | 1.203 *** | 1.711 *** | 0.634 *** | 0.893 *** | 1.965 *** |
| | | mc2 | 1-10 years (in 1980 or 1990) | 0.537 *** | 0.130 | -0.200 | 0.458 *** | 0.701 *** |
| | | mc3 | 11-20 years (in 1980 or 1990) | 0.156 *** | -0.011 | 0.079 | 0.176 *** | 0.399 ** |
| BC | bc | bc1 | 20+ years (in 1980 or 1990) | 0.851 *** | 0.902 *** | 0.638 *** | 0.595 *** | 1.340 *** |
| | | bc2 | 15-24 (in 1980 or 1990) | 0.404 *** | 0.547 *** | 0.206 *** | 0.251 *** | 0.338 ** |
| | | bc3 | 25-34 (in 1980 or 1990) | 0.177 *** | 0.193 *** | 0.044 | 0.174 *** | -0.023 |
| | | bc4 | 35-44 (in 1980 or 1990) | Ref. | | | | |
| | | bc5 | 45-54 (in 1980 or 1990) | 0.079 *** | 0.181 *** | 0.077 | 0.227 *** | -0.192 |
| | | bc6 | 55-64 (in 1980 or 1990) | 0.168 *** | 0.360 *** | 0.124 * | 0.191 *** | 0.386 ** |
| Y*Period | yp | Last year*Period(1990-2000) | 0.468 *** | 0.484 *** | 0.607 *** | 0.219 *** | 0.579 *** | |
| Y*MC | ymc | ymc0 | Last year*Native-born | Ref. | | | | |
| | | ymc1 | Last year*(1-10yr) | -0.146 *** | -1.037 *** | -0.716 *** | -0.044 | -0.842 *** |
| | | ymc2 | Last year*(11-20yr) | 0.055 * | -0.014 | 0.191 | -0.024 | -0.200 |
| | | ymc3 | Last year*(20+yr) | -0.040 | -0.023 | -0.541 | -0.083 | -0.229 |
| Y*BC | ybc | ybc1 | Last year*15-24 (in 1980 or 1990) | -0.565 *** | -0.777 *** | -0.436 *** | -0.407 *** | -0.730 *** |
| | | ybc2 | Last year*25-34 (in 1980 or 1990) | -0.391 *** | -0.717 *** | -0.280 *** | -0.165 *** | -0.142 |
| | | ybc3 | Last year*35-44 (in 1980 or 1990) | -0.426 *** | -0.493 *** | -0.375 *** | -0.379 *** | -0.069 |
| | | ybc4 | Last year*45-54 (in 1980 or 1990) | Ref. | | | | |
| | | ybc5 | Last year*55-64 (in 1980 or 1990) | -0.099 *** | -0.195 *** | 0.063 | -0.188 ** | 0.415 ** |
| | | ybc6 | Last year*65-74 (in 1980 or 1990) | 0.248 *** | 0.205 *** | 0.162 | 0.158 * | 0.508 ** |
| MC*BC | mc1bc | mc1bc1 | (1-10yr)*15-24 (in 1980 or 1990) | -0.245 *** | -0.394 *** | -0.301 | -0.202 *** | -0.723 *** |
| | | mc1bc2 | (1-10yr)*25-34 (in 1980 or 1990) | -0.079 *** | -0.409 *** | -0.437 * | -0.047 | -0.408 *** |
| | | mc1bc3 | (1-10yr)*35-44 (in 1980 or 1990) | 0.029 | -0.152 ** | -0.549 ** | 0.096 ** | -0.100 |
| | | mc1bc4 | (1-10yr)*45-54 (in 1980 or 1990) | Ref. | | | | |
| | | mc1bc5 | (1-10yr)*55-64 (in 1980 or 1990) | -0.018 | 0.030 | -0.691 * | -0.179 *** | 0.184 |
| | | mc1bc6 | (1-10yr)*65-74 (in 1980 or 1990) | -0.196 *** | -0.096 | -0.306 | -0.281 *** | -0.489 *** |
| | mc2bc | mc2bc1 | (11-20yr)*15-24 (in 1980 or 1990) | -0.438 *** | -0.217 ** | -0.256 | -0.391 *** | -0.555 *** |
| | | mc2bc2 | (11-20yr)*25-34 (in 1980 or 1990) | -0.004 | -0.102 | -0.130 | -0.092 ** | -0.273 ** |
| | | mc2bc3 | (11-20yr)*35-44 (in 1980 or 1990) | 0.070 ** | -0.011 | 0.089 | 0.041 | -0.292 ** |
| | | mc2bc4 | (11-20yr)*45-54 (in 1980 or 1990) | Ref. | | | | |
| | | mc2bc5 | (11-20yr)*55-64 (in 1980 or 1990) | 0.093 ** | 0.497 *** | 0.762 ** | -0.058 | 0.221 |
| | | mc2bc6 | (11-20yr)*65-74 (in 1980 or 1990) | -0.004 | 0.365 *** | 0.158 | -0.265 *** | 0.023 |
| | mc3bc | mc3bc1 | (20+yr)*15-24 (in 1980 or 1990) | -0.257 *** | 0.064 | -0.295 | -0.324 *** | 0.034 |
| | | mc3bc2 | (20+yr)*25-34 (in 1980 or 1990) | -0.201 *** | 0.018 | 0.044 | -0.261 *** | -0.181 |
| | | mc3bc3 | (20+yr)*35-44 (in 1980 or 1990) | 0.109 *** | 0.064 | 0.488 * | 0.029 | -0.088 |
| | | mc3bc4 | (20+yr)*45-54 (in 1980 or 1990) | Ref. | | | | |
| | | mc3bc5 | (20+yr)*55-64 (in 1980 or 1990) | 0.087 ** | 0.125 * | 0.258 | 0.028 | 0.614 *** |
| | | mc3bc6 | (20+yr)*65-74 (in 1980 or 1990) | 0.082 ** | 0.246 *** | 0.740 ** | -0.046 | 0.284 |
| P*MC | pmc | pmc0 | (1990-2000)*Native-born | Ref. | | | | |
| | | pmc1 | (1990-2000)*(1-10yr) | 0.242 *** | 0.080 * | -0.395 *** | 0.305 *** | -0.086 |
| | | pmc2 | (1990-2000)*(11-20yr) | 0.342 *** | 0.204 *** | -0.332 | 0.287 *** | 0.182 |
| | | pmc3 | (1990-2000)*(20+yr) | 0.164 *** | -0.024 | -0.477 ** | 0.052 | -0.377 ** |
| P*BC | pbc | pbc1 | (1990-2000)*15-24 (in 1980 or 1990) | 0.131 *** | 0.219 *** | 0.234 *** | 0.009 | 0.016 |
| | | pbc2 | (1990-2000)*25-34 (in 1980 or 1990) | -0.004 | -0.144 *** | 0.324 *** | -0.005 | -0.057 |
| | | pbc3 | (1990-2000)*35-44 (in 1980 or 1990) | -0.007 | -0.091 * | 0.209 *** | -0.010 | 0.109 |
| | | pbc4 | (1990-2000)*45-54 (in 1980 or 1990) | Ref. | | | | |
| | | pbc5 | (1990-2000)*55-64 (in 1980 or 1990) | 0.048 | 0.073 | 0.251 *** | -0.141 ** | 0.114 |
| | | pbc6 | (1990-2000)*65-74 (in 1980 or 1990) | -0.058 | -0.109 ** | 0.342 *** | -0.034 | -0.065 |
| P*Y*MC | pymc | pymc0 | (1990-2000)*Last year*Native-born | Ref. | | | | |
| | | pymc1 | (1990-2000)*Last year*(1-10yr) | -0.316 *** | 0.202 ** | 0.556 ** | -0.208 *** | -0.056 |
| | | pymc2 | (1990-2000)*Last year*(11-20yr) | -0.305 *** | 0.056 | -0.004 | -0.101 * | -0.123 |
| | | pymc3 | (1990-2000)*Last year*(20+yr) | -0.086 | 0.057 | 0.367 | 0.002 | 0.078 |
| P*Y*BC | pybc | pybc1 | (1990-2000)*Last year*15-24 (in 1980 or 1990) | -0.108 *** | -0.236 *** | -0.252 ** | -0.044 | -0.246 |
| | | pybc2 | (1990-2000)*Last year*25-34 (in 1980 or 1990) | 0.091 ** | 0.320 *** | -0.238 ** | -0.052 | 0.041 |
| | | pybc3 | (1990-2000)*Last year*35-44 (in 1980 or 1990) | 0.067 | 0.228 *** | -0.047 | -0.041 | -0.132 |
| | | pybc4 | (1990-2000)*Last year*45-54 (in 1980 or 1990) | Ref. | | | | |
| | | pybc5 | (1990-2000)*Last year*55-64 (in 1980 or 1990) | -0.241 *** | -0.436 *** | -0.579 *** | 0.117 | -0.330 |
| | | pybc6 | (1990-2000)*Last year*65-74 (in 1980 or 1990) | -0.399 *** | -0.535 *** | -0.719 *** | -0.088 | -0.148 |
| -2 Log Likelihood | | | 49932.36 | 9581.54 | 1268.67 | 14072.91 | 5301.82 | |
| DF | | | 50 | 50 | 50 | 50 | 50 | |
| Pseudo R-Square | | | 0.0598 | 0.0278 | 0.0163 | 0.0498 | 0.0845 | |

