

Preliminary Draft
(Note: Case settled before formal filing)

Demographic Affidavit re: *Scott, et al. v. The American Tobacco Co., et al.*

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Purpose and Rationale

I have been asked to prepare a demographic analysis of the population composition and population changes in the state of Louisiana since 1945. This analysis was requested by the Stone, et al. firm on behalf of R. J. Reynolds, Inc. who will compensate me for my work. Clients are particularly interested in in-migration to Louisiana from other states across the time frame of interest. Relying primarily on decennial census data, I show below that in-migration to Louisiana from other states has been substantial since 1950. In every decennial census, between one-half million and one million persons residing in Louisiana who were born in another state. This indicates that Louisiana's residential population mix always contains a significant number of persons who have migrated into the state from elsewhere.

Qualifications

I am Professor of Sociology and Rural Sociology at Louisiana State University and Senior Research Scientist in the Louisiana Population Data Center. I occasionally have served as a consultant and expert witness, providing socioeconomic and demographic analysis. Recent consultations include work with Kean, Miller et al., Attys., in re: *Davis et al. v. East Baton Rouge Parish School Board et al.* (school desegregation) and the U.S. Department of Justice, Office of Civil Rights in re: *Hays et al. v. Louisiana*, (congressional redistricting). I am in my fifth year at LSU after spending 11 years at Florida State University, four of those as Chair of the Department of Sociology. I also lived in Louisiana as a child while my father pursued his doctorate in sociology at LSU. My research has been funded by the National Science Foundation, the U.S. Department of Agriculture (Economic Research Service), the U.S. Department of the Interior (Minerals Management Service and National Marine Fisheries Service), the U.S. Department of Labor (Employment and Training Administration), the U.S. Department of Commerce (Economic Development Administration), and the Louisiana Universities Marine Consortium. I have written articles in journals such as *American Demographics*, *American Sociological Review*, *American Journal of Sociology*, *Social Forces*,

Social Science Quarterly, *Rural Sociology*, and *Work and Occupations*. I am also the author of three books and, most recently, a CD-ROM containing unique data developed from the 1990 Census. My major area of research is social stratification. I specialize in quantitative labor market and employment analyses and also conduct socioeconomic and social demographic studies. I am an elected member of the Executive Committee of the Southwestern Sociological Association. I served as Recording Secretary in the Southern Sociological Society from 1988-1993, currently chair that organization's 1997 program, and have just been elected Vice President. In the Rural Sociological Society, I am member of the Publications committee and have served as liaison to the U.S. Bureau of the Census. A curriculum vitae that accurately details my training and qualifications is attached to this report.

Analysis of In-Migration

Evidence from Decennial Censuses.

The decennial censuses (1950, 1960, 1970, 1980, 1990) provide us with sound data for assessing the extent of in-migration into Louisiana from other states. Data on state of birth and state of current residence are collected as part of the standard Census enumeration procedures. These data taken from the relevant censuses are exhibited in Table 1 below.

TABLE 1. Number of Persons Born In-State 1960-1990, Louisiana

	1960 ^a	1970 ^b	1980 ^c	1990 ^d
Total Population	3,257,022	3,640,442	4,205,900	4,219,973
Number Born Out-of-State	617,865	821,023	920,747	887,431
Percent Born Out-of-State	19.0%	22.5%	21.9%	21.0%

^a Eighteenth Decennial Census of the Population: 1960, Volume 1. Characteristics of the Population, Part 20 Louisiana. Table 98.

^b 1970 Census of Population, Volume 1. Characteristics of the Population, Part 20 Louisiana. Table 140.

^c 1980 Census of Population, Volume 1. Characteristics of the Population. Chapter D: Detailed Population Characteristics, Part 20 Louisiana. PL80-1-D20. Table 194.

^d 1990 Census of Population, Social and Economic Characteristics, Louisiana. 1990 CP-2-20. Table 37.

The figures in Table 1 indicate that, in each decennial Census, a very substantial number of Louisiana residents reported that they were born in another state. The total born out-of-state ranges between 500,000 and 1,000,000 in each Census. The percent born out-of-state is roughly one-fifth of all residents at any of the time points. This is suggestive of a changing population mix generated by substantial amounts of in-migration and out-migration.

[Note: we could also show states of origin of migrants in Louisiana for some decennial years, but not all due to scant data. This would take about one hour per census where available.]

[Note: we also have access to parish-level data which show a great deal of variability among La. parishes. Some parishes have 95%+ residents born in La., while others have under 50%. This variability could be used to counter the argument that La.'s proportion born in state is exceedingly high (hence lower in-migration than other states). Two additional hours estimated to generate such a table, text, and map.]

