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## LABOR FORCE PARTICIPATION AND TRANSITIONS OF OLDER WORKERS IN SPAIN\*

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### Abstract

We use data from the Active Population Survey (EPA) to study the labor force participation of older workers in Spain. More specifically, the focus is on labor force transitions of men aged 50-69. We match quarterly EPA files, available for the period 1987-1996, to obtain transitions over one-year intervals. In the parametric analysis of transitions rates we use a multinomial logit model. Similar to U.S. studies, we find a strong spike in labor force exit at age 65, the normal age of retirement. We also find a higher probability of exit from the labor force at the beginning of eligibility for early retirement, age 60 in Spain. In general, the paper's results agree with those obtained in previous studies. In addition, we provide evidence of the effect on transition rates of variables related labor force attachment and job characteristics. For instance, we find that lower job security is associated with a higher probability of leaving the labor force at older ages.

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## I. Introduction

In Spain as in many other countries, the population is aging quickly. It is forecasted that 21 per cent of people will be 65 and older in 2025.<sup>1</sup> This compares to 15 per cent of elderly persons in 1995. Also, the labor force participation of older workers has declined significantly. For example, the labor force participation rate among men aged 60-64 was 42 per cent in 1996, as compared to 70 per cent in 1977. This trend in labor force participation is even more marked for males aged 65-69: 31 per cent in 1977 and 5 per cent in 1996.

In this paper, we use the Spanish labor force survey (EPA) to study trends in labor force participation of older workers. More specifically, we focus on the labor market transitions of male workers aged 50-69. To do this we use matched EPA files, available from the second quarter of 1987 to the second quarter of 1996. Because a sixth of the 60,000 households in the EPA rotates every quarter, it is possible to follow part of the sample for six consecutive quarters. In this research we have opted for matching second quarters of consecutive years for the period indicated. Thus, the labor force state of people in the second quarter can be compared with that of a year later, obtaining transitions over a one-year period. In the parametric analysis of labor force transitions we use a multinomial logit model.

Among the findings of this article we highlight the following: (1) Through successive reforms over the last thirty years, the Spanish Social Security system has become more generous in providing income for retired people. However, we have not been able to single out any particularly important change in Social Security rules which affect older workers' behavior in such a way that could be examined. (2) The declining trend in labor force participation of older men seems to respond to the business cycle: in periods of strong employment creation participation rates tend to flatten or increase.

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<sup>1</sup> Instituto de Demografía (1994).

(3) Similar to U.S. studies, we found two spikes in older men's exit from the labor force: one corresponds to the first year of eligibility for early retirement (age 60); the second, much stronger, corresponds to the normal age for retirement (age 65). (4) Most results obtained in the parametric analysis of labor force transitions of older men are consistent with those from previous U.S. studies. For instance, education and family size reduce the probability of moving from employment to inactivity, while unemployment and health reasons increase it. Also, self-employed workers are more likely to remain active at older ages. More specific results for Spain are that married men and temporary employees exhibit a higher probability to leave the labor force.

In the next section we provide an overview of the institutional setting for the retirement decisions of older workers in Spain. The main features of the conceptual framework are also discussed, taking into account the incentives provided by the legal environment. In section III we examine trends in labor force participation and consider some forces driving early retirement in Spain. In section IV we describe the data set, and then perform non-parametric analysis of labor force transitions. In section V we use a multinomial logit model to investigate the effects of a number of factors on transitions among labor force states. Finally, in section VI we summarize the main findings and conclude.

## **II. The Institutional and Conceptual Framework**

The Workers' Statute of 1980 considered 69 to be the maximum age for retirement. However, such disposition was declared unconstitutional by the Constitutional Court the year after the Act was passed. As far as the Social Security system is concerned, the normal age for retirement is 65. A worker can retire at that age if he or she has made contributions to Social Security for a minimum of fifteen years, of which two years must be within the eight years preceding the retirement date. The amount of benefits

is calculated as a percentage of earnings<sup>2</sup> during the 96 month period prior to the retirement date, divided by 112. For the 24 months preceding retirement nominal earnings are taken, and the remaining period's earnings are indexed by the Consumption Price Index. The so calculated percentage of earnings is one hundred per cent if the worker has made contributions to the Social Security system for at least 35 years. Benefits are reduced 2 percentage points for each year the contribution period falls short of 35.

There is a transitory legal disposition, dated from the Social Security Act of 1966, that allows workers to retire early when turning 60. Eligible workers need to have been registered with the Social Security system since before January 1, 1967. Claiming benefits before age 65 implies a reduction of 8 per cent for each year of early receipt, to a maximum of 40 per cent for those who retire at age 60. In general, people who had not started to work before the indicated date cannot take early retirement.<sup>3</sup> However, Social Security legislation makes the provision for early retirement with full benefits for workers who meet some special requirements as, for instance, being affected by economic restructuring or performing hazardous work tasks. In addition, workers can partially retire starting at age 62 with 50 percent of full benefits if the firm hires another worker (*contrato de relevo*) to compensate for the reduction in worktime. Retirement at age 64 is also possible if the employer replaces the retired person with another hire for a minimum period of one year (*contrato de sustitución*). In this case the retiree is eligible for full benefits, according to Social Security rules applicable to retirement at the normal age.

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<sup>2</sup> Earnings are coded according to 11 professional categories for the purpose of Social Security tax base. There are upper and lower bounds for each category of earnings. Such bounds are increased each year with the aim to approximate or simply update the tax base to actual earnings.

<sup>3</sup> For example, people born after 1941 and who started work at age 25 would not be able to retire early by taking advantage of the indicated legal disposition. A person who was born in 1941 turned 25 in 1966 and will turn 60 in 2001. The last cohort that will be eligible for early retirement according to this transitory provision was born in 1952 given that he/she could have started work at 14 -the minimum working age of the time, 1966. That person will turn 60 in year 2012.

It should also be pointed out that unemployed workers aged 52 and older who meet some requirements,<sup>4</sup> can receive unemployment insurance benefits until they are eligible for early or normal retirement. In this case, the worker can supplement the contributions made to the fund by the Social Security system.

#### *A. Main Reforms of the Social Security System*

The first attempt to create a modern Social Security system in Spain took place in 1963. Approved in this year, the first Social Security Chart (*Ley de Bases de la Seguridad Social*) tried to institute a public model of social protection, with universal coverage based on the pay-as-you-go principle.<sup>5</sup> Later, the Social Security Act (*Ley de la Seguridad Social*) was passed in 1966. Despite two minor reforms, in 1972 and 1974, the main shortcomings of the system persisted. In particular, the gap between the contributory bases (fixed by the labor authority) and actual wages; and the progressive erosion of pensioners' real income.

After receiving a democratic endorsement with the approval of the Constitution in 1978, the Social Security system was subsequently reformed to bring it in line with those existing in Europe. A first reform in 1978 was aimed at consolidating the management of the system in four *Institutos*: (1) *Instituto Nacional de la Seguridad Social*, in charge of the managing social security benefits, (2) *Instituto Nacional de la Salud*, in charge of health services, (3) *Instituto de Servicios Sociales*, in charge of social services,

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<sup>4</sup> Among the requirements are: (1) The workers must be registered at the public employment office, (2) his or her income should be lower than the minimum wage, (3) he or she needs to have made Social Security contributions for a minimum of six years, and (4) the person must meet all the requirements for retirement except that of age.

<sup>5</sup> Before 1963, there were two acts aimed at protecting workers: *Ley de Accidentes de Trabajo* of 1890, and the *Retiro Obrero Obligatorio* of 1919. Workers' protection, depending on their employment status, was unequal by industries. The system was highly fragmented, inefficient, and unjust.

and (4) *Instituto Social de la Marina*, in charge of Social Security benefits for persons in activities related to the sea. The principle of solidarity was materialized through the creation of a unique fund for financing all Social Security benefits.

The new legal framework did not solve the old problems. Protection was partial and insufficient, as many old persons did not receive a pension and many others obtained low benefits. The latter eroded rapidly by high inflation in the late 1970s. The financing of the system continued to be very inefficient, with many people skipping their contributory obligations. In addition, the granting of invalidity pensions was loose, thus aggravating the financial integrity of the Social Security system. New reforms in the 1980s (Royal Decree of 1984) addressed these problems, by approximating contributory bases to actual wages, improving benefit indexation to the Consumer Price Index, and tightening eligibility for invalidity pensions. Furthermore, a Law in 1985 increased the minimum required period of contribution from 10 to 15 years, and the reference period for benefit calculation from 2 to 8 years. Other aims of the 1985 Law were to reduce the number of sub-systems existing so far, in order to establish automatic indexation and improve the lower pensions to equalize them with the minimum wage.

More recent reforms have focused on bringing the contributory bases more in line with actual wages; clarifying the specific financing of both the contributory system on the one hand and the assistance system on the other; increasing the coverage to needed persons regardless of the amount of contributions during their working life; and extending health assistance to all aged persons. In the 1990s, the main issue for future reform seems to be centered on improving the financing of the Social Security system, given the increasing imbalance between active and inactive populations. The so called *Pacto de Toledo* of 1995, a document agreed upon by the social partners (unions, employers and the government), laid down a road map for future reforms. The main recommendations refer to improving the management and financing

of the Social Security system, based on the pay-as-you-go principle. In particular, indicated agreement stated that the contributory bases should, once and forever, become equalized to actual wages, and a variety of incentives should be given to older workers for postponing their retirement age.

It should be noted that the current Social Security system in Spain is composed of several sub-systems, governed by different rules.<sup>6</sup> This feature makes Social Security complicated, fragmented and, therefore, harder to manage efficiently. Because the relationship between contributions and benefits are not harmonized, the incentives for early retirement differ across sub-systems.

#### *B. Determinants of Labor Force Participation of Older Workers*

The literature on the economics of aging and, more particularly, on retirement has bloomed over the last twenty years. This is particularly true in the United States, where empirical work has benefitted from data sets specifically collected for studying the elderly. Comparable data are not so readily available in the European countries. The researchers' main task has been to explain the dramatic decline in labor force participation of older workers, a pervasive phenomenon in Western economies.<sup>7</sup> The increasing generosity of the Social Security system and the growing importance of employer pension plans have been considered two strong determinants of a worker's labor supply in the U.S. (Mitchel and Fields 1985; Burkhauser and Quinn 1990; Lumsdaine, Stock and Wise 1994).

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<sup>6</sup> There are the general sub-system (*régimen general*), and six special sub-systems (*regímenes especiales*). The latter are designed for farmers, fishers, self-employed persons, homemakers, coal mining workers, and students.

<sup>7</sup> Research has been stimulated by policy needs; as an aging population elicits public policy measures that ensure the continuity of the Social Security system as conceived today (Hurd 1990). Studies for Spain are scarcer (Martín and Moreno 1990, Villagarcia 1995).



The right to receive a stream of retirement income from Social Security (or a private pension plan) hinges on contributions made throughout a person's working life. The amount of benefit depends on average monthly earnings during a certain period of time preceding retirement or during the whole working life. This means that current work decisions are crucial for future benefit entitlement. On the other hand, the retirement income stream depends on when benefits are claimed. This implies that a worker who is already eligible for retirement benefits has to decide whether to keep working or not. An additional year of work increases future benefits and the present discounted value of the expected income stream (the asset value of pension rights or pension wealth). Authors have called this increase in pension wealth the pension accrual, and considered it part of compensation because it rewards working another year.<sup>8</sup>

The worker has to decide between retirement today and retirement one year from now. The decision can be made by comparing two income streams: one that starts today and another that will start a year later with higher annual benefits. If the present value of the second stream is greater than the first, the actual compensation for that additional year of work exceeds the paycheck by the wealth accrual. If the present value of the second stream is smaller than the first, true compensation is less than the paycheck by the amount of the wealth loss, implying a pay cut. For the US, researchers have found that the latter is the case for many older workers if they delay retirement for too long. Therefore, if workers respond to incentives stemming from the way Social Security programs work, early retirement is just a rational option for workers.<sup>9</sup>

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<sup>8</sup> Authors have also considered a "wealth effect", resulting from the fact that the present value of potential benefits exceeds the amount of contributions made to the Social Security System, accumulated at risk-free market interest rates (Ippolito 1990).

<sup>9</sup> Despite that most studies agree on the influence of Social Security incentives on labor force behavior of older workers, "... the models have not been able to explain the large drop in labor force participation in the last 30 years." (Hurd 1990, p. 605).

Apart from Social Security and private pension plans, there are many other factors that can potentially affect retirement decisions. For instance, it has been found that self-employed workers leave the labor force later than wage and salary workers, and that self-employment is more common among older workers (Fuchs 1982). The family situations, local labor market conditions, and health status are also considered to be some of the factors that influence labor force transitions. In particular, health reasons are often indicated by persons who retire early, and researchers have found strong links between health impairment and exit from the labor force (Bazzoli 1985, Sickles and Taubman 1986). Moreover, it has been found that longer life expectancy does not necessarily imply better health, casting doubt on a future longer working life hand in hand with longer life expectancy.

Labor market conditions, particularly when unemployment is high, can also be considered to affect labor market transitions among older workers. Restructuring and recessions may prompt some workers to leave the labor force, either through early retirement or applying for invalidity pensions. In Spain, hardship of unemployment among older workers has been eased by special unemployment insurance eligibility as explained above, and by loose screening of applications for invalidity benefits. The reform of 1984 introduced a procedure for more accurate assessment of invalidity claims. In this year, invalidity pensions represented more than 50 percent of retirement pensions (Figure 1). Note that the tendency of newly-granted invalidity pensions reversed since 1984.

### **III. Trends in Labor Force Participation of Older Workers: 1977-1996**

As explained in the previous section, successive reforms of the Social Security system in Spain have contributed to improving both coverage and the level of pension benefits provided. We do not find, however, any particular change in legislation that can be expected to have had a strong impact on retirement behavior. Provisions for early retirement exist since 1966 and the average pension has steadily

increased over the last 15 years, as shown in Figure 2. The benefit amounts of new Social Security pensions have been higher than those of terminated pensions, increasing the average benefit amount over time. It is also apparent that the average pension has increased consistently in real terms since 1982, favored by automatic indexation.

Regarding the evolution of the labor market, as Figure 3 shows, the evolution of the unemployment rate among men has been quite similar across age groups. The unemployment rate of male workers aged 50-64 moves with the cycle, and has been more stable for those 64 or older. The female unemployment rate has much to do with increasing labor force participation of middle age women over the period. In general, one cannot expect sudden changes in men's retirement behavior over the period of analysis.

In this section, we study time trends in participation and age participation profiles; then we consider some personal and job characteristics associated with older participants in the labor market; and, finally, we explore the relationship between labor force status and retirement.

#### *A. Time Trends*

The upper panel of Figure 4 shows labor force participation of older men in the period 1977-1996 by age groups, and the lower panel gives percentage points of variation over the same period. A trend of decline in labor force participation of men aged 50 and over is apparent in Figure 4. Such decline is particularly strong for age groups 60-64 and 65-69, with a much higher relative decline for the latter. About 40 percent of men aged 60-64 were in the labor force in 1996 as compared with 70 percent in 1977. The difference of 30 percentage points represents a decline of more than 40 percent. On the other hand, the labor force participation of men aged 65-69 was 31 percent in 1977 and became 5 percent in 1996, which

implies a decline of 84 percent.

The lower panel of Figure 4 allows us to see that the evolution of labor force participation of older men has not been uniform over the whole period. The decline was quite consistent up to 1988 for workers aged 55-69, and somewhat came to a halt in the period 1988-1991, only to continue declining afterwards and increase slightly in 1996. This evolution shows certain parallels with that of unemployment in Spain (Figure 3). The unemployment rate increased from the mid-1970s to the mid-1980s, then diminished significantly and increased again from 1992 to 1994. The economic recovery since 1995 has been weak. This suggests that labor force participation of older workers significantly responds to labor market fluctuations.

Regarding older women, participation trends result from the combined effect of higher participation rates among women in general and lower participation of elderly women. As cohorts of more-participant women age, the participation rate of older women appears higher. Figure 5 tells us that the cohort effect on participation dominates for Spanish women aged 50-59 after the mid-1980s, and that it is offset by the trend of lower participation at older ages for 60-64 year old women. Contrary to men, the business cycle effect on participation of older women is less apparent in Figure 5.

The relationship between sex/age-specific labor force participation rates and the global unemployment rate is documented in Table 1, which presents the coefficient of correlation between both variables taking the latter one-year lagged. The coefficients of correlation are calculated using the levels of the variables (panel 1), and using the annual percentage points of variation (panel 2). The table shows that older men are more responsive to the unemployment rate than middle aged men. This is not the case for women. The upper panel of Table 1 confirms that for women aged 25-49, much of the increase in

unemployment can be linked to their increasing labor force participation rate.