*** p<0.01 ** p<0.05 *p<0.1

**Appendix C4. (Model 10+Edu) Estimation Results for Below Poverty,
1980-1990, Los Angeles Region**

| Parameter | | | Total | NH White | NH Black | Hispanic | NH AsianPI |
|-------------------|---------|--------------------------|------------|------------|------------|------------|------------|
| Intercept | | | -2.170 *** | -2.630 *** | -1.207 *** | -2.070 *** | -3.095 *** |
| YEAR | year | 1990 | 0.102 *** | 0.135 *** | -0.042 | 0.198 *** | 0.031 |
| | | 1980 | Ref. | | | | |
| MC | mc0 | Native-Borns | Ref. | | | | |
| | mc1 | 1970s (1970-79) | 1.217 *** | 1.646 *** | 0.260 | 1.017 *** | 2.145 *** |
| | mc2 | 1960s (1960-69) | 0.325 *** | 0.056 | -0.367 | 0.496 *** | 0.384 |
| | mc3 | pre60 | -0.083 | -0.187 | 0.203 | 0.132 | 0.461 |
| BC | bc1 | 15-24 in 1980 | 0.621 *** | 0.659 *** | 0.476 *** | 0.691 *** | 1.153 *** |
| | bc2 | 25-34 in 1980 | 0.656 *** | 0.654 *** | 0.410 *** | 0.706 *** | 1.000 *** |
| | bc3 | 35-44 in 1980 | 0.311 *** | 0.258 *** | 0.179 *** | 0.396 *** | 0.249 |
| | bc4 | 45-54 in 1980 | Ref. | | | | |
| | bc5 | 55-64 in 1980 | 0.044 | 0.133 *** | -0.076 | 0.253 *** | -0.166 |
| | bc6 | 65-74 in 1980 | -0.001 | 0.187 *** | -0.161 ** | 0.127 | 0.796 ** |
| Y*MC | ymc0 | 1990*Native-born | Ref. | | | | |
| | ymc1 | 1990*1970s | -0.869 *** | -1.208 *** | 0.088 | -0.652 *** | -1.247 *** |
| | ymc2 | 1990*1960s | -0.090 | -0.021 | 0.328 | -0.260 ** | 0.384 |
| | ymc3 | 1990*pre60 | -0.079 | 0.143 | -0.883 | -0.305 ** | -0.121 |
| Y*BC | ybc1 | 1990*15-24 in 1980 | -0.272 *** | -0.457 *** | -0.069 | -0.300 *** | -0.437 |
| | ybc2 | 1990*25-34 in 1980 | -0.564 *** | -0.714 *** | -0.266 *** | -0.486 *** | -0.517 |
| | ybc3 | 1990*35-44 in 1980 | -0.447 *** | -0.465 *** | -0.357 *** | -0.448 *** | -0.149 |
| | ybc4 | 1990*45-54 in 1980 | Ref. | | | | |
| | ybc5 | 1990*55-64 in 1980 | -0.184 *** | -0.227 *** | 0.058 | -0.386 *** | 0.440 |
| | ybc6 | 1990*65-74 in 1980 | 0.231 *** | 0.227 *** | 0.220 * | 0.116 | 0.525 |
| MC*BC | mc1bc1 | 1970s*15-24 in 1980 | -0.432 *** | -0.118 | 0.183 | -0.517 *** | -0.815 *** |
| | mc1bc2 | 1970s*25-34 in 1980 | -0.638 *** | -0.489 *** | 0.129 | -0.690 *** | -0.979 *** |
| | mc1bc3 | 1970s*35-44 in 1980 | -0.232 *** | -0.194 | -0.297 | -0.260 *** | -0.264 |
| | mc1bc4 | 1970s*45-54 in 1980 | Ref. | | | | |
| | mc1bc5 | 1970s*55-64 in 1980 | -0.225 *** | -0.163 | -0.756 | -0.320 ** | -0.226 |
| | mc1bc6 | 1970s*65-74 in 1980 | -0.341 *** | -0.244 | 0.087 | -0.348 ** | -1.450 *** |
| | mc2bc1 | 1960s*15-24 in 1980 | -0.090 | -0.053 | 0.219 | -0.290 *** | 0.040 |
| | mc2bc2 | 1960s*25-34 in 1980 | -0.280 *** | 0.075 | -0.578 | -0.535 *** | -0.498 |
| | mc2bc3 | 1960s*35-44 in 1980 | -0.073 | -0.061 | 0.327 | -0.237 ** | 0.100 |
| | mc2bc4 | 1960s*45-54 in 1980 | Ref. | | | | |
| | mc2bc5 | 1960s*55-64 in 1980 | 0.048 | 0.174 | 1.241 | -0.300 ** | 1.243 ** |
| | mc2bc6 | 1960s*65-74 in 1980 | 0.070 | 0.570 ** | 0.537 | -0.456 ** | 0.454 |
| | mc3bc1 | pre60*15-24 in 1980 | 0.528 *** | 0.658 *** | 0.213 | 0.132 | -0.079 |
| | mc3bc2 | pre60*25-34 in 1980 | 0.005 | 0.292 * | -0.061 | -0.327 ** | -0.449 |
| | mc3bc3 | pre60*35-44 in 1980 | 0.226 ** | 0.432 *** | 0.635 | -0.028 | -0.147 |
| | mc3bc4 | pre60*45-54 in 1980 | Ref. | | | | |
| | mc3bc5 | pre60*55-64 in 1980 | 0.182 ** | 0.173 | -0.585 | 0.049 | 0.756 |
| | mc3bc6 | pre60*65-74 in 1980 | 0.177 ** | 0.327 ** | 0.727 | -0.023 | -0.594 |
| Y*MC*BC | ymc1bc1 | 1990*1970s*15-24 in 1980 | 0.500 *** | -0.112 | -1.337 * | 0.415 *** | 0.425 |
| | ymc1bc2 | 1990*1970s*25-34 in 1980 | 0.934 *** | 0.516 ** | -0.528 | 0.776 *** | 0.691 * |
| | ymc1bc3 | 1990*1970s*35-44 in 1980 | 0.469 *** | 0.063 | -0.854 | 0.362 ** | 0.363 |
| | ymc1bc4 | 1990*1970s*45-54 in 1980 | Ref. | | | | |
| | ymc1bc5 | 1990*1970s*55-64 in 1980 | 0.353 *** | 0.317 | -0.599 | 0.427 ** | 0.156 |
| | ymc1bc6 | 1990*1970s*65-74 in 1980 | -0.013 | -0.188 | -0.798 | -0.025 | 0.251 |
| | ymc2bc1 | 1990*1960s*15-24 in 1980 | -0.118 | 0.080 | -0.263 | -0.038 | -0.815 |
| | ymc2bc2 | 1990*1960s*25-34 in 1980 | 0.367 *** | -0.006 | 1.174 | 0.404 *** | -0.357 |
| | ymc2bc3 | 1990*1960s*35-44 in 1980 | 0.077 | -0.082 | -0.536 | 0.170 | -0.691 |
| | ymc2bc4 | 1990*1960s*45-54 in 1980 | Ref. | | | | |
| | ymc2bc5 | 1990*1960s*55-64 in 1980 | 0.040 | 0.269 | -1.859 | 0.304 | -1.610 ** |
| | ymc2bc6 | 1990*1960s*65-74 in 1980 | -0.223 | -0.784 ** | -10.573 | 0.215 | -0.782 |
| | ymc3bc1 | 1990*pre60*15-24 in 1980 | -0.640 *** | -0.469 | 0.164 | -0.541 | -0.970 |
| | ymc3bc2 | 1990*pre60*25-34 in 1980 | 0.215 | -0.383 | -0.129 | 0.650 *** | 0.361 |
| | ymc3bc3 | 1990*pre60*35-44 in 1980 | -0.262 * | -0.583 *** | -9.667 | -0.026 | -0.761 |
| | ymc3bc4 | 1990*pre60*45-54 in 1980 | Ref. | | | | |
| | ymc3bc5 | 1990*pre60*55-64 in 1980 | 0.074 | -0.020 | 2.229 * | 0.209 | -0.233 |
| | ymc3bc6 | 1990*pre60*65-74 in 1980 | -0.042 | -0.185 | 0.592 | 0.095 | -0.676 |
| Education | edu1 | Below HS | Ref. | | | | |
| | edu2 | HS and Some Colleage | -0.828 *** | -0.606 *** | -0.716 *** | -0.863 *** | -0.638 *** |
| | edu3 | BA+ | -1.560 *** | -1.157 *** | -1.804 *** | -1.316 *** | -1.370 *** |
| -2 Log Likelihood | | | 30825.81 | 7818.48 | 2528.94 | 7058.14 | 2714.60 |
| DF | | | 49 | 49 | 49 | 49 | 49 |
| Pseudo R-Square | | | 0.0853 | 0.0444 | 0.0644 | 0.07 | 0.1416 |

