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AN ANALYSIS OF YOUTH LABOR FORCE
TRANSITION PROBABILITIES

by

Douglas Wayne Harris

December 1984

Thesis Advisor: George W. Thomas

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Much of the enlisted supply research to date focuses on the transition of individuals from high school to the military. Little is known of those who have chosen other options, such as further education, employment, or to remain out of the labor force completely. With the decline of the 17-21 year old male population, research must be directed towards the entire labor market. This research uses data

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from the National Longitudinal Survey of Youth to estimate the transition probabilities among seven possible states for individuals aged 17-22. The states are high school, college active service, employment full time, employment part time, unemployment, and out of the labor force. Tests are made to determine if the transition probabilities are stable across and independent of time. It was found that the system was generally stable across time but was not independent of age and labor force history.

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An Analysis of Youth Labor Force Transition Probabilities

by

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Lieutenant, United States Navy
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Submitted in partial fulfillment of the
requirements for the degree of

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ABSTRACT

Much of the enlisted supply research to date focuses on the transition of individuals from high school to the military. Little is known of those who have chosen other options, such as further education, employment, or to remain out of the labor force completely. With the decline of the 17-21 year old male population, research must be directed towards the entire labor market. This ~~research~~ thesis uses data from the National Longitudinal Survey of Youth to estimate the transition probabilities among seven possible states for individuals aged 17-22. The states are high school, college, active service, employment full time, employment part time, unemployment, and out of the labor force. Tests are made to determine if the transition probabilities are stable across and independent of time. It was found that the system was generally stable across time but was not independent of age and labor force history.

Additional keywords: Markov processes; recruiting; Enlisted personnel; Civilian personnel.

TABLE OF CONTENTS

I. INTRODUCTION 9
A. BACKGROUND 9
B. LITERATURE REVIEW 12
1. Choice in the Labor Market 12
2. Transition into the Military 14

II. RESEARCH OBJECTIVES AND DATA DESCRIPTION 23
A. RESEARCH OBJECTIVES 23
B. DATA BASE 23
1. Survey Sample 24
2. Segmentation of the Sample 26
C. DATA PREPARATION FOR TESTING 28

III. METHODOLOGY 33
A. EMPIRICAL ESTIMATION OF TRANSITION PROBABILITIES 33
B. TESTING FOR TIME STABILITY 35
C. TESTING FOR INDEPENDENCE BETWEEN TIME PERIODS 38

IV. DATA ANALYSIS 41
A. TRANSITION PROBABILITIES INTO THE MILITARY . . 42
1. Source Categories 42
2. Destination Categories 44
B. STABILITY ACROSS TIME 46
C. INDEPENDENCE OF FORMER CATEGORY (MARKOV INDEPENDENCE) 49

V. CONCLUSIONS AND RECOMMENDATIONS 52
A. MODELLING FLOW 52

1. Flows Into the Military 52
2. Other Selected Flows 53
B. STABILITY TESTING 54
C. CHI-SQUARE TEST FOR MARKOV INDEPENDENCE . . . 54

APPENDIX A: PROGRAMS USED TO CREATE THE SAS AND SPSS SYSTEMS FILE 55

APPENDIX B: WEIGHTED TRANSITION PROBABILITY MATRICES BY AGE AND SEX FOR 79-80 AND 80-81 75

APPENDIX C: UNCONDITIONAL 4 BY 4 CONVERTED TRANSITION PROBABILITY MATRICES BY AGE AND SEX FOR 79-80 AND 80-81 99

APPENDIX D: CONDITIONAL TRANSITION PROBABILITIES BY AGE AND SEX FOR 80-81 112

APPENDIX E: UNCONDITIONAL 3 BY 3 CONVERTED TRANSITION PROBABILITY MATRICES BY AGE AND SEX FOR 79-80 AND 80-81 124

LIST OF REFERENCES 136

INITIAL DISTRIBUTION LIST 140

LIST OF TABLES

I. Predicted Probability of Enlistment with Respect to Selected Variables 17

II. Distribution of Individuals by Age and Race . . . 24

III. Major Subject Areas of NLS - Youth Cohort 25

IV. Target Groups for NLS Youth Cohort 26

V. Unweighted Frequency by Category and Year 30

VI. Weighted Frequency of Men by Age and Year 31

VII. Weighted Frequency of Women by Age and Year . . . 32

VIII. Unweighted Table of Category in 1979 by Category in 1980 For Age 17 in 1979 34

IX. Chi-Square Computation for 19 Year Old Males . . . 47

X. Cell Chi-Square Totals for the Stability Across Time Test for Males and Females Aged 17-22 48

XI. Chi-Square Computation for 18 Year Old Females . . 50

XII. Cell Chi-Square Totals for the Independence of Time Test for Males and Females Aged 17-22 . . 51

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LIST OF FIGURES

1.1 U.S. Male Population Aged 17-21 10

I. INTRODUCTION

A. BACKGROUND

The Department of Defense (DoD) currently employs over 2.1 million persons in the Armed Forces [Ref. 1]. To sustain those numbers, the combined services averaged over 320,000 accessions a year between fiscal years 1978 (FY 78) and 1982 (FY 82) [Ref. 2]. This level of accessions was necessary to meet a programmed increase in manpower of about 200,000 by the end of FY 87 and to replace those who left the service [Ref. 2].

Since the end of conscription in June of 1973, the military has experienced a number of short term and long term problems meeting its accession goals. Short term problems such as the relative decline of military pay and the erosion of benefits such as the G.I. Bill have been corrected by the appropriation of funds to raise pay and establish educational assistance programs. Long term problems such as competition for manpower from private industry have been handled in a similar manner by increases in recruiting funds. However, not all the long term problems can be resolved through Congressional appropriation. The most important of these is the decline of the male population between the ages of 17-21 [Ref. 3]. This pool is of interest because it encompasses high school aged individuals who are new entrants to the labor market upon whom the military depends heavily for recruitment. As shown in Figure 1.1, the decline is sharp between 1982 and 1986, levels slightly, then continues so that by the mid 1990's there will be over 22 percent fewer in this group then there were in 1982.

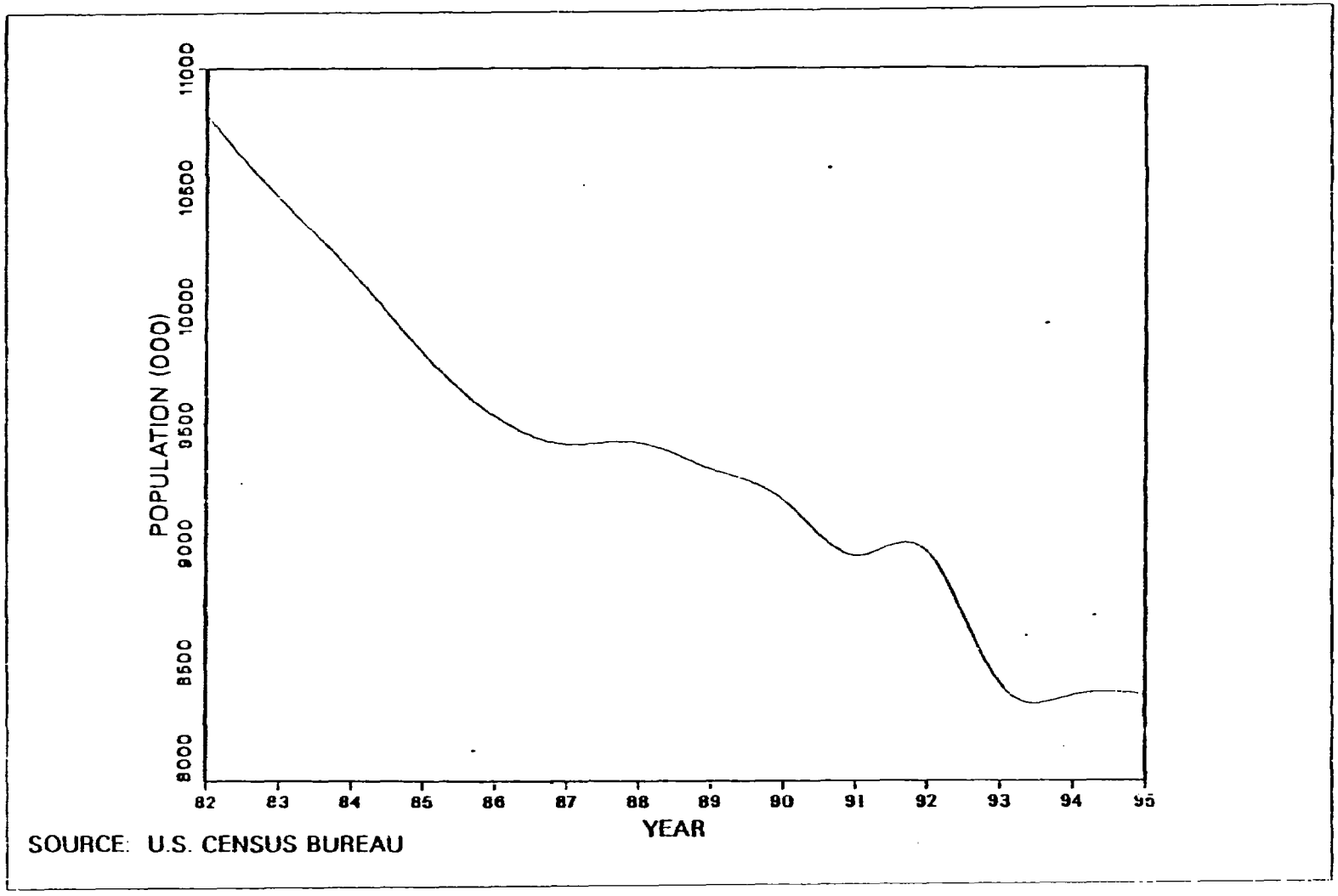

Figure 1.1 U.S. Male Population Aged 17-21.

With the number of youths aged 17-21 decreasing, the military will have to attract an increasingly larger share of this group if force levels are to be maintained. At present the military must enlist one of every six males in this pool; it has been estimated they will eventually need one out of every four [Ref. 3].

Because its manpower derives principally from the young male cohort, the military may feel the effects of this decline more severly than private industry. Traditional short term responses to recruiting problems may not provide the relief they have in the past due to a more competitive environment. While others may increase wages and benefits and spend more to search and recruit, these options may not be available to the military due to increased pressures from Congress to trim Defense spending and reduce the federal budget deficit. Reliance on fluctuations in the economy to raise unemployment rates and make the military an employer of "last resort" is imprudent. Therefore, it would appear reasonable to identify other segments of the market with the potential to provide the quality and quantity necessary to fill the shortages caused by the decline in the normal recruiting pool. To pursue this course requires accession planning based on a solid knowledge of the entire market.

Most of the current research in this area seeks to specify the factors which influence high school aged individuals to choose enlistment over other options such as further education or employment in the private sector. Enlistment choice behavior is treated as the dependent variable in these studies. An estimate of supply is made by modelling the relationship between factors relevant to the enlistment of young high school graduate males and the percentage who enlisted.

One of the first steps in extending enlistment supply research to the entire market is to investigate rates of

movement of individuals between various segments of the labor market. Once these rates are known, the factors influencing this behavior may be sought.

This thesis will expand enlisted supply research by investigating those in the labor market w' have chosen not to enter the military. The transition ra.s among a number of labor force and educational options available to youth will be estimated empirically. The rates will then be tested for independence between ages as well as time stability for individual ages.

B. LITERATURE REVIEW

A majority of individuals make their first real decision with respect to the labor force at high school graduation. Choices at this point include further education, military enlistment, employment, and seeking work while unemployed. Some seek neither further education nor work, thus choosing to remain out of the labor force. This transition point has received wide attention in the literature.

This literature review will start with research that considers the factors influencing individual choice from among the various labor force and educational options outside the military. Second, it will review the major research done in enlistment supply to include research considering the factors which influence both enlistment intention and actual enlistment.

1. Choice in the Labor Market

The determinants of choice in the labor force have been widely researched and a sampling of those efforts which address occupational and educational transition probabilities will be reviewed. A common thread which runs through all of these is the specification of the transition from an

individual's original state to the education or labor state chosen. This section will start with those works which considered only two possible states, employed and unemployed, and move to those which included several states.

a. Dual State Transitions

Korbel [Ref. 4], investigated the determinants of the movement of youth in and out of the labor force. This work was one of the first to use longitudinal data to capture transition behavior. In that work, Korbel noted that educational enrollment and attainment, family income, non-earned income, geographical region and degree of urbanization were most influential in the determination of individual transitions. These findings were generally consistent with those found in earlier studies [Ref. 5] which inferred individual transition behavior from cross sectional data.

b. Multi-state Transitions

Lerman's [Ref. 6] work built upon Korbel's by adding movement from education to employment, unemployment, or further education in estimating transition probabilities. Hall further [Ref. 7] added mobility within an occupation, to those specified by Lerman. Although both found transition probabilities were sensitive to family background, Lerman singled out area employment conditions and wage rates while Hall focused on education and initial occupation choice as the major determinants of future transitions.