It should be emphasized that, apart from the effects of economic fluctuations, it is difficult to identify any clear change in Social Security legislation that one could expect to have a significant impact on participation trends. Early retirement conditions have remained unchanged since 1966, except for the introduction of partial retirement in 1980 and its inclusion within the 1984 Employment Promotion Program.<sup>10</sup> Moreover, withdrawal from the labor force among older men may have been affected by more strict requirements for invalidity pension eligibility.<sup>11</sup>

### *B. Age Participation Profiles*

The upper panel of Figure 6 presents the age participation profiles for men aged 50-70 in 1980, 1985, 1990 and 1995; the lower panel of the same figure shows percentage points of changes in participation rates between five-year intervals. The figure indicates that the participation rate declines gradually when workers are in their early fifties, the profile becomes steeper for ages 58-63, and declines dramatically for workers aged 64-66. Taking the average participation rate for the period 1980-1995, we find that 92 percent of men participate in the labor force at age 50, 84 percent at age 55, 61 percent at age 60, 18 percent at age 65, and 6 percent at age 70. The relative decline in the participation rate is most pronounced from age 60 to age 65, but such decline is quite high from age 59 to age 64, given the early retirement provisions. For example, in 1995 the participation rate of 59 year olds was 63 percent and 50 percent for workers one year older; this compares to participation rates of 31 and 9 percent for 64 and

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<sup>10</sup> The *contrato de relevo* was introduced in 1984 as part of a package of policy measures to promote employment. On the other hand, the *contrato de sustitución* was introduced in 1985 also to encourage job creation.

<sup>11</sup> As seen in Figure 1, over the period 1981-1995 for which we have comparable data, the stock of invalidity pensions (about 50 percent of retirement pensions) increased rapidly up to 1985, and more moderately thereafter.

65 year olds, respectively. The proportion of male workers participating in the labor market at age 65 - the normal retirement age- or older appears strikingly low.

By comparing the cross-section profiles in different years, it is possible to see how the over-time decline in participation rates are more pronounced at particular ages and specific periods. The lower panel of Figure 6 shows that participation rates of men aged 68 and older has reached a minimum in 1995; for workers younger than 68 there is still room for further decline in participation rates. The figure indicates that over-time variations in participation rates for workers aged 50-65 are not uniform across ages. One regularity clearly seen is that for workers aged 62 and older, the decline in participation was always larger from 1980 to 1985 than from 1990 to 1995.

Figure 7 shows that the age participation profile for women is decreasing, although it appears linear rather than concave. The cohort effect is clearly reflected in the figure: the aging of cohorts of more participant women offset the tendency to retire early. Note that the unemployment rate reached a maximum in 1985 and this probably the reason why the female participation rate in that year was generally lower than in 1980.

Another way to see the tendency to retire early over time is to calculate the retirement hazard rate, defined as the probability of retirement at age  $T$  given labor force participation at age  $T-1$ . If we consider that lifetime participation profiles are well represented by age participation profiles from cross-section data -which is more likely to be true for men-, we can calculate retirement hazard rates from participation rates by age groups. Hazard rates, contained in Table 2, show that from 1980 to 1995 the probability to retire tripled for men aged 50-59, and almost doubled for those aged 55-64.

### *C. Who Are Older Participants and What Are They Doing?*

Table 3 contains the labor force participation rates by age, sex and levels of education for the years 1980, 1985, 1990, and 1995. The table shows that education is highly correlated with labor force participation. The relative differential of participation rates by education is larger at older ages. For example, in 1995 the participation rate among men aged 55-59 was 70 percent for those with primary education or less, and 82 percent for those with higher education. Among men aged 65-69, the respective figures were 5 percent and 19 percent. For women, however, the differential effect of education on participation rates is more marked at younger ages. Table 2 also indicates that the decline in participation rates has been lower for more educated people at older ages, thereby increasing the differential effect of education over time.

It is well known that older workers are over-represented among the self-employed and part-timers. According to Table 4 the proportion of self-employed workers is higher for men, older workers, and has increased over time at older ages. For example, the proportion of self-employed men aged 60-64 was 45 percent in 1995 as compared to 38 percent in 1980. Because workers in the farming/fishing sector are more likely to be self-employed and their numbers have diminished over time, by excluding them from the table we obtained that the proportion of self-employed men has increased significantly over time for all age groups. For instance, the percentage of persons aged 60-64 self-employed in other than the farming/fishing sector was 22 percent in 1980 and 34 percent in 1995.

The proportion of part-timers -persons with a normal workweek of less than 35 hours- was around 3 percent for men aged 25-59 in 1995 (Table 5), and was slightly higher for men aged 60-64. However, the proportion of part-time workers becomes much higher for those aged 65-69 (20 percent), and for workers aged 70 or more (52 percent). Also, part-time work is more common among women, and

differences by age are smaller than among men. Over-time variations of the proportion of part-time workers are only noticeable for the age group 65-69 of both sexes from 1990 to 1995. According to these figures, in Spain part-time work appears to be an option after the normal retirement age, more than a choice for partial retirement.

#### *D. The Relationship Between Labor Force Status and Retirement*

Are inactive persons retired? How many of those retired are actually working? How many of the unemployed indicate to be retired? Answering these questions is useful for the analysis of labor force transitions, undertaken in the next section of the article. The reason for this is that some of the observed transitions may result among persons who are borderline between two labor force states. By comparing the labor force status according to activity in the reference week with self-reported situation as of the same week, we can see the extent to which one classification is corroborated by the other.

Tables 6 and 7 show the distribution of older workers according to their labor force status and self-classification by age groups in 1995. Workers are asked to choose three situations among the following: (1) student, (2) retired, (3) doing housework, (4) disabled, (5) receiving a non-retirement pension, (6) doing voluntary work, and (7) other situation. Most employed and unemployed persons are expected to choose "other situation" in the first place. Indeed, among men aged 50-64 around 95 percent of the employed and 93 percent of the unemployed do so (Table 6). Among women the situation resulting from self-classification is more difficult to interpret, as a great majority of those aged 50-64 indicate to be doing housework -around 80 percent of the employed and 90 percent of the unemployed (Table 7).

The self-classification of inactive persons is more interesting because it allows us to ascertain more precisely the situation of those who are actually retired. More than 94 percent of men 65 and older



indicate to be retired, whereas the corresponding figure is 71 percent for those aged 60-64. For this age group, 12 percent are disabled, 7 percent receive a non-retirement pension (presumably an invalidity pension), and 8 percent are in "other situation". Inactive men at ages 50-54 and 55-59 are few, but 35 percent of the former and 45 percent of the latter indicate to be retired in 1995. Only about 20 percent of these two age groups classify themselves as in "other situation". Around 41 percent of men aged 50-54 indicate to be disabled or receiving a pension different from that of retirement.

Among women in either of the three labor force states, housework is clearly preferred for the younger age groups but housework is still considered the main situation for the majority of women aged 65 and older. For instance, 80 percent of employed women report to be engaged in housework, and 20 percent are in "other situation". This means that changes in labor force status among older women are hard to interpret because of low labor force attachment.

On the other hand, figures in Table 6 imply that a great many inactive men are actually retired from the labor force, and that most of those employed or unemployed are fairly attached to the labor market. This gives us more confidence for studying the labor force transitions of older men than for those of older women. Consequently, in the following sections we focus on the former group of persons.

#### **IV. Descriptive Analysis of Labor Force Transitions of older men: 1987-1996**

In this section we carry out non-parametric analysis of labor force transitions of older male workers for the period 1987-1996.<sup>12</sup> We consider changes in labor force status over one-year intervals. We focus

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<sup>12</sup> This period includes part of the phase of strong employment growth that lasted until the early 1990s, the deep employment crisis of 1992 and 1993, and the weak recovery that started in 1994. Therefore, the data permit to analyze labor market transitions over a complete cycle of the Spanish economy.

on men simply to avoid the difficulties associated with studying labor force transitions of women, as documented in the previous section.

#### *A. Data Issues*

The data used for studying labor force transitions of older workers are obtained from the Active Population Survey (EPA), a quarterly survey of some 60,000 households. This data set is suitable for analyzing employment transitions because of its panel structure. As a sixth of the EPA sample rotates every quarter, in principle we can follow a person for a maximum of six quarters. The time period available expands from the second quarter of 1987 to the fourth quarter of 1996. We only use the second quarter files because we study transitions over a one-year period. An advantage of the second quarter survey is that it contains questions about the labor force situation of every person a year earlier.<sup>13</sup> Despite the problems associated with retrospective questions, the resulting information becomes useful to compare transition rates by the two methods.

Matched EPA files have recently been made available by the Spanish National Institute of Statistics (INE). Given the rotation scheme, two thirds of households in a given quarter should be present in the survey a year later. When individuals are matched, about 10 percent of the sample is lost over the one-year period. With a similar attrition rate among male workers aged 50-69, we obtain a sample of 8 to 9 thousand persons for every two-year match. The main limitations of the tapes released by the INE are that place of residence, and the code to identify members of the same household were dropped from the original matched files. Also, age was grouped in five-year brackets, and other variables were available only in a more compressed format than the original one. To overcome these limitations we have been able

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<sup>13</sup> Each person is asked to indicate his or her situation exactly a year ago: (1) working, (2) looking for work, (3) available without looking for work, (4) in the military, (6) in school, and (7) other situation.

to "match" the matched and unmatched tapes.<sup>14</sup>

Let us consider  $S_t$  the labor force state at quarter  $t$ , and  $R_t$  the reported situation at quarter  $t$  indicated in quarter  $t+1$ . Labor force transitions can be analyzed by comparing  $S_t$  with  $S_{t+1}$ , and also by comparing  $R_t$  with  $S_{t+1}$ . Moreover, we can cross tabulate  $S_t$  and  $R_t$  to see the extent to which the labor force state obtained through the question on activity at the reference week differs from that indicated by the person a year later.

In order to see the extent to which labor force status varies with the method of classification, Table 8 shows numbers of persons in each labor force state classified according to activity in the reference week,  $S_t$ , and the situation derived from the retrospective question,  $R_t$ . The distribution of persons are quite similar by both methods of classification, although it seems that the retrospective question tends to overstate the number of inactive people. However, when labor force states according to the two methods of classification are compared, significant discrepancies arise. More than 90 percent of employed as well as of inactive persons show to be in either state according to both classification procedures. The coincidence of status is much lower for those who are classified as unemployed, at around 70 percent.

The indicated results imply that studying transitions by combining both classifications is likely to aggravate measurement errors, already quite common in longitudinal data. The upper panel of Table 9 contains the transition rates among labor force states -according to activity in the reference week- obtained from EPA matched files. The one-year transitions from employment to unemployment and to

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<sup>14</sup> Among employed and unemployed persons, we were able to recover information for almost 100 percent of observations. For inactive people, the match success rate was around 85 percent.

inactivity are 3 and 11 percent, respectively. On the other hand, about the same percentage of unemployed workers become employed or leave the labor force a year later, at 24 percent. Among the inactive, only about 5 percent changed their labor force status in one-year interval.

The lower panel of Table 9 contains the transition rates obtained from using the retrospective question for classifying workers at the origin year and the reference-week state as the destination year. The proportions of workers leaving employment or unemployment are lower than those obtained before. However, the proportion of persons who transit from inactivity to the other two labor force states is 2 percent as compared to 5 percent calculated from matched files.

Keeping in mind these discrepancies, in the next subsection we present transition rates calculated according to the two methods previously indicated. This way we can compare transitions by age and over the period of study. An additional reason to do so is that by combining retrospective and the reference-week classifications we do not need to match EPA files for calculating labor force transitions. As all observations of the EPA's second quarter can be pooled, the size of the sample becomes much larger.

### *B. Age Profiles of Transition Rates*

Figure 8 shows labor force transitions for men aged 49-69 by single years of age. Transition (or intensity) rates are measured among the three states: employment, unemployment and inactivity.<sup>15</sup> We define the

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<sup>15</sup> Studies for the U.S. (Peracchi and Welch 1994; Blau 1994) have considered transitions among states based on hours worked (or desired) per week: full-time participation, part-time participation, and non-participation. In this article we do not separate full-time from part-time workers because we wish to keep unemployment as a specific labor force state, given its high level in Spain. Although it is often hard to draw the line between unemployment and inactivity (or retirement) among older workers, Table 6 showed that according to self-reported labor force status, the distinction makes sense for Spain. Also, in the parametric analysis of section V, we will look at the transition from full-time employment to part-time work and to non-employment.

hazard rate from state  $i$  to state  $j$  for men at age  $t$  as the number of men of that age who enter state  $j$  in one-year interval divided by the number of them in state  $i$  at the origin year. As indicated in the previous section, we use pooled data from EPA's second quarters for the period 1987-1996. Therefore, the transition rates are averaged over that period of time.

The upper panels of Figure 8 show the transition rates from employment (upper left) and from unemployment (upper right) to out of the labor force by single years of age. The two curves correspond to alternative ways of measuring transitions. Circles refer to transitions resulting from matched files one year apart, and crosses refer to combining spot labor force status with that one-year-earlier, as reported by the workers. The former procedure generates a higher frequency of transitions, which has also been observed in other data sets (Peracchi and Welch 1994). However, similar profiles are obtained by both methods of measuring transitions. The hazard rate from both employment and unemployment to inactivity increases slightly up to age 58. Then, at age 59 in the first interview, we observe a first spike that results from the fact that people can retire early at age 60.

According to matched files, 13.3 percent of employed and 29 percent of unemployed men leave the labor force from age 59 to 60. The exit rates from the labor force is lower passed aged 60, and shows a tendency to increase for men aged 61-63; then it presents a strong spike for age 64 at the origin-year survey: 65 and 85 percent of employed and unemployed men, respectively, become inactive from age 64 to 65. The transition from employment to out of the labor force is still high for those aged 65, at 38 percent. Because less than 10 percent of men remained in the labor force at age 65, a reduced number of observations for men aged 65 or older advised us against calculating their transition rates from unemployment. Note that unemployed men are more likely to become inactive than those who are employed.

### *C. Time Trends of Transition Rates*

Figure 9 shows the six possible transitions among labor force states of older men over time. We use both methods for calculating transitions: matched files and the retrospective question. As indicated earlier, transition rates are lower when calculated by the latter method. However, the trends are quite similar. The transition from employment to inactivity and to unemployment, and the transition from unemployment to employment appear to follow trends consistent with the evolution of the unemployment rate (see Figure 3). Also, note that transitions between employment and unemployment show lower differences by the two methods of calculating the exit rates.

The spike in the transition rate from unemployment to inactivity in 1991 can be related to the business cycle. As unemployment was increasing quickly, jobless workers eligible for early retirement may have decided to take it. Those workers could have left employment in the late-1980s, when many long-tenured employees lost their jobs.<sup>16</sup>

## **V. Econometric Analysis**

### *A. A multinomial Logit Model*

In the parametric analysis undertaken in this section, we use a multinomial logit model to investigate the effect of demographic characteristics and labor market conditions on labor force transitions. To analyze transitions among employment, inactivity and unemployment, we estimate the following multinomial logit model:

$$\lambda_{ij} [f_{ij}(a,t); x] = \exp(f_{ij}(a,t) + \beta_{ij}'x) / 1 + \sum_{j=1,2} \exp(f_{mj}(a,t) + \beta_{mj}'x), i \neq j$$

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<sup>16</sup> For example, according to the EPA, from the second quarter of 1987 to the third of 1988, permanent employment declined by more than two hundred thousand persons.

where  $\lambda_{ij}$  is the conditional probability of a transition from state  $i$  to state  $j$ , in one-year interval;  $f_{ij}$  is a function of age and the time trend;  $x$  is a vector of covariates observed for each individual at the origin year; and  $\beta$  is a vector of parameters to be estimated. The indicated specification implies independence of the three possible labor force states, taken one at a time as the base category in the multinomial regressions. This means that the estimated effect of a specific variable on change of state is obtained relative to its effect on the conditional probability of remaining in the base state.

In the function  $f_{ij}$  we include age, age squared, age cubic, time, time squared, two dummies for persons aged 59 and 64 respectively, and their interaction with time. The variables contained in the vector of covariates  $x$  differ across regressions depending on the state considered at the origin year. We have grouped the set of explanatory variables in four categories.

(i) *Demographic and household characteristics.* Education dummies (primary or less, academic secondary, vocational secondary, and university); a dummy for married; number of members in the household; and a dummy if there are children (aged 0-15) in the household. All these variables are common to the three multinomial regressions.