*** p<0.01 ** p<0.05 *p<0.1

**Appendix C5. (Model 10+Edu) Estimation Results for Below Poverty,
1990-2000, Los Angeles Region**

| Parameter | | | Total | NH White | NH Black | Hispanic | NH AsianPI |
|-------------------|---------|--------------------------|------------|------------|------------|------------|------------|
| Intercept | | | -2.140 *** | -2.564 *** | -1.254 *** | -1.940 *** | -3.018 *** |
| YEAR | year | 2000 | 0.617 *** | 0.653 *** | 0.587 *** | 0.420 *** | 1.049 *** |
| | | 1990 | Ref. | | | | |
| MC | mc0 | Native-Borns | Ref. | | | | |
| | mc1 | 1980s (1980-89) | 1.333 *** | 1.782 *** | -0.216 | 1.060 *** | 2.044 *** |
| | mc2 | 1970s (1970-79) | 0.551 *** | 0.274 * | -0.857 | 0.479 *** | 1.004 *** |
| | mc3 | pre70 | 0.105 ** | -0.165 | -0.408 | 0.097 | 0.075 |
| BC | bc1 | 15-24 in 1990 | 0.676 *** | 0.751 *** | 0.514 *** | 0.570 *** | 1.272 *** |
| | bc2 | 25-34 in 1990 | 0.487 *** | 0.409 *** | 0.616 *** | 0.439 *** | 0.611 ** |
| | bc3 | 35-44 in 1990 | 0.237 *** | 0.161 *** | 0.358 *** | 0.267 *** | 0.378 |
| | bc4 | 45-54 in 1990 | Ref. | | | | |
| | bc5 | 55-64 in 1990 | 0.123 *** | 0.187 *** | 0.135 ** | 0.059 | -0.091 |
| | bc6 | 65-74 in 1990 | -0.024 | 0.075 * | 0.071 | -0.071 | 0.190 |
| Y*MC | ymc0 | 2000*Native-born | Ref. | | | | |
| | ymc1 | 2000*1980s | -1.096 *** | -1.292 *** | 0.526 | -0.725 *** | -1.797 *** |
| | ymc2 | 2000*1970s | -0.422 *** | -0.153 | 0.352 | -0.325 *** | -0.709 ** |
| | ymc3 | 2000*pre70 | -0.303 *** | 0.130 | -0.036 | -0.280 *** | -0.277 |
| Y*BC | ybc1 | 2000*15-24 in 1990 | -0.452 *** | -0.604 *** | -0.229 *** | -0.427 *** | -0.997 *** |
| | ybc2 | 2000*25-34 in 1990 | -0.404 *** | -0.391 *** | -0.498 *** | -0.325 *** | -0.828 *** |
| | ybc3 | 2000*35-44 in 1990 | -0.307 *** | -0.267 *** | -0.368 *** | -0.328 *** | -0.652 * |
| | ybc4 | 2000*45-54 in 1990 | Ref. | | | | |
| | ybc5 | 2000*55-64 in 1990 | -0.599 *** | -0.708 *** | -0.484 *** | -0.416 *** | -0.299 |
| | ybc6 | 2000*65-74 in 1990 | -0.322 *** | -0.352 *** | -0.494 *** | -0.050 | -0.316 |
| MC*BC | mc1bc1 | 1980s*15-24 in 1990 | -0.431 *** | -0.413 *** | 0.234 | -0.280 *** | -0.995 *** |
| | mc1bc2 | 1980s*25-34 in 1990 | -0.371 *** | -0.374 *** | 0.013 | -0.252 *** | -0.705 *** |
| | mc1bc3 | 1980s*35-44 in 1990 | -0.087 * | -0.163 | 0.200 | -0.005 | -0.410 |
| | mc1bc4 | 1980s*45-54 in 1990 | Ref. | | | | |
| | mc1bc5 | 1980s*55-64 in 1990 | -0.299 *** | -0.357 *** | 0.209 | -0.306 *** | 0.027 |
| | mc1bc6 | 1980s*65-74 in 1990 | -0.427 *** | -0.543 *** | 0.229 | -0.060 | -0.745 ** |
| | mc2bc1 | 1970s*15-24 in 1990 | -0.271 *** | -0.209 | -0.051 | -0.233 *** | -0.649 ** |
| | mc2bc2 | 1970s*25-34 in 1990 | -0.175 *** | -0.044 | 0.054 | -0.204 *** | -0.486 * |
| | mc2bc3 | 1970s*35-44 in 1990 | 0.049 | 0.178 | 0.807 | -0.012 | -0.386 |
| | mc2bc4 | 1970s*45-54 in 1990 | Ref. | | | | |
| | mc2bc5 | 1970s*55-64 in 1990 | -0.230 *** | 0.116 | 1.168 * | -0.107 | -0.092 |
| | mc2bc6 | 1970s*65-74 in 1990 | -0.100 | 0.275 | -0.192 | -0.002 | -0.157 |
| | mc3bc1 | pre70*15-24 in 1990 | 0.183 * | 0.499 * | -0.331 | 0.001 | 0.676 ** |
| | mc3bc2 | pre70*25-34 in 1990 | -0.118 * | 0.252 | 0.325 | -0.212 ** | -0.134 |
| | mc3bc3 | pre70*35-44 in 1990 | 0.128 ** | 0.138 | 0.816 * | 0.027 | -0.084 |
| | mc3bc4 | pre70*45-54 in 1990 | Ref. | | | | |
| | mc3bc5 | pre70*55-64 in 1990 | -0.095 | 0.126 | 0.148 | -0.040 | 0.501 |
| | mc3bc6 | pre70*65-74 in 1990 | 0.045 | 0.337 ** | 0.974 | 0.052 | 0.624 |
| Y*MC*BC | ymc1bc1 | 2000*1980s*15-24 in 1990 | 0.556 *** | 0.324 * | -0.516 | 0.416 *** | 0.815 *** |
| | ymc1bc2 | 2000*1980s*25-34 in 1990 | 0.570 *** | 0.389 ** | -0.663 | 0.370 *** | 1.100 *** |
| | ymc1bc3 | 2000*1980s*35-44 in 1990 | 0.221 *** | 0.412 ** | -1.161 | 0.034 | 0.813 ** |
| | ymc1bc4 | 2000*1980s*45-54 in 1990 | Ref. | | | | |
| | ymc1bc5 | 2000*1980s*55-64 in 1990 | 0.699 *** | 0.793 *** | -10.795 | 0.584 *** | 0.538 |
| | ymc1bc6 | 2000*1980s*65-74 in 1990 | 0.841 *** | 1.142 *** | -1.386 | 0.160 | 1.197 *** |
| | ymc2bc1 | 2000*1970s*15-24 in 1990 | 0.146 * | 0.198 | -0.017 | 0.181 | 0.129 |
| | ymc2bc2 | 2000*1970s*25-34 in 1990 | 0.159 ** | 0.178 | 0.240 | 0.133 | 0.589 * |
| | ymc2bc3 | 2000*1970s*35-44 in 1990 | -0.170 ** | -0.051 | -0.616 | -0.116 | 0.174 |
| | ymc2bc4 | 2000*1970s*45-54 in 1990 | Ref. | | | | |
| | ymc2bc5 | 2000*1970s*55-64 in 1990 | 0.808 *** | 0.832 *** | -0.420 | 0.626 *** | 0.509 |
| | ymc2bc6 | 2000*1970s*65-74 in 1990 | 0.394 *** | 0.132 | 1.732 | 0.102 | 0.366 |
| | ymc3bc1 | 2000*pre70*15-24 in 1990 | -0.466 ** | -0.758 | -9.669 | -0.186 | -1.155 |
| | ymc3bc2 | 2000*pre70*25-34 in 1990 | 0.105 | -0.272 | -0.331 | 0.159 | -0.104 |
| | ymc3bc3 | 2000*pre70*35-44 in 1990 | -0.183 ** | -0.111 | -0.426 | -0.141 | 0.041 |
| | ymc3bc4 | 2000*pre70*45-54 in 1990 | Ref. | | | | |
| | ymc3bc5 | 2000*pre70*55-64 in 1990 | 0.452 *** | -0.022 | 0.217 | 0.405 *** | 0.044 |
| | ymc3bc6 | 2000*pre70*65-74 in 1990 | 0.300 *** | -0.131 | -0.338 | 0.183 | -0.084 |
| Education | edu1 | Below HS | Ref. | | | | |
| | edu2 | HS and Some College | -0.893 *** | -0.733 *** | -0.970 *** | -0.818 *** | -0.589 *** |
| | edu3 | BA+ | -1.750 *** | -1.470 *** | -2.255 *** | -1.378 *** | -1.271 *** |
| -2 Log Likelihood | | | 57170.98 | 9843.04 | 3672.63 | 16043.37 | 4710.93 |
| DF | | | 49 | 49 | 49 | 49 | 49 |
| Pseudo R-Square | | | 0.119 | 0.0579 | 0.0917 | 0.0871 | 0.1072 |

