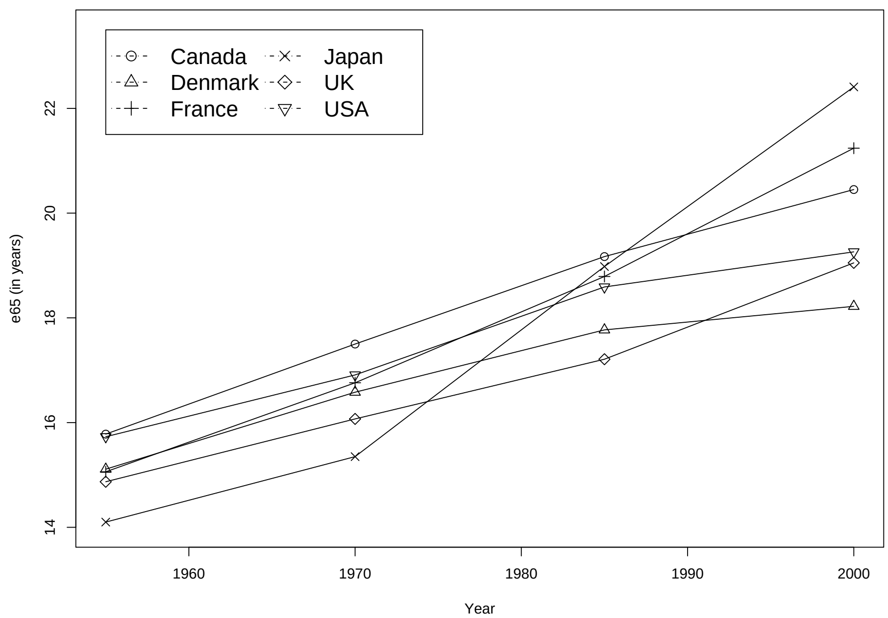
Researchers have observed recent differences in mortality trends in older age groups, particularly for females, in several developed countries. Mesle and Vallin noted that life expectancy at age 65 consistently increased by two to three years for females in France, Japan, the Netherlands, and the United States in the period from 1968 to 1984 and continued at this rate of increase in France and Japan from 1984 to 2000 but that increases in life expectancy at age 65 for females in the Netherlands and the United States had slowed to half a year in the later period (2006). Janssen, Mackenbach, and Kunst found slowing mortality declines for men and women above the age of 80 in the Northern European countries of Denmark and the Netherlands that they concluded were not due to cigarette smoking as well as continued strong mortality declines for men and women above this age in other European countries, particularly France (2004).

These trends can be analyzed using mortality and cause of death data. Figure 1 and Table 1 present values for life expectancy at age 65 for females from various developed countries over time from the Human Mortality Database (University of California, Berkeley 2007). The data show that some developed countries such as Denmark, the Netherlands, and the United States experienced little gain in e65 values from 1985 to 2000, whereas e65 values for females in some other countries, particularly France and Japan, increased by significant amounts during this period. Data for e65 values for these countries presented on an annual basis show similar trends.

Changes in life expectancy can be decomposed by age group and cause. Figure 2 presents results from the decomposition of changes in life expectancy for

Figure 1: Life Expectancy at Age 65, Females in Various Countries

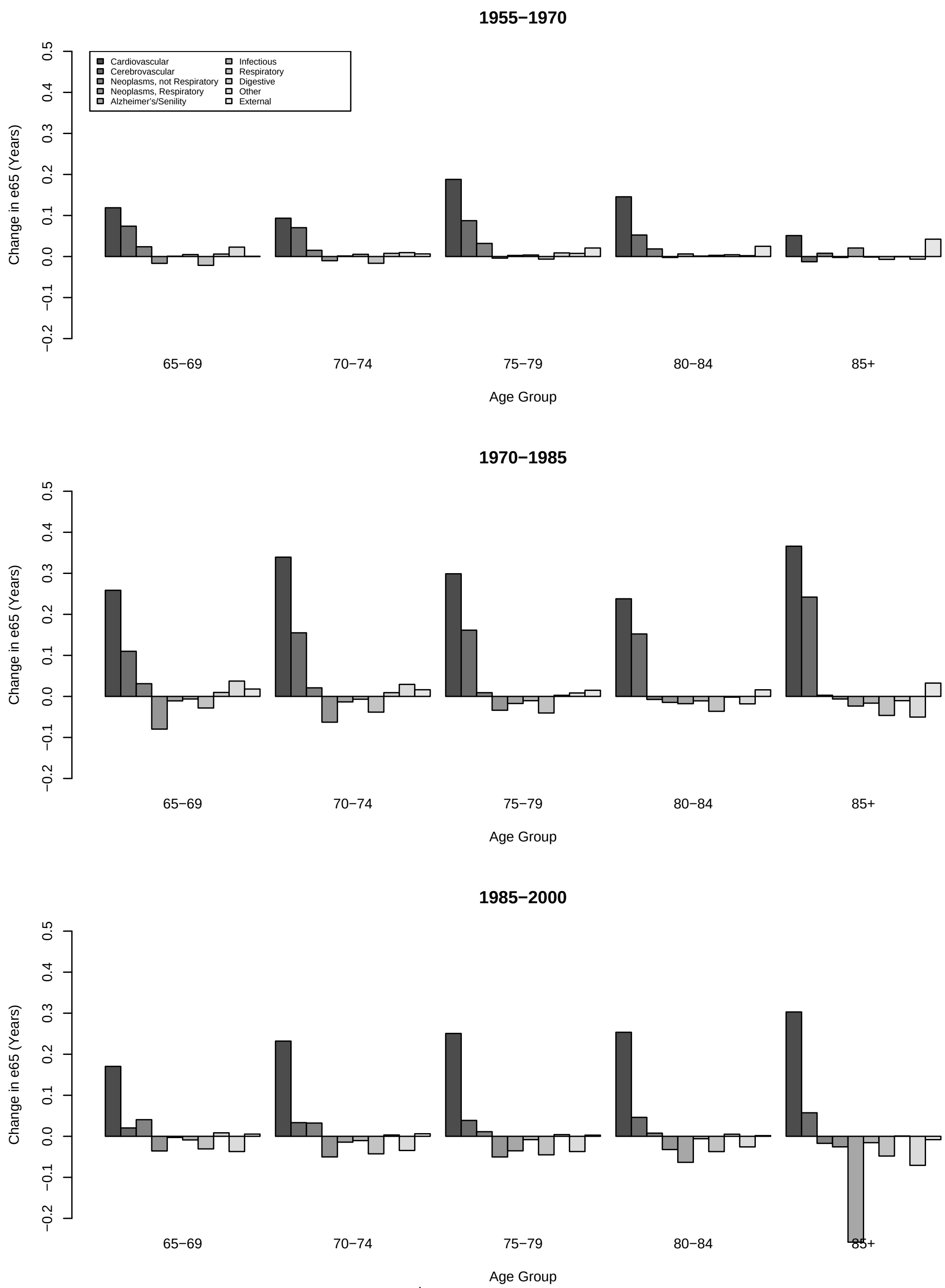


Source: Human Mortality Database

females in the United States from 1955 to 2000 by age group and cause produced using the method presented by Arriaga (1984) and mortality by cause of death data available in the World Health Organization Mortality Data Base (2006). Table 2 gives the ICD codes for each class of causes. The plot indicates that large decreases in mortality from cardiovascular and cerebrovascular diseases in the period from 1970 to 1985 as well as decreases in mortality from cardiovascular disease from 1985 to 2000 contributed to gains in life expectancy in U.S. women at older ages during these periods. The plot also suggests an increase in observed mortality rates in Alzheimer's disease and senility in the open-ended age group for US women from 1985 to 2000, a change that is probably due in some part to increased classification of deaths in this age range as being due to Alzheimer's disease as well as perhaps some increase in the mean age of women in this open-ended age group over time, in addition to increased mortality from this class of causes.

Decomposition of changes in life expectancy from countries that continue to experience significant increases in life expectancy at older ages for females suggest somewhat different trends by cause of death in those countries. Figure 3 presents decomposition results from France and suggests that deaths from other causes decreased from 1955 to 1985, a trend explained in large part by decreases in deaths at older ages attributed to the general cause of senility. Mortality from cardiovascular and cerebrovascular diseases decreased from 1970 to 1985 and from 1985 to 2000 in France, in contrast to the United States where mortality from cerebrovascular disease remained relatively constant over the lat-