Evidence from Annual Intercensal Estimates.

Annual population and migration estimates are available from the late 1960s to the present. While the decennial census data are based on a full enumeration of the population, the annual intercensal estimates are derived from sample data

(Table 2)

In-Migrants Who Are Smokers

Using national estimates of the percent of state residents (over age 18) who smoke, it is possible to produce rough estimates of the number of in-migrants who were likely to have been smokers. To do this, it is necessary to assume the following:

- 1) in-migrants are equally as likely to be smokers as residents; and,
- 2) the percentage of in-migrants age 18 or over is the same as the percentage 18 and over for the Louisiana's resident population; and,
- 3) the percentage of Louisiana residents (18 years of age and older) who smoke is the same as the percentage of U.S. residents who smoke.

With respect to the first point, we assume that the percentage of smokers in the general population is the same as the percentage among in-migrants. We are now aware of any migration studies which have shown any significant differences in smoking behavior between migrants and non-migrants. Thus, we believe the first of the assumptions to be reasonable. The migration literature contains

mixed support for the second assumption. Historical circumstances (e.g., major disruptive episodes such as energy crises or recessions) and cohort effects (e.g., timing and size factors such as a baby boom) intertwine to produce differential migration by age. In one case, a migration stream may be composed exclusively of retirees. In another case, migrants may primarily be young adults (and their families) in search of long-term employment. Thus, it would be rather untenable to assume that the *entire age distribution* of a migrating group corresponded to the age distribution of a resident population. However, here we only assume that the proportion of both groups *over age 18* is the same. This is a reasonably plausible assumption for producing the rough estimates of persons smoking. We have some evidence that the final assumption is fairly accurate. In 1992-93, smokers comprised 23.7 percent of Louisiana's residents compared to 22.9 percent of the U.S.¹ Thus, using national smoking prevalence data will slightly underestimate the numbers of smokers that appear in Table 3.

[Note: we are busily looking for older survey data that might show a larger discrepancy between smoking in Louisiana and the U.S. Will certainly add, if we can find.]

¹Cite source of survey data.

TABLE 3. Estimates of Number of Persons Smoking 1960-1990, Louisiana and the United States

	1960 ^a	1970 ^b	1980 ^c	1990 ^d
1. Total Population	3,257,022	3,640,442	4,205,900	4,219,973
2. Population 18+	1,939,239	2,253,549	2,875,432	2,992,704
3. Percent 18+	59.5%	61.9%	68.4%	71.0%
4. Percent Smoking (age 18+ in the U.S.) ^e	42.4%	37.1%	33.5%	25.5%
5. Estimated Number of Smokers	822,237	836,066	963,269	763,139
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6. Number Born Out- of-State	617,865	821,023	920,747	887,431
7. Number Ages 18+	367,629	508,213	629,790	630,076
8. Number of Smokers Born Out-of-State	155,874	170,251	210,979	160,669

^a Eighteenth Decennial Census of the Population: 1960, Volume 1. Characteristics of the Population, Part 20 Louisiana. Table 98.

^b 1970 Census of Population, Volume 1. Characteristics of the Population, Part 20 Louisiana. Table 140.

^c 1980 Census of Population, Volume 1. Characteristics of the Population. Chapter D: Detailed Population Characteristics, Part 20 Louisiana. PL80-1-D20. Table 194.

^d 1990 Census of Population, Social and Economic Characteristics, Louisiana. 1990 CP-2-20. Table 37.

^e Data on cigarette smoking in the U.S. obtained from U.S. National Center for Health Statistics, *Health, United States, 1994*.

The first row of Table 3 shows the Louisiana base resident populations on which calculations are based. The second and third rows provide data on the resident population ages 18 and over. The fourth row displays national estimates of the percent of adults (18 years of age and older) who smoke. The fifth line of the table contains our estimate for Louisiana of the number of smokers based on the national percentages in the previous row.

The lower panel of Table 3 repeats the estimates for persons who resided in Louisiana during a decennial census year, but were born in another state. The estimates suggest that from 150,000 to 200,000 of these persons were smokers in each of the census years.

Conclusions

These data and the estimates derived from them provide clear evidence that in-migration has been a significant feature of Louisiana's population composition throughout the post-war era. And, it follows that a substantial number of Louisiana's smokers in any recent decennial census year were born in other states. It is a fundamental demographic principle that population dynamics are driven by births, deaths, and migration. The state of Louisiana is no exception.

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(date)