Stephenson's [Ref. 8] work most closely resembles the type of research embodied in this thesis. Stephenson looked at school to work transitions in terms of the personal and economic factors which alter the distribution among white and black youths. His work was different from the others in that he specified six states between

which an individual could move. He found that the transition probabilities were a function of time, age, family size, labor market conditions, city type, local unemployment rate, family socio-economic status, highest completed grade level and the school versus work decision made by an individual in the previous year.

2. Transition into the Military

During the peak years of this nation's involvement in Southeast Asia, heavy draft calls were taking a million men a year into service. Even though an all-volunteer force was not being seriously considered, research aimed at describing the factors which influence an individual's decision to to volunteer was being conducted [Ref. 9]. This research was based on the economic assumption that a person will choose the employer who offers the greatest net present value in strictly monetary terms. More recent research has found that monetary concerns are only one of many factors which influence an individual's decision to enlist.

This section will review the major enlisted supply literature and will delineate those factors which influence an individual's intentions to enlist and those which influence actual enlistment.

a. Enlistment Intention

(1) Dependent Variable. When enlistment contracts are used as the dependent variable in modelling, a large segment of the population is removed from consideration. This segment consists of individuals who decided to enter the labor force in a job other than military service, those who decided to further their education beyond high school and those who are unemployed or not seeking work. Since the researcher is investigating the factors which influence enlistment, another measureable attribute which

captures this behavior must be found in the absence of actual enlistment. Enlistment intention measurements have been used for this purpose.

(2) Independent Variables. The output of most enlisted supply research is a regression equation which specifies those factors which the researcher has found to have a significant influence on the enlistment decision. The model is usually presented as in equation 1.1 where Y is

$$Y = C + a_1 x_1 + a_2 x_2 + \ldots + a_k x_k \qquad \text{(eqn 1.1)}$$

the number of accessions, C is a constant, x_1 might be the number of recruiters, x_2 might be the unemployment rate, and other traits used as independent variables might include family background, attributes measured by socio-economic status, number of siblings, parental status, individual attributes, educational attainment, age, educational aspirations, desire for occupational training, perceived discrimination in the labor market, employment status, duration of unemployment, actual or imputed wage levels, labor market attributes, perception of opinions of influential others, marital status. and enrollment status [Ref. 10]. Kim [Ref. 10] found that changes in educational attainment, training and parental attributes had the have the greatest impact on enlistment intention.

(3) Enlistment Intention Probability. Kim [Ref. 11] estimated that 25 percent of the population aged 14-21 who have never served in the Armed Forces have positive intentions to enlist. To support this finding Kim [Ref. 10], selected a number of traits for analysis to develop a model which predicted enlistment intention and calculated the change in enlistment intention probability for a one unit change in several characteristics. When combined with an enlistment intention probability, or how

likely is it that the intention will be acted upon, enlistment intention is a stronger proxy for actual enlistment.

To determine the probability that the enlistment intention was valid, a hypothetical person with the sample mean as the value on all the variables was created which gave a predicted probability of positive intentions to enlist of .27. Table I shows how the probabilities change in response to changing selected variables. To calculate a change, one would start with the predicted probability, and add the changes indicated according to the individual's deviation from the mean values. For example, suppose an individual is two grade levels lower than the mean, is a year younger than the mean, has values for all other variables equal to the mean and the unemployment rate is two percent lower than the mean. The adjusted probability (p^*) would be calculated as in equation 1.2

$$p^* = .27 + 2(.0877) + 1(.0237) + 2(.0054) \qquad \text{(eqn 1.2)}$$
$$p^* = .44$$

(4) Validity of Using Enlistment Intention. To assess the validity of using enlistment intention information to forecast supply, Orvis [Ref. 12], tracked a sample of youth who indicated a positive intention to enlist and calculated the percentages of those who actually did enlist. He found that for individuals with one year or less until enlistment eligibility, 53 percent of those who had definite intentions to enlist did so. The percentage dropped to 27 percent for those with only probable intentions. He concluded,

> There is a great deal of evidence that enlistment intention results predict the eventual enlistment actions of the survey respondents. The data suggest that enlistment intention measures are valid for both high- and low-quality respondents, once qualification for eligibility is controlled for. The data also support the conclusion that the intention measures are valid for

TABLE I

Predicted Probability of Enlistment with Respect to Selected Variables

Predicted Probability, p[1]		.2733
Δp:	Siblings increase from 4 to 5	.0363
Δp:	Ability measures decrease by .01	.0006
Δp:	Educational Attainment decrease one grade level	.0877
Δp:	Age decreases one year	.0237
Δp:	Educational discrepancy increases by one unit	.0150
Δp:	Training changes from 0 to 1	.0754
Δp:	Unemployment rate decreases by one percent	.0054
Δp:	In school in five years changes from 0 to 1	.1063
Δp:	Weeks unemployed increases by one	.0069
Δp:	Wage decreases from $3.65 by ten percent	.0019

[1] for male, 18-21 year old non-high school seniors

Source: [Ref. 10]

national youth samples, who may face enlistment decisions several years down the road, as well as for military applicants who will make their enlistment decisions in the near term [Ref. 12].

Since positive enlistment intention can therefore be used as a suitable proxy for actual enlistment, it is reasonable to use the factors which influence a positive intention to enlist to gain knowledge of the factors which may influence actual enlistment.

b. Actual Enlistment

(1) Dependent Variables. The dependent variable must represent or capture the behavior to be explained in the model. Those who have submitted or executed an enlistment contract or have begun basic training have definitely exhibited the behavior of interest. These three actions indicate increasing individual commitment to the military. (With the introduction of the Delayed Entry Program (DEP), a time lag between contract and basic training was introduced. Fortunately this policy did not carry significant losses [Ref. 13]) Thus, contracts or actual enlistments are the principal dependent variables used in these models.

(2) Independent Variables. In her review of 20 major works, Perelman [Ref. 13], divided the independent variables into one of four categories. Each one is either a micro-sociodemographic variable, taste variable, program policy variable, or econodemographic variable. This classification scheme provides a useful framework for looking at the works in that review as well as others.

(3) Micro-sociodemographic Variables. The first group includes traits such as age, sex, race, marital status, education, occupation, and score on the Armed Forces Qualification Test (AFQT). These are used by many researchers to stratify a sample of individuals into various subsamples of interest. Selection of "high quality", high school graduates who score on the upper half of the AFQT [Ref. 14], and selection of male high school graduates with diplomas, no prior service, in AFQT categories I-IIIA [Ref. 15], are examples of micro-sociodemographic variables which have been used to classify individuals as opposed to factors serving to explain their enlistment decision. Aggregate micro-sociodemographic characteristics such as

population mean education level, percentage of nonwhites in the population, and percent of blacks in the population [Refs. 16, 17], have been used in several models but have yielded inconsistent results.

(4) Taste Variables. The taste variables are those which assess the individual's propensity for military service, enlistment likelihood or perceived view of the military as a labor choice. Goldberg [Ref. 15], included the degree of negative feelings towards enlistment in his model and the Army Enlisted Production Model (EPM) [Ref. 18] calculates an area military presence to capture the amount of positive or negative military exposure as an estimate of propensity to enlist. As expected, the number of accessions and propensity to enlist were positively related to perceptions of the military. Stated another way, individual propensity to enlist increased as the favorable perception of the military increased.

(5) Program Policy Variables. This category of variable captures the effects of accession policy and budgetary constraints. This group is comprised of recruiter, advertising, compensation, interservice competition, and delayed entry program effects. These variables are widely used and one or more of these have been included in all the models discussed.

Goldberg [Ref. 19], measured the relative effect of individual recruiter aptitude and found a positive relationship. Several researchers have included a variable to capture the absolute number of recruiters in a given area [Refs. 18, 20, 21, 22], with consistently positive relationships DoD wide and across all services.

Advertising measures are included in many supply models. This variable has been included in a number of ways including both national and local expenditures, population awareness, geographic placement, and optimal

timing and mix of advertising media. General economic theory holds that when additional units of one resource are combined with a constant amount of a another resource, the output will increase but at an eventually diminishing rate. This occurs because each additional unit of the first resource has increasingly smaller amounts of the second resource with which to interact. An application of this theory, known as the law of diminishing marginal returns [Ref. 23], was found to have applications in the area of enlisted supply research. Huck [Ref. 24] observed this relationship in his research and applied it to advertising productivity estimates. In an attempt to explain the mechanism more accurately, Goldberg [Ref. 19], attributed the diminished return to the population's awareness of the advertising message fading from memory over time. He concluded that advertising was actually an investment in "awareness capital", which was spent or diminished as a person's memory faded with time.

Advertising expenditures have also been looked at from a number of other viewpoints. Morey [Ref. 17] analyzed specific advertising programs within the DoD by looking at the General Enlistment Program (GEP), which was further divided into GEP-General, GEP-TV/Radio, GEP-Print, and GEP-Minority, Local Advertising Management System (LAMS), Joint Advertising Operation (JADOR), and the Navy Opportunity Information Center (NOIC) expenditures.

Perhaps the policy variable subject to the most public debate is compensation. This factor is found in almost every enlisted supply model. (One noteable exception is the EPM which has no provision for pecuniary effects.) Compensation includes wages, allowances, bonuses, gratuities, benefits, reimbursements, and tax advantages [Ref. 25] and has been measured in a number of ways. These include the ratio of military to civilian wage, (often by state and

local area), a comparison of military wage to federal minimum wage, average per capita income by state, discounted present value of military income over a three year period, inverse of civilian pay, ratio of expected military pay to expected civilian pay, and a weighted average of enlistee's total basic pay, housing and subsistance allowance, and tax advantages divided by average weekly civilian earnings. The elasticities for compensation variables are best described as inconsistent. Values for the Air Force for example, ranged from 2.23 when the ratio of military to civilian wages nationwide was used to estimate the effect of compensation [Ref. 26], to .12 when the effect was estimated by using the inverse of civilian pay [Ref. 20].

Another program policy variable involves utilization of the delayed entry program (DEP). The DEP allows an individual to enlist and take up to a year to report for basic training. Although no compensation is received until the recruit starts basic training, the individual accumulates longevity for pay and promotion purposes. The length of the delay is part of the enlistment contract which allows for better management of the training pipeline and makes yearly accession planning easier since the DEP pool is essentially a known future supply. Morey [Ref. 17], hypothesized from analysis of the total DEP size and high school graduate accessions, that the positive effects of the DEP on supply was a function of the incumbents becoming service advocates and attracting others. Carroll's work [Ref. 22], supported Morey's and found that the effects were stronger for upper AFQT mental group high school graduates.

The last of the program policy variables is interservice competition. Goldberg [Ref. 27], and Carroll [Ref. 22], included variables to capture the effects of interservice competition and the EPM uses the percent of Army recruiters in a district in its forecasts. In both

cases, the results showed that interservice competition increased the supply of manpower overall.

(6) Econodemographic Variables. As the name implies, this group of variables refer to those which are demographic in nature and tied to economic forces. One such variable which dominates the literature and has been used in many variations is the unemployment rate. Different combinations of unemployment rate variables were constructed by selecting certain ages and races and applying nationwide or regional unemployment rates to the target group. Grissmer's review [Ref. 26], of six studies spanning 1963 to 1970, provides a chronology of findings and clearly indicates a degree of inconsistency with elasticities ranging from .02 to .41 for similar methodologies and age groups. Recent works have been no more consistent although the relationships have been positive and significant.

Those qualified and available for military service or qualified military available (QMA), as a subset of those unemployed is another econodemographic variable. QMA percentages have been calculated in the past by giving the AFQT to a nationally representative sample of youth with no reguard to enlistment intentions. When normalized according to standard conversions and combined with relevant physical and moral disqualification data, the percent of the population who could qualify under current selection standards is determined [Ref. 28]. Huck [Ref. 20] found that the Army and Marine Corps were most affected by this characteristic and found the average elasticity to be .46. These findings were not supported by other studies which reported elasticities as low as .13 [Ref. 29].

II. RESEARCH OBJECTIVES AND DATA DESCRIPTION

A. RESEARCH OBJECTIVES

The major objectives of this study are to estimate empirically the labor force transition probabilities for individuals between a number of educational and labor force opportunities and to provide information concerning stability properties of those rates. Questions of interest include:

1. What educational and labor force opportunities must be specified to generate a mutually exclusive and exhaustive number of states for 17-22 year olds?
2. With what frequencies do individuals move among opportunities?
3. Are the transition probabilities stable across time?
4. Are the transition probabilities independent of age?