Figure 2: Decomposition of Changes in e65, USA Females by Age and Cause



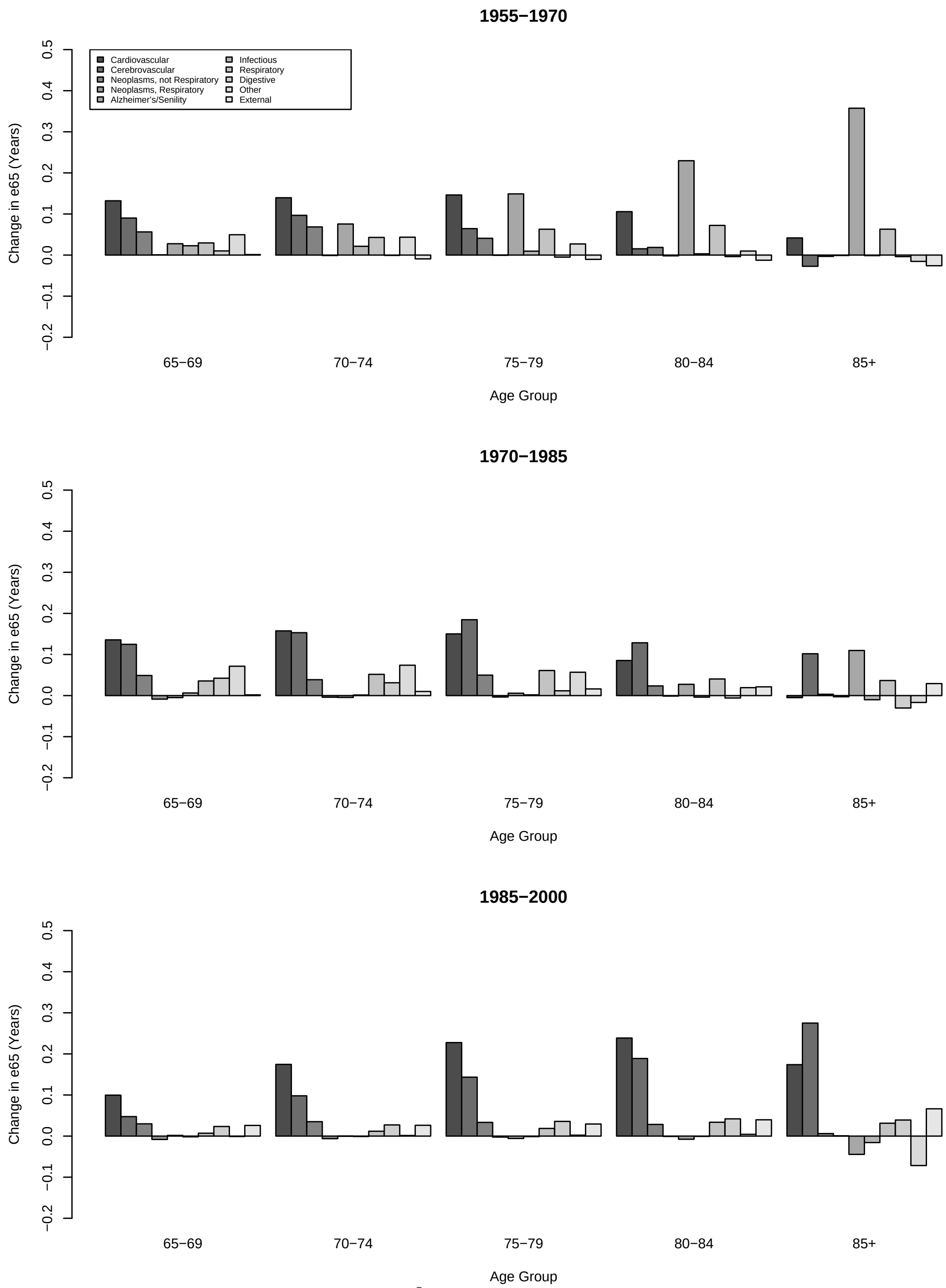
Source: WHO Mortality Data Base data

ter period. Figure 4 presents similar results for Japan, where very large gains in life expectancy for females at older ages occurred from 1970 to 1985 and large gains from 1985 to 2000, again primarily due to reductions in mortality from cardiovascular and cerebrovascular diseases.

Differences in life expectancy between countries at particular times can also be analyzed in this manner. Figure 5 presents the decomposition of differences in e65 values for females in France and the U.S. in particular years by age group and cause. The plots shows that at the beginning of the period France had an advantage in mortality rates in the age groups of 65-69 and 70-74 years for females, whereas the U.S. had an advantage in mortality rates above the age of 80 for females. During the period, France maintained its advantage in the younger age groups and came to approach or equal the mortality rates of the U.S. in the oldest age groups, thus producing that country's advantage over the U.S. in e65 values in 2000.

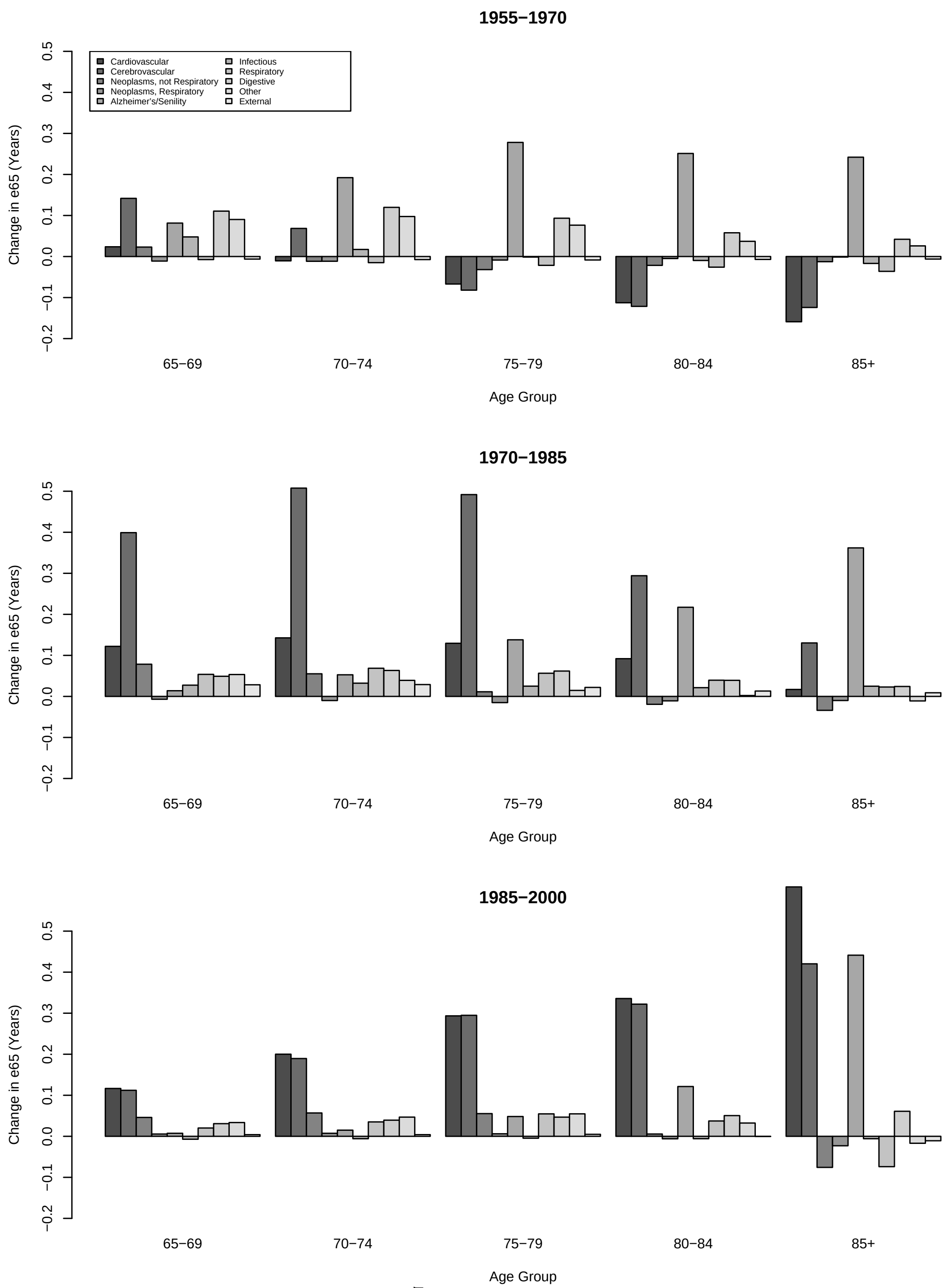
One possible contributing factor to mortality differentials in females at older ages could be cigarette smoking. Numerous studies have examined the effect of previous trends in cigarette smoking for males and females on differences in mortality and life expectancy between the sexes within countries (Pampel 2002) and (Preston and Wang 2006). The effect of cigarette smoking on life expectancy at older ages can be estimated from vital statistics data using a method suggested by Peto et al. (1992). First, standardized cigarette smoking prevalence in a country is estimated by sex- and age-group by period by calculating the proportion of smokers and nonsmokers in each group that would produce the

Figure 3: Decomposition of Changes in e65, France Females by Age and Cause



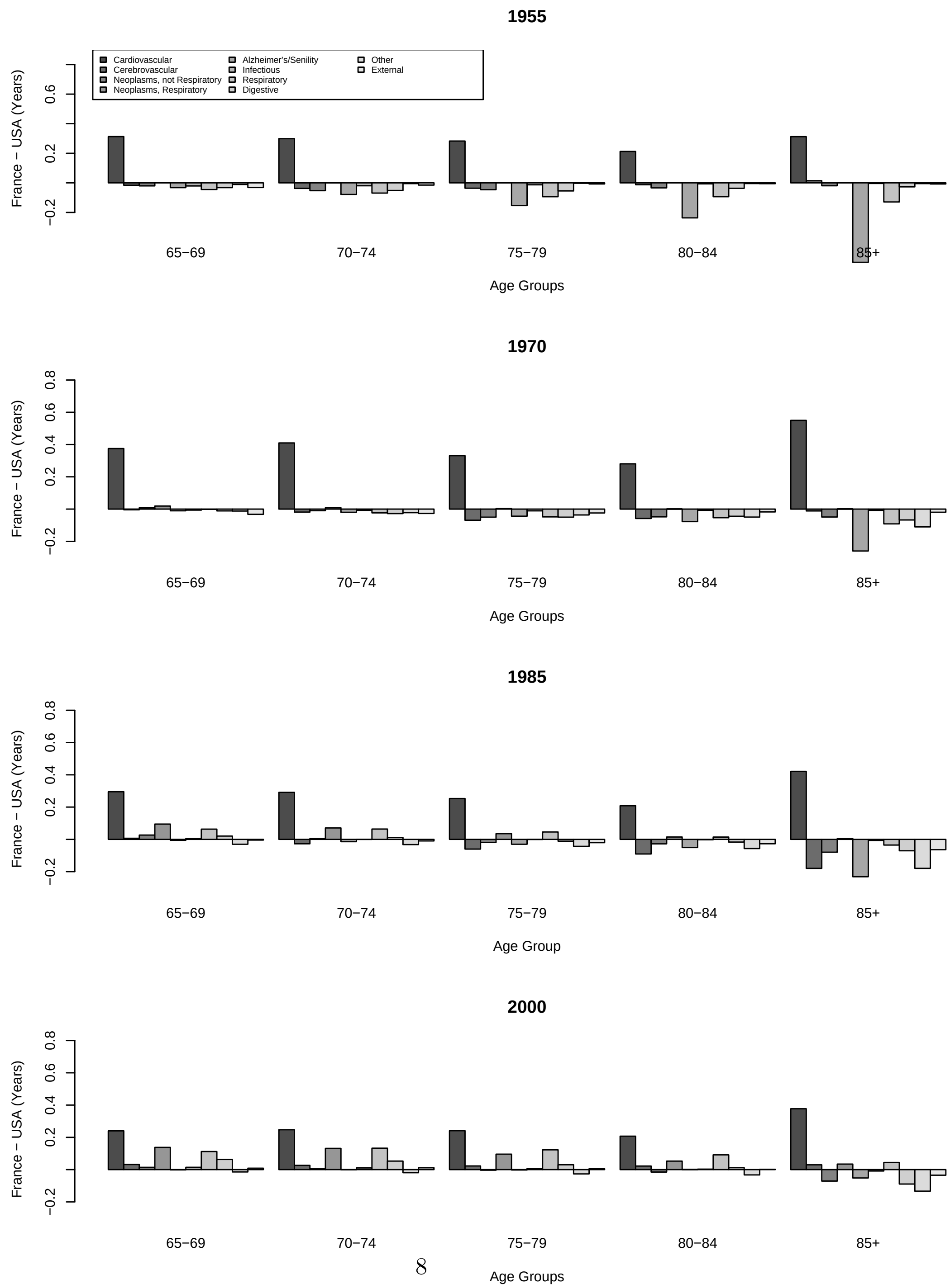
Source: WHO Mortality Data Base data

Figure 4: Decomposition of Changes in e65, Japan Females by Age and Cause



Source: WHO Mortality Data Base data

Figure 5: Decomposition of Differences in e65, France and U.S. Females by Age and Cause