(ii) *Variables related to labor force attachment.* To study transitions of employed workers we created dummies for the following cases: one dummy equal to one if the worker reported a worktime lower than usual in the reference week due to illness, and another dummy equal to one if the reason for the reduced workweek was employment adjustment; a dummy for workers holding a fixed-term contract, and another dummy for those who indicated to be unemployed or out of the labor force a year before the origin year. For analyzing transitions of unemployed workers, we consider three dummies for the three possible situations with respect to the public employment service (registered receiving benefits, registered

without receiving benefits, and not registered); four dummies were also created for duration of the unemployment spell; and three dummies for reasons for job loss (end of a fixed-term contract, lay-off, and other reasons). For the regression on transitions from inactivity, dummies for time since last job were used instead of those referring to unemployment duration.<sup>17</sup>

(iii) *Current or previous job related variables.* For transitions from employment, we consider tenure in the current job in years; dummies for five brackets of worktime; dummies for three types of employment (wage/salary workers in public or private sector, and other situation); and dummies for five industries (farming/fishing, mining/manufacturing, construction, trade/hotel/restaurant, and "other services"). For transitions from unemployment or inactivity, the latter two sets of categorical variables refer to the previous job, and tenure in that previous job was also included in the regressions.<sup>18</sup>

(iv) *Other variables.* Four geographical areas (North, Central, East and South);<sup>19</sup> and the unemployment rate in seventeen autonomous regions for the period 1987-1995. The latter variable is deemed to pick up the state of the local labor market as well as the business cycle effect on labor market transitions of older workers.

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<sup>17</sup> In the EPA, each non-employed worker is asked to indicate time looking for a job if doing so and, in any case, time since left the previous job.

<sup>18</sup> Tenure in the current or previous job is reported in months for durations of less than one year, and in years for longer durations.

<sup>19</sup> The 17 autonomous communities are grouped as follows. South (Andalusia, Canary Islands, Extremadura, and Murcia); Central (Castile-Leon, Castile-La Mancha, and Madrid); East (Aragon, Balearic Islands, Catalonia, and Valencia); North (Asturias, Cantabria, Galicia, Navarre, La Rioja, and the Basque Country).



## *B. Estimation Results*

Tables 10 to 13 contain sample means, multinomial logit estimates, and marginal probabilities<sup>20</sup> for transitions among employment, unemployment and inactivity. The transitions are measured between two consecutive years. More specifically, we use the EPA's second quarters over the period 1987-1996 and focus on male workers for reasons indicated earlier. For transitions from employment we consider a sample of workers that results from pooling all those who report to be employed at the origin year. For transitions from unemployment and from inactivity we consider unemployed workers who report to be unemployed or out of the labor force, respectively. In the latter two cases, we focus on workers who indicated to have left the previous job less than 36 months ago, because only for them we have information on the characteristics of the previous job.

### *1. Transitions From Employment*

Table 10 presents the multinomial logit estimates of transitions from employment to inactivity and to unemployment, as well as the corresponding marginal probabilities. Dummies for age 59 and 64, and their interaction terms with time obtain positive coefficients in the equation referring to transitions from employment to inactivity, but only age 64, and the interaction term between age 59 and time are significant. This indicates that, compared to the average worker in the sample, transition from employment to inactivity (retirement) increases by 167 percent when workers turn 65 and that this transition rate has not changed significantly over the period of study, 1987-1996. On the other hand, a positive and significant coefficient for the interaction term between age 59 and time indicates that the spike observed for workers aged 59 in Figure 8 has emerged over the period of study, reflecting the tendency to early retirement. Age has a positive, although decreasing effect on the transition from

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<sup>20</sup> For the transition from a certain state to the  $j$ th situation, the marginal effect of an exogenous variable,  $x$ , is obtained at the sample means as follows:  $\delta p_j / \delta x = p_j(\beta_j - \sum p_k \beta_k)$ , where  $k=1,2$ .

employment to unemployment. This could be due to displaced, older workers having to enter unemployment as an intermediate step toward retirement. The time trend is concave in both the transition to inactivity and the transition to unemployment.

Higher education reduces the probability of moving from employment to inactivity and to unemployment by 39 and 41 percent, respectively. Married men are more likely to make a transition from employment to inactivity. The number of members in the household and the dummy for the presence of children reduce that probability, although the latter variable is not significantly different from zero at the conventional level. The finding that married men -around 91 percent in the sample- are more likely to exit employment to become inactive is somewhat surprising because married men tend to be highly attached to the labor force.<sup>21</sup> Indeed, as will be seen later, married men are more likely to make a transition from unemployment or inactivity to employment. However, unemployed, married men, similar to those who are employed, show a higher probability to become inactive.

The variables deemed to be proxies for labor force attachment show the expected effect on transitions from employment. The dummies equal to one if the workweek was shorter than usual for health reasons or employment adjustment obtain strong and positive coefficients. A worker who in the origin year suffered health problems or whose firm made employment adjustments is, respectively, 125 and 86 percent more likely to be out of the labor force one year later. Both dummies have also strong effects on the probability of becoming unemployed. The dummy equals to one if the worker experienced non-employment one year before the origin year is also an important predictor of the probability of exit from employment. It increases that probability by 66 percent if the destination state is inactivity and by

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<sup>21</sup> For instance, in similar analysis for the U.S., Peracchi and Welch (1994) and Blau (1994)] find that married men are less likely to exit full-time work to become inactive.

80 percent if it is unemployment. Because this variable is highly correlated with temporary employment status, we excluded it from the regression and found that workers holding a fixed-term employment contract were more likely to become inactive than workers under indefinite contracts (results not shown). On the other hand, temporary workers exhibit a much higher probability to become unemployed than permanent workers, by 83 percent according to estimates in Table 10.

Job characteristics also have significant effects on transitions from employment. Compared to private sector workers, those in the public sector are more likely to become inactive and less likely to become unemployed; and those in "other situation", mostly self-employed, are less likely to make a transition to inactivity or unemployment. By industries, mining/manufacturing workers are more likely to become inactive, and construction workers are more likely to become unemployed; meanwhile those in "other services" exhibit a lower probability to leave the labor force or enter unemployment. Tenure in the current job reduces the likelihood of a transition to unemployment and increases that of becoming inactive. Furthermore, men with a workweek of more than 40 hours are less likely to become inactive, by 11 percent. These results indicate that job characteristics matter in exits from employment status. In particular, the higher probability of mining/manufacturing workers to become inactive may be related to specific early retirement incentives provided by this sector's employers.

Regional dummies obtain insignificant coefficients in the exit from employment to inactivity. The dummy referring to the central area of the country obtains a positive and significant coefficient in the transition from employment to unemployment. The region-specific unemployment rate -annually imputed for the period 1987-1995- obtains positive and significant coefficients in the regression for transition to inactivity and to unemployment. A one percentage increase in the unemployment rate increases the probability of becoming inactive or unemployed by 1.6 and 3.2 percent, respectively. This result confirms

the importance of the developments of regional labor markets for labor force transitions of older workers.

## *2. Transitions From Unemployment*

Table 11 contains multinomial estimates for the transition from unemployment to inactivity and to employment. We use a sample of unemployed workers who indicated to have left the previous job less than three years ago (2,402 observations which represent 75 percent of all unemployed men). It is noteworthy that unemployed men aged 59 in the origin year are more likely to make a transition to inactivity; and they are also more likely to become employed, although to a declining rate over the period. Married unemployed men are more likely both to become inactive or to find work by 7 and 53 percent, respectively. The number of members in the family increases the transition to employment and the existence of children in the household reduces the probability of transition to inactivity. It is not surprising that family responsibilities play a role in labor force transitions of older workers.

Dummies for duration of the unemployment spell show that workers are more likely to make a transition to inactivity when they are in the 12-23 month of their unemployment spell, and that the probability of becoming employed declines significantly for durations of 24-35 months. The timing of transition from unemployment is probably related to receipt of unemployment benefits. For this reason we controlled for workers' relation with the employment office: those not registered, 4.5 percent of the sample used, are significantly more likely to make a transition to inactivity, by 37 percent.<sup>22</sup>

Other results worth mentioning refer to characteristics of the previous job: unemployed workers who were previously employed in the public sector, in mining/manufacturing, in construction, in "other

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<sup>22</sup> The effect of unemployment benefit insurance on transitions from unemployment is likely to be biased downward if some workers report not to be receiving benefits simply because of delays in the administrative process that evaluate unemployment claims.

services", and held the job for a longer tenure, were more likely to become inactive. Moreover, unemployed workers who held a non wage/salary job were less likely to leave the labor force; and construction workers were more likely to obtain a job within a one-year interval.

### *3. Transitions From Inactivity*

To analyze transitions from inactivity we focus on a sample of inactive workers who indicated to have left their last job less than three years ago, a sample of 8,360 men (37 percent of inactive men that result from matched EPA files). Multinomial logit results are presented in Table 12. Among the variables that have a positive effect on the probability that inactive, older men enter the labor force, we highlight age, which obtains negative and significant coefficients for the quadratic and cubic terms. This result may indicate that older workers are more willing to re-enter the labor force once they have secure retirement income, more frequent in their early sixties. An alternative explanation could be that (relatively) younger workers who indicate to be inactive do so because of health reasons, and it is because of this impairment that they exhibit a lower probability of obtaining or search for a job. Also note that married men and those who worked previously in a non-wage/salary job are more likely to move from inactivity to employment.

A longer spell since leaving the last job and a longer tenure in such a job reduce significantly the probability to re-enter the labor force. For example, a person who left the previous job 24-35 months ago is, respectively, 38 and 63 percent less likely to become employed or to look for work. As indicated earlier, tenure in the (current or previous) job is an important variable in explaining transitions to inactivity from either employment or unemployment. It is also important in explaining the probability of returning to the labor force. The reason for this could be that the time a job is held can reflect a more stable work history and, therefore, better retirement conditions (Ruhm 1990). It can also reflect

accumulation of specific human capital and, thereby, more difficulties to change labor force status.

#### *4. Transitions From Full-Time Work*

Only 1.5 percent of full-time employed men in the sample made a transition to part-time employment in one-year interval. Despite this low rate, we obtained interesting results by running the multinomial logit model on the transition from full-time employment to part-time work. As usual, Table 13 provides the sample means, multinomial logit estimates, and marginal probabilities. Non-employment (unemployment or inactivity) now becomes the alternative choice to part-time work for full-time employed men.

Age has a negative effect on the probability of exiting from full-time work to become a part-timer. Workers aged 59 and 64 were more likely to make such a transition, although those aged 59 show to have become less willing or able to do so over the period 1987-1996. Other variables associated with a higher probability of transition from full-time to part-time work are: university education (the probability increases by 69 percent); the presence of children in the household; illness; employment adjustment; a non-wage/salary job (an increase of 91 percent in the probability); a job in fishing/farming; a workweek of 35-39 hours as compared to 40 hours; and residence in the Eastern area of the country.

Other variables which have a negative impact on the likelihood of transition from full-time to part-time work are: being married; number of members in the household; a normal workweek of more than 40 hours. Workers who usually work more than 40 hours in the reference week (34 percent of full-time workers in the sample) are 38 percent less likely to become part-timers. The number of hours normally worked during the week seems to be a good predictor of transitions from full-time to part-time work. Note also that working more than 40 hours per week reduced the probability of making a transition from employment to inactivity and, less significantly, to unemployment. In Table 13, when transition to

the latter two labor force states are consolidated as the alternative to part-time work, the dummy for more than 40 hours of work obtains a negative and very significant coefficient in the regression on transition from full-time work to non-employment. Thus, a long workweek appears to involve strong job attachment, high employment security, or simply a preference to work.

## **VI. Summary and Conclusions**

We have investigated labor force participation and transitions of older workers in Spain. The first task of this work has been to show patterns in labor force participation of older workers over the period 1977-1996, by using EPA's data. A strong tendency to lower participation means that very few people 65 and older remain in the labor force (about 5 percent in 1996). Most of these people are self-employed, and many of them work part-time. In describing the trends, we paid attention to the relationship between participation and unemployment. We could see that when the economy was creating jobs, the decline in participation slowed down or reversed.

The second task of this work has been to analyze movements among labor force states for a better understanding of workers' retirement behavior. For this we used EPA's matched files. Instead of defining the retirement status, we consider that older workers can move among three possible labor force states: Employment, unemployment, and inactivity. We could check that a majority of workers in the latter situation self-classified themselves as retired, or as receiving an invalidity or some other type of pension. Only 8 and 20 percent of inactive men aged 60-64 and 50-59, respectively, indicate to be in "other situation". Thus, most inactive men are retired in our sample of older workers. We found that the retirement hazard rate showed a small spike at age 60 and a strong spike at age 65, corresponding to the beginning of eligibility for early and normal retirement, respectively.

Finally, in the parametric analysis we studied the effect of a number of factors on labor force transitions: Demographic and household characteristics, variables related to labor force attachment, current and previous job characteristics, four geographic areas, and year/region-specific unemployment rates for the period 1987-1996. Most of the results obtained from estimating the multinomial logit model are well known; other findings are more specific to Spain. Among the latter, we should emphasize that a history of no-employment -or temporary employment status- tends to hasten the transition from employment to inactivity; that men who worked more than 40 hours in the reference week are less likely to become inactive; and that high unemployment increases transitions to both unemployment and inactivity.

The results obtained in this article confirm that, apart from Social Security and private pensions, labor force transitions of older workers are affected by many other factors. This should be taken into account when designing policies to encourage labor force participation among the elderly. In Spain, reforms of the Social Security system to solve its financial problems are currently being debated. One possible lesson from this article's results could be that alternative policies to that of simply reducing the generosity of Social Security benefits can produce the desired effects without putting at risk the wellbeing of older men and women. For example, better job opportunities and more stable employment may be effective in keeping older workers in the labor market. Moreover, postponing the age for early as well as normal retirement can also be an effective measure so long as labor market conditions are favorable to the employment of older persons.



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**Table 1. The Relationship Between Labor Force Participation Rates and One-Year Lagged Unemployment Rates**

**1.- Coefficients of Correlation between the variables in levels**

	25-49	50-54	55-59	60-64	65-69	70+
<i>MEN</i>	-0,7535	-0,8128	-0,8951	-0,8762	-0,8952	-0,9010
<i>WOMEN</i>	0,7236	0,4293	-0,2724	-0,8743	-0,8895	-0,8469

**2.- Coefficients of Correlation between the variables in rates of change**

	25-49	50-54	55-59	60-64	65-69	70+
<i>MEN</i>	0.0219	-0.1360	-0.4701	-0.5498	-0.2453	-0.3802
<i>WOMEN</i>	-0.3167	-0.3634	-0.3108	-0.3275	-0.2925	0.0583

**Table 2. Retirement Hazard Rate by Gender**

	<i>MEN</i>			<i>WOMEN</i>		
<b>YEAR</b>	<b>50-54 to 55-59</b>	<b>55-59 to 60-64</b>	<b>60-64 to 65-69</b>	<b>50-54 to 55-59</b>	<b>55-59 to 60-64</b>	<b>60-64 to 65-69</b>
1980	6.47	24.61	67.21	8.79	28.50	55.57
1985	12.23	29.85	76.48	4.60	30.64	69.67
1990	14.61	38.54	83.97	18.09	35.41	76.36
1995	18.82	44.29	85.78	28.07	39.47	79.32

Note: Data for obtaining this table are the same as those used for Figure 5 and 6, and Table 3. See text for explanation of how hazard rates have been calculated.