B. DATA BASE

The data base used in this study was generated from the Center for Human Resource Research National Longitudinal Survey (NLS) of Youth which is designed to record labor market experience and behavior [Ref. 30]. The NLS project has been tracking cohorts of men and women of various ages since 1966 and is a combined effort of the U.S. Department of Labor Employment and Training Administration, Bureau of Census Demographic Survey Branch, National Opinion Research Center, Center for Human Resource Research and the Department of Defense. The youth cohort of 12,686 young men and women aged 14-22 as of January 1, 1979, was established in 1979 and has been resampled yearly since then. The results for 1979 through 1981 are used in this research.

The results for 1982 have been tabulated recently but are not included in this effort. Table II shows the distribution of individuals by age and race.

TABLE II

Distribution of Individuals by Age and Race

AGE	WHITE	BLACK	OTHER	MISSING
14	639	222	45	44
15	1003	409	94	57
16	1012	391	80	78
17	957	409	77	65
18	1016	428	82	108
19	1138	369	63	107
20	1153	340	54	119
21	1167	343	67	113
22	301	87	18	31
TOTALS	8386	2998	580	722

To locate the youth for the cohort over 70,000 households were screened. Each year the cohort is located and administered a questionnaire which contains about 1000 items. The questions address behavior and perceptions in the 19 areas listed in Table III.

1. Survey Sample

Table IV shows the frequency of the ten groups targeted for the cohort. To insure statistical efficiency, sample selection was conducted through a multistage,

TABLE III

Major Subject Areas of NLS - Youth Cohort

1. Family Background
2. Marital History
3. Fertility
4. Regular Schooling
5. Jobs and Pay
6. Knowledge of and Experiences with the World of Work
7. Military
8. Current Labor Force Status (Census Current Population Survey)
9. Work Experience
10. Government Training
11. Other Training
12. Periods When Respondent was Not At Work
13. Health
14. Significant Others
15. Residences
16. Rotter Scale (control of one's own life)
17. Family Attitudes
18. Assets and Income
19. Aspirations and Expectations

Source:
[Ref. 31]

stratified area probability sample of 918 segments of the National Opinion Research Corporation's Master Probability Sample of the United States which is comprised of 102 Primary Sampling Units [Ref. 30]. Although held to a

TABLE IV

Target Groups for NLS Youth Cohort

Hispanic males	- 946
Hispanic females	- 978
Black, non-hispanic males	- 1,444
Black, non-hispanic females	- 1,479
All nonblack, non-Hispanic male	- 2,441
All nonblack, non-Hispanic female	- 2,475
Male Military personnel	- 823
Female Military personnel	- 457
Economically disadvantaged nonblack, Non-Hispanic males	- 744
Economically disadvantaged nonblack, Non-Hispanic females	- 899

Source:
[Ref. 30]

minimum to increase sample efficiency, oversampling was necessary for blacks, Hispanics and economically disadvantaged whites. Since transition probabilities are to be estimated in this research, the sample must reflect the correct distribution of race and socio-economic status. Therefore individual frequencies were weighted according to the national population frequency as compiled by the NLS when the sample was interviewed in 1981. This year's sample weighting was different from that done in either 1979 or 1980 but the intercorrelations among the three years was over .95. The 1981 sample weights were chosen since they reflected the most current status of the sample.

2. Segmentation of the Sample

The NLS was subdivided as follows. First, all those 14 years old were deleted from the sample. The age limit was imposed since the majority of 14 year olds in 1979 would not make a labor force decision in the three years surveyed.

The age limit reduced the sample to 11,736 useable cases. Those not 14 in 1979 were assigned to one of seven mutually exclusive and exhaustive categories. The categories were; enrolled in high school, enrolled in college, in the active Armed Forces, working full time, working part time, unemployed, and unemployed and not seeking work or out of the labor force. The individuals were classified according to the following scheme:

1. High School: attending regular school in grades 9-12.[1]
2. College: attending regular school in grades 13-20 and and working less than 35 hours per week.
3. Active Armed Forces: currently serving in the active Armed Forces.
4. Employed Full Time: having a current occupation and working 35 hours per week or more.
5. Employed Part Time: having a current occupation and working less than 35 hours per week.
6. Unemployed: looking for work for one week or more and having no current occupation or currently laid off and looking for work for one week or more and having no current occupation.
7. Out of the Labor Force: unemployed and no longer seeking work and having no current occupation.

When the above classification scheme was applied to the data a number of individuals met the criteria for membership in more than one group due to valid and invalid skips of the screening questions. In those cases the following precedents were invoked:

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[1]Regular school is defined as an elementary school, middle school, high school or college where an individual earns credit towards a degree and excludes all others such as a vocational programs or trade schools which award a certificate vice a degree.

1. High school classification took precedence over employment and unemployment when the individual's age was 19 or less. When the age was 20 or more, employment or unemployment took precedence.
2. High school classification took precedence over being out of the labor force. Classification by age was not necessary since inspection of these cases revealed that all were under 18 years of age.
3. College classification took precedence over unemployment and being out of the labor force.
4. Armed Forces classification took precedence over high school and college.

Once the precedents had been applied, each individual in the sample was classified into one and only one category for each year of the survey.[2] The unweighted sample frequencies by category and year are shown in Table V.

C. DATA PREPARATION FOR TESTING

In order to control for the social and behavioral differences between men and women the sample was split by sex into two subsamples. Each subsample was then divided by age in order to provide groupings of more homogeneous individuals. Table VI shows the weighted frequencies for men aged 17-22 for 79, 80, and 81 and Table VII shows the weighted frequencies for women aged 17-22 for the same period. From these tables one can judge the composition of the various age groups across the years.

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[2]The Statistical Analysis System (SAS) [Ref. 32] and Integrated Financial Planning System (IFPS) [Ref. 33] were used in this study for data manipulation and statistical analysis. To enhance the usefulness of the data for future users, a system file was formatted for use with the Statistical Package for the Social Sciences (SPSS) [Ref. 34]. The programs used to create the SAS and SPSS system files can be found in appendix A. Statistical analysis of the data was done at the Naval Postgraduate School with an IBM model 3033 computer.

With the data segmented it is then possible to compare 17 year olds in 1979 to 17 year olds in 1980 and 1981. As expected, the general flow for both men and women is similar and is from education to the labor force. This can be seen in tables VI and VII by observing the most populated categories as the individuals age. For 17 and 18 year olds the majority are in high school and college. At 19 many have gone to college or have entered the labor force with a few choosing the military. By ages 20 to 21 the college ranks begin to decline and the employed and unemployed categories begin to swell. Participation in the military increases, but not as rapidly as participation in the civilian labor force. In comparison, women move along similar paths, with much smaller numbers entering the military and slightly higher numbers attending college. It is interesting to note the much larger number of women out of the labor force at all ages. This could be due to the effects of inequity in education or the labor force combined with the choice of remaining in the home.

TABLE V

Unweighted Frequency by Category and Year

	1979		1980		1981	
CATEGORY	FREQUENCY	PERCENT	FREQUENCY	PERCENT	FREQUENCY	PERCENT
HIGH SCHOOL	4619	39.36	3256	27.74	1814	15.46
COLLEGE	740	6.31	804	6.85	907	7.73
ACTIVE	1218	10.39	993	8.46	855	7.29
FULL TIME	2166	18.46	2885	24.58	3683	31.38
PART TIME	1230	10.48	1367	11.65	1578	13.45
UNEMPLOYED	1003	8.55	1487	12.67	1647	14.03
OUT OF THE LABOR FORCE (OLF)	760	6.48	944	8.04	1252	10.67

TABLE VI

Weighted Frequency of Men by Age and Year

AGE/YEAR	HS	COLLEGE	ACTIVE	FULL TIME	PART TIME	UNEMPLOYED	OLF
17/79	1823410	8175	6682	85308	42498	83785	28185
80	1661274	5892	4876	130644	54043	130268	49560
81	1866576	3188	25256	96119	69108	109367	40653
18/79	868403	208672	54986	563039	253224	144815	54893
80	891685	197908	69860	345544	330058	173093	69897
81	726628	203078	56785	459256	336089	166648	88072
19/79	119483	337867	146028	955604	358581	201171	27307
80	133182	300999	154005	841199	332601	295379	90668
81	85058	314956	147749	650641	519128	248954	111561
20/79	0	329328	162932	1080706	412140	112910	58751
80	0	328428	144693	1047571	314596	243899	57038
81	0	317055	191476	921767	353809	273846	81042
21/79	0	249508	172219	951225	468487	216891	47182
80	0	281312	135328	1122929	335747	227523	50641
81	0	271631	135232	1095069	365851	187209	89300
22/79	0	54072	62569	357096	92436	23674	11426
80	0	22605	49580	310854	62677	48297	3340
81	0	221025	125131	1222419	305666	218325	62303

TABLE VII

Weighted Frequency of Women by Age and Year

AGE/YEAR	HS	COLLEGE	ACTIVE	FULL TIME	PART TIME	UNEMPLOYED	OLF
17/79	1739954	2775	0	89175	73947	72824	101607
80	1669255	3695	0	74929	70835	103203	90127
81	1705845	12635	0	77741	53533	100823	128174
18/79	589392	277776	9417	360053	469098	198810	144130
80	639613	247141	6702	389386	401243	207959	188244
81	602009	295045	4462	358614	392724	173527	185663
19/79	54633	314109	11285	682024	607077	297787	219711
80	65688	341999	21338	585828	581673	231331	220816
81	52608	349277	7941	654158	577522	178420	260352
20/79	0	242687	13470	721163	518362	252423	251472
80	0	301016	10896	766301	496467	274136	326648
81	0	314617	22309	737142	484610	161155	320915
21/79	0	226626	15471	924678	403869	246000	338768
80	0	188828	14933	837887	423580	225874	326442
81	0	225017	10955	842657	427330	210119	423946
22/79	0	50813	4310	168053	133385	38494	63592
80	0	36633	14421	195000	66183	48238	60766
81	0	143867	13978	974046	385024	156903	343909

III. METHODOLOGY

A. EMPIRICAL ESTIMATION OF TRANSITION PROBABILITIES

Within the context of this effort, a transition probability denotes the probability of an individual who starts a year in a given labor force or educational state, ending the year in a given state. The transition probabilities will be estimated on an age, year and sex specific basis. Note that the system to be analyzed is closed. That is, a person must either stay in the same category or move to another category in the matrix. For example, a person who is in high school in 1979 either remains in high school in 1980 or moves to college, the Armed Forces, full time employment, part time employment, unemployment or out of the labor force completely.

A matrix of this type can be seen in Table VIII which contains the unweighted transition probabilities for men and women aged 17 in 1979 with the begining 1979 categories forming the rows and the ending 1980 categories forming the columns. As noted earlier, this data is derived from the National Longitudinal Survey of Youth (NLS). As can be seen in Table VIII there were 305 individuals who were in high school when sampled in 1979 and were still in high school when sampled in 1980. They account for 40.94 percent of the all 17 year olds in the sample. Looking at the row percentages reveals that 50.5 percent of those who were in high school in 1979 were in high school in 1980. Looking across the first row one can see that a number of individuals who were in high school in 1979 were in a different category in 1980.

TABLE VIII

Unweighted Table of Category in 1979 by Category in 1980
For Age 17 in 1979

FREQUENCY PERCENT ROW PCT COL PCT	HIGH SCHOOL	COLLEGE	ACTIVE	FULL TIME	PART TIME	UN EMPLOYED	OLF	TOTAL
HIGH SCHOOL	305 40.94 50.50 97.76	49 6.58 8.11 98.00	16 2.15 2.65 66.67	81 10.87 13.41 59.56	81 10.87 13.41 83.51	55 7.38 9.11 57.89	17 2.28 2.81 54.84	604 81.07
COLLEGE	1 0.13 25.00 0.32	1 0.13 25.00 2.00	0 0.00 0.00 0.00	1 0.13 25.00 0.74	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.13 25.00 3.23	4 0.54
ACTIVE	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.13 50.00 4.17	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.13 50.00 1.05	0 0.00 0.00 0.00	2 0.27
FULL TIME	3 0.40 6.00 0.96	0 0.00 0.00 0.00	2 0.27 4.00 8.33	26 3.49 52.00 19.12	5 0.67 10.00 5.15	13 1.74 26.00 13.68	1 0.13 2.00 3.23	50 6.71
PART TIME	1 0.13 5.00 0.32	0 0.00 0.00 0.00	1 0.13 5.00 4.17	7 0.94 35.00 5.15	4 0.54 20.00 4.12	3 0.40 15.00 3.16	4 0.54 20.00 12.90	20 2.68
UNEMPLOYED	0 0.00 0.00 0.00	0 0.00 0.00 0.00	2 0.27 4.65 8.33	16 2.15 37.21 11.76	5 0.67 11.63 5.15	14 1.88 32.56 14.74	6 0.81 13.95 19.35	43 5.77
OLF	2 0.27 9.09 0.64	0 0.00 0.00 0.00	2 0.27 9.09 8.33	5 0.67 22.73 3.68	2 0.27 9.09 2.06	9 1.21 40.91 9.47	2 0.27 9.09 6.45	22 2.95
TOTAL	312 41.88	50 6.71	24 3.22	136 18.26	97 13.02	95 12.75	31 4.16	745 100.00

Specifically, 8.11 percent were in college, 2.65 percent entered the military, 13.41 percent were employed full time or part time, 9.11 percent were unemployed and 2.81 percent were out of the labor force.