Source: WHO Mortality Data Base data

observed mortality rates from lung cancer in the group in that period, assuming that the incidence rates of lung cancer mortality for smokers and nonsmokers in that group are the same as those observed for smokers and nonsmokers in a study population, in this case, the American Cancer Society's Cancer Preventive Study-II, a large prospective cohort study that included more than one million adults in the United States in the mid-1980s. Incidence rates for nonsmokers were reported by Peto et al. for individuals who reported at the beginning of the CPS-II study that they had never smoked regularly. Rates for smokers were taken from people who reported that they were current smokers at the time, and Peto et al. report that most of these current smokers were lifelong adult smokers who smoked on average approximately 20 cigarettes a day. (Incidence rates for lung cancer mortality as well as relative risk of mortality for other causes in the study are in this case obtained from the data presented in the appendix of the paper by Peto et al. rather than those figures presented in the paper itself because of the greater detail in mortality rates by age groups available in the appendix, and the data are smoothed using the Loess procedure when necessary because of empty cells for the youngest age groups. Incidence rates and relative risks for conditions for the age groups of 80-84 and 85+ are assumed to be the same as those presented in the data in the appendix of the paper for those 80+.) Lung cancer mortality among nonsmokers has tended to be rather constant during the period, at least in the U.S. according to results from the ACS CPS-I and CPS-II (Thun et al. 2006), making possible estimation for various years, and the period of estimation is similar to the interval for which Peto and his colleagues estimated the effects of smoking on mortality for various developed countries (Peto et al. 1994). Standardized smoking prevalence is estimated using the lung cancer incidence rates of CPS-II smokers, as well as nonsmokers, so this measure can be thought of as the cumulative impact of smoking for a group, observed through lung cancer mortality, standardized to the average smoking habits of smokers in the CPS-II study for that group. If the effects of smoking for a sex- and age-group in a national population are different than those for the relevant CPS-II sex- and age-group because of differences in factors such as smoking intensity, smoking duration, or cigarette composition, then the standardized smoking prevalence should differ from the observed cumulative smoking practices in the national population.

The standardized proportion of smokers and nonsmokers in each age and sex group is then used to calculate the proportion of deaths from other classes of causes known to be associated with smoking among smokers, using standard population attributable risk calculations (Kahn and Sempos 1989). In this case, the relevant factor in exposure is the change in smoking prevalence over time, so the formulae can be expressed as:

$$PAR = \frac{N\Delta P_e I_e[(RR-1)/RR]}{NP_e I_e + N\Delta P_e I_e + N(1-P_e-\Delta P_e)I_o}$$

where N is the number of people in a population at a particular time, P_e is the proportion exposed to the exposure at a previous time, Δ P_e is the change in proportion exposed to that time, RR is the relative risk of mortality from a cause due to the exposure, and I_e and I_o are the incidence rates, in this case expressed as mortality rates, for that cause among the exposed and unexposed. Relative risk and incidence rates are assumed to be constant over time. This simplifies to:

$$PAR = \frac{\Delta P_e(RR-1)}{P_eRR + \Delta P_eRR + (1 - P_e - \Delta P_e)}$$

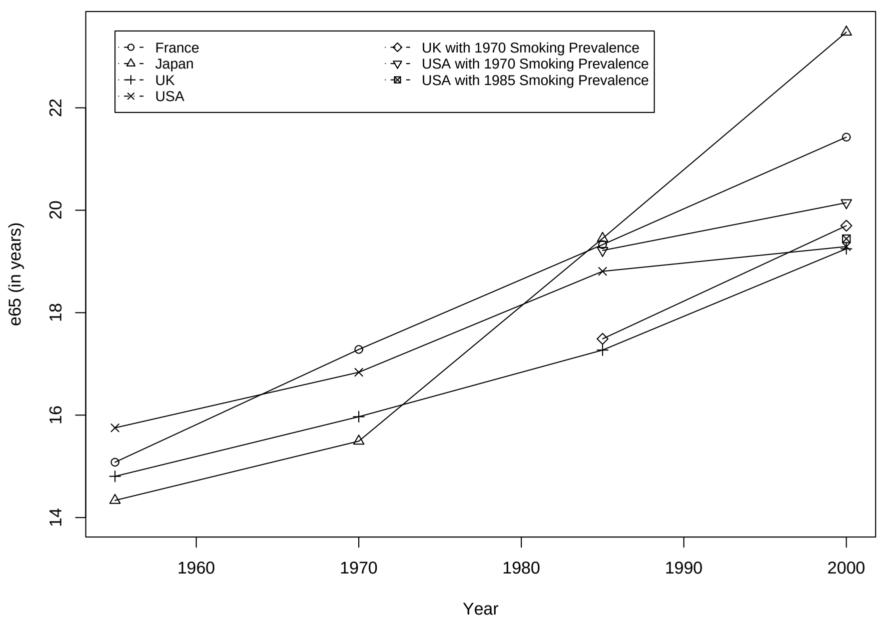
The relative risk of mortality from other causes associated with smoking, specifically in this case cardiovascular disease, cerebrovascular disease, upper aero-digestive neoplasms, other neoplasms, respiratory diseases, infectious diseases, digestive diseases other than cirrhosis of the liver, and other diseases, used in the attributable risk calculations are also taken from the ACS CPS-II study. Because of the possible effect of confounding by other risk factors associated with smoking such as excessive alcohol consumption or poor diet on changes in mortality rates for these causes, only half of the increase in relative risk of mortality from these causes for smokers compared to nonsmokers is attributed to smoking in the calculations, as opposed to lung cancer for which all of the increase in smokers compared to nonsmokers is attributed to smoking. It is assumed that smokers have no increased risk of mortality from external causes and cirrhosis of the liver, as was the case in the procedure presented by Peto, as well as Alzheimer's Disease and senility.

This method can be used to estimate the effects of smoking prevalence on trends of mortality and life expectancy from one period to another. Specifically, in this case, it is used to estimate the proportion of deaths attributable to smoking among the increase or decrease in proportion of people who are smokers in an age-sex group among all deaths from that cause in that group. The change in proportion of smokers in an age-sex group is obtained from the change in estimated standardized prevalence of smoking for a group between two periods. Table 3 provides the estimated standardized smoking prevalence for females in various industrialized countries by age groups in 1955, 1970, 1985, and 2000. Standardized smoking prevalence may not be accurately estimated for the youngest age groups in some countries, particularly those with relatively small populations, an imprecision resulting in part from the low levels of lung cancer generally found among smokers and nonsmokers in these age groups, and may be somewhat overestimated at older ages in a country such as Japan in which other factors such as environmental exposures may contribute to lung cancer deaths among nonsmokers. Smoking prevalence is greatly overestimated for those 85+ in Japan in 2000. To control for the effects of other factors that tend to inflate the estimated smoking prevalence for females in older age groups in Japan, the estimated prevalence for those 60-64 in this country is used for older age groups.

In general, trends in estimated standardized smoking prevalences for age groups above 65 in most countries are generally consistent with survey results for smoking prevalence by birth cohorts although consistent differences occur for various countries. Table 4 gives the proportion of females by age group who reported that they were smokers in surveys in France, Japan, the United Kingdom, and the United States over time (Nicolaides-Bouman et al. 1993). Differences in the results from the two methods of measuring smoking prevalence include the increases in smoking among females in France at the younger age groups observed in survey data in earlier periods than in the estimates derived from lung cancer mortality. Smoking prevalence as measured by the indirect method also tends to be higher for U.S. females than the results from survey data. To some extent, variation in results between the two results may occur because of differences in the type of smoking exposure that is being measured, given that survey data provides an estimate of smoking prevalence at a particular time whereas the indirect method attempts to estimate cumulative exposure to smoking as measured by its impact. The indirect method also standardizes smoking exposure to the average experiences of CPS-II nonsmokers and smokers by age- and sex-group. The latter aspect of the method may also produce results that are somewhat larger in magnitude than expected for some countries, given that the mortality rates overall for smokers and nonsmokers in the ACS CPS-II were, according to the paper by Peto et al., lower than those of the U.S. population for those age groups, perhaps because of a tendency of people in good health or concerned about their health to participate in such a study. Standardized prevalence estimates for the same birth cohorts over time tend to be comparable, although in general there is an increase in estimated prevalence for many cohorts in countries such as Canada, Denmark, the Netherlands, Norway, and the U.S., particularly from 1985 to 2000.