**Table 3. Labor Force Participation Rates by Age and Education**

		<i>MEN</i>			
		1980	1985	1990	1995
<b>50-54</b>		<b>90.88</b>	<b>89.35</b>	<b>89.25</b>	<b>87.88</b>
	Primary education or less	90.00	88.24	87.49	85.66
	Secondary education	96.54	94.67	94.67	91.07
	University	98.79	98.04	98.83	96.96
<b>55-59</b>		<b>85.00</b>	<b>78.42</b>	<b>76.21</b>	<b>71.34</b>
	Primary education or less	83.73	76.57	73.96	69.88
	Secondary education	93.2	87.08	84.86	74.49
	University	98.22	95.13	92.47	81.59
<b>60-64</b>		<b>64.08</b>	<b>55.01</b>	<b>46.84</b>	<b>39.74</b>
	Primary education or less	62.45	53.75	44.26	37.19
	Secondary education	73.39	60.16	58.98	45.86
	University	82.04	72.75	69.1	66.00
<b>65-69</b>		<b>21.01</b>	<b>12.94</b>	<b>7.51</b>	<b>5.65</b>
	Primary education or less	18.97	11.72	6.65	4.76
	Secondary education	32.59	16.61	9.77	6.92
	University	45.25	27.82	19.53	19.32
<b>70+</b>		<b>7.35</b>	<b>2.77</b>	<b>1.36</b>	<b>1.44</b>
	Primary education or less	6.7	2.39	0.99	1.13
	Secondary education	9.15	5.48	1.71	1.97
	University	20.97	7.98	8.15	6.48
		<i>WOMEN</i>			
		1980	1985	1990	1995
<b>50-54</b>		<b>26.85</b>	<b>24.36</b>	<b>28.86</b>	<b>34.66</b>
	Primary education or less	25.57	22.45	26.5	29.75
	Secondary education	30.24	37.42	34.37	43.79
	University	67.68	58.62	75.00	81.87
<b>55-59</b>		<b>24.49</b>	<b>23.24</b>	<b>23.64</b>	<b>24.93</b>
	Primary education or less	23.35	21.47	21.45	22.02
	Secondary education	32.19	34.14	32.53	34.58
	University	67.06	61.24	69.56	62.76
<b>60-64</b>		<b>17.51</b>	<b>16.12</b>	<b>15.27</b>	<b>15.09</b>
	Primary education or less	16.65	15.35	14.42	13.77
	Secondary education	22.99	23.55	16.06	19.53
	University	64.48	46.81	45.93	47.2
<b>65-69</b>		<b>7.78</b>	<b>4.89</b>	<b>3.61</b>	<b>3.12</b>
	Primary education or less	7.28	4.58	3.58	2.9
	Secondary education	11.57	8.59	1.32	5.2
	University	35.63	13.14	9.15	5.54
<b>70+</b>		<b>2.18</b>	<b>1.42</b>	<b>0.73</b>	<b>0.76</b>
	Primary education or less	2.19	1.39	0.72	0.66
	Secondary education	0.69	1.42	1.23	2.43
	University	2.56	3.34	1.06	1.78

**Table 4. Percentage of Self-Employed Workers**

**1. Including farming / fishing**

<i>Age</i>	<i>MEN</i>				<i>WOMEN</i>			
	1980	1985	1990	1995	1980	1985	1990	1995
25-49	22.72	22.89	22.00	22.48	17.21	16.30	14.59	15.32
50-54	31.07	33.53	30.49	31.22	22.49	24.64	27.67	27.64
55-59	33.38	35.65	33.77	35.80	24.58	29.32	30.21	29.59
60-64	37.85	44.67	42.36	44.69	31.22	35.12	35.77	38.84
65-69	56.76	63.55	67.27	67.71	36.45	40.17	55.35	49.93
70+	74.47	79.92	84.17	77.51	44.97	50.25	55.22	57.59

**2. Excluding farming / fishing**

<i>Age</i>	<i>MEN</i>				<i>WOMEN</i>			
	1980	1985	1990	1995	1980	1985	1990	1995
25-49	17.48	18.68	19.43	20.17	15.23	13.74	13.07	14.05
50-54	21.36	24.42	24.43	26.97	19.02	21.47	24.01	22.78
55-59	20.83	24.31	24.33	29.25	19.47	23.40	22.54	24.02
60-64	21.70	30.03	30.82	34.15	25.23	26.77	23.53	29.42
65-69	35.52	47.50	52.42	57.66	28.71	36.06	48.64	40.80
70+	62.32	68.30	78.67	70.75	41.13	50.82	45.04	51.92

**Table 5. Percentage of Persons Usually Working Less Than 35 Hours per Week**

**1. Including farming / fishing**

<i>Age</i>	<i>MEN</i>			<i>WOMEN</i>		
	1987	1990	1995	1987	1990	1995
25-49	3.03	2.47	3.54	18.47	17.80	20.70
50-54	2.83	2.66	2.45	20.83	18.78	23.55
55-59	3.79	2.74	3.39	22.10	21.30	22.68
60-64	5.56	4.31	4.48	23.57	25.52	24.08
65-69	16.23	16.21	19.78	27.71	27.98	34.16
70+	46.36	40.86	51.65	46.58	47.27	48.55

**2. Excluding farming / fishing**

<i>Age</i>	<i>MEN</i>			<i>WOMEN</i>		
	1987	1990	1995	1987	1990	1995
25-49	2.87	2.40	3.54	18.63	17.73	20.95
50-54	2.69	2.23	2.20	20.87	18.45	23.75
55-59	3.20	2.08	3.04	23.11	21.42	24.21
60-64	4.25	2.72	3.02	23.92	24.45	25.35
65-69	10.21	9.25	13.57	24.25	33.48	28.45
70+	32.36	32.80	38.56	27.77	33.31	32.49

**Table 6. Self-Classification of Older Workers in 1995. Men**

		Retired	Housework	Disabled	Non-retirement pension	Other	TOTAL	
<b>EMPLOYED</b>								
	50-54	0.17	2.24	0.18	0.32	97.09	100	816,228
	55-59	0.11	2.56	0.32	0.61	96.4	100	589,308
	60-64	0.76	2.85	0.34	1.35	94.7	100	387,174
	65-69	26.39	5.24	0.00	1.38	66.99	100	54,105
	70+	57.10	3.09	0.00	2.10	37.71	100	24,791
<b>UNEMPLOYED</b>								
	50-54	0.11	5.29	0.00	1.15	93.45	100	100,880
	55-59	0.00	6.34	0.29	1.26	92.1	100	97,576
	60-64	0.81	4.28	0.00	0.81	94.1	100	45,618
	65-69	0.00	24.79	0.00	0.00	75.21	100	1,130
	70+	-	-	-	-	-	-	0
<b>INACTIVE</b>								
	50-54	34.79	3.14	26.16	14.99	20.92	100	126,362
	55-59	44.68	2.93	22.01	10.64	19.74	100	276,820
	60-64	70.91	2.11	12.00	7.06	7.92	100	656,719
	65-69	94.20	0.65	3.32	1.03	0.8	100	921,628
	70+	96.63	0.56	1.65	0.80	0.35	100	1,692,000

---

Note: The categories "Student" and "Voluntary work", almost nil, are included in "Other".

Source: EPA's second quarter.

**Table 7. Self-Classification of Older Workers in 1995. Women**

		Retired	Housework	Disabled	Non-retirement pension	Other	TOTAL	
<b>EMPLOYED</b>								
	<i>50-54</i>	0.04	79.26	0.05	0.14	20.51	100	324,297
	<i>55-59</i>	0.07	79.30	0.03	0.93	19.67	100	228,237
	<i>60-64</i>	0.51	82.46	0.14	0.39	16.5	100	166,933
	<i>65-69</i>	17.14	66.97	0.00	1.51	14.37	100	34,662
	<i>70+</i>	44.93	47.40	0.00	0.47	7.21	100	19,065
<b>UNEMPLOYED</b>								
	<i>50-54</i>	0.00	92.20	0.00	0.00	7.81	100	68,958
	<i>55-59</i>	0.27	95.84	0.00	0.00	3.89	100	36,027
	<i>60-64</i>	0.00	87.70	0.00	0.00	12.3	100	13,520
	<i>65-69</i>	0.00	100.00	0.00	0.00	0	100	863
	<i>70+</i>	100.00	0.00	0.00	0.00	0	100	234
<b>INACTIVE</b>								
	<i>50-54</i>	0.88	96.75	1.19	0.47	0.72	100	740,005
	<i>55-59</i>	2.48	95.02	0.94	0.58	0.97	100	795,251
	<i>60-64</i>	8.24	89.21	0.98	1.02	0.58	100	1,015,000
	<i>65-69</i>	26.79	70.17	1.07	1.54	0.39	100	1,103,000
	<i>70+</i>	32.82	56.19	2.22	8.16	0.62	100	2,522,000

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Note: The categories "Student" and "Voluntary work" are included in "Other".

Source: EPA's second quarter.



**Table 8. Comparison of Labor Force States as Result From Activity in the Reference Week and From Survey's Retrospective Question One Year Later. Men Aged 50-69**

Status Retrospectively Reported	Reference Week Status			
	Employed	Unemployed	Inactive	Total
Employed	28037	490	996	29523
	94.97	1.66	3.37	100.00
	92.64	15.21	4.38	52.52
Unemployed	483	2207	348	3038
	15.90	72.65	11.45	100.00
	1.60	68.52	1.53	5.40
Inactive	1745	524	21380	23649
	7.38	2.22	90.41	100.00
	5.77	16.27	94.09	42.07
Total	30265	3221	22724	56210
	53.84	5.73	40.43	100.00
	100.00	100.00	100.00	100.00

**Table 9. Labor Force Transitions Over One-Year Intervals.  
Pooled Sample from 1987 to 1996. Men Aged 50-69**

1. Panel Data

Status in quarter t	Status in quarter t+1			
	Employed	Unemployed	Inactive	Total
Employed	26018	963	3290	30271
	85.95	3.18	10.87	100.00
	93.95	33.64	12.80	53.80
Unemployed	772	1664	785	3221
	23.97	51.66	24.37	100.00
	2.79	58.12	3.05	5.72
Inactive	904	236	21634	22774
	3.97	1.04	94.99	100.00
	3.26	8.24	84.15	40.48
Total	27694	2863	25709	56266
	49.22	5.09	45.69	100.00
	100.00	100.00	100.00	100.00

2. Retrospective Question

Status in quarter t from retrospective question	Status in quarter t+1			
	Employed	Unemployed	Inactive	Total
Employed	26683	770	2070	29523
	90.38	2.61	7.01	100.00
	96.36	26.89	8.07	52.52
Unemployed	615	1985	438	3038
	20.24	65.34	14.42	100.00
	2.22	69.33	1.71	5.40
Inactive	393	108	23148	23649
	1.66	0.46	97.88	100.00
	1.42	3.77	90.22	42.07
Total	27691	2863	25656	56210
	49.26	5.09	45.64	100.00
	100.00	100.00	100.00	100.00

**Table 10. Sample Means and Multinomial Logit Estimates/Marginal Probabilities for Transition Rates From Employment**

	Sample Means	To inactivity			To unemployment		
		Coeff.	t	Marg. prob.	Coeff.	t	Marg. prob.
Age	56.319	.035	0.43	.0012	.615	3.99	.0187
Age <sup>2</sup> /100		.157	1.84	.0167	-.422	2.38	-.0134
Age <sup>3</sup> /10000		-.024	0.44	-.0017	-.165	1.47	-.0050
Age=59	.063	.177	1.08	.0180	-.254	0.75	-.0084
Age=64	.034	1.922	12.08	.1808	1.410	1.01	.0366
Time		.099	2.46	.0089	.185	2.69	.0053
Time <sup>2</sup>		-.010	2.65	-.0009	-.019	2.70	-.0005
Time*Age=59		.066	2.40	.0062	.057	1.00	.0015
Time*Age=64		.004	0.17	.0037	-.964	1.25	-.0296
No education	.226						
Primary	.565	.110	2.10	.0105	.030	0.36	.0005
Secondary acad.	.097	-.181	2.03	-.0171	-.108	0.71	-.0027
Secondary vocat.	.024	-.030	0.19	-.0023	-.180	0.65	-.0054
University	.086	-.454	4.62	-.0422	-.476	2.34	-.0130
Married	.913	.284	3.68	.0273	.033	0.25	.0000
# household memb.	3.985	-.045	2.79	-.0044	.006	0.24	.0003
Children (yes=1)	.262	-.100	1.57	-.0100	.110	1.25	.0037
Ill	.040	1.410	19.06	.1354	.220	1.36	.0019
Empl. adjustment	.006	.991	4.86	.0930	.789	2.99	.0208
Nonemployment	.037	.778	7.83	.0720	.917	8.65	.0254
Temporary	.070	.152	1.58	.0116	.874	8.24	.0263
Private sector	.432						
Public	.169	.177	2.50	.0187	-.474	3.46	-.0151
Other	.398	-.439	7.53	-.0403	-.586	5.68	-.0165
Farming/fishing	.233						
Mining/manufact.	.232	.302	4.28	.0292	-.024	0.20	-.0018
Construction	.096	.100	1.16	.0080	.500	4.58	.0150
Trade/rest./hotel	.166	-.113	1.57	-.0110	.036	0.29	.0015
Other services	.270	-.168	2.21	-.0149	-.372	2.78	-.0108
Tenure in years	21.073	.003	1.83	.0004	-.030	8.12	-.0009
Workweek <35 hours	.039	.150	1.51	.0150	-.154	0.72	-.0052
35-39	.075	-.075	0.88	-.0071	-.046	0.26	-.0011
40	.561						
> 40	.324	-.128	2.35	-.0119	-.139	1.51	-.0038
North	.224						
South	.254	-.074	0.81	-.0079	.221	1.41	.0070
Center	.250	-.062	1.02	-.0072	.360	3.16	.0112
East	.270	-.093	1.57	-.0094	.105	0.92	.0035
Regional un. rate	19.313	.018	2.86	.0017	.036	3.31	.0010
Constant		-9.695	3.99		-22.506	5.26	
Sample's transition rate			.1083			.0317	
Log likelihood				-11,841			
Number of observations				30,253			
Pseudo R <sup>2</sup>				0.18			

**Notes:**

1. The sample is composed of 50-69 years old men, employed at the origin year.
2. Transition rates are calculated between EPAS's second quarters of two consecutive years.
3. Given the sample's transition rate to state  $j$ ,  $p_j$ , and the estimated coefficients,  $\beta_j$ , the marginal effect of an exogenous variable,  $x$ , is obtained at the sample means as follows:  $\delta p_j / \delta x = p_j ( \beta_j - \sum p_k \beta_k )$ , where  $k=1,2$ .

**Table 11. Sample Means and Multinomial Logit Estimates/Marginal Probabilities for Transition Rates From Unemployment**

	Sample Means	To inactivity			To employment		
		Coeff.	t	Marg. prob.	Coeff.	t	Marg. prob.
Age	55.842	-.355	1.35	-.0513	-.191	0.78	-.0156
Age <sup>2</sup> /100		.608	2.37	.1036	.075	0.27	-.0230
Age <sup>3</sup> /10000		-.125	0.70	-.0261	.062	0.37	.0199
Age=59	.071	1.287	2.87	.1534	1.218	2.53	.1591
Age=64	.020	1.953	1.61	.3366	.176	0.09	-.0866
Time		.205	1.79	.0418	-.083	0.84	-.0291
Time <sup>2</sup>		-.021	1.86	-.0040	.002	0.25	.0018
Time*Age=59	.352	-.035	0.49	.0076	-.225	2.42	-.0420
Time*Age=64	.104	.117	0.50	.0145	.102	0.30	.0127
No education	.447						
Primary	.471	-.102	0.78	-.0169	-.021	0.18	.0020
Secondary acad.	.051	-.540	1.75	-.0754	-.334	1.30	-.0319
Secondary vocat.	.013	-.052	0.10	-.0109	.024	0.05	.0081
University	.016	-1.046	1.79	-.2110	.401	1.07	.1436
Married	.889	.392	2.03	.0170	.850	4.46	.1424
# household memb.	4.017	.033	0.75	.0010	.077	2.16	.0131
Children (yes=1)	.300	-.267	1.62	-.0404	-.114	0.87	-.0059
U. durat. <6 months	.402						
6-11	.194	.051	0.31	.0247	-.250	1.75	-.0524
12-23	.221	.427	2.73	.0839	-.127	0.88	-.0514
24-35	.181	.145	0.85	.0444	-.298	1.96	-.0676
Registered with UI	.666	-.086	0.64	-.0107	-.073	0.64	-.0090
Reg. without UI	.286						
Not registered	.045	.526	1.71	.0865	.115	0.44	-.0100
End of Fixed-term	.613						
Lay-off	.262	.183	1.07	.0492	-.267	1.70	-.0639
Other reason	.123	.373	1.65	.0582	.132	0.63	.0028
Private sector	.809						
Public	.145	.368	2.00	.0627	.046	0.27	-.0138
Other	.044	-1.026	2.72	-.1736	-.143	0.47	.0355
Farming/fishing	.233						
Mining/manufact.	.204	.505	2.36	.1049	-.241	1.24	-.0786
Construction	.323	.572	3.24	.0813	.329	2.25	.0291
Trade/rest./hotel	.095	.173	0.67	.0456	-.238	1.06	-.0576
Other services	.143	.426	1.83	.0778	-.031	0.15	-.0326
Previous tenure (in years)	6.813	.013	2.07	.0028	-.006	0.88	-.0020
North	.121						
South	.482	.381	1.34	.0690	-.020	0.08	-.0277
Center	.196	.097	0.46	.0173	.001	0.00	-.0058
East	.199	.091	0.44	.0038	.200	1.07	.0336
Regional un. rate	22.575	-.011	0.59	-.0016	-.006	0.37	-.0005
Constant		.700	0.08		6.276	0.93	
Sample's transition rate		.2315			.2681		
Log likelihood				-2,199			
Number of observations				2,402			
Pseudo R <sup>2</sup>				0.12			