*** p<0.01 ** p<0.05 *p<0.1

**Appendix C6. (Model 13+Edu) Estimation Results for Below Poverty,
1980-1990 & 1990-2000, Los Angeles Region**

| Parameter | | Total | NH White | NH Black | Hispanic | NH AsianPI | |
|-------------------|------------------------------|---|------------|------------|------------|------------|------------|
| Intercept | | -2.103 *** | -2.579 *** | -1.143 *** | -1.950 *** | -2.927 *** | |
| YEAR | year | | | | | | |
| | Last year of two decade | 0.029 | 0.143 *** | -0.036 | 0.032 | -0.110 | |
| | Beginning year of two decade | Ref. | | | | | |
| PERIOD | period | | | | | | |
| | 1990-2000 | -0.004 | -0.043 | -0.203 *** | 0.039 | 0.167 | |
| | 1980-1990 | Ref. | | | | | |
| MC | mc0 | Native-Borns | Ref. | | | | |
| | mc1 | 1-10 years (in 1980 or 1990) | 0.915 *** | 1.575 *** | 0.605 ** | 0.688 *** | 1.826 *** |
| | mc2 | 11-20 years (in 1980 or 1990) | 0.268 *** | 0.022 | -0.386 | 0.317 *** | 0.692 *** |
| | mc3 | 20+ years (in 1980 or 1990) | -0.035 | -0.070 | 0.139 | 0.062 | 0.372 ** |
| BC | bc1 | 15-24 (in 1980 or 1990) | 0.592 *** | 0.648 *** | 0.466 *** | 0.576 *** | 1.054 *** |
| | bc2 | 25-34 (in 1980 or 1990) | 0.565 *** | 0.661 *** | 0.450 *** | 0.467 *** | 0.509 *** |
| | bc3 | 35-44 (in 1980 or 1990) | 0.296 *** | 0.268 *** | 0.207 *** | 0.323 *** | 0.139 |
| | bc4 | 45-54 (in 1980 or 1990) | Ref. | | | | |
| | bc5 | 55-64 (in 1980 or 1990) | 0.006 | 0.116 *** | -0.103 * | 0.116 ** | -0.297 ** |
| | bc6 | 65-74 (in 1980 or 1990) | -0.046 | 0.169 *** | -0.199 *** | -0.016 | 0.155 |
| Y*Period | yp | Last year*Period(1990-2000) | 0.478 *** | 0.481 *** | 0.628 *** | 0.256 *** | 0.629 *** |
| Y*MC | ymc0 | Last year*Native-born | Ref. | | | | |
| | ymc1 | Last year*(1-10yr) | -0.294 *** | -1.060 *** | -0.729 *** | -0.172 *** | -0.872 *** |
| | ymc2 | Last year*(11-20yr) | -0.009 | -0.044 | 0.250 | -0.087 ** | -0.220 |
| | ymc3 | Last year*(20+yr) | -0.095 ** | -0.051 | -0.440 | -0.140 ** | -0.276 |
| Y*BC | ybc1 | Last year*15-24 (in 1980 or 1990) | -0.210 *** | -0.439 *** | -0.033 | -0.192 *** | -0.311 ** |
| | ybc2 | Last year*25-34 (in 1980 or 1990) | -0.355 *** | -0.698 *** | -0.257 *** | -0.114 ** | -0.096 |
| | ybc3 | Last year*35-44 (in 1980 or 1990) | -0.405 *** | -0.486 *** | -0.381 *** | -0.338 *** | -0.049 |
| | ybc4 | Last year*45-54 (in 1980 or 1990) | Ref. | | | | |
| | ybc5 | Last year*55-64 (in 1980 or 1990) | -0.120 *** | -0.210 *** | 0.060 | -0.201 *** | 0.399 ** |
| | ybc6 | Last year*65-74 (in 1980 or 1990) | 0.258 *** | 0.207 *** | 0.218 * | 0.184 * | 0.563 *** |
| MC*BC | mc1bc1 | (1-10yr)*15-24 (in 1980 or 1990) | -0.201 *** | -0.211 *** | -0.204 | -0.192 *** | -0.604 *** |
| | mc1bc2 | (1-10yr)*25-34 (in 1980 or 1990) | -0.172 *** | -0.286 *** | -0.276 | -0.192 *** | -0.350 *** |
| | mc1bc3 | (1-10yr)*35-44 (in 1980 or 1990) | -0.009 | -0.071 | -0.495 * | -0.034 | -0.052 |
| | mc1bc4 | (1-10yr)*45-54 (in 1980 or 1990) | Ref. | | | | |
| | mc1bc5 | (1-10yr)*55-64 (in 1980 or 1990) | -0.024 | -0.062 | -0.834 ** | -0.085 | 0.143 |
| | mc1bc6 | (1-10yr)*65-74 (in 1980 or 1990) | -0.161 *** | -0.180 * | -0.348 | -0.115 | -0.502 *** |
| | mc2bc1 | (11-20yr)*15-24 (in 1980 or 1990) | -0.178 *** | -0.067 | 0.009 | -0.205 *** | -0.489 *** |
| | mc2bc2 | (11-20yr)*25-34 (in 1980 or 1990) | -0.104 *** | 0.044 | 0.158 | -0.218 *** | -0.332 *** |
| | mc2bc3 | (11-20yr)*35-44 (in 1980 or 1990) | -0.023 | 0.047 | 0.331 | -0.096 ** | -0.279 * |
| | mc2bc4 | (11-20yr)*45-54 (in 1980 or 1990) | Ref. | | | | |
| | mc2bc5 | (11-20yr)*55-64 (in 1980 or 1990) | 0.131 *** | 0.437 *** | 0.839 ** | 0.062 | 0.160 |
| | mc2bc6 | (11-20yr)*65-74 (in 1980 or 1990) | 0.044 | 0.305 ** | 0.360 | -0.097 | -0.090 |
| | mc3bc1 | (20+yr)*15-24 (in 1980 or 1990) | 0.134 ** | 0.335 ** | -0.094 | -0.051 | 0.239 |
| | mc3bc2 | (20+yr)*25-34 (in 1980 or 1990) | -0.023 | 0.111 | 0.089 | -0.134 | -0.220 |
| | mc3bc3 | (20+yr)*35-44 (in 1980 or 1990) | 0.071 * | 0.116 | 0.567 ** | -0.038 | -0.150 |
| | mc3bc4 | (20+yr)*45-54 (in 1980 or 1990) | Ref. | | | | |
| | mc3bc5 | (20+yr)*55-64 (in 1980 or 1990) | 0.146 *** | 0.121 * | 0.221 | 0.130 ** | 0.507 *** |
| | mc3bc6 | (20+yr)*65-74 (in 1980 or 1990) | 0.159 *** | 0.237 *** | 0.815 ** | 0.085 | 0.112 |
| P*MC | pmc0 | (1990-2000)*Native-born | Ref. | | | | |
| | pmc1 | (1990-2000)*(1-10yr) | 0.242 *** | 0.071 | -0.401 *** | 0.305 *** | -0.110 |
| | pmc2 | (1990-2000)*(11-20yr) | 0.238 *** | 0.194 *** | -0.333 | 0.158 *** | 0.154 |
| | pmc3 | (1990-2000)*(20+yr) | 0.072 ** | -0.033 | -0.436 * | -0.006 | -0.264 |
| P*BC | pbc1 | (1990-2000)*15-24 (in 1980 or 1990) | 0.016 | 0.118 *** | 0.087 | -0.047 | -0.070 |
| | pbc2 | (1990-2000)*25-34 (in 1980 or 1990) | -0.144 *** | -0.260 *** | 0.150 ** | -0.048 | -0.161 |
| | pbc3 | (1990-2000)*35-44 (in 1980 or 1990) | -0.050 * | -0.115 ** | 0.153 * | -0.006 | -0.014 |
| | pbc4 | (1990-2000)*45-54 (in 1980 or 1990) | Ref. | | | | |
| | pbc5 | (1990-2000)*55-64 (in 1980 or 1990) | -0.001 | 0.048 | 0.270 *** | -0.176 *** | 0.071 |
| | pbc6 | (1990-2000)*65-74 (in 1980 or 1990) | -0.049 | -0.092 * | 0.320 *** | -0.048 | -0.106 |
| P*Y*MC | pymc0 | (1990-2000)*Last year*Native-born | Ref. | | | | |
| | pymc1 | (1990-2000)*Last year*(1-10yr) | -0.306 *** | 0.189 ** | 0.551 ** | -0.218 *** | -0.101 |
| | pymc2 | (1990-2000)*Last year*(11-20yr) | -0.300 *** | 0.079 | -0.019 | -0.113 ** | -0.155 |
| | pymc3 | (1990-2000)*Last year*(20+yr) | -0.096 * | 0.067 | 0.176 | -0.015 | 0.088 |
| P*Y*BC | pybc1 | (1990-2000)*Last year*15-24 (in 1980 or 1990) | -0.119 *** | -0.187 *** | -0.253 ** | -0.052 | -0.195 |
| | pybc2 | (1990-2000)*Last year*25-34 (in 1980 or 1990) | 0.093 ** | 0.321 *** | -0.244 ** | -0.060 | 0.036 |
| | pybc3 | (1990-2000)*Last year*35-44 (in 1980 or 1990) | 0.061 | 0.230 *** | -0.017 | -0.070 | -0.123 |
| | pybc4 | (1990-2000)*Last year*45-54 (in 1980 or 1990) | Ref. | | | | |
| | pybc5 | (1990-2000)*Last year*55-64 (in 1980 or 1990) | -0.221 *** | -0.418 *** | -0.559 *** | 0.126 | -0.311 |
| | pybc6 | (1990-2000)*Last year*65-74 (in 1980 or 1990) | -0.389 *** | -0.512 *** | -0.719 *** | -0.113 | -0.183 |
| Education | edu1 | Below HS | Ref. | | | | |
| | edu2 | HS and Some College | -0.866 *** | -0.662 *** | -0.840 *** | -0.833 *** | -0.604 *** |
| | edu3 | BA+ | -1.675 *** | -1.318 *** | -2.045 *** | -1.360 *** | -1.300 *** |
| -2 Log Likelihood | | 89364.38 | 17475.07 | 6077.99 | 23530.26 | 7412.26 | |
| DF | | 52 | 52 | 52 | 52 | 52 | |
| Pseudo R-Square | | 0.1059 | 0.0505 | 0.0767 | 0.0824 | 0.1173 | |

*** p<0.01 ** p<0.05 *p<0.1

**Appendix C7. (Model 9) Estimation Results for the Homeowner per household,
1980-1990, Los Angeles Region**

| Parameter | | | Total | NH White | NH Black | Hispanic | NH AsianPI |
|-------------------|--------|---------------------|------------|------------|------------|------------|------------|
| Intercept | | | 0.903 *** | 1.032 *** | 0.247 *** | 0.786 *** | 1.115 *** |
| YEAR | year | 1990 | 0.346 *** | 0.371 *** | 0.160 *** | 0.271 *** | 0.598 *** |
| | | 1980 | Ref. | | | | |
| MC | mc0 | Native-Borns | Ref. | | | | |
| | mc1 | 1970s (1970-79) | -1.507 *** | -1.234 *** | -1.080 *** | -2.027 *** | -1.372 *** |
| | mc2 | 1960s (1960-69) | -0.502 *** | -0.020 | -1.000 *** | -0.865 *** | 0.063 |
| | mc3 | pre60 | 0.040 | 0.132 ** | -0.088 | -0.157 ** | 0.069 |
| BC | bc1 | 15-24 in 1980 | -2.849 *** | -2.901 *** | -2.954 *** | -2.686 *** | -3.116 *** |
| | bc2 | 25-34 in 1980 | -1.261 *** | -1.263 *** | -1.404 *** | -1.193 *** | -1.398 *** |
| | bc3 | 35-44 in 1980 | -0.302 *** | -0.272 *** | -0.326 *** | -0.351 *** | -0.183 |
| | bc4 | 45-54 in 1980 | Ref. | | | | |
| | bc5 | 55-64 in 1980 | 0.056 *** | 0.022 | 0.046 | -0.058 | 0.267 ** |
| | bc6 | 65-74 in 1980 | -0.188 *** | -0.251 *** | -0.046 | -0.331 *** | -0.281 * |
| Y*MC | ymc0 | 1990*Native-born | Ref. | | | | |
| | ymc1 | 1990*1970s | 0.527 *** | 0.611 *** | 0.883 *** | 0.558 *** | 0.535 *** |
| | ymc2 | 1990*1960s | 0.081 *** | 0.060 | 0.359 | 0.180 *** | -0.237 ** |
| | ymc3 | 1990*pre60 | 0.048 | -0.014 | 0.425 | 0.126 ** | 0.166 |
| Y*BC | ybc1 | 1990*15-24 in 1980 | 1.169 *** | 1.213 *** | 1.013 *** | 1.054 *** | 1.357 *** |
| | ybc2 | 1990*25-34 in 1980 | 0.452 *** | 0.461 *** | 0.493 *** | 0.395 *** | 0.625 *** |
| | ybc3 | 1990*35-44 in 1980 | 0.035 | 0.018 | 0.088 | 0.051 | 0.017 |
| | ybc4 | 1990*45-54 in 1980 | Ref. | | | | |
| | ybc5 | 1990*55-64 in 1980 | -0.034 | -0.014 | 0.032 | -0.090 | -0.508 *** |
| | ybc6 | 1990*65-74 in 1980 | -0.117 *** | -0.128 *** | -0.009 | -0.031 | -0.612 *** |
| MC*BC | mc1bc1 | 1970s*15-24 in 1980 | 0.852 *** | 0.890 *** | 1.004 ** | 1.190 *** | 1.293 *** |
| | mc1bc2 | 1970s*25-34 in 1980 | 0.531 *** | 0.515 *** | 0.273 | 0.736 *** | 0.935 *** |
| | mc1bc3 | 1970s*35-44 in 1980 | 0.269 *** | 0.295 *** | 0.316 | 0.326 *** | 0.417 *** |
| | mc1bc4 | 1970s*45-54 in 1980 | Ref. | | | | |
| | mc1bc5 | 1970s*55-64 in 1980 | -0.490 *** | -0.477 *** | -0.184 | -0.252 * | -0.787 *** |
| | mc1bc6 | 1970s*65-74 in 1980 | -0.969 *** | -1.000 *** | -9.792 | -0.763 *** | -1.038 *** |
| | mc2bc1 | 1960s*15-24 in 1980 | 0.674 *** | 0.013 | 0.610 | 1.022 *** | 0.760 *** |
| | mc2bc2 | 1960s*25-34 in 1980 | 0.532 *** | 0.103 | 0.740 ** | 0.824 *** | 0.607 *** |
| | mc2bc3 | 1960s*35-44 in 1980 | 0.283 *** | 0.063 | 0.982 *** | 0.414 *** | 0.395 ** |
| | mc2bc4 | 1960s*45-54 in 1980 | Ref. | | | | |
| | mc2bc5 | 1960s*55-64 in 1980 | -0.478 *** | -0.501 *** | 0.873 | -0.422 *** | -0.729 *** |
| | mc2bc6 | 1960s*65-74 in 1980 | -1.023 *** | -1.058 *** | -0.506 | -1.020 *** | -1.409 *** |
| | mc3bc1 | pre60*15-24 in 1980 | 0.442 *** | 0.271 * | -0.515 | 0.712 *** | 0.157 |
| | mc3bc2 | pre60*25-34 in 1980 | 0.254 *** | 0.126 | 0.495 | 0.404 *** | 0.093 |
| | mc3bc3 | pre60*35-44 in 1980 | 0.127 ** | 0.111 | -0.170 | 0.179 ** | 0.188 |
| | mc3bc4 | pre60*45-54 in 1980 | Ref. | | | | |
| | mc3bc5 | pre60*55-64 in 1980 | -0.230 *** | -0.231 *** | -0.703 * | -0.126 | -0.358 * |
| | mc3bc6 | pre60*65-74 in 1980 | -0.304 *** | -0.432 *** | -0.827 | 0.024 | -0.004 |
| -2 Log Likelihood | | | 53573.32 | 31840.89 | 4416.76 | 11682.65 | 3048.24 |
| DF | | | 32 | 32 | 32 | 32 | 32 |
| Pseudo R-Square | | | 0.1693 | 0.1537 | 0.1652 | 0.192 | 0.2042 |