While the transition probabilities as shown by the row percentages can be used to make projections, the column percentages give the proportion of all those in a given category at the end of the period who made a transition from a given row category. In short, the row percentage indicates the proportion of all in the row who started in the row and ended in the indicated column while the column percentage indicates the proportion of all those who ended in the column who started in the indicated row. For example, 66.67 percent of all those who ended the period in the Active military started the period in High School. Similarly 4.17 percent started the period in the Active military, 8.33 percent started the period working full time, 4.17 percent started the period working part time, 8.33 percent started the period unemployed and 8.33 percent started the period out of the labor force. The category indicated by the row is said to be the source for the category indicated by the column.

B. TESTING FOR TIME STABILITY

One important issue in the development of a labor flow model is whether state-to-state movement is relatively stable over time (e.g. year) [Ref. 35]. Thus, one might ask, "Did individuals who were 17 in 1979, have the same transition probabilities as those who were 17 in 1980?" To test this assumption, the sample was grouped by age in a given year. Subsamples by age were created for 17, 18, 19, 20, 21 and 22 year olds. The transition probability matrices were generated by grouping all individuals who were

17 at the begining of 1979 with all those who were 17 at the begining of 1980 and then observing the change of categories over the years 1979 to 1980 and 1980 to 1981. By doing this a unique transition probability matrix was created for the period 1979 to 1980 and 1980 to 1981 for each age. Since the test will be based on a comparison of the observed and expected cell frequencies according to the chi-square distribution, care must be taken to insure that each cell has at least one observation. With the sample now grouped by age, a number of cells (especially among the younger age groups) were deficient. To correct this problem the high school and college, working full time and working part time, and unemployed and out of the labor force categories were combined. This action reduced the transition probability matrix from seven rows by seven columns to four rows by four columns. The four by four matrix categories are denoted as in school, active Armed Forces, (which did not change from the original), working, and not working. It is these transition probability matrices which provide the data to be compared through an appropriate Chi-Square test. The null hypothesis to be tested is that transition probabilities do not vary with time. The number of individuals expected to be in a given cell or expected cell frequency is computed as shown in equation 3.1 [Ref. 36].

$$E_{i,j,k} = \frac{\left(\sum_{k=1}^{2} O_{i,j,k}\right) x \left(\sum_{j=1}^{3} O_{i,j,k}\right)}{\sum_{j=1}^{3} \sum_{k=1}^{2} O_{i,j,k}} \qquad \text{(eqn. 3.1)}$$

Where O = frequency observed
E = frequency expected
i = row
j = column
k = transition (e.g. 79-80=1, 80-81=2)

Implicit in this equation is the assumption that transition probability depends only on an individual's age specific starting category and not on calender year. It is highly unlikely that any of the observed cell transition probabilities would be exactly equal to the expected cell transition probabilities. The question answered by doing the test in this manner is, "Are the differences statistically significant?"

The expected cell frequencies (E) were then used in equation 3.2 [Ref. 36] to compute the chi-square statistic for the two transitions.

$$\sum_{i=1}^{3} \sum_{j=1}^{3} \sum_{k=1}^{2} \frac{(O_{i,j,k} - E_{i,j,k})^2}{E_{i,j,k}} \qquad \text{(eqn. 3.2)}$$

Under the null hypothesis of no difference between the two years, this statistic follows a Chi-square distribution with degrees of freedom computed as in equation 3.3 [Ref. 36].

$$\begin{aligned} \nu &= i \times j-1 \times k-1 \\ &= 4 \times 3 \times 1 \\ &= 12 \end{aligned} \qquad \text{(eqn. 3.3)}$$

Where i = rows
j = columns
k = transition periods

Since weighting is done to correct for the effects of oversampling certain groups, the NLS weighted frequencies must be adjusted to bring the total number of individuals in the transition matrix back to its unweighted size in order for the test described above to be performed. The goal is to

reduce the weighted size but maintain the weighted distribution. To do this, the transition probability matrices are generated for both the weighted and unweighted cases. Then the total number in the unweighted matrix (e.g. row or column total) is divided by the total number in the weighted matrix. The result of this division is then used to multiply each cell of the weighted matrix in order to preserve the distribution and reduce the total number in the matrix to its unweighted size. Each cell then contains the observed frequencies (O) used in equation 3.1. Appendix C presents the converted transition probability matrices for men and women age 17-22. This procedure is equivalent to adjusting the weights so that the sum of the weighted observations is equal to the initial sample size.

C. TESTING FOR INDEPENDENCE BETWEEN TIME PERIODS

It is of interest to determine whether labor force behavior follows a Markov process for the ages under consideration in this study. For example, one might ask, "Are the transition probabilities for 18 year olds during 1980 to 1981 independent of their category in 1979?"

To test this assumption, transition probabilities are computed for the 1980 to 1981 transition in two separate ways. First, the transition probabilities are computed as shown in equation 3.4. [Ref. 37]. Here, the probabilities are calculated for the initial 1979 categorization.

$$p_{j_0 j_1 j_2} = \frac{n_{j_0 j_1 j_2}}{n_{j_0 j_1}} \quad . \qquad \text{(eqn. 3.4)}$$

Where j_0 = in school, working, not working (79)
j_1 = in school, working, not working (80)

j_2 = in school, working, not working (81)

$p_{j_0 j_1 j_2}$ = conditional probability (transition probability 80-81 given ending category 79 known)

$n_{j_0 j_1 j_2}$ = frequency from appendix D

$n_{j_0 j_1}$ = cell frequency from appendix C

The transition probabilities are computed in the second case without regard to status in 1979. Therefore, they are identical to the transition probabilities shown in appendix C for the period 1980 to 1981. If the assumption of independence is true, the differences between the conditional and unconditional probabilities should not be significantly different from zero. Under this hypothesis, the statistic computed in equation 3.5 [Ref. 37], follows a Chi-square distribution with degrees of freedom computed as shown in equation 3.6 [Ref. 37].

$$\sum_{j_0=1}^{3} \sum_{j_1=1}^{3} \sum_{j_2=1}^{3} = n_{j_0 j_1} \frac{(p_{j_0 j_1 j_2} - p_{j_1 j_2})^2}{p_{j_1 j_2}} \qquad \text{(eqn. 3.5)}$$

Where j_0 = in school, working, not working in 79

j_1 = in school, working, not working in 80

j_2 = in school, working, not working in 81

$p_{j_0 j_1 j_2}$ = conditional probability (transition probability 80-81 given ending category 79 known)

$p_{j_1 j_2}$ = unconditional probability (transition probability 80-81 from appendix C)

$n_{j_0 j_1}$ = cell frequency from appendix C

$$\nu = i^2(i-1) - ((k-1)\ i\ (i-1))$$
$$12 = 3^2(3-1) - ((2-1)\ 3\ (3-1)) \qquad \text{(eqn 3.6)}$$

Where i = rows
j = columns
k = transition periods

Since we are observing a three step transition when computing the conditional probability, the number of cells with no observations increases. In order to insure the test is valid, as described earlier, it was necessary to delete the Active military row and column from the 4 by 4 matrices developed for the previous test. The resulting 3 by 3 matrices are shown in appendix E. The weighted frequencies were adjusted in a fashion analogous to that described in the previous section.

IV. DATA ANALYSIS

Individuals in a free society may choose from a number of educational and labor force options throughout their lives. This freedom, coupled with the inherent variablity of human behavior makes it difficult to predict movement from one category to another with certainty. Thus, a probabilistic description of individual transition rates among those options is necessary when attempting to model the system.

In this study, transition probabilities were estimated by placing each individual from the sample gathered from the NLS Youth cohort into a mutually exclusive and exhaustive category at the begining of the year and then computing the percentage who remained in the same category and the percentage who made a transition to other categories by the end of the year. When segmented by age and sex, the result is a unique transition probability matrix for each age and sex group. Matrices generated in this manner have the potential to provide valuable information about the relative size of both manpower sources and destinations. Knowledge of the sources may allow an assessment of recruiting strategies and serve as a mechanism to warn of changing manpower supply characteristics, while knowledge of destinations is necessary for accurate predictions of future manpower supply.

The remainder of this section will be devoted to analysis of the transition probability matrices shown in appendix B. Their usefulness, as evaluated by stability over time and independence of age and labor force history, will be discussed in the following two sections. The discussion will highlight transition into the military.

A. TRANSITION PROBABILITIES INTO THE MILITARY

1. Source Categories

To understand the source percentages as they appear in the matrices in appendix B, one should examine the column percentages in the ACTIVE column and interpret them as that proportion of all in the column who were in a specific row category at the begining of the period.

a. High School

This source, as one would expect, is highly sensitive to age. For example, within the 17 year old male group, 80.07 percent of all those enlisting in 1979 came from high school. By age 19 however this percentage drops to 6.75. After age 19 the percentage goes to zero. The results are similar for females with 100 percent of the 17 year old and none of the 19 year old enlistees coming from high school.

b. College

The college category provided a low percentage of manpower flow into the military and was dependent on time as well. Since very few individuals even reach college age until age 18, there were no 17 year old enlistees from this source. At age 18, 2.83 percent of all those enlisting came from college during 1979. There were no 18 year olds who entered from college in 1980. Unexpectedly however, the percentage of those entering from this source never increases as the various ages are examined. After steep declines for ages 19 and 20 the percentage climbs for 21 year olds with about 7 percent of those who joined in 1980 coming from college. An expected jump in the percentage at age 22, when many graduate and enter the Officer Corps, did not occur. This finding is partially explained by the fact that there were

only ten officers in the sample. The results were similar for females.

c. Remaining in Service

Individuals are sources of manpower within the context of this study as long as they remain in the service from one period to the next. They may reenlist or simply continue to serve. As a source, continuation supplied large percentages for all ages beyond 17 for both sexes. The male proportions were typical and rose from over 30 percent at age 18 for those remaining in 1979 to a peak of almost 90 percent for 21 year olds remaining in 1979. A plateau around 70 percent was observed for 19 and 22 year olds.

d. Working Full time or Working Part time

Men and women showed very different patterns relative to working full time or working part time prior to entering the service. While these categories did not serve as principal sources for the military, (percentages were generally between 4 and 10 percent), the percentage of women who enlisted after working full time or part time in the previous period was as high as 35 percent. The ages at which the women became a source was restricted to 18 and 19 year olds however, with percentages much lower than the men at the other ages.

e. Unemployed or Out of the Labor Force

An interesting result of this research has been the relatively high percentage of the total number of those enlisting coming from the unemployed or "out of the labor force" categories. Out of the 12 transition probability matrices for males age 17 to 22 (e.g. two for each age) there were four cases in which the percentage of those who came from one of these categories prior to entry into the

military substantially exceeded the percentage who came from the ranks of the employed. In two other cases the percentages were less than one percentage point apart. The other six cases did show substantially more coming from the working categories. In relative terms, the non-working often provide numbers which equal or exceed those continuing in the military. For females, in six cases the percentages for those not working exceeded the percentages for those working.

2. Destination Categories

As will be discussed in the next section, transition probabilities were found to be stable across time. This fact allows analysis of destinations to be conducted for either time period with the knowledge that no significant difference exists between the two.

To understand the destination percentages as they appear in the matrices in appendix B, one should examine the row percentage in the given cell and interpret it as that proportion of all who began the period in this category and moved to the specified column by the end of the period.

a. The Main Diagonal

The main diagonal in a square matrix is comprised of those cells which the row number and column number are equal (e.g. 1,1 2,2 3,3 etc.). In the case of matrices depicting transition probabilities, the main diagonal contains the cells where no movement between states has taken place across the time period. Individuals who start the period in high school and end the period in high school, for example, have not altered their labor force status.[3]

[3]It is possible that an individual may have started the year in one state and ended the year in the same state while serving in a different state during part of the year. This type of occurance would not be detected in this study.