Alternative estimates of life expectancy can be calculated in the absence of changes in smoking prevalence for age-sex groups in countries in particular periods and the resulting changes in deaths from various causes that are at-

Figure 6: Life Expectancy at Age 65, Females in Various Countries with Changed Smoking Prevalence

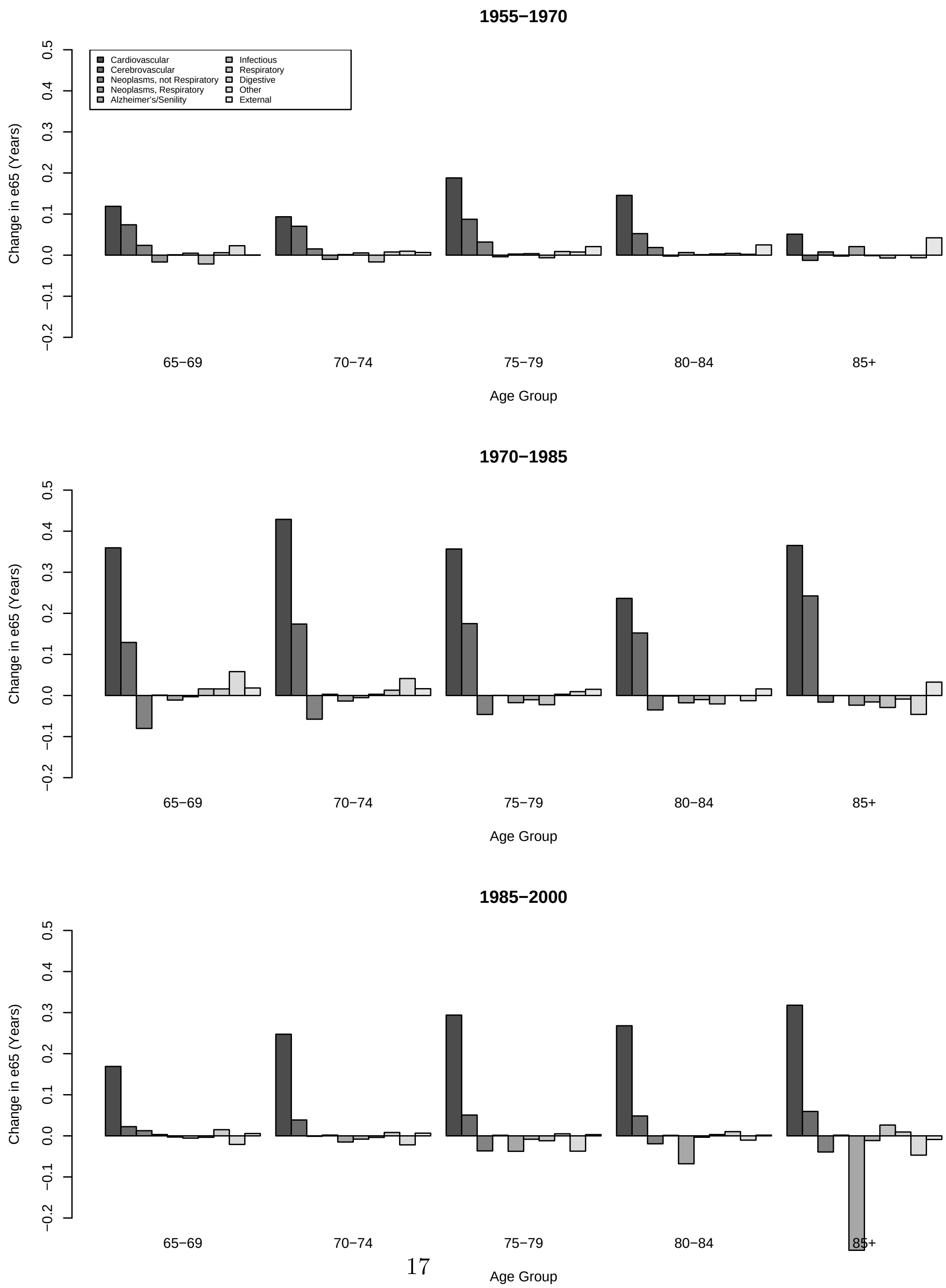


Source: WHO Mortality Data Base data

tributable to smoking. Figure 6 shows life expectancy at age 65 for females in the U.K. (specifically England and Wales) and the U.S. calculated using WHO Mortality Data Base data on the assumption that previous estimated smoking prevalence had continued in subsequent periods. The plot shows a slight increase in e65 for U.S females in 2000 if smoking prevalence had remained at the same levels by age group as in 1985 and a larger increase for U.S. females in 2000 if smoking prevalence had remained at the same levels as in 1970. Figure 7 shows the decomposition of change in life expectancy for class of cause for females in the United States assuming smoking prevalence for females had remained the same in subsequent periods as it was estimated being for 1970. Some difference is observed from 1970 to 2000 for the classes of causes associated with an increased risk due to cigarette smoking, particularly neoplasms of the respiratory system. The United Kingdom would have experienced an increase in the value of e65 for females in 2000 using 1970 smoking prevalence that was similar in magnitude to the increase estimated for the United States, although the effect of smoking prevalence by age groups on this increase differs for the two countries. Table 3 suggests that smoking prevalence peaked for women in ages from 65 to 69 in 1970 and for women 80 to 84 in 1985 in the United Kingdom, whereas smoking prevalence for women in the United States in ages from 65 to 69 peaked in 1985 and had increased for women 80 to 84 from 1985 to 2000. These estimates are consistent with research that finds that increases in smoking among women in the United Kingdom and Ireland occurred somewhat before they did in other developed countries (Pampel 2001) and that as a result lung cancer rates increased in these countries before they did elsewhere.

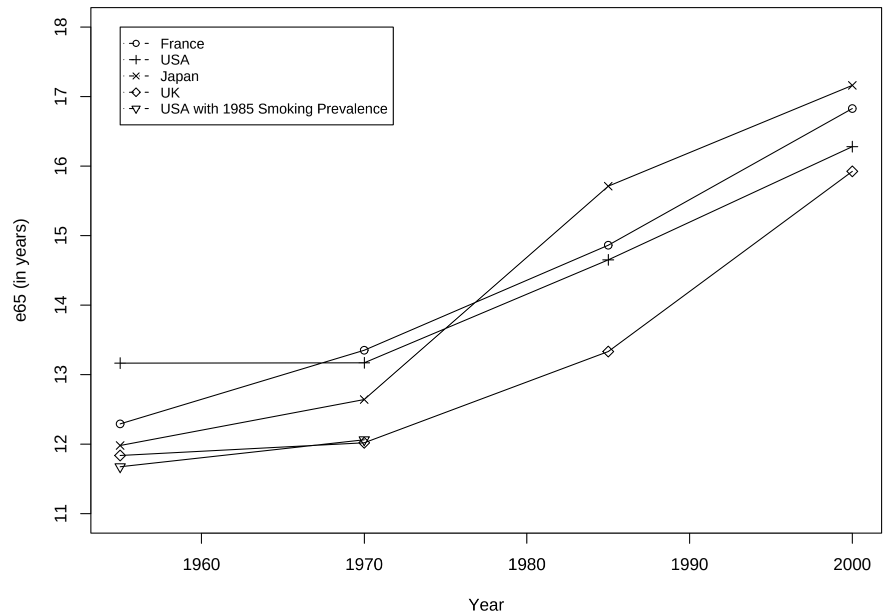
Similar analysis can be performed for life expectancy at older ages for males in developed countries. Table 5 and Figure 8 present values for e65 for males in various industrialized countries obtained from the Human Mortality Database (University of California, Berkeley 2007). They show that life expectancy at older ages stalled in several countries, including the U.K. and the U.S., from 1955 to 1970 and in some cases from 1955 to 1985, in a manner similar to later trends for females at older ages in some countries. Figure 8 also shows values of e65 for the U.S. in 1955 and 1970 calculated with the indirect estimation technique and using smoking prevalence figures for the U.S. in 1985 estimated from WHO Mortality Data Base data (2006). The figure shows that life expectancy at age 65 would have actually been lower in 1955 and 1970 using the estimated 1985 smoking prevalence than the observed values due to subsequent increases in smoking for age groups above 65. The figure also shows that with constant smoking prevalence e65 values for males would have increased somewhat in the U.S. from 1955 to 1970, rather than remaining unchanged during the period, and would have increased at an even greater rate from 1970 to 1985, suggesting that observed increases in life expectancy at older ages for males in the U.S. and other developed countries during this period were due to factors such as advances in medical care and technology rather than advantageous changes in smoking prevalence among older age groups. Table 6 gives the proportion of estimated standardized smoking prevalence for the various industrialized countries in 1955, 1970, 1985, and 2000 using the indirect method and shows that the estimated

Figure 7: Decomposition of Changes in e65, USA Females by Age and Cause with Changed Smoking Prevalence



Source: WHO Mortality Data Base data

Figure 8: Life Expectancy at Age 65, Males in Various Countries



Source: Human Mortality Database

prevalence for age groups above age 65 increased from 1955 to 1970 and then from 1970 to 1985 in many of the countries such as Australia, Canada, Denmark, and the U.S. before declining somewhat from 1985 to 2000.

This analysis suggests that differences in previous smoking trends account for some portion of the observed differences across countries in female life expectancy at age 65. Based on the WHO data, e65 for females had increased to 2.14 more years in France than in the United States by 2000. 7.1% of this difference would be eliminated, based on the indirect estimation method of the effects of cigarette smoking, if smoking prevalence were the same for women in the U.S. in 2000 as in 1985, and 40.0% of the difference would be eliminated if smoking prevalence remained the same in 2000 as it was in 1970. Because of the nature of the indirect estimation method and its conservative assignment of only half of the excess relative risk among smokers for mortality for causes associated with smoking other than lung cancer, the full effect of smoking on these cross-country differences could be higher, although it would appear that differences in smoking practice do not account for all of the differences between countries in female life expectancy at older ages.