**Notes:**

1. The sample is composed of 50-69 year old men, unemployed at the origin year.
2. See notes 2 and 3 of Table 10.

**Table 12. Sample Means and Multinomial Logit Estimates/Marginal Probabilities for Transition Rates From Inactivity**

	Sample Means	To employment			To unemployment		
		Coeff.	t	Marg. prob.	Coeff.	t	Marg. prob.
Age	62.128	.589	2.92	.0268	1.631	4.64	.0272
Age <sup>2</sup> /100		-.274	1.24	-.0121	-1.180	3.05	-.0198
Age <sup>3</sup> /10000		-.451	3.21	-.0212	-.528	1.78	-.0085
Age=59	.045	-.241	0.50	-.0111	-.490	0.57	-.0081
Age=64	.060	.213	0.31	.0145	-4.928	0.86	-.0839
Time		-.084	0.84	-.0040	.061	0.34	.0011
Time <sup>2</sup>		.004	0.44	.0002	-.006	0.35	-.0001
Time*Age=59	.244	.008	0.11	.0004	-.032	0.24	-.0005
Time*Age=64	.325	-.094	0.75	-.0049	.530	0.75	.0090
No education	.330						
Primary	.541	-.168	1.36	-.0082	.213	0.99	.0037
Secondary acad.	.065	-.198	0.84	-.0097	.206	0.49	.0036
Secondary vocat.	.017	-.520	1.08	-.0259	1.101	2.08	.0191
University	.045	-.039	0.12	-.0025	.694	1.31	.0118
Married	.894	.387	2.01	.0187	-.198	0.71	-.0037
# household memb.	3.267	-.019	0.45	-.0009	.065	0.97	.0011
Children (yes=1)	.129	.084	0.52	.0040	-.042	0.16	-.0008
Left job<6 months	.160						
6-11	.163	.028	0.18	.0012	.162	0.63	.0027
12-23	.338	-.376	2.59	-.0177	-.455	1.89	-.0074
24-35	.337	-.414	2.75	-.0193	-.664	2.52	-.0109
End of Fixed-term	.043						
Lay-off	.054	-.323	1.24	-.0153	-.223	0.69	-.0035
Other reason	.902	-.664	3.32	-.0307	-1.379	5.45	-.0228
Private sector	.556						
Public	.185	-.029	0.18	-.0009	-.588	1.97	-.0099
Other	.258	.466	3.23	.0222	.152	0.48	.0021
Farming/fishing	.261						
Mining/manufact.	.272	-.298	1.77	-.0144	.151	0.50	.0028
Construction	.122	-.066	0.36	-.0033	.229	0.82	.0039
Trade/rest./hotel	.117	.233	1.30	.0113	-.132	0.36	-.0024
Other services	.226	-.130	0.69	-.0063	.092	0.27	.0016
Previous tenure (in years)	24.963	-.007	1.73	-.0003	-.045	5.22	-.0007
North	.226			.0087			.0048
South	.269	.187	0.81	.0066	.292	0.74	.0025
Center	.247	.141	0.90	.0042	.154	0.55	-.0028
East	.256	.086	0.55	-.0009	-.162	0.57	.0001
Regional un. rate	20.004	-.018	1.16	-.7921	.006	0.21	-.7828
Constant		-17.343	2.90		-46.941	4.39	
Sample's transition rate		.0506			.0173		
Log likelihood				-1,989			
Number of observations				8,360			
Pseudo R <sup>2</sup>				0.17			

**Notes:**

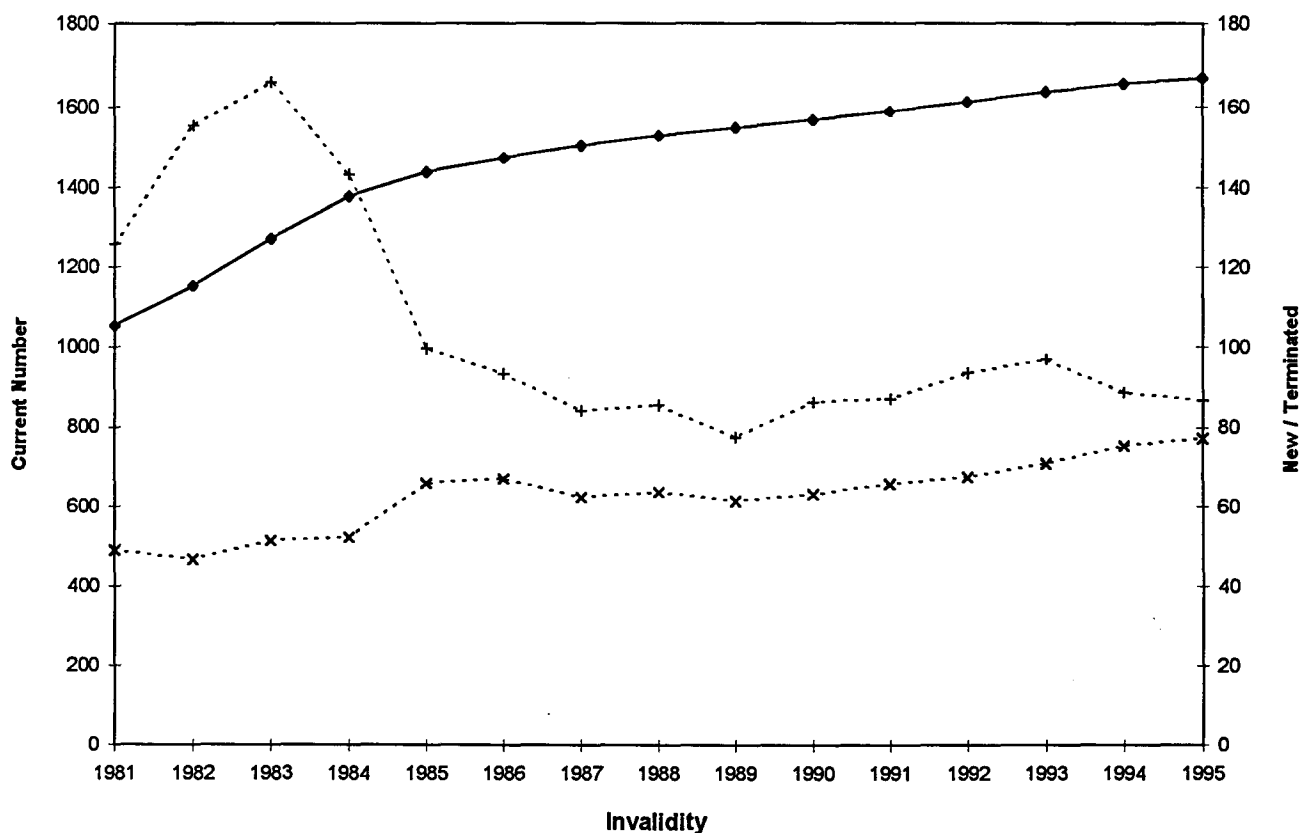
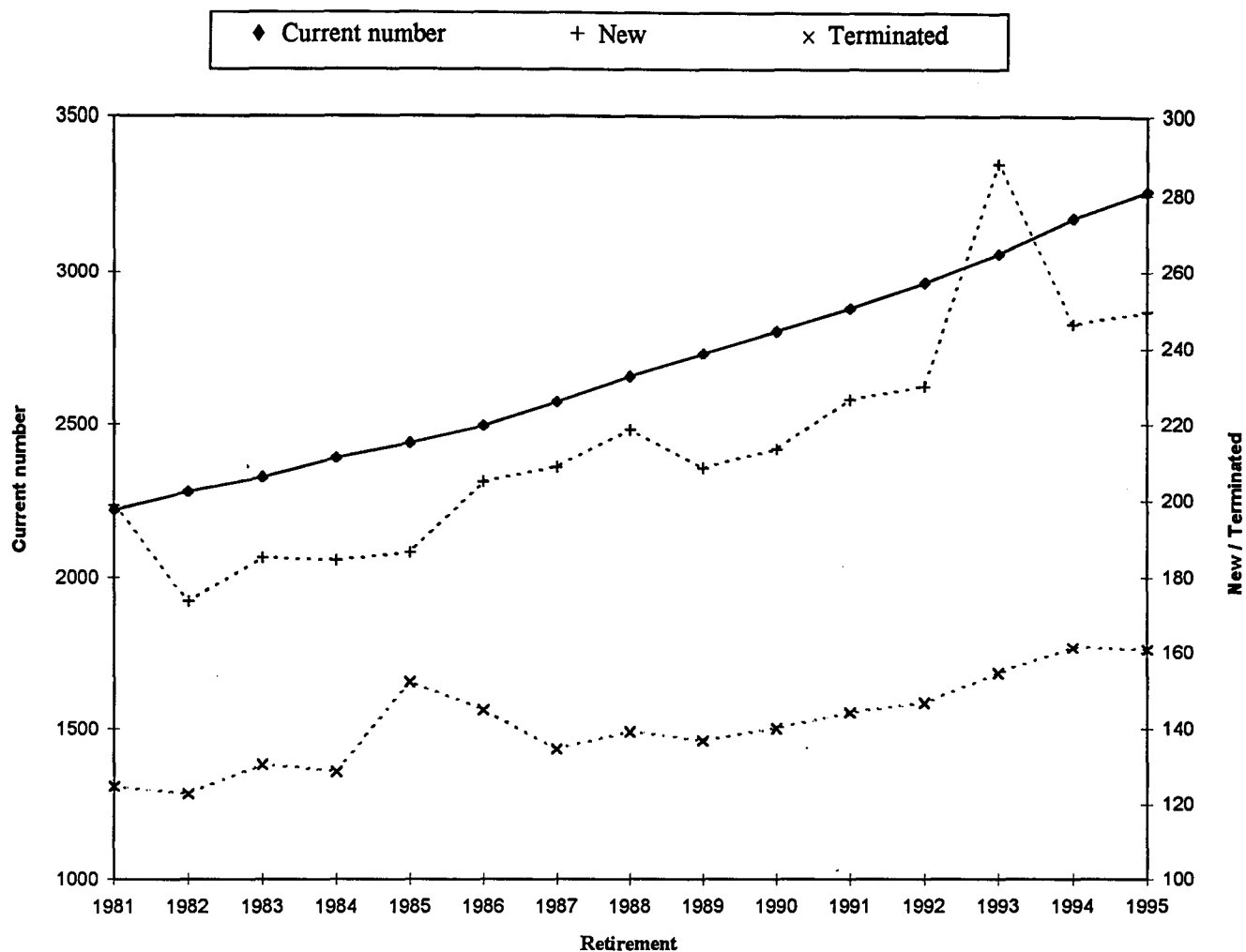
1. The sample is composed of 50-69 year old men, inactive at the origin year.
2. See notes 2 and 3 of Table 10.

**Table 13. Sample Means and Multinomial Logit Estimates/Marginal Probabilities for Transition Rates From Full-Time Employment**

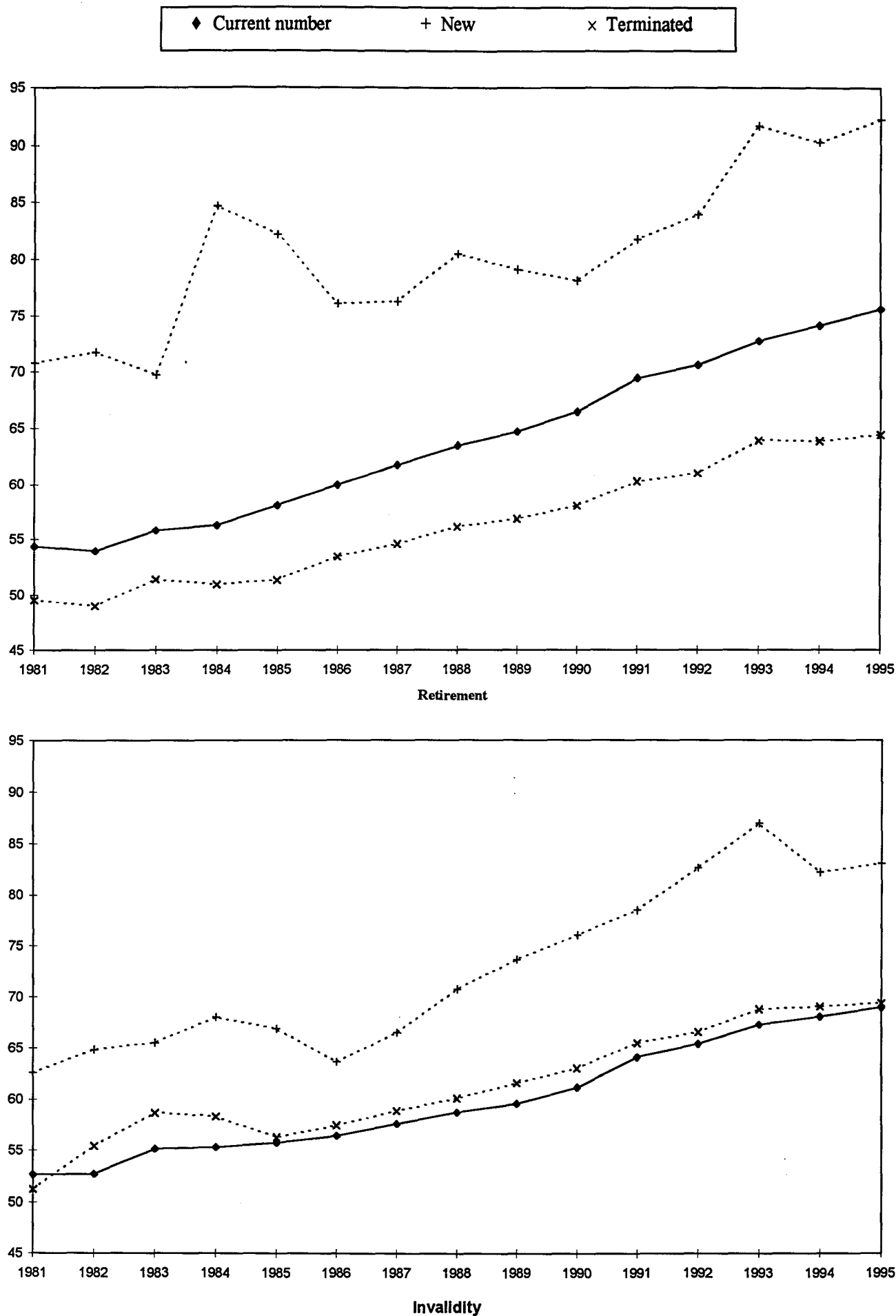
	Sample Means	To Part-time empl.			To inactiv./unempl.		
		Coeff.	t	Marg. prob.	Coeff.	t	Marg. prob.
Age	56.235	-.359	2.03	-.0052	-.111	1.54	-.0125
Age <sup>2</sup> /100		.333	1.59	.0047	.171	2.13	.0197
Age <sup>3</sup> /10000		.040	0.31	.0004	.064	1.27	.0076
Age=59	.063	1.172	2.84	.0176	.120	0.77	.0118
Age=64	.034	1.199	2.52	.0140	1.960	11.98	.2312
Time		.082	0.87	.0009	.124	3.40	.0146
Time <sup>2</sup>		-.007	0.78	-.0000	-.013	3.56	-.0015
Time*Age=59	.308	-.251	2.68	-.0039	.060	2.31	.0078
Time*Age=64	.161	-.101	1.09	-.0015	-.006	0.22	-.0005
No education	.224						
Primary	.572	-.284	2.35	-.0044	.071	1.52	.0091
Secondary acad.	.099	-.521	2.27	-.0075	-.189	2.37	-.0214
Secondary vocat.	.024	.289	0.87	.0045	-.058	0.42	-.0076
University	.079	.641	3.63	.0107	-.463	4.93	-.0566
Married	.916	-.328	2.23	-.0054	.197	2.78	.0242
# household memb.	3.998	-.078	2.12	-.0011	-.038	2.65	-.0044
Children (yes=1)	.264	.462	3.59	.0070	.008	0.15	.0000
Ill	.040	.775	3.56	.0093	1.177	16.63	.1387
Empl. adjustment	.005	1.056	2.01	.0141	.910	5.06	.1062
Nonemployment	.035	-.012	0.04	-.0021	.919	11.26	.1096
Temporary	.069	.223	0.85	.0019	.667	8.98	.0790
Private sector	.442						
Public	.166	.229	1.27	.0034	.048	0.73	.0052
Other	.391	.866	6.03	.0141	-.448	8.52	-.0553
Farming/fishing	.226						
Mining/manufact.	.239	-1.136	5.77	-.0177	.198	3.10	.0261
Construction	.099	-1.340	4.90	-.0210	.289	4.07	.0374
Trade/rest./hotel	.168	-.786	4.81	-.0117	-.096	1.46	-.0098
Other services	.265	-.423	2.62	-.0059	-.228	3.27	-.0263
Tenure in years	21.098	-.002	0.70	-.0000	-.001	0.82	-.0001
Workweek 35-39 h.	.078	.636	4.09	.0097	-.033	0.42	-.0053
40	.584						
> 40	.337	-.406	3.45	-.0059	-.141	2.91	-.0159
North	.225						
South	.254	.269	1.21	.0041	-.001	0.01	-.0007
Center	.251	.074	0.50	.0010	.017	0.32	.0019
East	.268	.355	2.47	.0055	-.047	0.86	-.0064
Regional un. rate	19.308	.000	0.01	-.0000	.023	3.95	.0028
Constant		5.269	1.05	.0868	-3.002	1.42	-.3693
Sample's transition rate		.0155			.1384		
Log likelihood				-11,947			
Number of observations				29,059			
Pseudo R <sup>2</sup>				0.14			

**Notes:**

1. The sample is composed of 50-69 year old men, employed full-time (35 or more hours per week) at the origin year.
2. See notes 2 and 3 of Table 10.