A striking result from the transition probability matrices generated in this study is that once individuals reach a cell that affords a degree of permanence, they seem to stay in that cell with relatively high percentages. For males, as one would expect, the high school and out of the labor force categories did not qualify as states that afford permanence since considerable movement was observed from these categories. For females, only high school did not qualify as a state that affords permanence. That is there are only isolated cases where men tend to stay out of the labor force at greater percentages then they tend to move to others. Women however, tend to remain out of the labor force once they have reached this category.

b. Major Paths of Movement

Once past the high school years (e.g. 17-19), the migration for both men and women is towards full time employment. For example, 20 year old males moved from being unemployed to being employed full time at between 40 and 50 percent. For 21 and 22 year old males percentages between 37 and 61 and between 15 and 47 respectively were observed. The percentages for females among these categories were slightly lower and were distributed almost equally between staying unemployed and moving to either the full time employed, part time employed or out of the labor force categories.

c. Movement to the Military

Movement into the military at all ages was relatively small when compared against almost any other potential destination. As was mentioned in the section on sources, high school recruits were an important part of the total number of enlistees. While about 10 percent of the males who started the period in high school could be

expected to be in the military by the end of a period, the percentage for females was generally below one percent. The other starting categories, with the exception of those who continued in service, contained generally insignificant percentages who moved into the military. Among all the categories, there were a relatively high proportion of those who were either unemployed or out of the labor force who did elect to enter the military.

B. STABILITY ACROSS TIME

Unlike the first section which reported several results in terms of enlistment in 1979 or 1980, the previous section indicated that the analysis could be based on either period with similar results. This section illustrates the Chi-Square procedure which was used to test the hypothesis of time stability. Recalling the methodology described in section B of Chapter III, the difference between the expected and observed cell frequencies were computed and compared according to a Chi-Square distribution with 12 degrees of freedom. An example computed for 19 year old men is shown in Table IX.

In this example, the sum of the individual cell Chi-Square values was 11.57. With 12 degrees of freedom (i x j-1 x k-1) this Chi-Square value is associated with a p value of about .45. The null hypothesis in this case is that there is no difference between the observed and expected frequencies, or that there is no difference in transition matrices due to time measured by calender year. As can be seen, this probability is well above the .05 level selected for significance in this study and therefore the null hypothesis is not rejected. Therefore, it is concluded that transition behavior was not different for the different calender years under study.

TABLE IX

Chi-Square Computation for 19 Year Old Males

CELL (i,j,k=1)	OBSERVED FREQUENCY (O) (Appendix C)	EXPECTED FREQUENCY (E) (equation 3.1)	CELL CHI-SQUARE (equation 3.2)
1,1	80.71	83.06	.07
2,1	.64	.31	.35
3,1	46.35	45.79	.01
4,1	.32	1.09	.55
1,2	4.12	2.55	.97
2,2	43.77	46.67	.[illegible]
3,2	5.61	6.99	.[illegible]
4,2	1.59	5.19	2.[illegible]
1,3	74.42	71.13	.15
2,3	6.00	4.54	.46
3,3	392.1	390.1	.01
4,3	46.84	43.98	.19
1,4	14.87	17.38	.36
2,4	5.2	4.08	.31
3,4	56.27	57.40	.02
4,4	38.23	36.72	.06
(i,j,k=2)			
1,1	81.80	79.45	.07
2,1	0[1]	.33	.33
3,1	40.66	41.21	.01
4,1	2.63	1.86	.32
1,2	.87	2.44	1.01
2,2	52.49	49.59	.17
3,2	7.67	6.29	.30
4,2	12.43	8.83	1.47
1,3	64.76	68.05	.16
2,3	3.48	4.83	.35
3,3	349.2	351.1	.01
4,3	72.02	74.88	.11
1,4	19.13	16.62	.38
2,4	3.21	4.33	.29
3,4	52.79	51.66	.02
4,4	61.01	62.52	.04
		TOTAL	11.57

[1]Zero cells violate an assumption of a Chi-Square test, for this study, 4 by 4 matrices were retained if the number of zero cells were one or less. All others were reduced to 3 by 3 before the test was performed.

TABLE X

Cell Chi-Square Totals for the Stability Across Time Test for Males and Females Aged 17-22

AGE	SEX	TOTAL CHI-SQUARE	P-VALUE
17[1]	Male	8.81	.185
17[1]	Female	7.78	.253
18[1]	Male	11.04	.088
18[1]	Female	6.54	.375
19	Male	11.57	.445
19[1]	Female	5.29	.511
20[1]	Male	4.42	.622
20[1]	Female	8.12	.227
21	Male	8.39	.754
21[1]	Female	9.41	.152
22	Male	16.40	.178
22[1]	Female	19.34	.008[2]

[1]degrees of freedom = 6 (matrix reduced to 3 by 3)
[2]reject null hypothesis

The Chi-square test as mentioned earlier must have at least one observation in each cell in order for it to be valid. As can be seen in appendix C there were several cases where this convention was violated. In the case of 17 and 18 year old males, and females of all ages the ACTIVE row and column contained almost no observations in any of its cells which meant the row and column were deleted before preceding with the tests. In the few cases where there was only one cell left blank the test was conducted and no attempt was made to fill the cell artificially. In most cases, however, the difference between the observed and the expected would have had to been enough to increase the Chi-Square value by 100 percent before rejection criteria would be met. One, however, should view the results where the assumption has been violated with caution.

C. INDEPENDENCE OF FORMER CATEGORY (MARKOV INDEPENDENCE)

If the transition probabilities were independent of time then it would only be necessary to know the estimated transition probabilities in any period to make forecasts of future labor status. One might expect, however, that other information about the individual, such as category in the previous period, would have an influence on his category in the next period. For example, one would think that an individual's probability of being in the military in the next period would depend on whether he had enlisted previously, thus incurring a period of required service, or had never enlisted and was currently employed in a well paying job.

As described in Chapter III section C, this assumption was tested by comparing 1980 to 1981 transition probability matrices generated in two different ways. The first method estimated the transition probability conditioned on knowledge of the individual's category in 1979. The second merely used the 1980 to 1981 transition probabilities unconditionally as shown in appendix C. It was found for selected ages and both sexes that a statistically significant (α = .05) difference existed between the two cases. An example of the test procedure computed for 18 year old females is shown in Table XI.

In this example, the sum of the individual cell Chi-Square values was 110.1 with 9 degrees of freedom. This Chi-Square value is associated with a P-value which is less than .0005. The P-value is the probability that the conditional probability will differ as much as the unconditional probability when the null hypothesis is true. The .0005 level is much less than the .05 level selected for this study and thus the null hypothesis of equality between the two is rejected.

TABLE XI

Chi-Square Computation for 18 Year Old Females

PATH $j_0 j_1 j_2$	CELL FREQUENCY $n_{j_0 j_1 j_2}$ (App. D)	CELL FREQUENCY $n_{j_0 j_1}$ (App. C)	CONDITIONAL PROBABILITY $p_{j_0 j_1 j_2}$ (eqn. 3.4)	UNCONDITIONAL PROBABILITY $p_{j_1 j_2}$ (App. E)	CELL CHI-SQUARE (eqn. 3.5)
111	66.99	125.30	.5155	.3589	13.28
112	36.79	125.30	.3788	.4904	8.27
113	16.29	125.30	.0993	.1507	0.18
121	24.51	165.40	.1369	.0793	11.24
122	113.79	165.40	.7424	.8374	2.81
123	20.20	165.40	.0999	.0833	3.65
131	1.69	49.40	.0311	.0554	0.32
132	19.88	49.40	.6419	.3515	0.68
133	24.78	49.40	.2330	.5931	0.34
211	18.06	31.42	.2823	.3589	4.94
212	11.85	31.42	.4848	.4904	0.56
213	0.20	31.42	.2355	.1507	4.13
221	9.32	248.59	.0544	.0793	4.83
222	202.02	248.59	.8187	.8374	0.04
223	26.77	248.59	.1080	.0833	2.43
231	0.21	44.96	.0046	.0554	1.98
232	23.67	44.96	.5487	.3515	4.84
233	19.20	44.96	.3554	.5931	1.56
311	0.36	4.47	.5415	.3598	0.80
312	2.16	4.47	.2102	.4904	0.02
313	1.76	4.47	.0863	.1507	2.22
321	0.56	47.65	.0728	.0793	2.61
322	30.59	47.65	.5966	.8374	1.63
323	14.50	47.65	.3087	.0833	29.72
331	0.49	82.30	.0202	.0554	3.45
332	21.49	82.30	.2289	.3515	1.42
333	56.85	82.30	.6800	.5931	2.14
				TOTAL =	110.10

As stated in the previous chapter, all matrices were reduced to 3 by 3 in preparation for this test. After reduction, all but four were still unsuitable due to several cells having no observations. Therefore, only four matrices were tested. These matrices examined 18 year old men, 18 year old women, 20 year old women, and 21 year old men. The Chi-Square totals for these are shown in Table XII.

TABLE XII

Cell Chi-Square Totals for the Independence of Time Test for Males and Females Aged 17-22

AGE	SEX	TOTAL CHI-SQUARE	P-VALUE
18	Male	72.38	< .0005
18	Female	110.10	< .0005
20	Female	79.66	< .0005
21	Male	110.20	< .0005

There were no deficient unconditional transition probability cells in this test. For the 20 year old female and 21 year male conditional transition probability matrices it was necessary to accept one empty cell in each. In light of this, one should view the tests where the assumption was violated with caution.

V. CONCLUSIONS AND RECOMMENDATIONS

A. MODELLING FLOW

The labor force modelling technique used in this study has provided interesting insights into the flow of individuals between segments of the labor force. When examined in terms of sources and destinations, the data showed several trends and identified a number of issues for further research.

1. Flows Into the Military

a. High School and College

The difference between high school and college as a source of military manpower proved to be striking. While high school was a rich source that declined with age, college provided only a fraction of the total entrants in the survey. Analysis of data which contains a higher proportion of officers than is found in the NLS is necessary before any substantial conclusions can be reached.

b. Working Full Time or Part Time

Those working full time or part time were generally found to enter the military at very low percentages. It was observed that not only does the probability of entering the service decline with age after high school, but is further eroded if an individual chooses employment in the private sector at that point.

c. Not Working

The military was chosen by those unemployed or out of the labor force with relatively high frequency. A

more focused effort on this group might include an attempt to compute the percentage qualified for military service to determine if the percentage who entered in this study was a significant proportion of all who could enter if they chose to do so. The NLS contains the mental, physical, and moral data necessary to address this question.

d. The Military

The probability of remaining in the military from one period to the next was among the highest flows observed. The observed frequencies probably result from a combination of those continuing to serve through their current enlistment and those reenlisting upon completion of their initial contract. Through the use of other screening variables in the NLS, it would be possible for future researchers to determine the distribution between the two and therefore gain access to information relevant to individual reenlistment decision behavior from the viewpoint of stayers. This information could then be compared to that gained by examing the leavers to describe more accurately the differences.

2. Other Selected Flows

A large percentage of individuals elected to remain in the same category over the periods studied. For example, women out of the labor force tended to remain out of the labor force. Research into the determinants of this behaviour would be the next step in an extention of this work. Questions of interest include:

1. Is the permanent nature of a category primarily a function of category or individual characteristics?
2. Are the individuals who do not move satisfied with their current employment or are other forces dominant?

3. Do individuals who have reached a "permanent" state continue to seek others alternatives?
4. If they do seek other alternatives, to what degree must the alternative be more appealing to induce movement?
5. Are there other variables which may aid in the prediction and understanding of these labor force transition probabilities?

B. STABILITY TESTING

Since transition probabilities are stable across time, the utility of these transition matrices as a forecast tool is enhanced. Unfortunately the impact of external factors such as the unemployment rate, comparability of military to civilian compensation, the state of the national economy, and public regard for the military, could not be examined because these findings were based on observations over a very limited time period.

C. CHI-SQUARE TEST FOR MARKOV INDEPENDENCE

The Chi-Square test for Markov independence confirmed the belief that this system of transition probabilities is not a Markov process. It was interesting to note that the sum of the chi-square values was observed to decline with age. The obvious question would be, "Is there an age where the system is independent of time?" The next step, aside from answering the previous question, should be an extension of this research to a greater number of time periods to determine how far back one must go in order for the difference between the conditional and unconditional probabilities to become insignificant. If the exact amount of historical data necessary to estimate transition probabilities accurately were known, a major improvement to forecasting methods should be achieved.