*** p<0.01 ** p<0.05 *p<0.1

Appendix C8. (Model 9) Estimation Results for the Homeowner per household, 1990-2000, Los Angeles Region

| Parameter | | | | Total | NH White | NH Black | Hispanic | NH AsianPI |
|-------------------|--------|---------------------|------|------------|------------|------------|------------|------------|
| Intercept | | | | 0.977 *** | 1.146 *** | 0.176 *** | 0.752 *** | 1.278 *** |
| YEAR | year | 2000 | | 0.166 *** | 0.226 *** | 0.093 * | 0.148 *** | 0.184 ** |
| | | 1990 | Ref. | | | | | |
| MC | mc0 | Native-Borns | Ref. | | | | | |
| | mc1 | 1980s (1980-89) | | -1.608 *** | -1.233 *** | -0.968 *** | -2.384 *** | -1.586 *** |
| | mc2 | 1970s (1970-79) | | -0.695 *** | -0.267 *** | -0.061 | -1.162 *** | -0.069 |
| | mc3 | pre70 | | -0.007 | 0.143 *** | 0.236 | -0.154 *** | 0.477 *** |
| BC | bc1 | 15-24 in 1990 | | -2.874 *** | -2.956 *** | -2.738 *** | -2.598 *** | -2.982 *** |
| | bc2 | 25-34 in 1990 | | -1.419 *** | -1.439 *** | -1.713 *** | -1.315 *** | -1.320 *** |
| | bc3 | 35-44 in 1990 | | -0.542 *** | -0.547 *** | -0.692 *** | -0.533 *** | -0.387 *** |
| | bc4 | 45-54 in 1990 | Ref. | | | | | |
| | bc5 | 55-64 in 1990 | | 0.296 *** | 0.266 *** | 0.239 *** | 0.342 *** | 0.556 *** |
| | bc6 | 65-74 in 1990 | | 0.312 *** | 0.269 *** | 0.313 *** | 0.189 *** | 0.349 *** |
| Y*MC | ymc0 | 2000*Native-born | Ref. | | | | | |
| | ymc1 | 2000*1980s | | 0.450 *** | 0.274 *** | 0.552 *** | 0.935 *** | 0.307 *** |
| | ymc2 | 2000*1970s | | 0.088 *** | -0.176 *** | -0.110 | 0.324 *** | -0.263 *** |
| | ymc3 | 2000*pre70 | | -0.042 * | -0.076 * | -0.076 | 0.026 | -0.107 |
| Y*BC | ybc1 | 2000*15-24 in 1990 | | 1.089 *** | 1.072 *** | 1.032 *** | 1.098 *** | 0.845 *** |
| | ybc2 | 2000*25-34 in 1990 | | 0.581 *** | 0.566 *** | 0.814 *** | 0.562 *** | 0.594 *** |
| | ybc3 | 2000*35-44 in 1990 | | 0.187 *** | 0.189 *** | 0.274 *** | 0.139 *** | 0.291 *** |
| | ybc4 | 2000*45-54 in 1990 | Ref. | | | | | |
| | ybc5 | 2000*55-64 in 1990 | | -0.110 *** | -0.055 | -0.059 | -0.242 *** | -0.343 *** |
| | ybc6 | 2000*65-74 in 1990 | | -0.129 *** | -0.177 *** | 0.001 | -0.096 | -0.314 *** |
| MC*BC | mc1bc1 | 1980s*15-24 in 1990 | | 0.995 *** | 1.068 *** | 0.962 ** | 1.104 *** | 1.819 *** |
| | mc1bc2 | 1980s*25-34 in 1990 | | 0.597 *** | 0.618 *** | 0.252 | 0.750 *** | 1.041 *** |
| | mc1bc3 | 1980s*35-44 in 1990 | | 0.326 *** | 0.276 *** | 0.347 | 0.231 *** | 0.412 *** |
| | mc1bc4 | 1980s*45-54 in 1990 | Ref. | | | | | |
| | mc1bc5 | 1980s*55-64 in 1990 | | -0.572 *** | -0.887 *** | -1.113 * | -0.243 * | -0.848 *** |
| | mc1bc6 | 1980s*65-74 in 1990 | | -1.209 *** | -1.348 *** | -10.984 | -0.613 *** | -1.456 *** |
| | mc2bc1 | 1970s*15-24 in 1990 | | 0.898 *** | 0.495 *** | 0.533 | 1.066 *** | 0.876 *** |
| | mc2bc2 | 1970s*25-34 in 1990 | | 0.595 *** | 0.523 *** | 0.978 *** | 0.869 *** | 0.478 *** |
| | mc2bc3 | 1970s*35-44 in 1990 | | 0.298 *** | 0.287 *** | 0.354 | 0.501 *** | 0.267 ** |
| | mc2bc4 | 1970s*45-54 in 1990 | Ref. | | | | | |
| | mc2bc5 | 1970s*55-64 in 1990 | | -0.475 *** | -0.574 *** | -0.676 | -0.457 *** | -0.959 *** |
| | mc2bc6 | 1970s*65-74 in 1990 | | -1.085 *** | -1.111 *** | -1.269 * | -0.724 *** | -1.852 *** |
| | mc3bc1 | pre70*15-24 in 1990 | | 0.548 *** | 0.301 | 0.076 | 0.630 *** | 0.019 |
| | mc3bc2 | pre70*25-34 in 1990 | | 0.300 *** | 0.067 | -0.119 | 0.474 *** | -0.031 |
| | mc3bc3 | pre70*35-44 in 1990 | | 0.162 *** | -0.008 | 0.161 | 0.374 *** | -0.099 |
| | mc3bc4 | pre70*45-54 in 1990 | Ref. | | | | | |
| | mc3bc5 | pre70*55-64 in 1990 | | -0.159 *** | -0.069 | -0.536 * | -0.250 *** | -0.505 *** |
| | mc3bc6 | pre70*65-74 in 1990 | | -0.352 *** | -0.288 *** | -0.459 | -0.380 *** | -0.947 *** |
| -2 Log Likelihood | | | | 64213.79 | 31134.21 | 4250.08 | 18032.59 | 5255.31 |
| DF | | | | 32 | 32 | 32 | 32 | 32 |
| Pseudo R-Square | | | | 0.1784 | 0.1599 | 0.1542 | 0.1902 | 0.1803 |

*** p<0.01 ** p<0.05 *p<0.1

**Appendix C9. (Model 13) Estimation Results for the Homeowner per household,
1980-1990 & 1990-2000, Los Angeles Region**