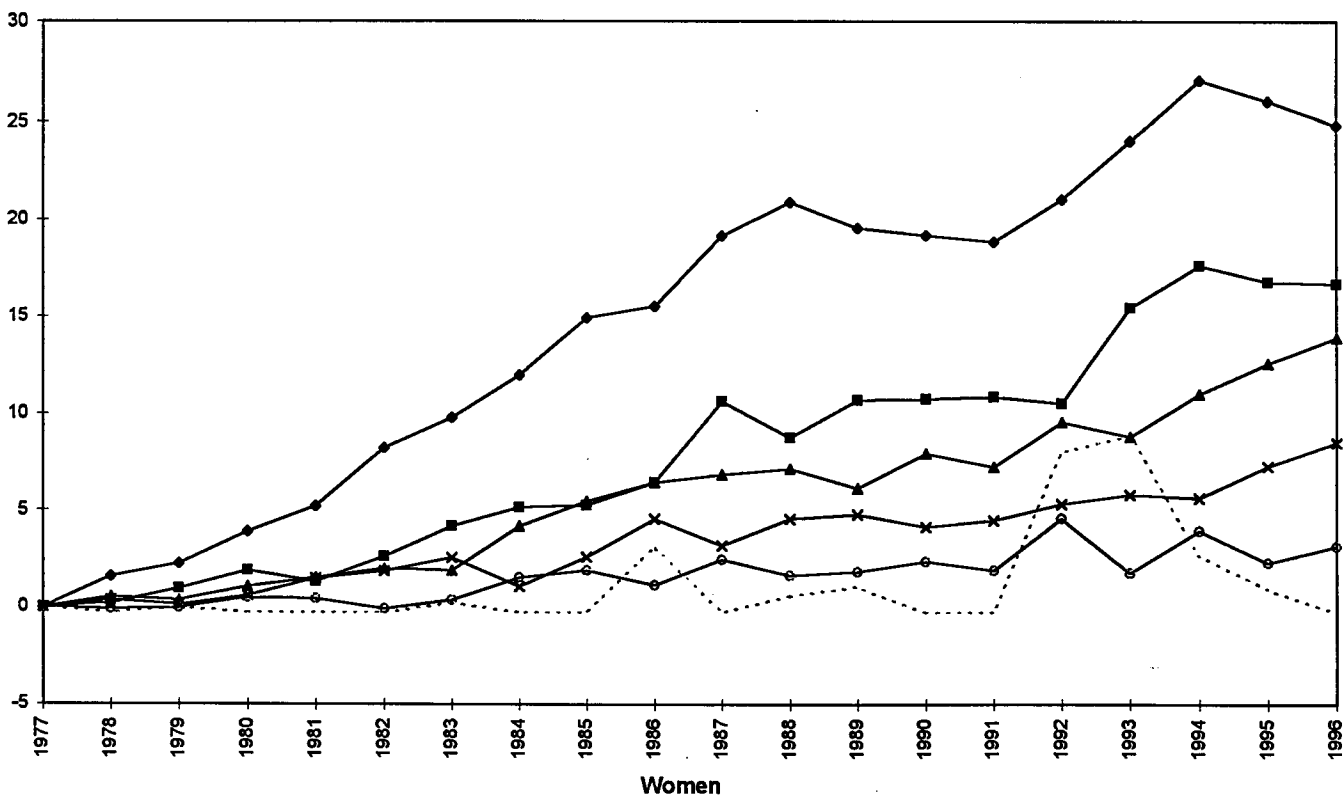
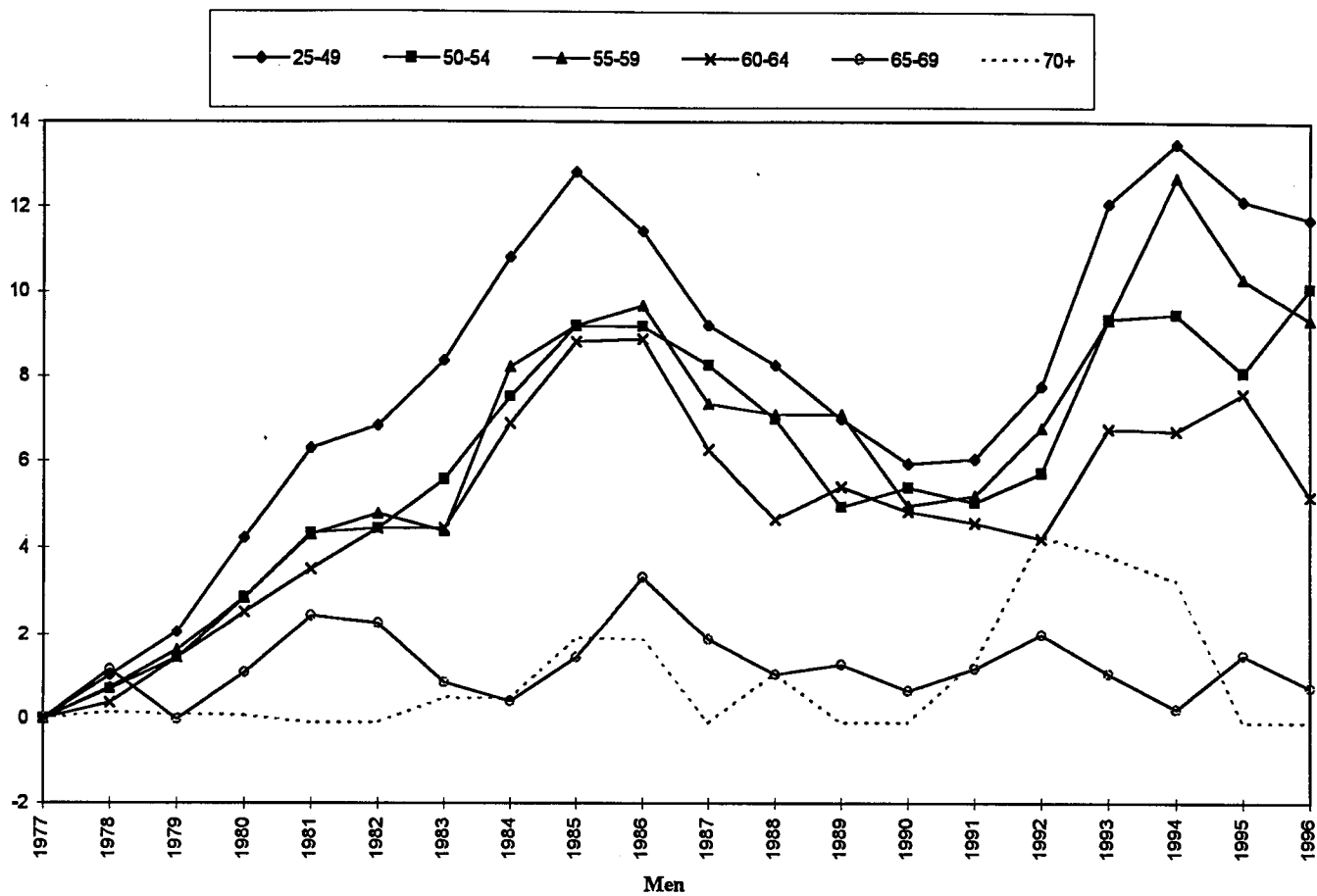


**Figure 1. Number of Social Security Pensions by Type in Thousands**



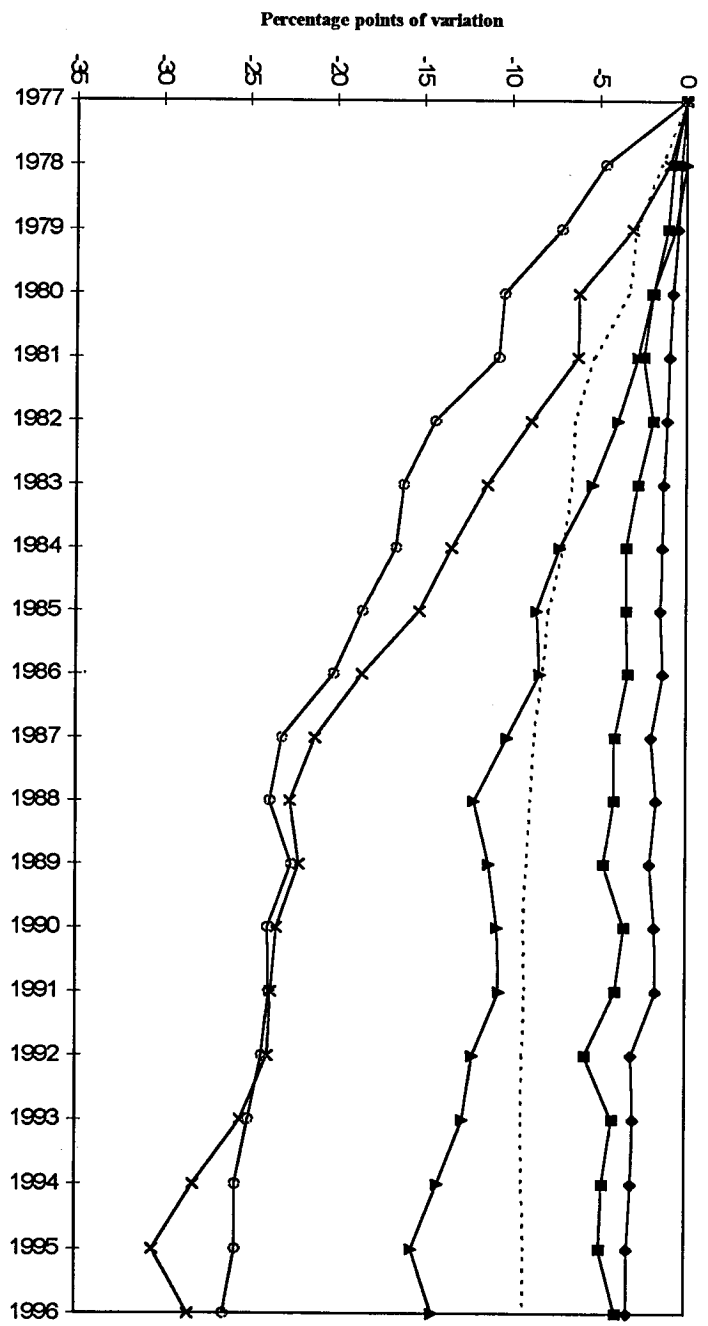
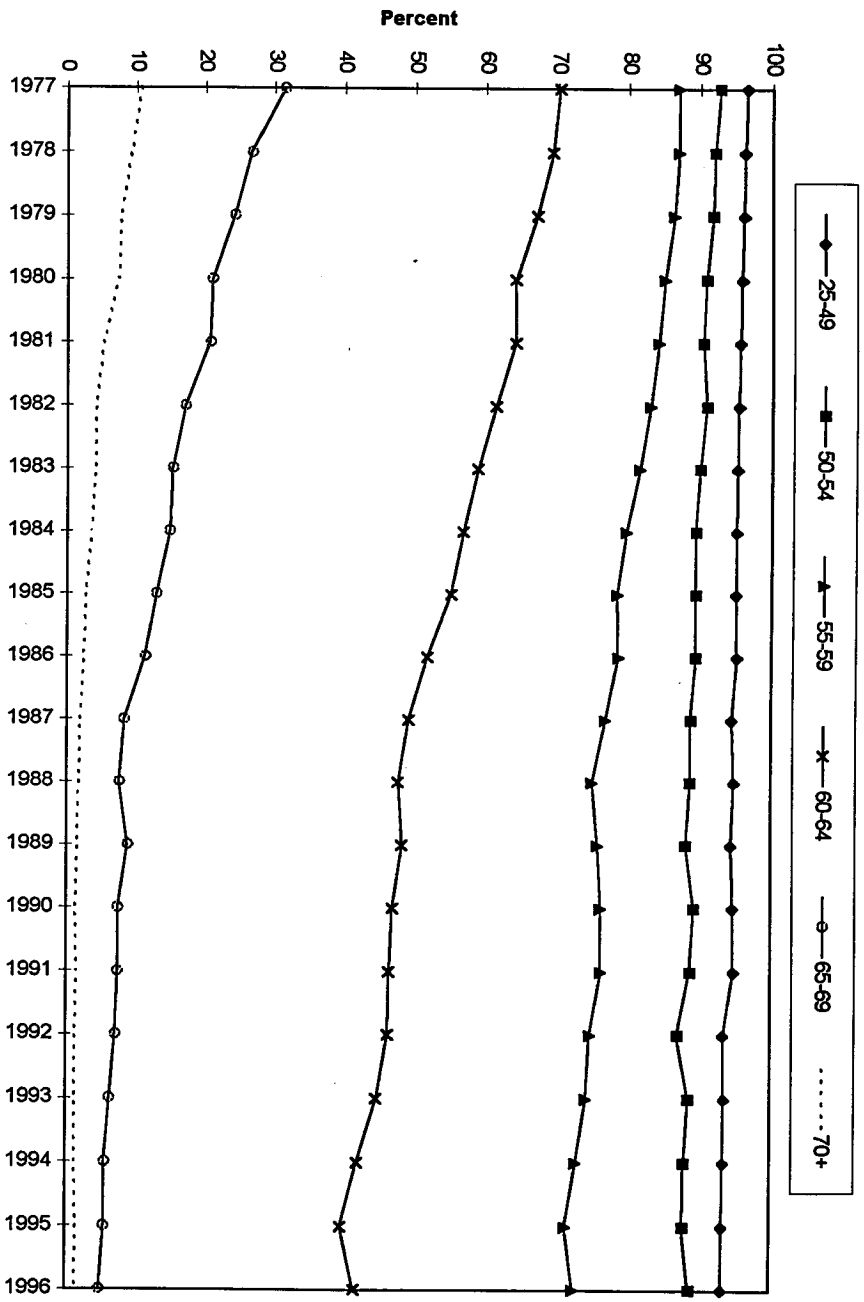
**Figure 2. Average Benefit Amount For Social Security Pensions.  
In Thousand Pesetas , 1996 Value**





**Figure 3. Percentage Point Variations in the Unemployment Rate by Age Groups and Gender**

Source: EPA's second quarter of each year.



**Figure 4. Labor Force Participation Rates of Men by Age Groups**

Source: EPA's second quarter of each year.