APPENDIX A

PROGRAMS USED TO CREATE THE SAS AND SPSS SYSTEMS FILE

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//*MAIN ORG=NPGVM1.2091P
//   EXEC SPSS,REGION=1024K
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//          LABEL=(1,SL,,IN),DSN=SRNLS.RAW.P1981
//FT04F001 DD DISP=(OLD,KEEP),DCB=BLKSIZE=13030,DSN=
  MSS.S2091.NLSPSS
//SYSIN DD *
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                V5 17-20
                V9 33-36
                V11 41-44
                V36 141-144
                V48 189-192
                V61 241-244
                V62 245-248
                V66 261-264
                V72 285-288
                V74 293-296
                V89 353-356
                V110 437-440
                V112 445-448
                V113 449-452
                V114 453-456
                V115 457-460
                V116 461-464
                V117 465-468
                V118 469-472
                V119 473-476
                V120 477-480
                V121 481-484
                V125 497-500
                V126 501-504
                V134 533-536
                V135 537-540
                V167 665-668
                V169 673-676
                V188 749-752
                V191 761-764
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                V225 897-900
                V226 901-904
                V227 905-908
                V239 955-958
                V240 957-960
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                V381 1521-1524
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                V419 1673-1676
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V420P 1677-1684
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V468 1869-1872
V472 1885-1888
V473 1889-1892
V476 1901-1904
V504 2013-2016
V506 2021-2024
V508 2029-2032
V514 2053-2056
V593 2369-2372
V613 2449-2452
V668 2669-2672
V698 2789-2792
V711 2841-2844
V712 2845-2848
V744P 2973-2980
V746 2981-2984
V759 3033-3036
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V1069P 4273-4280
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RECODE V412, V508, V2582, V4461 (001 THRU 195=1) (201 THRU
        245=2)
        (260 THRU 284=3) (301 THRU 395=4) (401 THRU 575=5)
        (580 THRU 590=6) (601 THRU 715=7) (740 THRU 785=8)
        (801 THRU 802=9) (821 THRU 824=10) (901 THRU 965=11)
        (980 THRU 984=12)
VAR LABELS      V3, AGE 79/
        V5, AGE 80/
        V9, RESIDENCE AT AGE 14 79/
        V11, RESIDENCE AT 14 URBAN OR RURAL? 79/
        V36, HIGHEST GRADE COMPLETED BY MOTHER 79/
        V48, HIGHEST GRADE COMPLETED BY FATHER 79/
        V61, NUMBER OF SIBLINGS 79/
        V62, NUMBER OF SIBLINGS ATTENDING SCHOOL 79/
        V66, RACE OR ETHNIC ORIGIN 79/
        V72, RACE RESP IDENTIFIES WITH MOST CLOSELY 79/
        V74, MARITAL STATUS 79/
        V89, MARITAL STATUS 80/
        V110, GRADE ATTENDING 79/
        V112, SCHOOL ATTITUDE, MAKE FRIENDS EASY 79/
        V113, SCHOOL ATTITUDE, TEACHERS WILLING TO HELP 79/
        V114, SCHOOL ATTITUDE, CLASSES BORING 79/
        V115, SCHOOL ATTITUDE, DOES NOT FEEL SAFE 79/
        V116, SCHOOL ATTITUDE, TEACHER KNOW SUBJECTS 79/
        V117, SCHOOL ATTITUDE, NO CONTROL OVER STUDENTS 79/
        V118, SCHOOL ATTITUDE, SCHOOL WORKS TAKES THOUGHT 79/
        V119, SCHOOL ATTITUDE, FREE TO PURSUE INTERESTS 79/
        V120, SCHOOL ATTITUDE, GOOD JOB COUNSEL OFFERED 79/
        V121, ATTITUDE TOWARD CURRENT SCHOOL 79/
        V125, HIGHEST GRADE ATTENDED 79/
        V126, HIGHEST GRADE COMPLETED 79/
        V134, HAVE HS DIPLOMA OR EQUAL? 79/
        V135, HS DIPLOMA OR GED 79/
        V167, LAST OR CURRENT COLLEGE 2 OR 4 YEAR 79/
        V169, IS CURRENTLY ENROLLED IN COLLEGE? 79/
        V188, HIGHEST GRADE EXPECT TO COMPLETE 79/
        V191, IS CURRENTLY ENROLLED IN REGULAR SCHOOL? 79/
        V224, PROB GETTING GOOD JOB, RACE DISCRIMINATION 79/
        V225, PROB GETTING GOOD JOB, NATIONALITY DISCRIM 79/
        V226, PROB GETTING GOOD JOB, SEX DISCRIMINATION 79/
        V227, PROB GETTING GOOD JOB, AGE DISCRIMINATION 79/
        V239, CURRENTLY PARTICIPATING ROTC? 79/
        V240, EVER PARTICIPATED IN ROTC? 79/
        V311, IS CURRENTLY ON ACTIVE DUTY? 79/
```

V362, EVER CONTACTED RECRUITER? 79/
V367, CONTACTED RESERVE RECRUITER? 79/
V380, ATTITUDE TOWARD SERVICE, A GOOD THING. 79/
V381, EXPECT TO ATTEMPT ENLISTMENT IN FUTURE? 79/
V382, BRANCH MOST LIKELY TO ENLIST IN IN FUTURE? 79/
V398, # HOURS WORKED OVERTIME OR OTHER JOB 79/
V406, WILL CURRENT LAYOFF PERIOD LAST > 30 DAYS? 79/
V407, # WEEKS SINCE CURRENT LAYOFF BEGAN 79/
V411, TYPE BUSINESS OR INDUSTRY CURRENT JOB 79/
V412, OCCUPATION AT CURRENT JOB CENSUS 3 DIGIT 79/
V419, MULTIPLE LOCATIONS CURRENT JOB 79/
V420P, # OF EMPLOYEES LOCATION CURRENT JOB 79/
V422, TOTAL EMPLOYED AT CURRENT JOB 79/
V468, NUMBER OF WEEKS LOOKING FOR WORK NEVER WORKED 79/
V472, NUMBER OF WEEKS LOOKING FOR WORK UNEMPLOYED 79/
V473, BEEN SEEKING FULL TIME EMPLOYMENT? UNEMPLOYED 79/
V476, DOES RESPONDENT WANT A JOB NOW? OLF 79/
V504, NUMBER OF WEEKS LOOKING FOR WORK EMPLOYED 79/
V506, OCCUPATION SEEKING GIVEN EMPLOYED 79/
V508, OCCUPATION SEEKING GIVEN UNEMPLOYED 79/
V514, DAYS PER WEEK WANT TO WORK 79/
V593, MARITAL STATUS, NOW MARRIED? 80/
V613, HOURS PER WEEK WORKED CURRENT JOB 79/
V668, HIGHEST GRADE COMPLETED BY ***SPOUSE*** 80/
V698, GRADE ATTENDING TIME OF LAST INTERVIEW 80/
V711, CURRENTLY ATTENDING OR ENROLLED IN SCHOOL 80/
V712, GRADE ATTENDING 80/
V744P, RATE OF PAY CURRENT JOB 79/
V746, TIME UNIT RATE OF PAY CURRENT JOB 79/
V759, JOB WITHOUT PAY IN FAMILY BUSINESS 79/
V991, HIGHEST GRADE ATTENDED 80/
V1026, HIGHEST GRADE COMPLETED 80/
V1069P, TOTAL FAMILY INCOME 79/
V1115P, TOTAL FAMILY INCOME 80/
V1125, ANY VOTECH TRAINING SINCE JAN 78 79/
V1137, HAVE HS DIPLOMA OR EQUIVALENT 80/
V1138, WHICH HAVE DIPLOMA OR GED 80/
V1149, ANY VOTECH TRAINING >1 MONTH 79/
V1170, IS CURRENT COLLEGE SAME AS 79 80/
V1173, YEAR ENROLLED CURRENT OR LAST COLLEGE 80/
V1175, COLLEGE ATTENDING 2 OR 4 YEAR SCHOOL 80/
V1201, CURRENTLY ENROLLED IN COLLEGE 80/
V1315, ROTTER SCALE, PAIR ONE STATEMENT A 79/
V1316, ROTTER SCALE, PAIR ONE STATEMENT B 79/
V1317, ROTTER SCALE, PAIR TWO STATEMENT A 79/
V1318, ROTTER SCALE, PAIR TWO STATEMENT B 79/
V1319, ROTTER SCALE, PAIR THREE STATEMENT A 79/
V1320, ROTTER SCALE, PAIR THREE STATEMENT B 79/
V1321, ROTTER SCALE, PAIR FOUR STATEMENT A 79/
V1322, ROTTER SCALE, PAIR FOUR STATEMENT B 79/
V1323, FAMILY ATTITUDE, WOMEN PLACE IN HOME 79/
V1324, WIFE WITH FAMILY NO TIME FOR EMPLOYMENT 79/
V1325, WORKING WIFE FEELS MORE USEFUL 79/
V1326, WIFE WORK LEAD TO JUVENILE DELINQUENT 79/
V1327, INFLATION MEANS BOTH PARENTS WORK 79/
V1328, TRADITION HUSBAND WIFE ROLE BEST 79/
V1329, MEN SHOULD SHARE HOUSEWORK 79/
V1330, WOMEN ARE HAPPIER IN TRADITIONAL ROLE 79/
V1378, # OF WEEKS RECEIVE UNEMPLOY COMP 78 79/
V1379, AVERAGE WEEKLY UNEMPLOY COMP 78 79/
V1381, AVERAGE WEEKLY UNEMPLOY COMP 79 80/
V1413, DOLLAR WORTH OF FOOD STAMPS RECEIVED 79/
V1430, AVERAGE AMOUNT PUBLIC ASSISTANCE RECEIVED 79/
V1474, NUMBER OF DEPENDENTS 79/
V1504, EXPECT TO ACHIEVE OCCUPATION ASPIRATION @ 35 79/

V1697, ********** SEX **********/
V1733, MILITARY PAYGRADE 79/
V1746, SOUTH OR NON-SOUTH RESIDENCE @ 14 79/
V1748, CURRENT RESIDENCE IN SMSA 79/
V1751, NUMBER OF WEEKS OLF 78 79/
V1760, UNEMPLOYED RATE CURRENT LOCATION 79/
V1764, SPOKEN TO RECRUITER IN 80 80/
V1992, ATTITUDE TOWARD SERVICE, A GOOD THING. 80/
V2005, EXPECT TO ATTEMPT ENLISTMENT IN FUTURE? 80/
V2006, BRANCH MOST LIKELY TO ENLIST IN IN FUTURE? 80/
V2324, NUMBER OR PAID RESERVE DRILLS 80/
V2348P, SAMPLING WEIGHT, TWO DECIMAL IMPLIED 79/
V2367, CURRENTLY IN SELRES RECEIVING PAY? 80/
V2373, CURRENTLY IN SELRES AND RECEIVING PAY? 80/
V2385, CURRENTLY IN ACTIVE FORCE? 80/
V2402, INELIGIBLE FOR ACTIVE WAS REASON JOINED RESERVE 80/
V2440, CURRENT PAYGRADE 80/
V2476, CURRENTLY IN DELAYED ENTRY PROGRAM?/