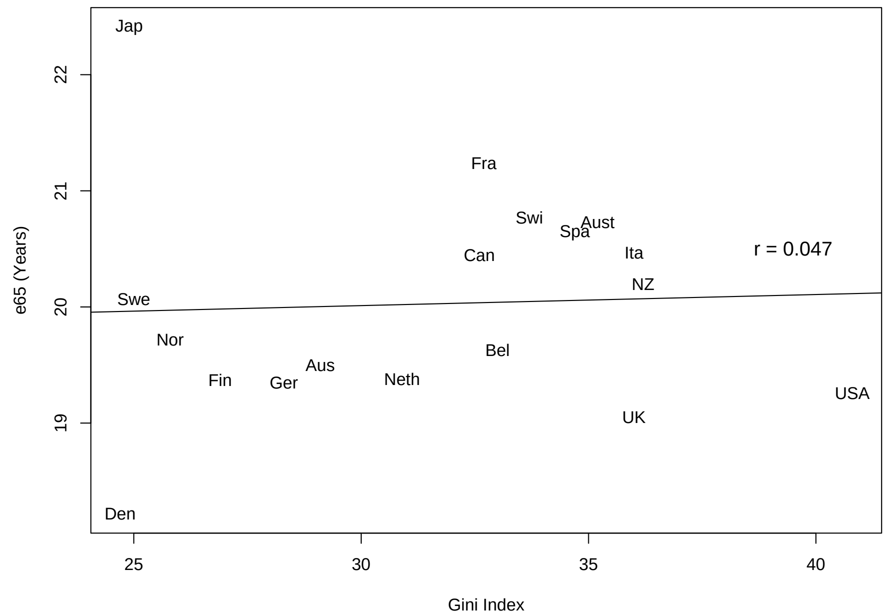
Other factors that could account for differences in life expectancy at older ages in these countries include environmental exposures, genetic factors, behavior, diet, and social and health care programs and policies. One aspect of the U.S. health care system that could affect morbidity and mortality at older ages is that although most U.S. residents have access to health care coverage from the age of 65 through the Medicare program, some U.S. residents lack health care coverage prior to the age of 65. Researchers have shown, for example, using a prospective cohort study with data from the U.S. Health and Retirement Study that individuals in the U.S. in the age range from 51 to 61 with no or intermittent health insurance coverage were more like to suffer serious declines in health over a four-year period than were individuals with continuous health care coverage during this time (Baker et al. 2001). Other researchers have shown using the U.S. Health and Retirement Study and the English Longitudinal Study of Aging that the health of U.S. residents aged 55 to 64 is generally worse than that of their English counterparts based on self-reported prevalence of several chronic diseases including heart disease and diabetes and biological markers such as c-reactive protein, even for residents of the two countries of similar income or education levels (Banks et al. 2006). The study was restricted to non-Hispanic whites in both countries to eliminate any possible effects due to health differences among minority racial or ethnic populations within a country, particularly for African-Americans and Hispanics in the U.S. This result is consistent with data that show that although a disparity in e65 values exists between racial and ethnic groups in the U.S., with the value of e65 for African-American females being 17.7 years as opposed to 19.4 years for white females in 2000, white females are a sufficiently large proportion of the female population above the age of 65 in the U.S. that results for the national population, in this case an e65 value of 19.3 for females in 2000, are very similar to those of whites (National Center for Health Statistics 2006), and thus these differences for racial and ethnic minority populations do not account for much of the difference in life expectancy at older ages between the U.S. and other developed countries.

These studies suggest that aspects of the U.S. health care and social systems could account for some portion of the differences observed between life expectancy at older ages for females in the U.S. and other developed countries. It is interesting to note that, as seen in Figure 1, the value for e65 for females in 2000 was approximately a year lower in the U.S. than in Canada, even though both countries have similar characteristics in terms of smoking prevalence, diet, and ethnic composition, although they do have differences in their health care and social welfare systems with Canada providing more comprehensive care for its residents throughout the life course.

Differences in health and mortality based on social and health care systems between the U.S. and other industrialized countries could result from specific differences in health care coverage between the countries or more generally from differences in the level of economic and social equality between them. Numerous researchers have argued that income inequality accounts for some portion of mortality differentials between countries (Wilkinson 1992) and U.S. states (Kaplan et al. 1996), although other researchers question aspects of these findings (Judge 1995) and (Mackenbach 2002).

Figure 9 plots e65 values for females in 17 developed countries against their Gini index value, a measure of income inequality that is the ratio, multiplied by 100, of the area between the cumulative income distribution function in a population and the uniform distribution function divided by the area under the uniform distribution function, as reported by the World Bank for various developed countries in the year closest to 2000 (World Bank 2006) . The figure shows essentially no relationship between these two variables, perhaps because of confounding by other variables such as smoking prevalence, and the correlation coefficient is equal to 0.047. Figure 10 plots e85 values against Gini index values for these same countries and shows a much stronger relationship between these two variables. The correlation coefficient for these countries excluding Japan, which appears as an outlier in the plot and is the only non-European, non-

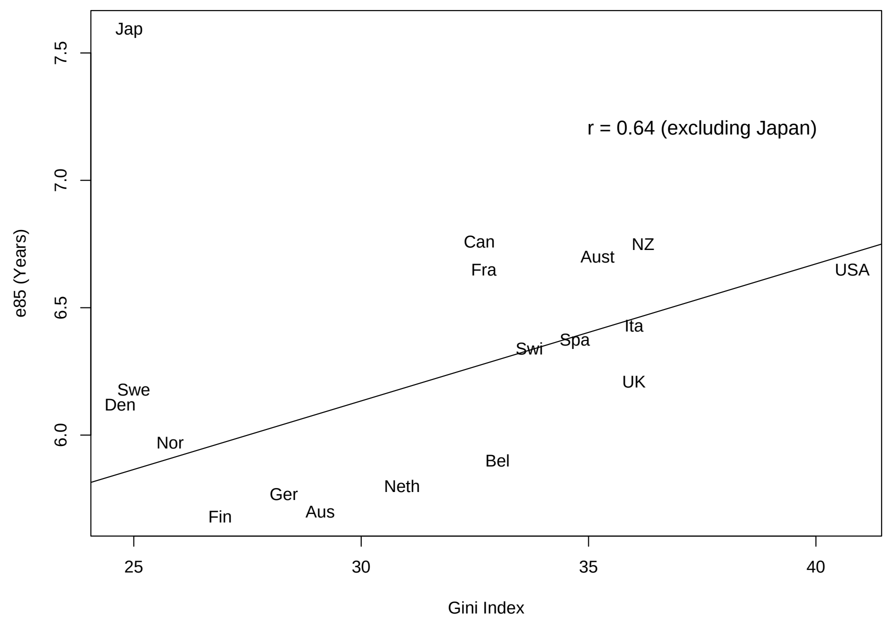
Figure 9: e65 for Females and Gini Index, Various Countries 2000



Source: Human Mortality Database and World Bank World Development Indicators 06

English-speaking country in the group, is 0.64, indicating a positive relationship between life expectancy at advanced age and income inequality. To some extent, this relationship may result from the greater ability of individuals to obtain advanced, and in some cases very expensive, medical procedures and care in countries with greater income inequality and emphasis on individualism such as the U.S. than in some Northern and Central European countries that provide comprehensive health course throughout the life course and have a tradition of more collectivist policies and programs.

Figure 10: e85 for Females and Gini Index, Various Countries 2000



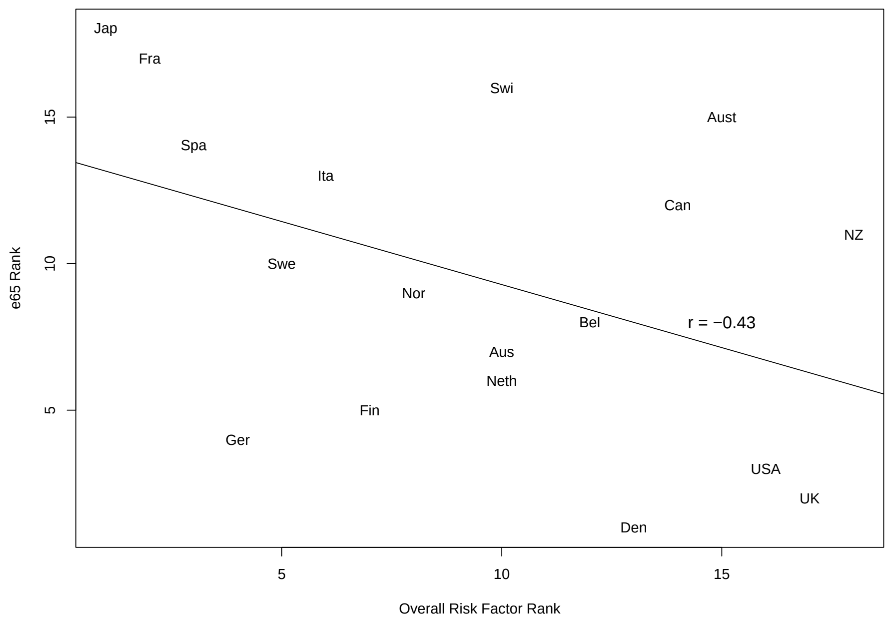
Source: Human Mortality Database and World Bank World Development Indicators 06

Finally, other differences in factors such as diet and behavior could account for a portion of differences in life expectancy for females at older ages in developed countries. Some researchers have suggested that differences in consumption of saturated fats, animal products, or alcohol (Criqui and Ringel 1994) and (Law and Wald 1999) could affect life expectancy for various nations. Table 7 displays data and ranks for three important risk factors, estimated smoking prevalence, the Gini Index, and animal fat consumption for a group of 17 countries that were selected according to the criteria, similar to the methodology used by (Criqui and Ringel 1994) in a comparable analysis, of having per capita GDP in 2000 of at least $18,000 to identify high-income countries, a population of at least one million residents to include only reasonably large countries, and inclusion of data in the Human Mortality Database to ensure good life expectancy data quality. The figure for estimated smoking prevalence for each country is the mean of the estimated smoking prevalence for 2000 for the age groups 65-84 derived from the WHO data, a range that was chosen because of the importance of smoking-related deaths for these ages, the Gini Index for 2000 indicates the type of income inequality that existed at that time in the various countries, and this year is used because of the significant effect that social and economic inequality might have on people at older ages particularly as they utilize health and public welfare services, and animal fat consumption is represented by the proportion of daily caloric intake obtained from animal fat in 1965 according to published data derived from U.N. Food and Agricultural Organization food balance sheets (Criqui and Ringel 1994), this year have been chosen to reflect the general level of animal fat consumption that women at older ages in various countries would have commonly consumed during much of the lifetimes. The table also presents an overall risk factor ranking based on the means of the three risk factor ranks, and Figure 11 shows the somewhat negative relationship between the ranks of e65 for females and overall risk factor rank for these countries, expressed by the correlation coefficient of -0.43. The plot suggests that this model somewhat overpenalizes countries such as Australia and New Zealand that have relatively high income inequality in its prediction of life expectancy rank and underpenalizes a country such as Denmark with very high female smoker prevalence at older ages. A similar model that employs a weighted mean of rankings, with twice the weight assigned to smoking prevalence and half the weight assigned to the Gini index as the weight assigned to animal fat consumption produces a correlation coefficient that is somewhat larger in magnitude at -0.56.