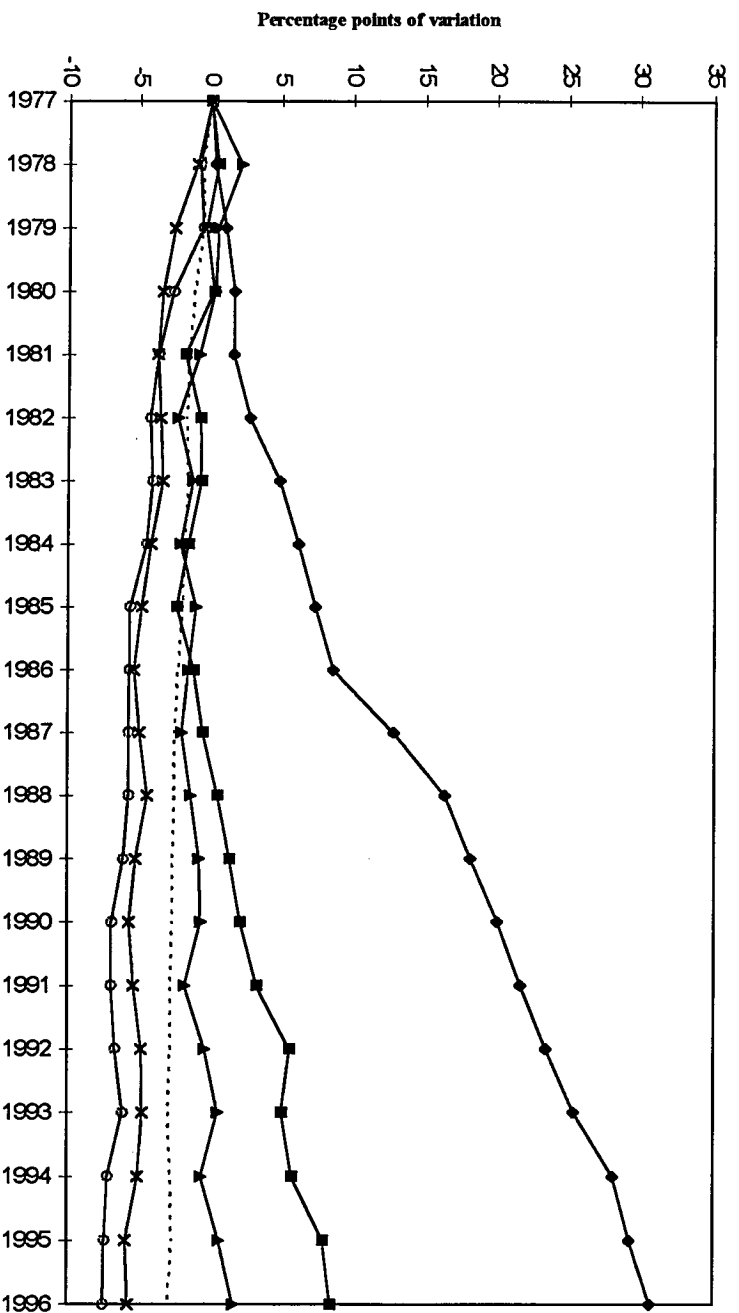
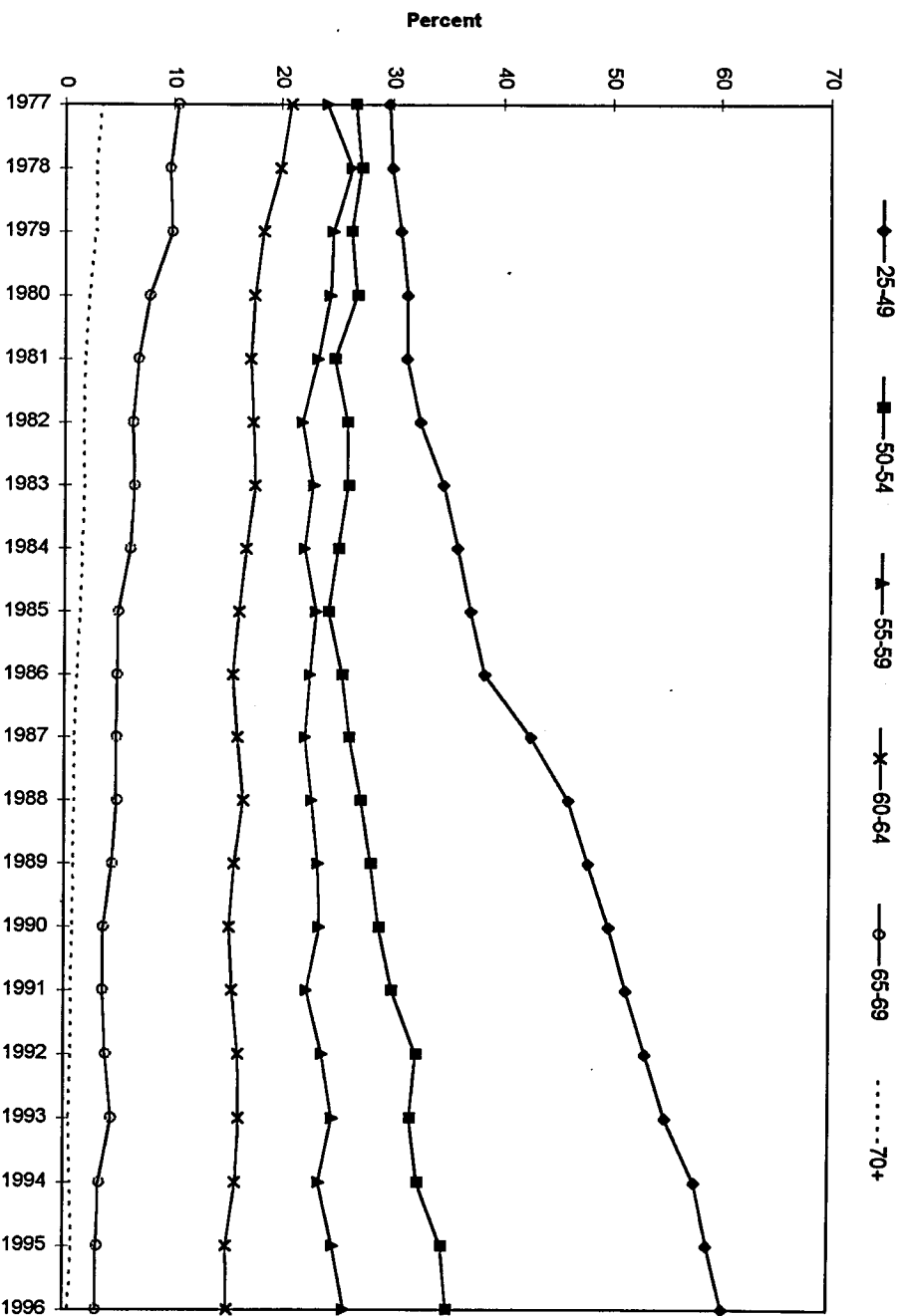
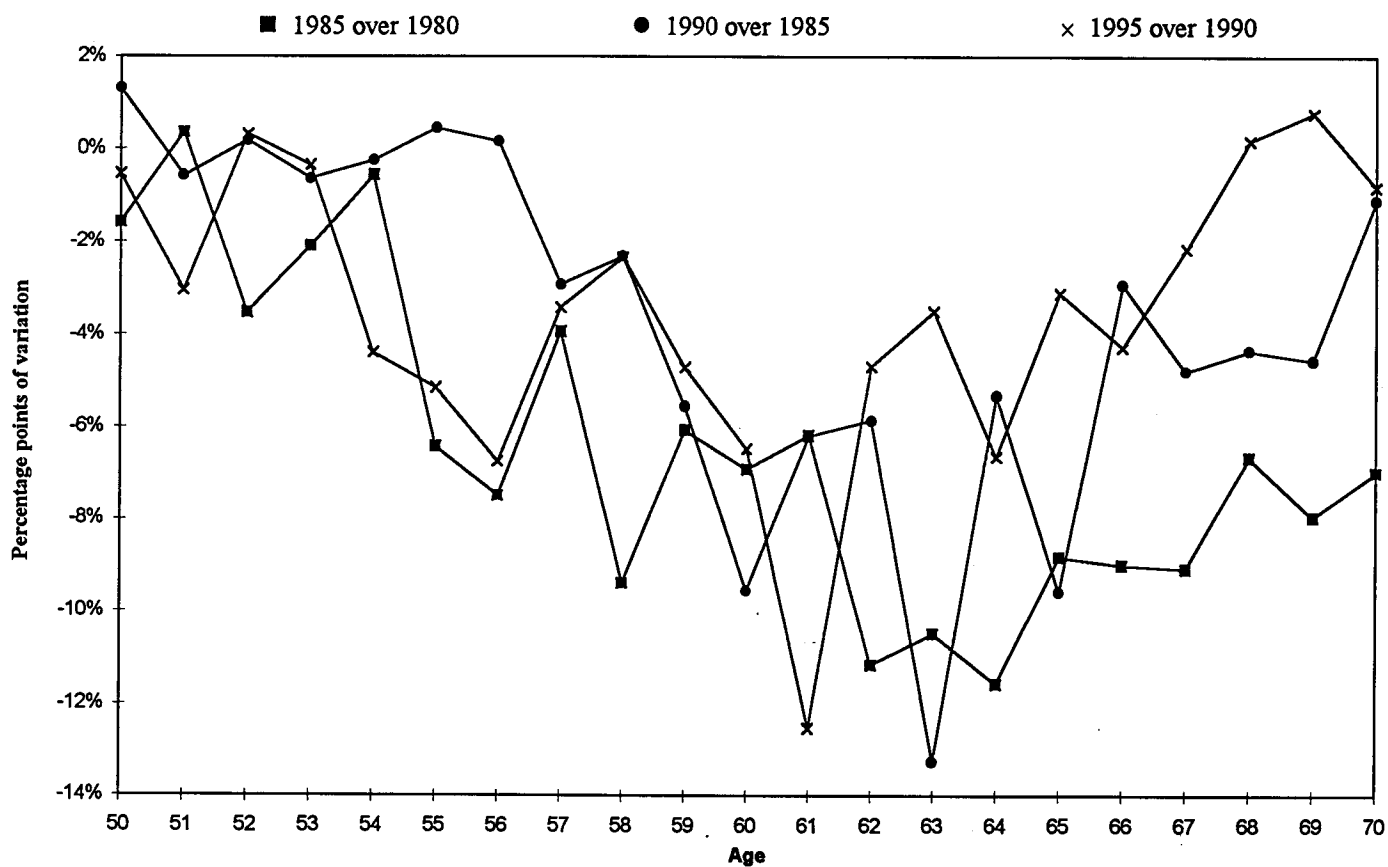
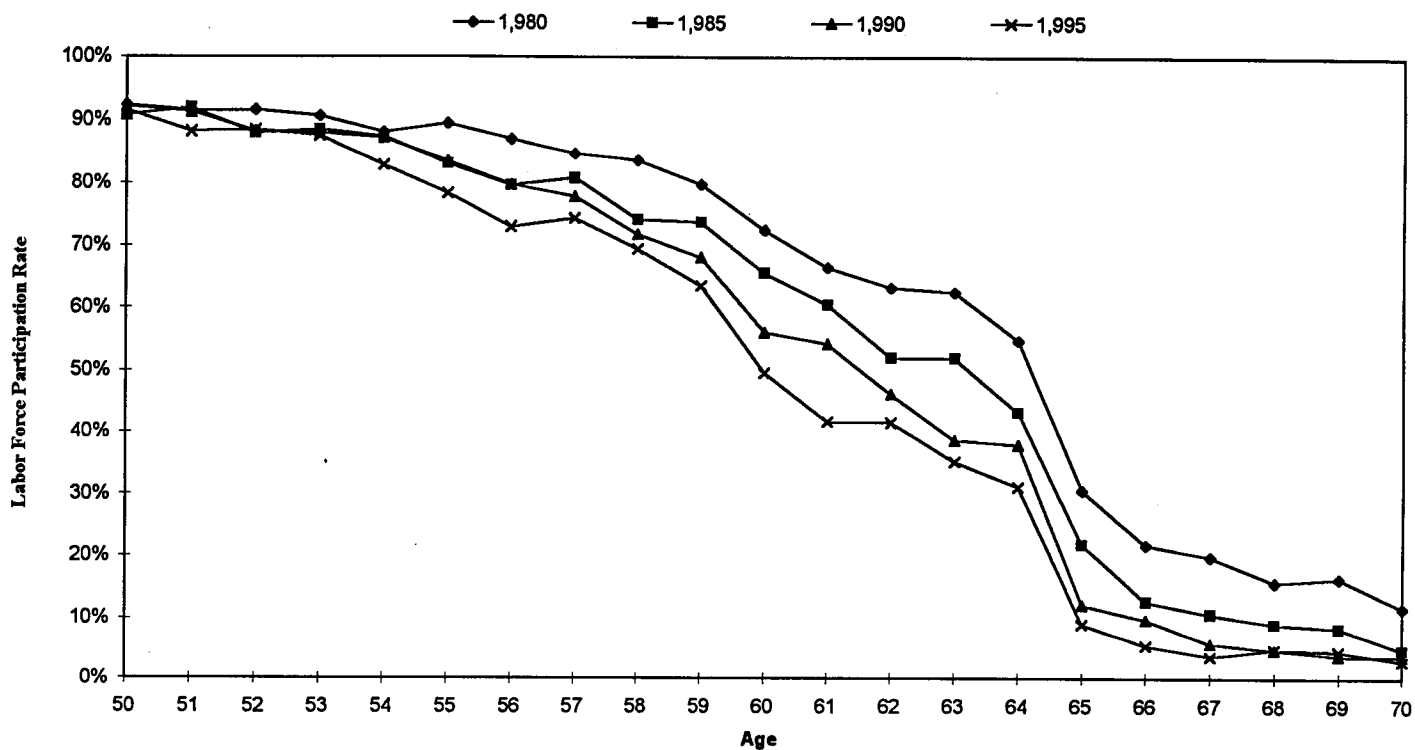
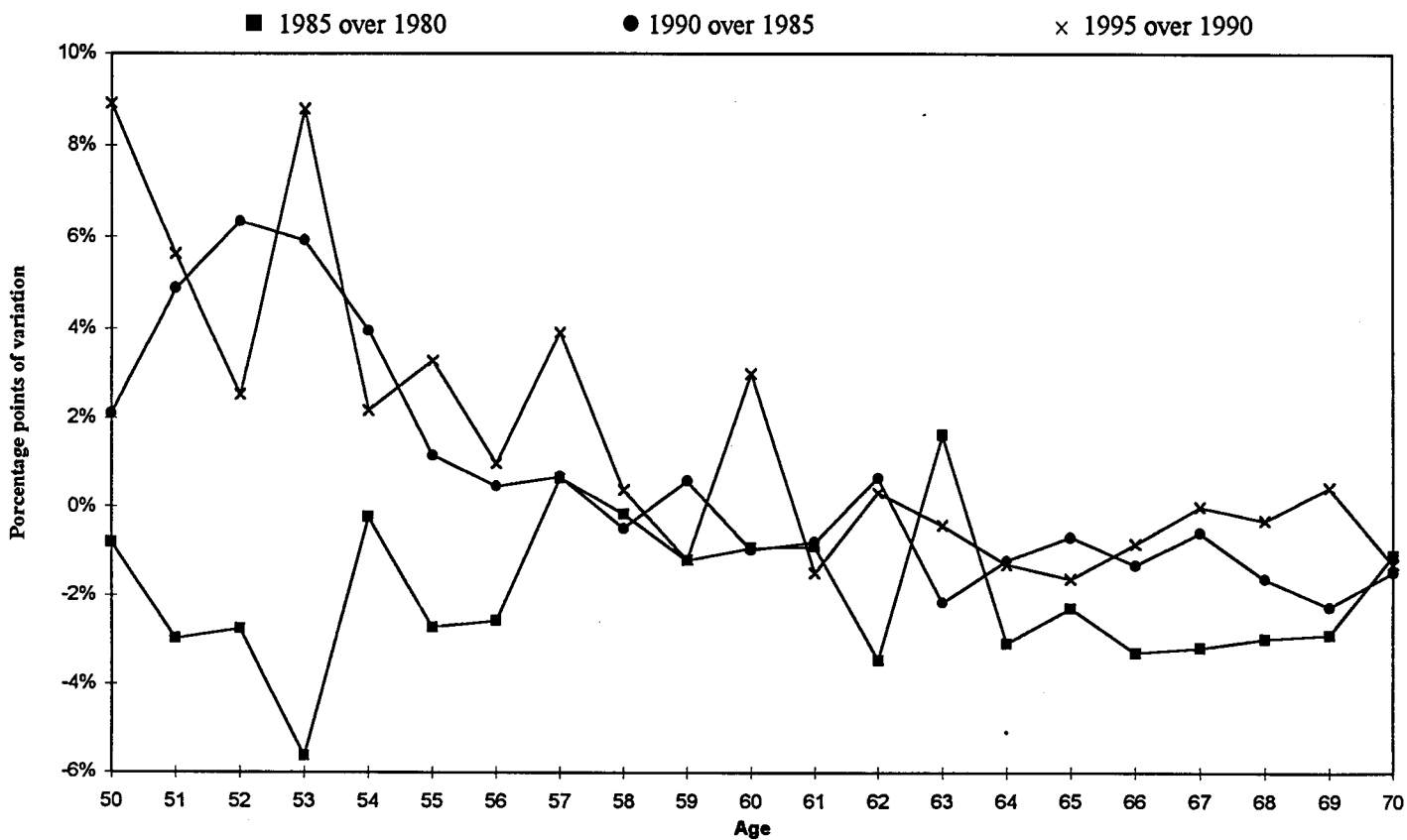
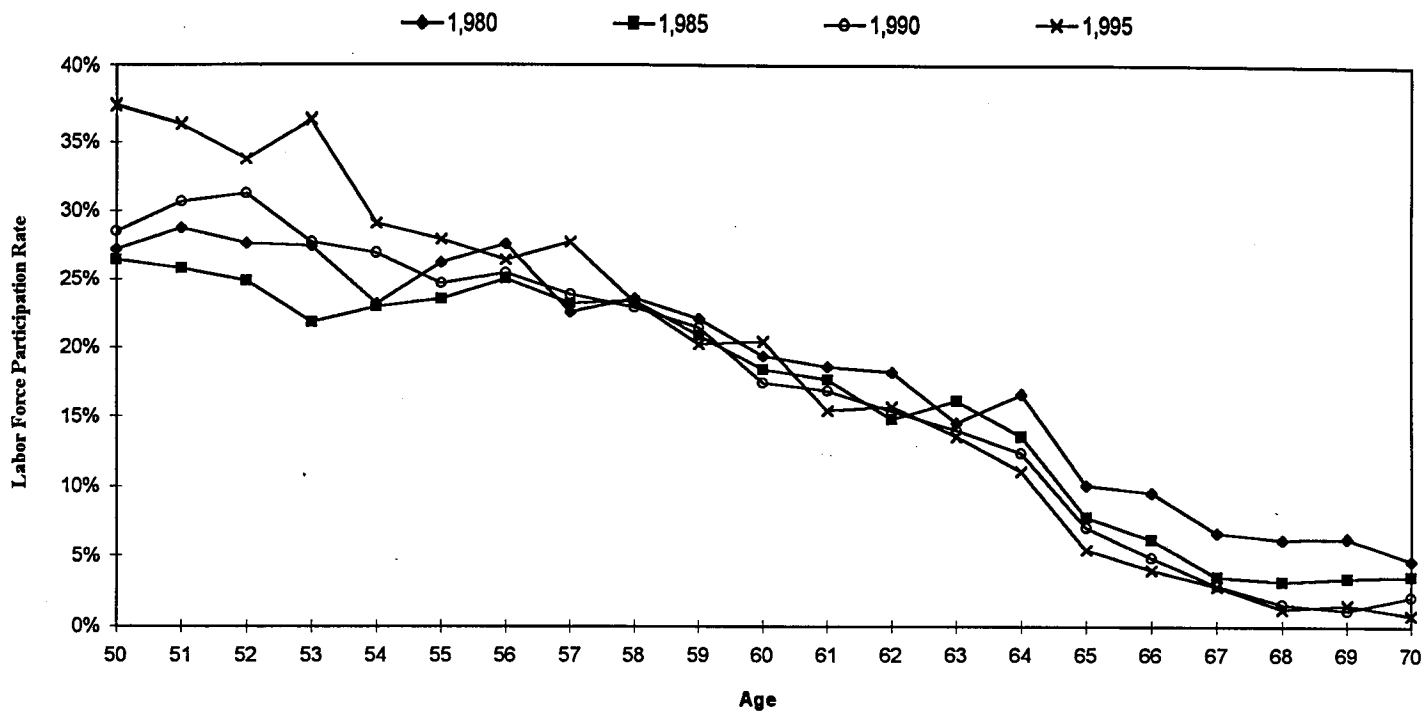


Figure 5. Labor Force Participation Rates of Women by Age Groups

Source: EPA's second quarter of each year.