V2477, MONTH WILL BEGIN ACTIVE DUTY, IN DEP 80/
V2478, YEAR WILL BEGIN ACTIVE DUTY, IN DEP 80/
V2479, NOT ENLISTED, ENLIST REASON IS UNEMPLOYED 80/
V2480, NOT ENLISTED, ENLIST REASON IS BE ON MY OWN 80/
V2481, NOT ENLISTED, ENLIST REASON IS TO BETTER SELF 80/
V2482, NOT ENLISTED, ENLIST REASON IS TO TRAVEL 80/
V2483, NOT ENLISTED, ENLIST REASON IS ESCAPE PROBLEM 80/
V2484, NOT ENLISTED, ENLIST REASON IS SERVE COUNTRY 80/
V2485, NOT ENLISTED, ENLIST REASON IS BETTER INCOME 80/
V2486, NOT ENLISTED, ENLIST REASON IS FAMILY TRADITION 80/
V2487, NOT ENLISTED, ENLIST REASON IS PROVE ONESELF 80/
V2488, NOT ENLISTED, ENLIST REASON IS CIV JOB TRAINING 80/
V2489, NOT ENLISTED, ENLIST REASON IS FRINGE BENEFITS 80/
V2490, NOT ENLISTED, ENLIST REASON IS COLLEGE EXPENSE 80/
V2492, SERVED ANY TIME ON ACTIVE DUTY 80, NOT SERVING NOW/
V2568, # HOURS WORKED OVERTIME OR OTHER JOB 80/
V2576, CURRENT LAYOFF PERIOD LAST > 30 DAYS? 80/
V2577, # OF WEEKS CURRENT LAYOFF BEGAN 80/
V2581, TYPE BUSINESS OR INDUSTRY CURRENT JOB 80/
V2582, OCCUPATION AT CURRENT JOB CENSUS 3 DIGIT 80/
V2584, CURRENT JOB WITH STATE LOCAL OR FEDERAL GOVT? 80/
V2586, MULTIPLE LOCATIONS CURRENT JOB 80/
V2587P, # OF EMPLOYEES LOCATION CURRENT JOB 80/
V2589, TOTAL EMPLOYED AT CURRENT JOB 80/
V2592, HOURS PER WEEK WORKED CURRENT JOB 80/
V2600, EXPECTED DURATION CURRENT JOB 80/
V2603, SELF-EMPLOYED IN UNINCORPORATED BUSINESS? 80/
V2604, CURRENTLY ON ACTIVE DUTY? 80/
V2627, GLOBAL JOB SATISFACTION CURRENT JOB 80/
V2628, CURRENTLY ON ACTIVE DUTY? 80/
V2642, NUMBER OF WEEKS LOOKING FOR WORK NEVER WORKED 80/
V2646, NUMBER OF WEEKS LOOKING FOR WORK UNEMPLOYED 80/
V2647, BEEN SEEKING FULL TIME EMPLOYMENT? UNEMPLOYED 80/
V2650, DOES RESPONDENT WANT A JOB NOW? 80/
V2684, PLAN TO SEEK EMPLOYMENT IN THE NEXT YEAR? OLF

80/
V2705, NUMBER OF WEEKS LOOKING FOR WORK EMPLOYED
80/
V2709, OCCUPATION SEEKING GIVEN UNEMPLOYED 80/
V2716, DAYS PER WEEK WANT TO WORK 80/
V2731, CURRENTLY ENROLLED IN GRADES 1-12? 80/
V2796, CURRENTLY ENROLLED IN GRADES 1-12? 80/
V2891, TYPE OF 1ST VOTECH ENROLLED 79 80/
V2902, ANY VOTECH TRAINING >1 MONTH 80/
V3081, CURRENTLY ENROLLED IN COLLEGE? 80/
V3114, # WEEKS RECEIVE UNEMPLOY COMP 79 80/
V3162, DOLLAR WORTH OF FOOD STAMPS RECEIVED 80/
V3190, AVERAGE AMOUNT PUBLIC ASSISTANCE RECEIVED 80/
V3239, NUMBER OF DEPENDENTS 80/
V3266, RACE OR ETHNICITY 80/
V3837, # OF CHILDREN 80/
V3848, COLLEGE OR UNIV. LAST ATTENDED 80/
V3993P, SAMPLING WEIGHT, TWO DECIMAL IMPLIED 80/
V4003, #NUMBER OF WEEKS OLF 79 80/
V4096, CURRENT RESIDENCE IN SMSA 80/
V4101, AGE 81/
V4130, HIGHEST GRADE COMPLETED BY ***SPOUSE*** 81/
V4164, CURRENTLY ENROLLED OR ATTENDING SCHOOL? 81/
V4165, GRADE ATTENDING 81/
V4169, HIGHEST GRADE ATTENDED 81/
V4170, HIGHEST GRADE COMPLETED 81/
V4175, CURRENTLY ENROLLED IN GRADES 1-12? 81/
V4177, HAVE HS DIPLOMA OR EQUAL? 81/
V4178, HS DIPLOMA OR GED 81/
V4184, YEAR ENROLLED CURRENT OR LAST COLLEGE 81/
V4185, LAST OR CURRENT COLLEGE 2 OR 4 YEAR 81/
V4187, CURRENTLY ENROLLED IN COLLEGE? 81/
V4192, HIGHEST GRADE EXPECTS TO COMPLETE 81/
V4201, CONTACTED RECRUITER IN 1981? 81/
V4202, CONTACTED ARMY RECRUITER? 81/
V4203, CONTACTED NAVY RECRUITER? 81/
V4204, CONTACTED USAF RECRUITER? 81/
V4205, CONTACTED USMC RECRUITER? 81/
V4206, CONTACTED ARMY RESERVE RECRUITER? 81/
V4207, CONTACTED NAVY RESERVE RECRUITER? 81/
V4208, CONTACTED USAF RESERVE RECRUITER? 81/
V4209, CONTACTED USMC RESERVE RECRUITER? 81/
V4210, CONTACTED AIR NAT'L GUARD RECRUITER? 81/
V4211, CONTACTED ARMY NAT'L GUARD RECRUITER? 81/
V4212, CONTACTED USCG RECRUITER? 81/
V4213, CONTACTED OTHER RECRUITER? 81/
V4214, TAKEN MILITARY PHYSICAL? 81/
V4215, TAKEN ARMY PHYSICAL? 81/
V4216, TAKEN NAVY PHYSICAL? 81/
V4217, TAKEN USAF PHYSICAL? 81/
V4218, TAKEN USMC PHYSICAL? 81/
V4219, TAKEN ARMY RESERVE PHYSICAL? 81/
V4220, TAKEN ARMY NAT'L GUARD PHYSICAL? 81/
V4221, TAKEN USCG PHYSICAL? 81/
V4222, TOOK ARMED FORCES PHYSICAL IN 1981? 81/
V4227, ATTITUDE TOWARD SERVICE, A GOOD THING. 81/
V4228, EXPECT TO ATTEMPT ENLISTMENT IN FUTURE? 81/
V4229, BRANCH MOST LIKELY TO ENLIST IN IN FUTURE?
81/
V4237, NUMBER OF PAID RESERVE DRILLS 81/
V4279, CURRENTLY IN SELRES AND RECEIVING PAY? 81/
V4285, CURRENTLY IN SELRES AND RECEIVING PAY? 81/
V4297, CURRENTLY IN ACTIVE FORCE? 81/
V4314, NOT ELIGIBLE FOR ACTIVE WAS REASON JOIN
RESERVE 81/
V4352, CURRENT PAYGRADE 81/
V4354, CURRENTLY IN ACTIVE FORCE? 81/
V4388, CURRENTLY IN DELAYED ENTRY PROGRAM? 81/
V4389, MONTH WILL BEGIN ACTIVE DUTY, IN DEP 81/

V4390, YEAR WILL BEGIN ACTIVE DUTY, IN DEP 81/
V4391, NOT ENLISTED, ENLIST REASON IS UNEMPLYED 81/
V4392, NOT ENLISTED, ENLIST REASON IS BE ON MY OWN 81/
V4393, NOT ENLISTED, ENLIST REASON IS TO BETTER MYSELF 81/
V4394, NOT ENLISTED, ENLIST REASON IS TO TRAVEL 81/
V4395, NOT ENLISTED, ENLIST REASON IS ESCAPE PROBLEM 81/
V4396, NOT ENLISTED, ENLIST REASON IS SERVE COUNTRY 81/
V4397, NOT ENLISTED, ENLIST REASON IS BETTER INCOME 81/
V4398, NOT ENLISTED, ENLIST REASON IS FAMILY TRADITION 81/
V4399, NOT ENLISTED, ENLIST REASON IS PROVE ONESELF 81/
V4400, NOT ENLISTED, ENLIST REASON IS CIV JOB TRAINING 81/
V4401, NOT ENLISTED, ENLIST REASON IS FRINGE BENEFIT 81/
V4402, NOT ENLISTED, ENLIST REASON IS COLLEGE EXPENSE 81/
V4404, SERVE ANY TIME ON ACTIVE DUTY 81, NOT SERVING NOW/
V4432, CURRENTLY ON ACTIVE DUTY? 81/
V4447, # OF HOURS WORKED OVERTIME OR OTHER JOB 81/
V4455, WILL CURRENT LAYOFF PERIOD LAST > 30 DAYS? 81/
V4456, # OF WEEKS CURRENT LAYOFF BEGAN 81/
V4460, TYPE BUSINESS OR INDUSTRY CURRENT JOB 81/
V4461, OCCUPATION AT CURRENT JOB CENSUS 3 DIGIT 81/
V4464, CURRENT JOB WITH STATE, LOCAL OR FEDERAL GOVT? 81/
V4466, HOURS WORKED PER WEEK CURRENT JOB 81/
V4468, EXPECTED DURATION CURRENT JOB 81/
V4489, GLOBAL JOB SATISFACTION CURRENT JOB 81/
V4490, CURRENTLY ON ACTIVE DUTY? 81/
V4504, NUMBER OF WEEKS LOOKING FOR WORK? NEVER WORKED 81/
V4508, NUMBER OF WEEKS LOOKING FOR WORK? UNEMPLOYED 81/
V4509, BEEN SEEKING FULL TIME EMPLOYMENT? UNEMPLOYED 81/
V4512, DOES RESPONDENT WANT A JOB NOW? 81/
V4529, PLAN TO SEEK EMPLOYMENT IN THE NEXT YEAR? OLF 81/
V4548, NUMBER OF WEEKS LOOKING FOR WORK EMPLOYED 81/
V4559, DAYS PER WEEK WANT TO WORK 81/
V4650, UNEMPLOYED RATE CURRENT LOCATION 80/
V4654, NUMBER OF WEEKS OLF 80 81/
V4759, TYPE OF 1ST VOTECH ENROLLED 80 81/
V4770, ANY VOTECH TRAINING >1 MONTH 81/
V4880, # OF WEEKS RECEIVE UNEMPLOY COMP 80 81/
V4881, AVERAGE WEEKLY UNEMPLOYMENT COMP 80 81/
V4956, AVERAGE AMOUNT PUBLIC ASSISTANCE RECEIVED 81/
V5013, NUMBER OF DEPENDENTS 81/
V5360, RACE OR ETHNICITY 81/
V5386, # OF CHILDREN 81/
V5390, COLLEGE OR UNIV. LAST ATTENDED 81/
V5401, UNEMPLOYED RATE CURRENT LOCATION 81/
V5417, CURRENT RESIDENCE IN SMSA 81/
V6203P, SAMPLING WEIGHT, TWO DECIMAL IMPLIED 81/
V6208, GRADUATE STATUS 81/
V6209, SECTION 1 PROFILE, GENERAL SCIENCE/
V6210, SECTION 2 PROFILE, ARITHMETIC REASONING/
V6211, SECTION 3 PROFILE, WORD KNOWLEDGE/
V6212, SECTION 4 PROFILE, PARAGRAPH COMPREHENSION/
V6213, SECTION 5 PROFILE, NUMERICAL OPERATIONS/
V6214, SECTION 6 PROFILE, CODING SPEED/

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        V6215, SECTION 7 PROFILE, AUTO AND SHOP INFORMATION/
        V6216, SECTION 8 PROFILE, MATHEMATICS KNOWLEDGE/
        V6217, SECTION 9 PROFILE, MECHANICAL COMPREHENSION/
        V6218, SECTION 10 PROFILE, ELECTRONICS INFORMATION/
        V6252P, TOTAL FAMILY INCOME 81/
        V6261, RANK IN CLASS LAST YEAR ATTENDED 81/
VALUE LABELS    V3 TO V6261 (-1) REFUSALS
                            (-2) DON'T KNOW
                            (-3) INVALID SKIPS
                            (-4) VALID SKIPS
                            (-5) NONINTERVIEWS
READ INPUT DATA
SAVE FILE
FINISH
/*
//SPSSAS ... (2091,0198),'HARRIS',CLASS=G
//*MAIN ORG=NPGVM1.2091P
//    EXEC SAS
//SMALL     DD DISP=(OLD,KEEP),DSN=MSS.S2091.NLSPSS
//LARGE     DD DISP=(OLD,KEEP),DSN=MSS.S2091.NLSAS
//SYSIN DD *
PROC CONVERT SPSS=SMALL OUT=LARGE.MASTER;
DATA LARGE.MASTER;
SET LARGE.MASTER;
IF V3>=15;
IF V6209=25 THEN GS=67;