| | | Parameter | Total | NH White | NH Black | Hispanic | NH AsianPI | |
|-----------------|--------|------------------------------|---|------------|------------|------------|------------|------------|
| | | Intercept | 0.907 *** | 1.036 *** | 0.245 *** | 0.785 *** | 1.093 *** | |
| YEAR | year | Last year of two decade | 0.350 *** | 0.372 *** | 0.160 *** | 0.271 *** | 0.645 *** | |
| | | Beginning year of two decade | Ref. | | | | | |
| PERIOD | period | 1990-2000 | 0.067 *** | 0.107 *** | -0.068 | -0.033 | 0.204 ** | |
| | | 1980-1990 | Ref. | | | | | |
| MC | mc | mc0 | Ref. | | | | | |
| | | mc1 | Native-Borns | | | | | |
| | | mc2 | 1-10 years (in 1980 or 1990) | -1.532 *** | -1.228 *** | -1.040 *** | -2.008 *** | -1.397 *** |
| | | mc3 | 11-20 years (in 1980 or 1990) | -0.519 *** | -0.103 * | -0.743 *** | -0.889 *** | 0.155 |
| BC | bc | bc1 | 20+ years (in 1980 or 1990) | 0.026 | 0.101 ** | -0.127 | -0.136 *** | 0.219 * |
| | | bc2 | 15-24 (in 1980 or 1990) | -2.863 *** | -2.909 *** | -2.956 *** | -2.678 *** | -3.242 *** |
| | | bc3 | 25-34 (in 1980 or 1990) | -1.267 *** | -1.269 *** | -1.404 *** | -1.202 *** | -1.405 *** |
| | | bc4 | 35-44 (in 1980 or 1990) | -0.305 *** | -0.274 *** | -0.324 *** | -0.369 *** | -0.147 |
| | | bc5 | 45-54 (in 1980 or 1990) | Ref. | | | | |
| | | bc6 | 55-64 (in 1980 or 1990) | 0.052 *** | 0.019 | 0.052 | -0.038 | 0.298 *** |
| Y*Period | yp | Last year*Period(1990-2000) | -0.186 *** | -0.148 *** | -0.068 | -0.122 ** | -0.496 *** | |
| | | | | | | | | |
| Y*MC | ymc | ymc0 | Ref. | | | | | |
| | | ymc1 | Last year*Native-born | | | | | |
| | | ymc2 | Last year*(1-10yr) | 0.512 *** | 0.588 *** | 0.864 *** | 0.564 *** | 0.460 *** |
| | | ymc3 | Last year*(11-20yr) | 0.060 ** | 0.028 | 0.249 | 0.179 *** | -0.278 ** |
| Y*BC | ybc | ybc1 | Last year*(20+yr) | 0.042 | -0.010 | 0.429 | 0.121 ** | 0.135 |
| | | ybc2 | Last year*15-24 (in 1980 or 1990) | 1.167 *** | 1.212 *** | 1.015 *** | 1.055 *** | 1.358 *** |
| | | ybc3 | Last year*25-34 (in 1980 or 1990) | 0.452 *** | 0.461 *** | 0.492 *** | 0.389 *** | 0.628 *** |
| | | ybc4 | Last year*35-44 (in 1980 or 1990) | 0.035 | 0.018 | 0.090 | 0.056 | 0.023 |
| | | ybc5 | Last year*45-54 (in 1980 or 1990) | Ref. | | | | |
| | | ybc6 | Last year*55-64 (in 1980 or 1990) | -0.035 | -0.014 | 0.032 | -0.090 | -0.512 *** |
| MC*BC | mc1bc | mc1bc1 | Last year*65-74 (in 1980 or 1990) | -0.116 *** | -0.128 *** | -0.009 | -0.041 | -0.618 *** |
| | | mc1bc2 | (1-10yr)*15-24 (in 1980 or 1990) | 0.931 *** | 0.970 *** | 0.979 *** | 1.143 *** | 1.595 *** |
| | | mc1bc3 | (1-10yr)*25-34 (in 1980 or 1990) | 0.569 *** | 0.569 *** | 0.259 | 0.746 *** | 1.008 *** |
| | | mc1bc4 | (1-10yr)*35-44 (in 1980 or 1990) | 0.303 *** | 0.282 *** | 0.339 | 0.279 *** | 0.422 *** |
| | | mc1bc5 | (1-10yr)*45-54 (in 1980 or 1990) | Ref. | | | | |
| | | mc1bc6 | (1-10yr)*55-64 (in 1980 or 1990) | -0.544 *** | -0.729 *** | -0.632 | -0.249 *** | -0.810 *** |
| | mc2bc | mc2bc1 | (1-10yr)*65-74 (in 1980 or 1990) | -1.134 *** | -1.235 *** | -9.917 | -0.718 *** | -1.326 *** |
| | | mc2bc2 | (11-20yr)*15-24 (in 1980 or 1990) | 0.812 *** | 0.221 *** | 0.567 * | 1.053 *** | 0.776 *** |
| | | mc2bc3 | (11-20yr)*25-34 (in 1980 or 1990) | 0.572 *** | 0.331 *** | 0.922 *** | 0.849 *** | 0.500 *** |
| | | mc2bc4 | (11-20yr)*35-44 (in 1980 or 1990) | 0.290 *** | 0.172 *** | 0.568 *** | 0.469 *** | 0.304 *** |
| | | mc2bc5 | (11-20yr)*45-54 (in 1980 or 1990) | Ref. | | | | |
| | | mc2bc6 | (11-20yr)*55-64 (in 1980 or 1990) | -0.476 *** | -0.530 *** | -0.114 | -0.439 *** | -0.896 *** |
| | mc3bc | mc3bc1 | (11-20yr)*65-74 (in 1980 or 1990) | -1.061 *** | -1.085 *** | -0.985 * | -0.867 *** | -1.720 *** |
| | | mc3bc2 | (20+yr)*15-24 (in 1980 or 1990) | 0.497 *** | 0.291 ** | -0.158 | 0.658 *** | 0.019 |
| | | mc3bc3 | (20+yr)*25-34 (in 1980 or 1990) | 0.282 *** | 0.095 * | 0.082 | 0.450 *** | 0.001 |
| | | mc3bc4 | (20+yr)*35-44 (in 1980 or 1990) | 0.150 *** | 0.034 | 0.082 | 0.330 *** | -0.014 |
| | | mc3bc5 | (20+yr)*45-54 (in 1980 or 1990) | Ref. | | | | |
| | | mc3bc6 | (20+yr)*55-64 (in 1980 or 1990) | -0.187 *** | -0.152 *** | -0.588 ** | -0.206 *** | -0.444 *** |
| P*MC | pmc | pmc0 | (20+yr)*65-74 (in 1980 or 1990) | -0.324 *** | -0.366 *** | -0.574 * | -0.225 *** | -0.603 *** |
| | | pmc1 | (1990-2000)*Native-born | Ref. | | | | |
| | | pmc2 | (1990-2000)*(1-10yr) | -0.060 ** | -0.007 | 0.041 | -0.395 *** | -0.189 ** |
| | | pmc3 | (1990-2000)*(11-20yr) | -0.166 *** | -0.074 | 0.559 ** | -0.259 *** | -0.257 *** |
| P*BC | pbc | pbc1 | (1990-2000)*(20+yr) | -0.024 | 0.066 ** | 0.380 * | -0.026 | 0.192 |
| | | pbc2 | (1990-2000)*15-24 (in 1980 or 1990) | 0.008 | -0.036 | 0.219 | 0.073 | 0.383 ** |
| | | pbc3 | (1990-2000)*25-34 (in 1980 or 1990) | -0.146 *** | -0.163 *** | -0.307 *** | -0.105 ** | 0.086 |
| | | pbc4 | (1990-2000)*35-44 (in 1980 or 1990) | -0.234 *** | -0.271 *** | -0.371 *** | -0.150 *** | -0.267 *** |
| | | pbc5 | (1990-2000)*45-54 (in 1980 or 1990) | Ref. | | | | |
| | | pbc6 | (1990-2000)*55-64 (in 1980 or 1990) | 0.248 *** | 0.250 *** | 0.181 ** | 0.363 *** | 0.217 * |
| P*Y*MC | pymc | pymc0 | (1990-2000)*65-74 (in 1980 or 1990) | 0.492 *** | 0.532 *** | 0.358 *** | 0.375 *** | 0.246 |
| | | pymc1 | (1990-2000)*Last year*Native-born | Ref. | | | | |
| | | pymc2 | (1990-2000)*Last year*(1-10yr) | -0.048 | -0.298 *** | -0.296 | 0.367 *** | -0.101 |
| | | pymc3 | (1990-2000)*Last year*(11-20yr) | 0.039 | -0.173 ** | -0.331 | 0.145 *** | 0.050 |
| P*Y*BC | pybc | pybc1 | (1990-2000)*Last year*(20+yr) | -0.080 * | -0.066 | -0.508 | -0.092 | -0.210 |
| | | pybc2 | (1990-2000)*Last year*15-24 (in 1980 or 1990) | -0.076 | -0.139 ** | 0.016 | 0.042 | -0.513 ** |
| | | pybc3 | (1990-2000)*Last year*25-34 (in 1980 or 1990) | 0.129 *** | 0.107 *** | 0.322 *** | 0.178 *** | -0.036 |
| | | pybc4 | (1990-2000)*Last year*35-44 (in 1980 or 1990) | 0.151 *** | 0.171 *** | 0.183 * | 0.079 | 0.263 ** |
| | | pybc5 | (1990-2000)*Last year*45-54 (in 1980 or 1990) | Ref. | | | | |
| | | pybc6 | (1990-2000)*Last year*55-64 (in 1980 or 1990) | -0.075 ** | -0.042 | -0.090 | -0.152 * | 0.171 |
| | | | -2 Log Likelihood | 117763.37 | 63301.90 | 8651.43 | 29702.44 | 8304.10 |
| | | | DF | 50 | 50 | 50 | 50 | 50 |
| | | | Pseudo R-Square | 0.1741 | 0.1574 | 0.1594 | 0.1908 | 0.1884 |

*** p<0.01 ** p<0.05 *p<0.1

Appendix C10. (Model 9+Edu) Estimation Results for the Homeowner per household, 1980-1990, Los Angeles Region