Cross-sectional regression analysis with these risk factors as explanatory variables produces mixed results. Results presented in Tables 8 and 9 show animal fat consumption has a statistically significant association with e65 and e85 values for females in 2000 in these countries, in large part due to the low animal fat consumption and high life expectancy of Japan, but that this effect does not remain after the removal of data for Japan from the analyses. The addition of per capita real Gross Domestic Product (Heston, Summers, and Aten 2006), calculated using purchase power parity with 2000 as the benchmark year, as a control variable does not significantly affect these results.

Longitudinal data analysis of life expectancy at older ages in these countries

Figure 11: e65 for Females and Risk Factor Ranking, Various Countries 2000



Source: See Table 1 and 7

produces more robust results. Table 10 presents results of regression analyses of the effect of population characteristics on e65 values over time using mixed effect models with random intercepts for each country. This group of developed countries is the same as that used previously with the exception of Germany, which was not included in this analysis because of its divided status prior to 1990. Life expectancy figures come from the Human Mortality Database, smoking prevalence figures are estimated using the indirect method from WHO Mortality Data Base data with the mean of the estimated prevalence for the age groups from 65 to 84 used in the regression analyses for e65 and the estimated prevalence for the age group 85+ used in the analyses for e85, animal fat consumption data come from UN Food and Agricultural Organization food balance sheets for 1965, 1975, 1985, and 1995 with the conversion factor of 1 gm animal fat = 9 kCal employed, values for the Gini Index for countries over time come from the World Bank's World Income Distribution Gini Database (World Bank 2007) with the means of all indices designated as being of "accept" data quality for each country calculated and used for the years 1955 to 1965, 1966 to 1975, 1976 to 1985, and 1986 to 1999, and real per capita GDP data come from the Penn World Tables (Heston, Summers, and Aten 2006). Life expectancy consistently increases with per capita GDP in each period and with time when per capita GDP is not included in the analysis. There is a a strong association between smoking prevalence and e65 from 1970 to 1984 and 1985 to 1999 when smoking levels were increasing to moderate and high levels in many of these countries but not from 1955 to 1970 when smoking prevalence among females at older ages was generally low in most developed countries. Animal fat consumption has a strong negative association with e65 values in the period from 1985 to 1999, as might be expected given trends observed in the previous analysis. The Gini Index has a positive association that nears statistical significance in the period from 1970 to 1984, perhaps suggesting that gains in life expectancy at older ages due to advances in medical technology during the period were more strongly realized in countries with higher levels of income inequality at that time.

Table 11 presents similar regression results for e85. Once again, time is statistically significant in the absence of GDP data, and per capita GDP is significant from 1970 onward. Smoking prevalence is statistically significant for the period from 1985 to 1999 for e85 as opposed to 1970 to 1984 and 1985 to 1999 for e65, suggesting as expected that smoking prevalence began to increase significantly for women above the age of 85, and thus appreciably affect life expectancy oldest ages, at a later point in time than it increased for women in the age groups from 65 to 84. The Gini index has a positive and stastically significant association with e85 for the period of 1970 to 1984 in the absence of GDP data and in both analyses for the period of 1985 to 1999, again suggesting that gains in life expectancy at oldest ages due to advances in medical technology may have been realized more strongly at first in countries with higher income inequality and in this case these advantages for oldest ages are observed later in time than advantages for e65, as expected.

Table 1: Life Expectancy at Age 65 for Females, Various Countries

	1955	1970	1985	2000
Australia	15.30	15.73	18.14	20.73
Austria	14.25	14.88	16.86	19.50
Belgium	14.33	15.26	17.42	19.63
Bulgaria	14.68	14.88	14.78	15.37
Canada	15.78	17.50	19.17	20.45
Denmark	15.11	16.58	17.77	18.22
Finland	13.42	14.71	17.19	19.37
France	15.06	16.76	18.79	21.24
Germany (West until 2000)	NA	15.02	17.41	19.28
Hungary	13.83	14.35	14.90	16.67
Iceland	16.93	16.64	18.61	19.72
Italy	14.76	16.03	17.85	20.47
Japan	14.10	15.35	18.98	22.41
Netherlands	15.12	16.51	18.65	19.38
New Zealand	15.41	15.97	17.25	20.20
Norway	16.15	16.71	18.28	19.72
Portugal	14.40	14.95	17.03	18.89
Spain	14.76	16.15	18.37	20.64
Sweden	15.12	16.95	18.52	20.07
Switzerland	14.49	16.25	19.01	20.77
Taiwan	NA	14.22	15.74	18.48
UK	14.87	16.07	17.21	19.05
USA	15.73	16.91	18.59	19.26

Source: Human Mortality Database

Table 2: Classification of Causes of Death for Various Revisions of the International Classification of Diseases

	ICD7	ICD8	ICD9	ICD10
Infectious Diseases	A001 - A043	A001 - A044	B01 - B07	A00 - B99
Malignant Neoplasms, Not Respiratory	A046 - A049, A051 - A059	A047 - A049, A052 - A060	B08, B090, B10	C00 - C15, C32 - C34
Malignant Neoplasms, Not Respiratory	A044 - A045, A050	A045 - A046, A050 - A051	remainder of B09, B11 - B14	C16 - C31, C35 - C97
Cardiovascular Diseases	A079 - A086	A080 - A084, A086 - A088	B25 - B28, B30	I00 - I59, I70 - I99
Cerebrovascular Diseases	A070	A085	B29	I60 - I69
Respiratory Diseases	A087 - A097	A089 - A096	B31 - B32	J00 - J98
Digestive Diseases	A098 - A107	A097 - A104	B33 - B34	K00 - K92
Alzheimer's/Senility	A060 - A069, A071 - A078	A061 - A068, A070 - A079	B210, B211, B212, B212	F00 - F09, F20 - F29
	A108 - A137	A105 - A135, A137	B212, B222, B465	G30 - G39, R54
Other Diseases	A067, A136	A069, A136	B15 - B20, remainder of B21	D00 - E88, F10 - F19
			B22 - B24, B35 - B45	F20 - G29, G40 - H93
			remainder of B46	L00 - R53, R55 - R99
External Causes	A138 - A150	A138 - A150	B47 - B56	W00 - Y89

Source: WHO International Classification of Diseases codes

Table 3: Estimated Standardized Proportion of Female Smokers, by Year and Age Group

Country	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+
Australia									
1955	0.03	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00
1970	0.07	0.10	0.14	0.09	0.07	0.05	0.02	0.00	0.00
1985	0.16	0.17	0.27	0.20	0.22	0.18	0.13	0.06	0.01
2000	0.17	0.19	0.24	0.21	0.26	0.31	0.29	0.26	0.22
Austria									
1955	0.04	0.07	0.05	0.02	0.03	0.04	0.01	0.00	0.00
1970	0.02	0.06	0.06	0.05	0.06	0.05	0.06	0.00	0.03
1985	0.07	0.06	0.12	0.10	0.08	0.08	0.13	0.12	0.12
2000	0.38	0.29	0.25	0.14	0.13	0.15	0.17	0.09	0.13
Belgium									
1955	0.03	0.00	0.02	0.00	0.01	0.00	0.03	0.00	0.00
1970	0.01	0.01	0.03	0.01	0.02	0.01	0.00	0.00	0.00
1985	0.11	0.09	0.08	0.10	0.07	0.08	0.05	0.03	0.02
1997	0.26	0.20	0.19	0.16	0.16	0.12	0.14	0.06	0.08
Canada									
1955	0.03	0.01	0.00	0.02	0.02	0.00	0.02	0.00	0.00
1970	0.12	0.11	0.14	0.04	0.06	0.04	0.01	0.00	0.00
1985	0.48	0.46	0.46	0.37	0.34	0.30	0.24	0.10	0.11
2000	0.46	0.42	0.58	0.49	0.51	0.54	0.53	0.43	0.37
Denmark									
1955	0.00	0.00	0.01	0.05	0.05	0.01	0.00	0.01	0.00
1970	0.12	0.12	0.11	0.11	0.13	0.12	0.09	0.03	0.02
1985	0.60	0.60	0.57	0.45	0.34	0.31	0.26	0.08	0.05
2000	0.34	0.49	0.58	0.58	0.69	0.63	0.61	0.41	0.24
Finland									
1955	0.00	0.06	0.02	0.06	0.00	0.00	0.06	0.00	0.00
1970	0.04	0.02	0.00	0.01	0.00	0.01	0.03	0.00	0.00
1985	0.00	0.06	0.08	0.08	0.12	0.09	0.05	0.03	0.00
2000	0.00	0.12	0.07	0.07	0.11	0.13	0.12	0.13	0.03
France									
1955	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1970	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1985	0.00	0.02	0.03	0.01	0.02	0.02	0.01	0.00	0.00
2000	0.22	0.13	0.11	0.06	0.06	0.05	0.05	0.00	0.00

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Proportion Female Smokers *(Cont.)*

Country	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+
Italy									
1955	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1970	0.04	0.04	0.02	0.03	0.03	0.03	0.01	0.00	0.00
1985	0.05	0.04	0.08	0.08	0.08	0.08	0.09	0.00	0.00
2000	0.14	0.09	0.12	0.09	0.10	0.12	0.14	0.14	0.22
Japan									
1955	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1970	0.03	0.01	0.04	0.05	0.05	0.05	0.03	0.00	0.00
1985	0.04	0.03	0.05	0.07	0.09	0.12	0.17	0.16	0.15
2000	0.05	0.08	0.07	0.07	0.09	0.11	0.17	0.23	0.66
Netherlands									
1955	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1970	0.00	0.05	0.00	0.01	0.00	0.00	0.00	0.00	0.00
1985	0.16	0.23	0.17	0.12	0.06	0.06	0.04	0.00	0.04
2000	0.64	0.37	0.37	0.33	0.31	0.26	0.20	0.08	0.04
New Zealand									
1955	0.16	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00
1970	0.07	0.20	0.18	0.19	0.08	0.09	0.07	0.00	0.13
1985	0.27	0.27	0.44	0.35	0.28	0.23	0.17	0.09	0.05
2000	0.12	0.30	0.33	0.33	0.37	0.32	0.39	0.34	0.30
Norway									
1955	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00
1970	0.02	0.03	0.00	0.02	0.00	0.00	0.00	0.00	0.00
1985	0.22	0.10	0.26	0.13	0.07	0.11	0.09	0.00	0.00
2000	0.24	0.27	0.40	0.29	0.30	0.38	0.24	0.12	0.00
Spain									
1955	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1971	0.06	0.03	0.02	0.01	0.01	0.00	0.00	0.00	0.00
1985	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00
2000	0.14	0.05	0.01	0.01	0.00	0.00	0.00	0.00	0.00
Sweden									
1955	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00
1970	0.09	0.03	0.00	0.03	0.01	0.04	0.05	0.00	0.00
1985	0.17	0.17	0.10	0.14	0.09	0.07	0.05	0.09	0.02
2000	0.24	0.24	0.31	0.27	0.25	0.23	0.19	0.09	0.09