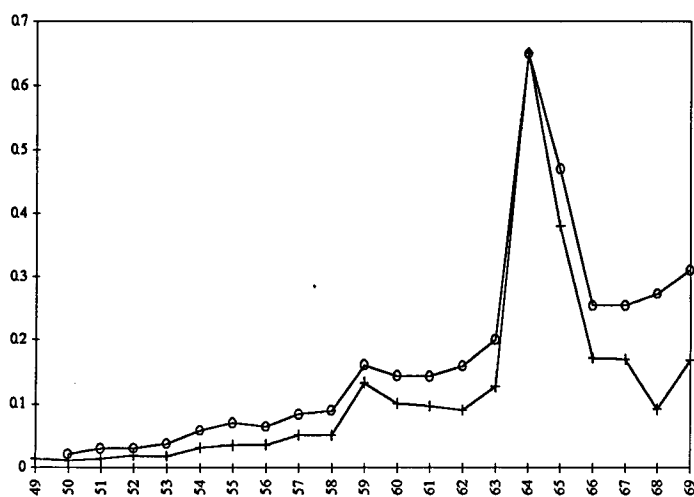
**Figure 6. Age Participation Profiles of Men for Selected Years**



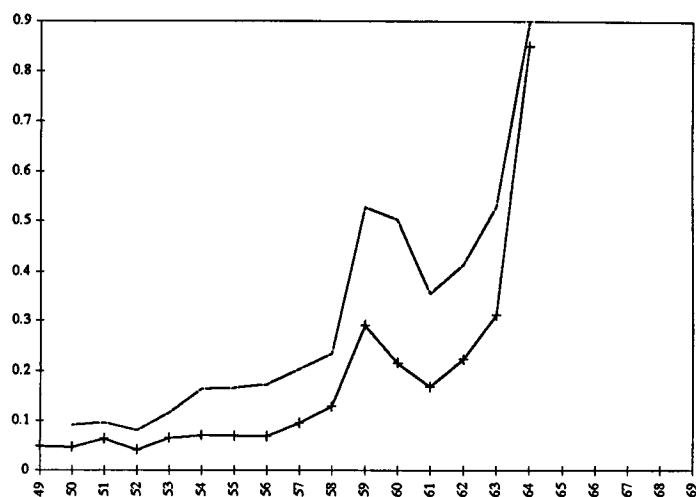
**Figure 7. Age Participation Profiles of Women for Selected Years**

o Matched files      + Retrospective question

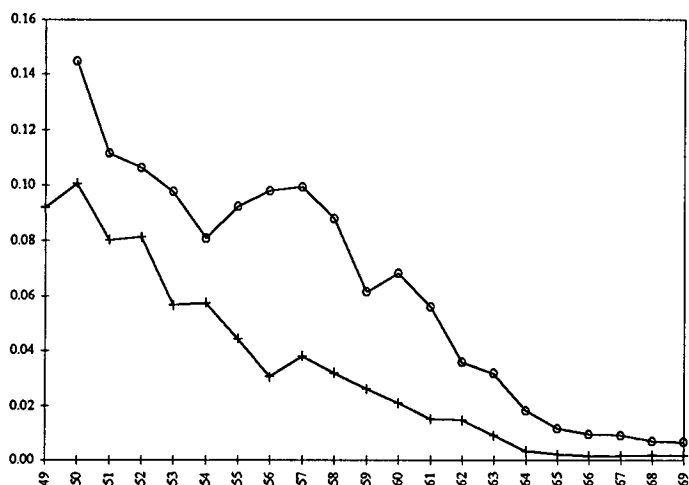
**Employment to inactivity**



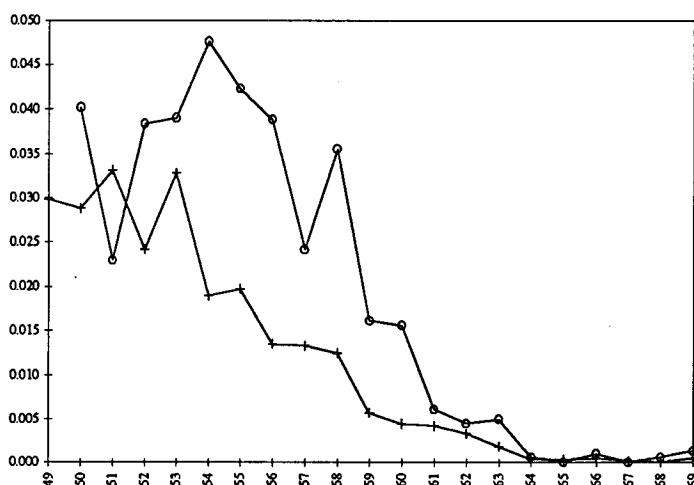
**Unemployment to inactivity**



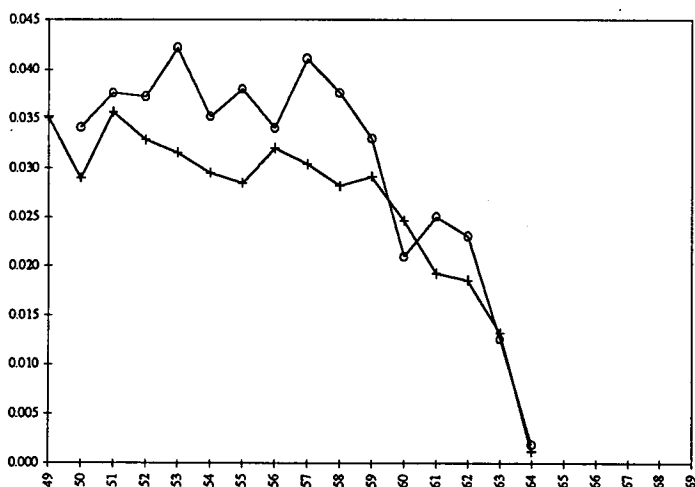
**Inactivity to employment**



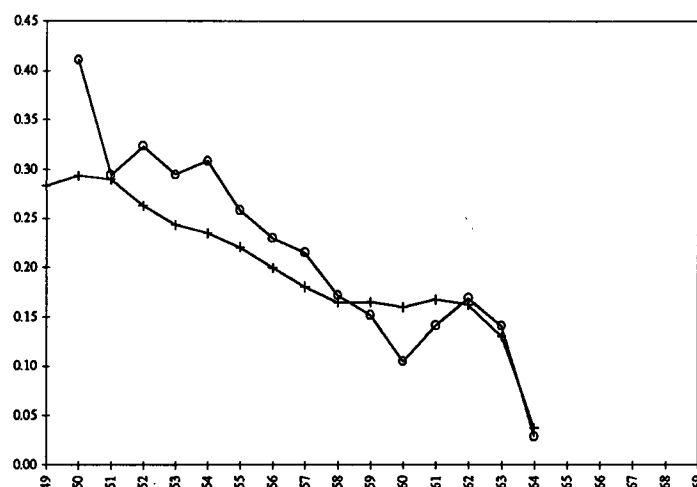
**Inactivity to unemployment**



**Employment to unemployment**



**Unemployment to employment**

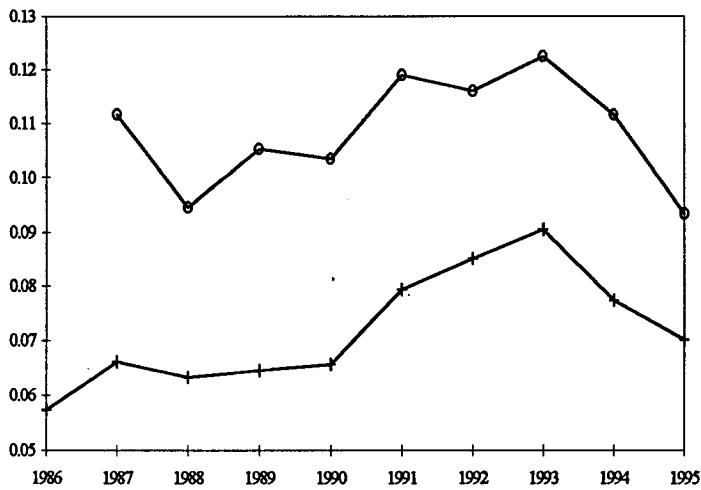


**Figure 8. Transition Rates by Age Over One-Year Interval for the Period 1987-1996. Men**

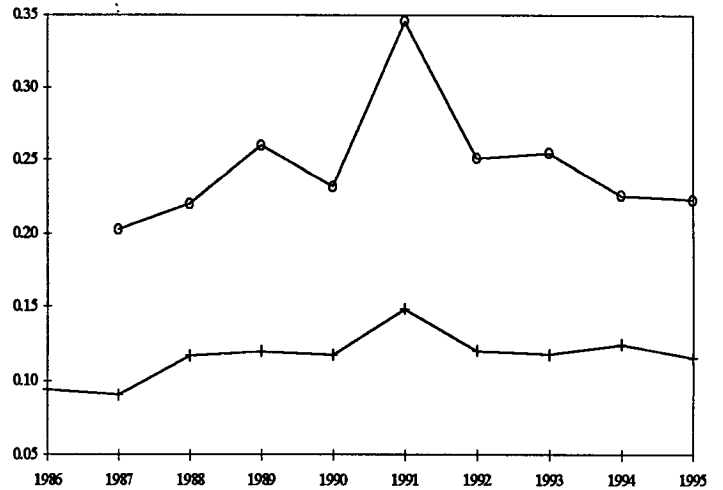
o Matched files

+ Retrospective question

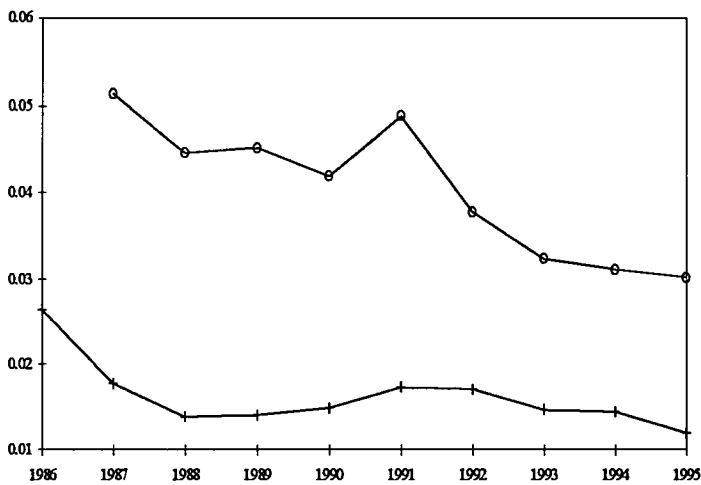
**Employment to inactivity**



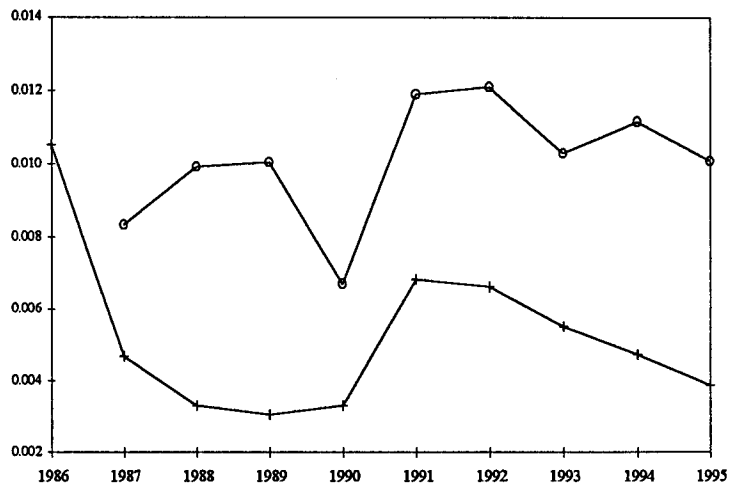
**Unemployment to inactivity**



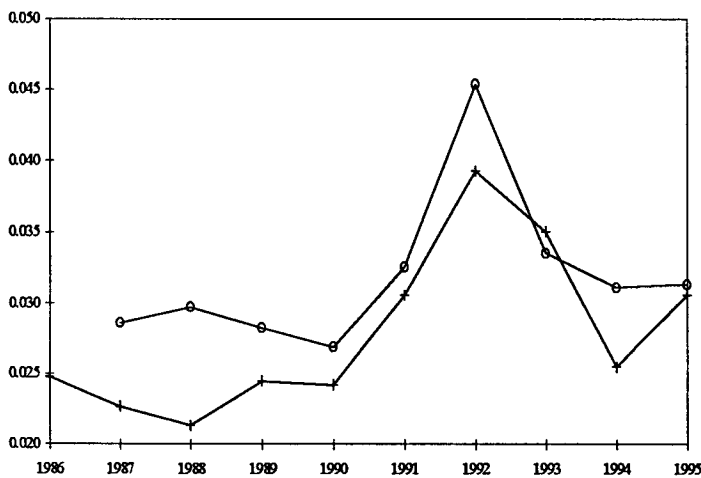
**Inactivity to employment**



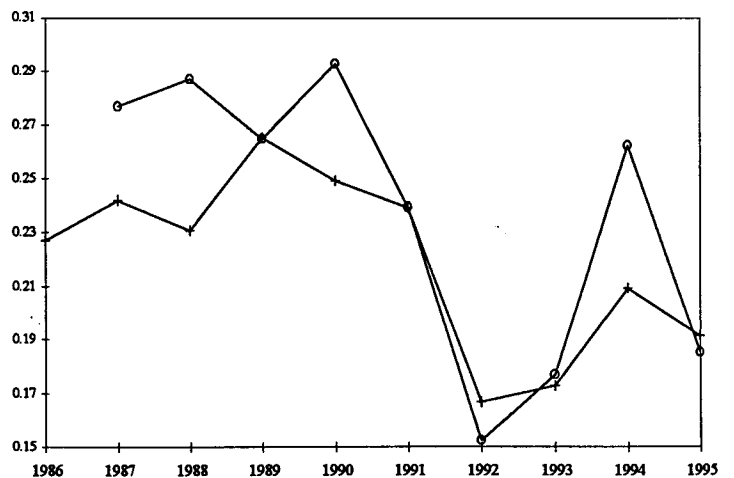
**Inactivity to unemployment**



**Employment to unemployment**



**Unemployment to employment**



**Figure 9. Transition Rates Over One-Year Interval. Men Aged 50-69**