| Parameter | | | Total | NH White | NH Black | Hispanic | NH AsianPI |
|-------------------|--------|-----------------------|------------|------------|------------|------------|------------|
| Intercept | | | 0.379 *** | 0.599 *** | -0.133 *** | 0.525 *** | 0.557 *** |
| YEAR | year | 1990 | 0.334 *** | 0.358 *** | 0.160 *** | 0.271 *** | 0.598 *** |
| | | 1980 | Ref. | | | | |
| MC | mc0 | Native-Borns | Ref. | | | | |
| | mc1 | 1970s (1970-79) | -1.402 *** | -1.166 *** | -1.068 *** | -1.944 *** | -1.410 *** |
| | mc2 | 1960s (1960-69) | -0.337 *** | 0.037 | -0.915 *** | -0.802 *** | -0.007 |
| | mc3 | pre60 | 0.157 *** | 0.162 *** | -0.175 | -0.093 | 0.082 |
| BC | bc1 | 15-24 in 1980 | -2.870 *** | -2.881 *** | -3.024 *** | -2.848 *** | -3.201 *** |
| | bc2 | 25-34 in 1980 | -1.390 *** | -1.340 *** | -1.566 *** | -1.410 *** | -1.604 *** |
| | bc3 | 35-44 in 1980 | -0.378 *** | -0.321 *** | -0.425 *** | -0.470 *** | -0.289 ** |
| | bc4 | 45-54 in 1980 | Ref. | | | | |
| | bc5 | 55-64 in 1980 | 0.117 *** | 0.077 *** | 0.165 *** | 0.008 | 0.356 *** |
| | bc6 | 65-74 in 1980 | -0.036 * | -0.118 *** | 0.163 ** | -0.200 *** | -0.041 |
| Y*MC | ymc0 | 1990*Native-born | Ref. | | | | |
| | ymc1 | 1990*1970s | 0.591 *** | 0.631 *** | 0.983 *** | 0.609 *** | 0.567 *** |
| | ymc2 | 1990*1960s | 0.108 *** | 0.080 | 0.347 | 0.213 *** | -0.221 * |
| | ymc3 | 1990*pre60 | 0.066 ** | -0.006 | 0.324 | 0.154 *** | 0.186 |
| Y*BC | ybc1 | 1990*15-24 in 1980 | 1.066 *** | 1.124 *** | 0.893 *** | 0.988 *** | 1.215 *** |
| | ybc2 | 1990*25-34 in 1980 | 0.439 *** | 0.451 *** | 0.459 *** | 0.376 *** | 0.631 *** |
| | ybc3 | 1990*35-44 in 1980 | 0.023 | 0.012 | 0.076 | 0.028 | 0.004 |
| | ybc4 | 1990*45-54 in 1980 | Ref. | | | | |
| | ybc5 | 1990*55-64 in 1980 | -0.022 | -0.003 | 0.030 | -0.077 | -0.488 *** |
| | ybc6 | 1990*65-74 in 1980 | -0.125 *** | -0.130 *** | -0.039 | -0.053 | -0.635 *** |
| MC*BC | mc1bc1 | 1970s*15-24 in 1980 | 1.010 *** | 0.752 *** | 0.786 * | 1.361 *** | 1.431 *** |
| | mc1bc2 | 1970s*25-34 in 1980 | 0.668 *** | 0.427 *** | 0.038 | 0.949 *** | 1.003 *** |
| | mc1bc3 | 1970s*35-44 in 1980 | 0.315 *** | 0.245 ** | 0.173 | 0.463 *** | 0.389 *** |
| | mc1bc4 | 1970s*45-54 in 1980 | Ref. | | | | |
| | mc1bc5 | 1970s*55-64 in 1980 | -0.518 *** | -0.486 *** | -0.160 | -0.321 ** | -0.753 *** |
| | mc1bc6 | 1970s*65-74 in 1980 | -1.060 *** | -1.020 *** | -10.033 | -0.884 *** | -1.107 *** |
| | mc2bc1 | 1960s*15-24 in 1980 | 0.574 *** | -0.075 | 0.407 | 1.001 *** | 0.837 *** |
| | mc2bc2 | 1960s*25-34 in 1980 | 0.630 *** | 0.056 | 0.588 | 0.985 *** | 0.712 *** |
| | mc2bc3 | 1960s*35-44 in 1980 | 0.313 *** | 0.039 | 0.829 ** | 0.529 *** | 0.339 * |
| | mc2bc4 | 1960s*45-54 in 1980 | Ref. | | | | |
| | mc2bc5 | 1960s*55-64 in 1980 | -0.535 *** | -0.519 *** | 0.748 | -0.508 *** | -0.742 *** |
| | mc2bc6 | 1960s*65-74 in 1980 | -1.094 *** | -1.075 *** | -0.696 | -1.132 *** | -1.276 *** |
| | mc3bc1 | pre60*15-24 in 1980 | 0.312 *** | 0.214 | -0.483 | 0.635 *** | 0.142 |
| | mc3bc2 | pre60*25-34 in 1980 | 0.157 *** | 0.088 | 0.500 | 0.337 *** | 0.103 |
| | mc3bc3 | pre60*35-44 in 1980 | 0.129 ** | 0.097 | -0.103 | 0.226 ** | 0.178 |
| | mc3bc4 | pre60*45-54 in 1980 | Ref. | | | | |
| | mc3bc5 | pre60*55-64 in 1980 | -0.271 *** | -0.245 *** | -0.792 * | -0.177 ** | -0.291 |
| | mc3bc6 | pre60*65-74 in 1980 | -0.331 *** | -0.420 *** | -0.790 | -0.026 | 0.099 |
| Education | edu1 | Below HS | Ref. | | | | |
| | edu2 | HS and Some Colleague | 0.563 *** | 0.407 *** | 0.477 *** | 0.577 *** | 0.462 *** |
| | edu3 | BA+ | 1.042 *** | 0.792 *** | 1.166 *** | 0.824 *** | 1.062 *** |
| -2 Log Likelihood | | | 63057.22 | 35010.91 | 5213.73 | 12945.08 | 3520.47 |
| DF | | | 34 | 34 | 34 | 34 | 34 |
| Pseudo R-Square | | | 0.197 | 0.168 | 0.1928 | 0.211 | 0.233 |

*** p<0.01 ** p<0.05 *p<0.1

Appendix C11. (Model 9+Edu) Estimation Results for the Homeowner per household, 1990-2000, Los Angeles Region

| Parameter | | | | Total | NH White | NH Black | Hispanic | NH AsianPI |
|-------------------|--------|-----------------------|------|------------|------------|------------|------------|------------|
| Intercept | | | | 0.266 *** | 0.566 *** | -0.447 *** | 0.383 *** | 0.432 *** |
| YEAR | year | 2000 | Ref. | 0.163 *** | 0.218 *** | 0.102 * | 0.153 *** | 0.176 ** |
| | | 1990 | | | | | | |
| MC | mc0 | Native-Borns | Ref. | | | | | |
| | mc1 | 1980s (1980-89) | | -1.485 *** | -1.201 *** | -1.108 *** | -2.204 *** | -1.468 *** |
| | mc2 | 1970s (1970-79) | | -0.448 *** | -0.210 *** | 0.071 | -0.918 *** | -0.064 |
| | mc3 | pre70 | | 0.220 *** | 0.186 *** | 0.137 | 0.022 | 0.418 *** |
| BC | bc1 | 15-24 in 1990 | Ref. | -2.808 *** | -2.898 *** | -2.679 *** | -2.611 *** | -2.917 *** |
| | bc2 | 25-34 in 1990 | | -1.464 *** | -1.456 *** | -1.818 *** | -1.394 *** | -1.415 *** |
| | bc3 | 35-44 in 1990 | | -0.607 *** | -0.583 *** | -0.799 *** | -0.624 *** | -0.450 *** |
| | bc4 | 45-54 in 1990 | | | | | | |
| | bc5 | 55-64 in 1990 | | 0.400 *** | 0.327 *** | 0.384 *** | 0.475 *** | 0.693 *** |
| | bc6 | 65-74 in 1990 | | 0.497 *** | 0.402 *** | 0.606 *** | 0.391 *** | 0.606 *** |
| Y*MC | ymc0 | 2000*Native-born | Ref. | | | | | |
| | ymc1 | 2000*1980s | | 0.516 *** | 0.288 *** | 0.574 *** | 0.980 *** | 0.329 *** |
| | ymc2 | 2000*1970s | | 0.097 *** | -0.157 *** | -0.092 | 0.333 *** | -0.257 *** |
| | ymc3 | 2000*pre70 | | -0.039 | -0.071 | -0.013 | 0.026 | -0.119 |
| Y*BC | ybc1 | 2000*15-24 in 1990 | Ref. | 0.956 *** | 0.962 *** | 0.841 *** | 1.002 *** | 0.645 *** |
| | ybc2 | 2000*25-34 in 1990 | | 0.585 *** | 0.564 *** | 0.811 *** | 0.545 *** | 0.602 *** |
| | ybc3 | 2000*35-44 in 1990 | | 0.185 *** | 0.186 *** | 0.249 *** | 0.130 *** | 0.286 *** |
| | ybc4 | 2000*45-54 in 1990 | | | | | | |
| | ybc5 | 2000*55-64 in 1990 | | -0.114 *** | -0.055 | -0.096 | -0.252 *** | -0.326 *** |
| | ybc6 | 2000*65-74 in 1990 | | -0.158 *** | -0.196 *** | -0.064 | -0.109 | -0.321 *** |
| MC*BC | mc1bc1 | 1980s*15-24 in 1990 | Ref. | 1.198 *** | 1.066 *** | 1.001 *** | 1.151 *** | 1.811 *** |
| | mc1bc2 | 1980s*25-34 in 1990 | | 0.715 *** | 0.592 *** | 0.171 | 0.792 *** | 1.023 *** |
| | mc1bc3 | 1980s*35-44 in 1990 | | 0.368 *** | 0.245 *** | 0.397 | 0.296 *** | 0.404 *** |
| | mc1bc4 | 1980s*45-54 in 1990 | | | | | | |
| | mc1bc5 | 1980s*55-64 in 1990 | | -0.607 *** | -0.802 *** | -0.969 | -0.350 *** | -0.877 *** |
| | mc1bc6 | 1980s*65-74 in 1990 | | -1.259 *** | -1.237 *** | -11.057 | -0.762 *** | -1.502 *** |
| | mc2bc1 | 1970s*15-24 in 1990 | | 0.794 *** | 0.415 *** | 0.233 | 0.931 *** | 0.894 *** |
| | mc2bc2 | 1970s*25-34 in 1990 | | 0.722 *** | 0.409 *** | 0.715 ** | 0.913 *** | 0.606 *** |
| | mc2bc3 | 1970s*35-44 in 1990 | | 0.412 *** | 0.232 *** | 0.035 | 0.581 *** | 0.329 *** |
| | mc2bc4 | 1970s*45-54 in 1990 | | | | | | |
| | mc2bc5 | 1970s*55-64 in 1990 | | -0.552 *** | -0.509 *** | -0.715 * | -0.593 *** | -0.941 *** |
| | mc2bc6 | 1970s*65-74 in 1990 | | -1.193 *** | -1.068 *** | -1.482 ** | -0.917 *** | -1.804 *** |
| | mc3bc1 | pre70*15-24 in 1990 | | 0.382 *** | 0.193 | -0.154 | 0.504 *** | 0.073 |
| | mc3bc2 | pre70*25-34 in 1990 | | 0.150 *** | 0.006 | -0.236 | 0.348 *** | 0.045 |
| | mc3bc3 | pre70*35-44 in 1990 | | 0.187 *** | -0.047 | 0.115 | 0.403 *** | -0.003 |
| | mc3bc4 | pre70*45-54 in 1990 | | | | | | |
| | mc3bc5 | pre70*55-64 in 1990 | | -0.208 *** | -0.048 | -0.479 | -0.347 *** | -0.435 *** |
| | mc3bc6 | pre70*65-74 in 1990 | | -0.457 *** | -0.297 *** | -0.540 | -0.525 *** | -0.779 *** |
| Education | edu1 | Below HS | Ref. | | | | | |
| | edu2 | HS and Some Colleague | | 0.659 *** | 0.502 *** | 0.619 *** | 0.511 *** | 0.661 *** |
| | edu3 | BA+ | | 1.161 *** | 0.869 *** | 1.430 *** | 0.862 *** | 1.193 *** |
| -2 Log Likelihood | | | | 77807.39 | 34206.36 | 5582.04 | 19806.77 | 6420.20 |
| DF | | | | 34 | 34 | 34 | 34 | 34 |
| Pseudo R-Square | | | | 0.2131 | 0.1746 | 0.1988 | 0.2074 | 0.2169 |