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Proportion Female Smokers *(Cont.)*

Country	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+
Switzerland									
1955	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00
1970	0.00	0.02	0.01	0.01	0.01	0.00	0.01	0.00	0.00
1985	0.19	0.08	0.04	0.06	0.07	0.08	0.03	0.00	0.00
2000	0.21	0.28	0.23	0.14	0.21	0.15	0.12	0.11	0.04
UK									
1955	0.14	0.11	0.11	0.08	0.07	0.05	0.02	0.00	0.00
1970	0.31	0.32	0.27	0.22	0.18	0.16	0.15	0.04	0.03
1985	0.29	0.25	0.41	0.46	0.43	0.40	0.34	0.24	0.17
2000	0.24	0.25	0.33	0.31	0.39	0.50	0.50	0.40	0.27
USA									
1955	0.03	0.02	0.01	0.01	0.01	0.00	0.00	0.00	0.00
1970	0.32	0.27	0.21	0.13	0.09	0.06	0.04	0.00	0.00
1985	0.53	0.55	0.55	0.48	0.43	0.37	0.28	0.18	0.10
2000	0.34	0.38	0.52	0.55	0.60	0.62	0.63	0.58	0.43

Source: WHO Mortality Data Base data

Table 4: Percentage Female Smokers from Survey Data

Country/ Year	Type	Frequency	Age Groups 45-49	50-54	55-59	60-64	65-69	70-74	75-79	80+
France										
1976	A	U	26	17	17	17	7	7	7	7
1980	A	R	12	12	10	10	4	4	2	2
1983	A	R	31	17	17	17	6	6	6	6
Japan										
1965	U	R	9	12	12	14	14	16	16	16
1970	UC	A	16	23	23	20	20	20	20	20
1974	UC	R	14	17	17	19	19	19	19	19
1980	UC	A	14	13	13	15	15	15	15	15
1985	UC	A	13	13	13	12	12	12	12	12
UK										
1955	MC	U	41	41	41	22	22	22	22	22
1960	MC	U	47	47	47	22	22	22	22	22
1965	MC	U	50	50	50	23	23	23	23	23
1970	MC	U	50	50	50	26	26	26	26	26
1975	MC	U	50	46	46	46	23	23	23	23
1980	MC	U	44	46	46	46	21	21	21	21
1985	MC	U	38	37	37	37	19	19	19	19
USA										
1955	UC	R	22	22	11	11	3	3	3	3
1959	UC	R	37	26	26	13	13	7	7	3
1966	UC	R	37	37	23	23	8	8	8	8
1970	UC	U	36	36	24	24	10	10	10	10
1975	UC	U	33	33	26	26	10	10	10	10
1983	UC	U	31	31	31	31	13	13	13	13
1985	UC	U	31	27	27	22	22	10	10	10

Source: *International Smoking Statistics*
Note: For type: "A" = All tobacco products, "MC" = Manufactured cigarettes, "UC" = Unspecified cigarettes, "U" = Unspecified. For frequency: "A"= All, "R"= Regular, "U" = Unspecified

Table 5: Life Expectancy at Age 65 for Males, Various Countries

	1955	1970	1985	2000
Australia	12.37	11.98	14.21	17.25
Austria	12.09	11.69	13.48	15.97
Belgium	12.39	12.18	13.29	15.53
Bulgaria	13.67	13.30	12.43	12.71
Canada	13.48	13.76	14.84	16.77
Denmark	13.95	13.77	13.85	15.16
Finland	11.17	11.50	12.96	15.47
France	12.31	13.04	14.45	16.72
Germany (West until 2000)	NA	11.95	13.55	15.60
Hungary	12.67	11.95	11.72	12.95
Iceland	14.97	14.86	15.82	17.76
Italy	13.37	13.27	14.17	16.55
Japan	11.81	12.52	15.59	17.52
Netherlands	14.04	13.57	14.02	15.39
New Zealand	13.19	12.45	13.53	16.59
Norway	15.01	13.79	14.23	16.08
Portugal	12.12	12.38	13.71	15.43
Spain	12.75	13.52	14.89	16.64
Sweden	13.98	14.30	14.67	16.69
Switzerland	12.63	13.30	14.89	16.98
Taiwan	NA	11.69	13.72	16.09
UK	11.82	12.16	13.26	15.84
USA	13.05	13.04	14.46	16.26

Source: Human Mortality Database

Table 6: Estimated Standardized Proportion of Male Smokers, by Year and Age Group

Country	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+
Austria									
1955	0.83	0.80	0.82	0.62	0.44	0.29	0.23	0.06	0.02
1970	0.70	0.46	0.51	0.65	0.68	0.54	0.41	0.21	0.16
1985	0.56	0.68	0.59	0.57	0.45	0.41	0.43	0.43	0.38
2000	0.61	0.53	0.47	0.39	0.37	0.33	0.30	0.22	0.21
Australia									
1955	0.39	0.38	0.29	0.25	0.17	0.17	0.11	0.02	0.00
1970	0.67	0.51	0.53	0.56	0.49	0.40	0.36	0.22	0.12
1985	0.51	0.61	0.57	0.57	0.49	0.44	0.44	0.40	0.35
2000	0.15	0.21	0.29	0.31	0.33	0.33	0.36	0.31	0.31
Belgium									
1955	0.68	0.72	0.51	0.35	0.23	0.15	0.08	0.00	0.00
1970	1.22	0.80	0.89	0.84	0.67	0.52	0.37	0.19	0.15
1985	1.06	1.01	0.93	0.97	0.89	0.78	0.81	0.67	0.49
2000	0.90	0.86	0.74	0.69	0.74	0.71	0.68	0.65	0.55
Canada									
19553	0.34	0.36	0.35	0.25	0.19	0.13	0.07	0.04	0.00
19703	0.75	0.60	0.55	0.52	0.44	0.37	0.26	0.18	0.15
19853	0.62	0.69	0.74	0.64	0.60	0.53	0.47	0.41	0.41
20003	0.36	0.39	0.42	0.48	0.45	0.46	0.46	0.42	0.38
Denmark									
1955	0.34	0.51	0.38	0.29	0.20	0.10	0.07	0.01	0.00
1970	0.54	0.52	0.49	0.53	0.51	0.39	0.23	0.15	0.11
1985	0.52	0.72	0.69	0.69	0.62	0.53	0.55	0.44	0.30
2000	0.46	0.35	0.45	0.46	0.50	0.50	0.51	0.36	0.25
Finland									
1955	0.87	0.87	0.81	0.71	0.55	0.32	0.28	0.09	0.04
1970	1.05	0.74	1.05	0.94	0.71	0.69	0.48	0.30	0.34
1985	0.42	0.55	0.70	0.80	0.61	0.59	0.58	0.48	0.40
2000	0.15	0.30	0.26	0.31	0.33	0.40	0.42	0.31	0.29
France									
1955	0.35	0.32	0.27	0.20	0.12	0.08	0.06	0.00	0.00
1970	0.58	0.42	0.40	0.39	0.31	0.25	0.17	0.08	0.05
1985	0.98	0.75	0.65	0.51	0.41	0.37	0.33	0.26	0.23
2000	1.23	0.83	0.60	0.52	0.43	0.35	0.31	0.26	0.23

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Proportion Male Smokers *(Cont.)*

Country	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+
Italy									
1955	0.51	0.40	0.29	0.17	0.08	0.03	0.02	0.00	0.00
1970	0.96	0.60	0.51	0.50	0.43	0.29	0.17	0.03	0.00
1985	1.00	0.90	0.85	0.78	0.61	0.49	0.45	0.33	0.19
2000	0.51	0.50	0.51	0.48	0.49	0.51	0.48	0.45	0.47
Japan									
1955	0.00	0.03	0.03	0.04	0.04	0.03	0.00	0.00	0.00
1970	0.09	0.13	0.14	0.16	0.18	0.15	0.12	0.03	0.00
1985	0.16	0.17	0.20	0.23	0.27	0.30	0.35	0.30	0.28
2000	0.24	0.20	0.19	0.21	0.26	0.33	0.40	0.45	0.69
Netherlands									
1955	0.88	0.73	0.53	0.40	0.26	0.17	0.13	0.02	0.04
1970	0.95	0.92	0.89	0.91	0.76	0.63	0.45	0.27	0.19
1985	0.68	0.84	0.83	0.82	0.90	0.81	0.87	0.71	0.60
2000	0.43	0.39	0.46	0.44	0.57	0.54	0.61	0.62	0.54
New Zealand									
1955	0.64	0.40	0.43	0.38	0.28	0.15	0.12	0.02	0.02
1970	0.86	0.50	0.54	0.58	0.59	0.42	0.34	0.33	0.18
1985	0.66	0.53	0.51	0.54	0.46	0.37	0.45	0.43	0.50
2000	0.36	0.34	0.24	0.24	0.34	0.34	0.34	0.30	0.28
Norway									
1955	0.01	0.19	0.16	0.07	0.04	0.01	0.00	0.00	0.00
1970	0.46	0.17	0.23	0.25	0.24	0.14	0.09	0.02	0.00
1985	0.23	0.31	0.39	0.35	0.32	0.29	0.23	0.15	0.04
2000	0.41	0.37	0.33	0.30	0.29	0.28	0.32	0.22	0.14
Spain									
1955	0.14	0.16	0.16	0.16	0.09	0.07	0.04	0.00	0.00
1970	0.37	0.29	0.28	0.30	0.24	0.18	0.16	0.05	0.01
1985	0.77	0.56	0.47	0.48	0.40	0.36	0.33	0.23	0.18
2000	1.16	0.72	0.57	0.49	0.43	0.39	0.39	0.32	0.30
Sweden									
1955	0.12	0.15	0.17	0.16	0.05	0.06	0.04	0.00	0.00
1970	0.20	0.15	0.21	0.19	0.21	0.20	0.15	0.06	0.05
1985	0.32	0.27	0.25	0.26	0.27	0.21	0.20	0.16	0.15
2000	0.20	0.15	0.18	0.24	0.20	0.21	0.19	0.13	0.16