*** p<0.01 ** p<0.05 *p<0.1

**Appendix C12. (Model 13+Edu) Estimation Results for the Homeowner per household,
1980-1990 & 1990-2000, Los Angeles Region**

| | | Parameter | Total | NH White | NH Black | Hispanic | NH AsianPI | |
|-------------------|--------|---|---|------------|------------|------------|------------|------------|
| | | Intercept | 0.344 *** | 0.573 *** | -0.182 *** | 0.522 *** | 0.431 *** | |
| YEAR | year | Last year of two decade | 0.337 *** | 0.360 *** | 0.161 *** | 0.266 *** | 0.634 *** | |
| | | Beginning year of two decade | Ref. | | | | | |
| PERIOD | period | 1990-2000 | -0.039 ** | 0.036 * | -0.195 *** | -0.135 *** | 0.073 | |
| | | 1980-1990 | Ref. | | | | | |
| MC | mc0 | Native-Borns | Ref. | | | | | |
| | | mc1 | 1-10 years (in 1980 or 1990) | -1.411 *** | -1.185 *** | -1.126 *** | -1.876 *** | -1.394 *** |
| | | mc2 | 11-20 years (in 1980 or 1990) | -0.361 *** | -0.039 | -0.606 ** | -0.798 *** | 0.065 |
| | | mc3 | 20+ years (in 1980 or 1990) | 0.163 *** | 0.136 *** | -0.208 | -0.049 *** | 0.220 ** |
| BC | bc1 | 15-24 (in 1980 or 1990) | -2.893 *** | -2.895 *** | -3.042 *** | -2.803 *** | -3.307 *** | |
| | | bc2 | 25-34 (in 1980 or 1990) | -1.406 *** | -1.351 *** | -1.590 *** | -1.377 *** | -1.605 *** |
| | | bc3 | 35-44 (in 1980 or 1990) | -0.392 *** | -0.324 *** | -0.436 *** | -0.478 *** | -0.294 *** |
| | | bc4 | 45-54 (in 1980 or 1990) | Ref. | | | | |
| | | bc5 | 55-64 (in 1980 or 1990) | 0.117 *** | 0.074 *** | 0.184 *** | 0.041 *** | 0.401 *** |
| | | bc6 | 65-74 (in 1980 or 1990) | -0.017 | -0.117 *** | 0.191 *** | -0.077 *** | 0.251 ** |
| Y*Period | yp | Last year*Period(1990-2000) | -0.178 *** | -0.143 *** | -0.061 | -0.108 *** | -0.486 *** | |
| Y*MC | ymc0 | Last year*Native-born | Ref. | | | | | |
| | | ymc1 | Last year*(1-10yr) | 0.577 *** | 0.598 *** | 0.963 *** | 0.618 *** | 0.507 *** |
| | | ymc2 | Last year*(11-20yr) | 0.091 *** | 0.047 | 0.233 | 0.218 *** | -0.253 ** |
| | | ymc3 | Last year*(20+yr) | 0.061 * | 0.000 | 0.320 | 0.149 ** | 0.161 |
| Y*BC | ybc1 | Last year*15-24 (in 1980 or 1990) | 1.060 *** | 1.123 *** | 0.879 *** | 0.989 *** | 1.223 *** | |
| | | ybc2 | Last year*25-34 (in 1980 or 1990) | 0.440 *** | 0.450 *** | 0.454 *** | 0.375 *** | 0.637 *** |
| | | ybc3 | Last year*35-44 (in 1980 or 1990) | 0.023 | 0.012 | 0.078 | 0.033 | 0.010 |
| | | ybc4 | Last year*45-54 (in 1980 or 1990) | Ref. | | | | |
| | | ybc5 | Last year*55-64 (in 1980 or 1990) | -0.022 | -0.003 | 0.030 | -0.076 | -0.485 *** |
| | | ybc6 | Last year*65-74 (in 1980 or 1990) | -0.125 *** | -0.131 *** | -0.044 | -0.060 | -0.646 *** |
| MC*BC | mc1bc1 | (1-10yr)*15-24 (in 1980 or 1990) | 1.113 *** | 0.901 *** | 0.890 *** | 1.247 *** | 1.647 *** | |
| | | mc1bc2 | (1-10yr)*25-34 (in 1980 or 1990) | 0.696 *** | 0.519 *** | 0.104 | 0.865 *** | 1.021 *** |
| | | mc1bc3 | (1-10yr)*35-44 (in 1980 or 1990) | 0.346 *** | 0.243 *** | 0.297 | 0.379 *** | 0.405 *** |
| | | mc1bc4 | (1-10yr)*45-54 (in 1980 or 1990) | Ref. | | | | |
| | | mc1bc5 | (1-10yr)*55-64 (in 1980 or 1990) | -0.574 *** | -0.685 *** | -0.544 | -0.337 *** | -0.815 *** |
| | | mc1bc6 | (1-10yr)*65-74 (in 1980 or 1990) | -1.192 *** | -1.176 *** | -10.066 | -0.863 *** | -1.379 *** |
| | mc2bc1 | (11-20yr)*15-24 (in 1980 or 1990) | 0.711 *** | 0.137 * | 0.313 | 0.960 *** | 0.828 *** | |
| | | mc2bc2 | (11-20yr)*25-34 (in 1980 or 1990) | 0.688 *** | 0.247 *** | 0.709 *** | 0.938 *** | 0.633 *** |
| | | mc2bc3 | (11-20yr)*35-44 (in 1980 or 1990) | 0.374 *** | 0.133 *** | 0.320 | 0.565 *** | 0.337 *** |
| | | mc2bc4 | (11-20yr)*45-54 (in 1980 or 1990) | Ref. | | | | |
| | | mc2bc5 | (11-20yr)*55-64 (in 1980 or 1990) | -0.542 *** | -0.512 *** | -0.185 | -0.553 *** | -0.874 *** |
| | | mc2bc6 | (11-20yr)*65-74 (in 1980 or 1990) | -1.150 *** | -1.074 *** | -1.183 ** | -1.028 *** | -1.662 *** |
| | mc3bc1 | (20+yr)*15-24 (in 1980 or 1990) | 0.348 *** | 0.215 * | -0.264 | 0.551 *** | 0.060 | |
| | | mc3bc2 | (20+yr)*25-34 (in 1980 or 1990) | 0.155 *** | 0.046 | 0.010 | 0.351 *** | 0.064 |
| | | mc3bc3 | (20+yr)*35-44 (in 1980 or 1990) | 0.169 *** | 0.007 | 0.068 | 0.369 *** | 0.052 |
| | | mc3bc4 | (20+yr)*45-54 (in 1980 or 1990) | Ref. | | | | |
| | | mc3bc5 | (20+yr)*55-64 (in 1980 or 1990) | -0.234 *** | -0.151 *** | -0.584 ** | -0.285 *** | -0.366 *** |
| | | mc3bc6 | (20+yr)*65-74 (in 1980 or 1990) | -0.389 *** | -0.362 *** | -0.612 ** | -0.332 *** | -0.451 *** |
| P*MC | pmc0 | (1990-2000)*Native-born | Ref. | | | | | |
| | | pmc1 | (1990-2000)*(1-10yr) | -0.071 *** | -0.004 | 0.071 | -0.391 *** | -0.093 |
| | | pmc2 | (1990-2000)*(11-20yr) | -0.082 *** | -0.092 | 0.517 ** | -0.124 *** | -0.162 |
| | | pmc3 | (1990-2000)*(20+yr) | 0.045 | 0.069 * | 0.364 | 0.049 | 0.135 |
| P*BC | pbc1 | (1990-2000)*15-24 (in 1980 or 1990) | 0.107 *** | 0.011 | 0.368 ** | 0.160 * | 0.490 *** | |
| | | pbc2 | (1990-2000)*25-34 (in 1980 or 1990) | -0.049 ** | -0.097 *** | -0.211 *** | -0.040 | 0.179 ** |
| | | pbc3 | (1990-2000)*35-44 (in 1980 or 1990) | -0.204 *** | -0.255 *** | -0.354 *** | -0.143 *** | -0.164 * |
| | | pbc4 | (1990-2000)*45-54 (in 1980 or 1990) | Ref. | | | | |
| | | pbc5 | (1990-2000)*55-64 (in 1980 or 1990) | 0.280 *** | 0.255 *** | 0.179 ** | 0.407 *** | 0.236 ** |
| | | pbc6 | (1990-2000)*65-74 (in 1980 or 1990) | 0.495 *** | 0.517 *** | 0.382 *** | 0.401 *** | 0.226 |
| P*Y*MC | pymc0 | (1990-2000)*Last year*Native-born | Ref. | | | | | |
| | | pymc1 | (1990-2000)*Last year*(1-10yr) | -0.050 | -0.287 *** | -0.363 | 0.353 *** | -0.138 |
| | | pymc2 | (1990-2000)*Last year*(11-20yr) | 0.016 | -0.173 ** | -0.301 | 0.110 ** | 0.022 |
| | | pymc3 | (1990-2000)*Last year*(20+yr) | -0.095 ** | -0.070 | -0.348 | -0.123 * | -0.257 |
| P*Y*BC | pybc1 | (1990-2000)*Last year*15-24 (in 1980 or 1990) | -0.097 ** | -0.160 ** | -0.024 | 0.011 | -0.587 *** | |
| | | pybc2 | (1990-2000)*Last year*25-34 (in 1980 or 1990) | 0.142 *** | 0.115 *** | 0.354 *** | 0.170 ** | -0.037 |
| | | pybc3 | (1990-2000)*Last year*35-44 (in 1980 or 1990) | 0.161 *** | 0.174 *** | 0.172 * | 0.093 | 0.272 ** |
| | | pybc4 | (1990-2000)*Last year*45-54 (in 1980 or 1990) | Ref. | | | | |
| | | pybc5 | (1990-2000)*Last year*55-64 (in 1980 or 1990) | -0.091 ** | -0.050 | -0.122 | -0.180 ** | 0.160 |
| | | pybc6 | (1990-2000)*Last year*65-74 (in 1980 or 1990) | -0.031 | -0.062 | -0.014 | -0.045 | 0.323 |
| Education | edu1 | Below HS | Ref. | | | | | |
| | | edu2 | HS and Some College | 0.612 *** | 0.445 *** | 0.542 *** | 0.536 *** | 0.598 *** |
| | | edu3 | BA+ | 1.104 *** | 0.822 *** | 1.301 *** | 0.847 *** | 1.153 *** |
| -2 Log Likelihood | | | 140757.80 | 69522.71 | 10759.61 | 32720.00 | 9937.50 | |
| DF | | | 52 | 52 | 52 | 52 | 52 | |
| Pseudo R-Square | | | 0.2054 | 0.1719 | 0.1953 | 0.2086 | 0.2222 | |

*** p<0.01 ** p<0.05 *p<0.1