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Proportion Male Smokers *(Cont.)*

Country	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+
Switzerland									
1955	0.71	0.61	0.46	0.37	0.24	0.17	0.10	0.08	0.00
1970	0.69	0.56	0.61	0.57	0.41	0.37	0.26	0.19	0.10
1985	0.55	0.59	0.58	0.60	0.61	0.44	0.43	0.32	0.26
2000	0.38	0.42	0.41	0.42	0.34	0.35	0.35	0.27	0.21
United Kingdom									
1955	1.39	1.12	0.99	0.77	0.54	0.35	0.21	0.07	0.01
1970	1.18	0.98	0.99	0.97	0.87	0.75	0.58	0.38	0.28
1985	0.65	0.58	0.70	0.77	0.70	0.66	0.69	0.66	0.59
2000	0.27	0.29	0.33	0.36	0.39	0.41	0.45	0.42	0.40
United States									
1955	0.68	0.50	0.40	0.33	0.23	0.14	0.09	0.02	0.00
1970	1.08	0.79	0.68	0.60	0.48	0.39	0.29	0.16	0.10
1985	0.98	0.83	0.77	0.70	0.59	0.51	0.48	0.40	0.30
2000	0.54	0.44	0.50	0.52	0.52	0.48	0.46	0.41	0.38

Source: WHO Mortality Data Base data

Table 7: Health Characteristics and Relative Rank for Various Developed Countries

Country	2000 Gini Index	1965 Fat Consumption	Smoker Proportion	Gini Rank	Fat Rank	Smoke Rank	Overall Rank
Australia	35.2	30.8	28.0	14	16	13	15
Austria	29.1	27.1	13.4	7	11	8	10
Belgium	33.0	28.9	12.1	11	12	4	12
Canada	32.6	28.9	50.3	9	12	16	14
Denmark	24.7	32.0	58.4	1	17	17	13
Finland	26.9	30.5	12.2	5	14	5	7
France	32.7	20.5	4.2	10	4	2	2
Germany	28.3	25.4	13.2	6	6	7	4
Italy	36.0	11.7	12.4	16	2	6	6
Japan	24.9	6.6	6.6	2	1	3	1
Netherlands	30.9	26.0	21.5	8	7	11	10
New Zealand	36.2	32.1	35.6	17	18	14	18
Norway	25.8	26.7	26.1	4	10	12	8
Spain	34.7	12.0	0.1	13	3	1	3
Sweden	25.0	26.5	19.0	3	8	10	5
Switzerland	33.7	23.6	14.9	12	5	9	10
UK	36.0	30.8	44.7	16	16	15	17
USA	40.8	26.7	61.0	18	10	18	16

Source: Gini Index - World Bank *World Development Indicators 06*, 1965 Animal Fat Consumption as Percentage of Total Energy Intake - UN Food and Agricultural Organization food balance sheets presented in (Criqui and Ringel 1994), Proportion Female Smokers calculated as mean of smoking prevalence for age groups 65-84 in 2000 estimated from WHO Mortality Data Base data, Overall Rank is rank of mean of Gini coefficient, fat consumption, and smoker proportion ranks.

Table 8: Results of Regressing Risk Factors on e65 for Females in 2000 in Developed Countries

	Estimate	Std. Error	Pr(> |t|)	Estimate	Std. Error	Pr(> |t|)
All Countries						
(Intercept)	21.3418	1.3931	0.0000	21.4675	2.1407	0.0000
Gini Index (%)	0.0244	0.0388	0.5398	0.0238	0.0409	0.5701
Fat Consumption (%)	−0.0723	0.0296	0.0283	−0.0724	0.0307	0.0347
Smoking Prevalence (%)	−0.0120	0.0122	0.3442	−0.0115	0.0143	0.4366
Per Capita GDP ($1000's)				−0.0046	0.0579	0.9378
All Countries Except Japan						
(Intercept)	18.5689	1.6454	0.0000	18.3436	2.2670	0.0000
Gini Index (%)	0.0702	0.0382	0.0890	0.0714	0.0405	0.1035
Fat Consumption (%)	−0.0148	0.0346	0.6761	−0.0143	0.0361	0.6993
Smoking Prevalence (%)	−0.0214	0.0112	0.0785	−0.0223	0.0131	0.1152
Per Capita GDP ($1000's)				0.0076	0.0500	0.8821

Source: Per capita GDP, Penn World Tables. For other data, see Table 7.

Table 9: Results of Regressing Risk Factors on e85 for Females in 2000 in Developed Countries

	Estimate	Std. Error	Pr(> |t|)	Estimate	Std. Error	Pr(> |t|)
All Countries						
(Intercept)	7.3001	0.7940	0.0000	7.4272	1.0798	0.0000
Gini Index (%)	−0.0061	0.0233	0.7968	−0.0067	0.0243	0.7882
Fat Consumption (%)	−0.0448	0.0134	0.0050	−0.0442	0.0143	0.0084
Smoking 85+ (%)	0.0218	0.0087	0.0260	0.0220	0.0092	0.0323
Per Capita GDP ($1000's)				−0.0049	0.0272	0.8585
All Countries Except Japan						
(Intercept)	5.3350	0.8866	0.0000	5.4545	1.0744	0.0003
Gini Index (%)	0.0318	0.0219	0.1707	0.0313	0.0229	0.1975
Fat Consumption (%)	−0.0113	0.0151	0.4669	−0.0108	0.0158	0.5082
Smoking 85+ (%)	0.0119	0.0075	0.1374	0.0122	0.0079	0.1498
Per Capita GDP ($1000's)				−0.0046	0.0214	0.8326

Source: Per capita GDP, Penn World Tables. For other data, see Table 7.

Table 10: Results of Regressing Risk Factors on e65 for Females in 16 Developed Countries

	Estimate	Std. Error	Pr(> |t|)	Estimate	Std. Error	Pr(> |t|)
1955 - 1969						
(Intercept)	14.2999	0.9504	0.0000	14.0304	0.9307	0.0000
Time (Year - 1955)	0.0774	0.0054	0.0000	0.1581	0.1408	0.2627
Gini Index (%)	0.0044	0.0192	0.8198	0.0094	0.0191	0.6225
Fat Consumption (%)	0.0174	0.0265	0.5233	0.0121	0.0252	0.6394
Smoking Prevalence (%)	0.0292	0.0189	0.1237	0.0257	0.0190	0.1788
Per Capita GDP ($1000's)				0.0590	0.0174	0.0008
1970 - 1984						
(Intercept)	16.0445	0.4502	0.0000	16.0779	0.4552	0.0000
Time (Year - 1970)	0.1751	0.0060	0.0000	-0.0167	0.0287	0.5613
Gini Index (%)	0.0149	0.0076	0.0515	0.0156	0.0077	0.0443
Fat Consumption (%)	-0.0143	0.0138	0.2966	-0.0147	0.0138	0.2874
Smoking Prevalence (%)	-0.0370	0.0072	0.0000	-0.0361	0.0073	0.0000
Per Capita GDP ($1000's)				0.1855	0.0187	0.0000
1985 - 1999						
(Intercept)	19.3609	0.7794	0.0000	19.2129	0.7813	0.0000
Time (Year - 1985)	0.1628	0.0045	0.0000	0.0303	0.0173	0.0809
Gini Index (%)	0.0291	0.0201	0.1483	0.0249	0.0201	0.2186
Fat Consumption (%)	-0.0566	0.0175	0.0014	-0.0610	0.0177	0.0007
Smoking Prevalence (%)	-0.0603	0.0040	0.0000	-0.0628	0.0042	0.0000
Per Capita GDP ($1000's)				0.1413	0.0131	0.0000

Source: See Table 8

Table 11: Results of Regressing Risk Factors on e85 for Females in 16 Developed Countries

	Estimate	Std. Error	Pr(> |t|)	Estimate	Std. Error	Pr(> |t|)
1955 - 1969						
(Intercept)	4.6998	0.5396	0.0000	4.5897	0.5336	0.0000
Time (Year - 1955)	0.0236	0.0026	0.0000	0.0750	0.0825	0.3642
Gini Index (%)	-0.0082	0.0112	0.4662	0.0062	0.0111	0.5762
Fat Consumption (%)	0.0009	0.0145	0.9537	-0.0018	0.0141	0.9001
Smoking 85+ (%)	0.0853	0.7005	0.9033	-0.0852	0.7022	0.9036
Per Capita GDP ($1000's)				0.0146	0.0103	0.1566
1970 - 1984						
(Intercept)	4.8123	0.2793	0.0000	4.7622	0.2797	0.0000
Time (Year - 1970)	0.0593	0.0027	0.0000	0.0223	0.0173	0.1991
Gini Index (%)	0.0094	0.0045	0.0380	0.0081	0.0046	0.0798
Fat Consumption (%)	-0.0125	0.0083	0.1341	-0.0115	0.0083	0.1688
Smoking 85+ (%)	-0.1496	0.4423	0.7355	-0.1629	0.4425	0.7131
Per Capita GDP ($1000's)				0.0448	0.0115	0.0001
1985 - 1999						
(Intercept)	4.7178	0.5531	0.0000	4.7589	0.5573	0.0000
Time (Year - 1985)	0.0500	0.0030	0.0000	-0.0132	0.0132	0.3181
Gini Index (%)	0.0315	0.0140	0.0252	0.0344	0.0144	0.0179
Fat Consumption (%)	-0.0019	0.0121	0.8740	0.0001	0.0123	0.9950
Smoking 85+ (%)	-0.8130	0.2699	0.0029	-0.7629	0.2749	0.0060
Per Capita GDP (1000's)				0.0600	0.0103	0.0000

Source: See Table 8

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