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IF V6209=23 THEN GS=63;
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IF V6209=12 THEN GS=42;
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IF V6209=10 THEN GS=38;
IF V6209=9 THEN GS=36;
IF V6209=8 THEN GS=34;
IF V6209=7 THEN GS=32;
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IF V6210=15 THEN AR=46;
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IF V6210=13 THEN AR=43;
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IF V6211+V6212=44 THEN VE=57;
IF V6211+V6212=43 THEN VE=56;
IF V6211+V6212=42 THEN VE=56;
IF V6211+V6212=41 THEN VE=55;
IF V6211+V6212=40 THEN VE=54;
IF V6211+V6212=39 THEN VE=53;
IF V6211+V6212=38 THEN VE=52;
IF V6211+V6212=37 THEN VE=51;
IF V6211+V6212=36 THEN VE=50;
IF V6211+V6212=35 THEN VE=49;
IF V6211+V6212=34 THEN VE=48;
IF V6211+V6212=33 THEN VE=47;
IF V6211+V6212=32 THEN VE=46;
IF V6211+V6212=31 THEN VE=45;
IF V6211+V6212=30 THEN VE=44;
IF V6211+V6212=29 THEN VE=43;
IF V6211+V6212=28 THEN VE=42;
IF V6211+V6212=27 THEN VE=41;
IF V6211+V6212=26 THEN VE=40;
IF V6211+V6212=25 THEN VE=39;
IF V6211+V6212=24 THEN VE=39;
IF V6211+V6212=23 THEN VE=38;
IF V6211+V6212=22 THEN VE=37;
IF V6211+V6212=21 THEN VE=36;
IF V6211+V6212=20 THEN VE=35;
IF V6211+V6212=19 THEN VE=34;
IF V6211+V6212=18 THEN VE=33;
IF V6211+V6212=17 THEN VE=32;
IF V6211+V6212=16 THEN VE=31;
IF V6211+V6212=15 THEN VE=30;
IF V6211+V6212=14 THEN VE=29;
IF V6211+V6212=13 THEN VE=28;
IF V6211+V6212=12 THEN VE=27;
IF V6211+V6212=11 THEN VE=26;
IF V6211+V6212=10 THEN VE=25;
IF V6211+V6212=9 THEN VE=24;
IF V6211+V6212=8 THEN VE=23;
IF V6211+V6212=7 THEN VE=23;
IF V6211+V6212=6 THEN VE=22;
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IF V6211+V6212=5 THEN VE=21;
IF V6211+V6212=4 THEN VE=20;
IF V6211+V6212=3 THEN VE=20;
IF V6211+V6212=2 THEN VE=20;
IF V6211+V6212=1 THEN VE=20;
IF V6211+V6212=0 THEN VE=20;
IF V6213=50 THEN NO1=50;
IF V6213=49 THEN NO1=50;
IF V6213=48 THEN NO1=48;
IF V6213=47 THEN NO1=48;
IF V6213=46 THEN NO1=46;
IF V6213=45 THEN NO1=46;
IF V6213=44 THEN NO1=44;
IF V6213=43 THEN NO1=44;
IF V6213=42 THEN NO1=42;
IF V6213=41 THEN NO1=42;
IF V6213=40 THEN NO1=40;
IF V6213=39 THEN NO1=40;
IF V6213=38 THEN NO1=38;
IF V6213=37 THEN NO1=38;
IF V6213=36 THEN NO1=36;
IF V6213=35 THEN NO1=36;
IF V6213=34 THEN NO1=34;
IF V6213=33 THEN NO1=34;
IF V6213=32 THEN NO1=32;
IF V6213=31 THEN NO1=32;
IF V6213=30 THEN NO1=30;
IF V6213=29 THEN NO1=30;
IF V6213=28 THEN NO1=28;
IF V6213=27 THEN NO1=28;
IF V6213=26 THEN NO1=26;
IF V6213=25 THEN NO1=26;
IF V6213=24 THEN NO1=24;
IF V6213=23 THEN NO1=24;
IF V6213=22 THEN NO1=22;
IF V6213=21 THEN NO1=22;
IF V6213=20 THEN NO1=20;
IF V6213=19 THEN NO1=20;
IF V6213=18 THEN NO1=18;
IF V6213=17 THEN NO1=18;
IF V6213=16 THEN NO1=16;
IF V6213=15 THEN NO1=16;
IF V6213=14 THEN NO1=14;
IF V6213=13 THEN NO1=14;
IF V6213=12 THEN NO1=12;
IF V6213=11 THEN NO1=12;
IF V6213=10 THEN NO1=10;
IF V6213=9 THEN NO1=10;
IF V6213=8 THEN NO1=8;
IF V6213=7 THEN NO1=8;
IF V6213=6 THEN NO1=6;
IF V6213=5 THEN NO1=6;
IF V6213=4 THEN NO1=4;
IF V6213=3 THEN NO1=4;
IF V6213=2 THEN NO1=2;
IF V6213=1 THEN NO1=2;
IF V6213=0 THEN NO1=0;
AFQTNO=NO1*.5;
IF V6211+V6212+V6210+AFQTNO=105 THEN AFQT=99;
IF V6211+V6212+V6210+AFQTNO=104 THEN AFQT=98;
IF V6211+V6212+V6210+AFQTNO=103 THEN AFQT=97;
IF V6211+V6212+V6210+AFQTNO=102 THEN AFQT=95;
IF V6211+V6212+V6210+AFQTNO=101 THEN AFQT=93;
IF V6211+V6212+V6210+AFQTNO=100 THEN AFQT=91;
IF V6211+V6212+V6210+AFQTNO=99 THEN AFQT=90;
IF V6211+V6212+V6210+AFQTNO=98 THEN AFQT=88;
IF V6211+V6212+V6210+AFQTNO=97 THEN AFQT=87;
IF V6211+V6212+V6210+AFQTNO=96 THEN AFQT=86;
IF V6211+V6212+V6210+AFQTNO=95 THEN AFQT=85;
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IF V6211+V6212+V6210+AFQTNO=94 THEN AFQT=83;
IF V6211+V6212+V6210+AFQTNO=93 THEN AFQT=82;
IF V6211+V6212+V6210+AFQTNO=92 THEN AFQT=80;
IF V6211+V6212+V6210+AFQTNO=91 THEN AFQT=78;
IF V6211+V6212+V6210+AFQTNO=90 THEN AFQT=76;
IF V6211+V6212+V6210+AFQTNO=89 THEN AFQT=74;
IF V6211+V6212+V6210+AFQTNO=88 THEN AFQT=72;
IF V6211+V6212+V6210+AFQTNO=87 THEN AFQT=70;
IF V6211+V6212+V6210+AFQTNO=86 THEN AFQT=68;
IF V6211+V6212+V6210+AFQTNO=85 THEN AFQT=66;
IF V6211+V6212+V6210+AFQTNO=84 THEN AFQT=65;
IF V6211+V6212+V6210+AFQTNO=83 THEN AFQT=63;
IF V6211+V6212+V6210+AFQTNO=82 THEN AFQT=61;
IF V6211+V6212+V6210+AFQTNO=81 THEN AFQT=59;
IF V6211+V6212+V6210+AFQTNO=80 THEN AFQT=58;
IF V6211+V6212+V6210+AFQTNO=79 THEN AFQT=56;
IF V6211+V6212+V6210+AFQTNO=78 THEN AFQT=54;
IF V6211+V6212+V6210+AFQTNO=77 THEN AFQT=52;
IF V6211+V6212+V6210+AFQTNO=76 THEN AFQT=50;
IF V6211+V6212+V6210+AFQTNO=75 THEN AFQT=49;
IF V6211+V6212+V6210+AFQTNO=74 THEN AFQT=48;
IF V6211+V6212+V6210+AFQTNO=73 THEN AFQT=46;
IF V6211+V6212+V6210+AFQTNO=72 THEN AFQT=44;
IF V6211+V6212+V6210+AFQTNO=71 THEN AFQT=42;
IF V6211+V6212+V6210+AFQTNO=70 THEN AFQT=40;
IF V6211+V6212+V6210+AFQTNO=69 THEN AFQT=38;
IF V6211+V6212+V6210+AFQTNO=68 THEN AFQT=36;
IF V6211+V6212+V6210+AFQTNO=67 THEN AFQT=34;
IF V6211+V6212+V6210+AFQTNO=66 THEN AFQT=33;
IF V6211+V6212+V6210+AFQTNO=65 THEN AFQT=31;
IF V6211+V6212+V6210+AFQTNO=64 THEN AFQT=30;
IF V6211+V6212+V6210+AFQTNO=63 THEN AFQT=29;
IF V6211+V6212+V6210+AFQTNO=62 THEN AFQT=28;
IF V6211+V6212+V6210+AFQTNO=61 THEN AFQT=26;
IF V6211+V6212+V6210+AFQTNO=60 THEN AFQT=25;
IF V6211+V6212+V6210+AFQTNO=59 THEN AFQT=24;
IF V6211+V6212+V6210+AFQTNO=58 THEN AFQT=23;
IF V6211+V6212+V6210+AFQTNO=57 THEN AFQT=22;
IF V6211+V6212+V6210+AFQTNO=56 THEN AFQT=21;
IF V6211+V6212+V6210+AFQTNO=55 THEN AFQT=20;
IF V6211+V6212+V6210+AFQTNO=54 THEN AFQT=20;
IF V6211+V6212+V6210+AFQTNO=53 THEN AFQT=19;
IF V6211+V6212+V6210+AFQTNO=52 THEN AFQT=18;
IF V6211+V6212+V6210+AFQTNO=51 THEN AFQT=17;
IF V6211+V6212+V6210+AFQTNO=50 THEN AFQT=16;
IF V6211+V6212+V6210+AFQTNO=49 THEN AFQT=16;
IF V6211+V6212+V6210+AFQTNO=48 THEN AFQT=15;
IF V6211+V6212+V6210+AFQTNO=47 THEN AFQT=15;
IF V6211+V6212+V6210+AFQTNO=46 THEN AFQT=14;
IF V6211+V6212+V6210+AFQTNO=45 THEN AFQT=14;
IF V6211+V6212+V6210+AFQTNO=44 THEN AFQT=13;
IF V6211+V6212+V6210+AFQTNO=43 THEN AFQT=13;
IF V6211+V6212+V6210+AFQTNO=42 THEN AFQT=12;
IF V6211+V6212+V6210+AFQTNO=41 THEN AFQT=12;
IF V6211+V6212+V6210+AFQTNO=40 THEN AFQT=11;
IF V6211+V6212+V6210+AFQTNO=39 THEN AFQT=10;
IF V6211+V6212+V6210+AFQTNO=38 THEN AFQT=10;
IF V6211+V6212+V6210+AFQTNO=37 THEN AFQT=9;
IF V6211+V6212+V6210+AFQTNO=36 THEN AFQT=9;
IF V6211+V6212+V6210+AFQTNO=35 THEN AFQT=8;
IF V6211+V6212+V6210+AFQTNO=34 THEN AFQT=8;
IF V6211+V6212+V6210+AFQTNO=33 THEN AFQT=7;
IF V6211+V6212+V6210+AFQTNO=32 THEN AFQT=7;
IF V6211+V6212+V6210+AFQTNO=31 THEN AFQT=6;
IF V6211+V6212+V6210+AFQTNO=30 THEN AFQT=6;
IF V6211+V6212+V6210+AFQTNO=29 THEN AFQT=5;
IF V6211+V6212+V6210+AFQTNO=28 THEN AFQT=5;
IF V6211+V6212+V6210+AFQTNO=27 THEN AFQT=4;
IF V6211+V6212+V6210+AFQTNO=26 THEN AFQT=4;
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IF V6211+V6212+V6210+AFQTNO=25 THEN AFQT=3;
IF V6211+V6212+V6210+AFQTNO=24 THEN AFQT=3;
IF V6211+V6212+V6210+AFQTNO=23 THEN AFQT=2;
IF V6211+V6212+V6210+AFQTNO=22 THEN AFQT=1;
IF V6211+V6212+V6210+AFQTNO=21 THEN AFQT=1;
IF V6211+V6212+V6210+AFQTNO=20 THEN AFQT=1;
IF V6211+V6212+V6210+AFQTNO=19 THEN AFQT=1;
IF V6211+V6212+V6210+AFQTNO=18 THEN AFQT=1;
IF V6211+V6212+V6210+AFQTNO=17 THEN AFQT=1;
IF V6211+V6212+V6210+AFQTNO=16 THEN AFQT=1;
IF V6211+V6212+V6210+AFQTNO=15 THEN AFQT=1;
IF V6211+V6212+V6210+AFQTNO=14 THEN AFQT=1;
IF V6211+V6212+V6210+AFQTNO=13 THEN AFQT=1;
IF V6211+V6212+V6210+AFQTNO=12 THEN AFQT=1;
IF V6211+V6212+V6210+AFQTNO=11 THEN AFQT=1;
IF V6211+V6212+V6210+AFQTNO=10 THEN AFQT=1;
IF V6211+V6212+V6210+AFQTNO=9 THEN AFQT=1;
IF V6211+V6212+V6210+AFQTNO=8 THEN AFQT=1;
IF V6211+V6212+V6210+AFQTNO=7 THEN AFQT=1;
IF V6211+V6212+V6210+AFQTNO=6 THEN AFQT=1;
IF V6211+V6212+V6210+AFQTNO=5 THEN AFQT=1;
IF V6211+V6212+V6210+AFQTNO=4 THEN AFQT=1;
IF V6211+V6212+V6210+AFQTNO=3 THEN AFQT=1;
IF V6211+V6212+V6210+AFQTNO=2 THEN AFQT=1;
IF V6211+V6212+V6210+AFQTNO=1 THEN AFQT=1;
IF V6211+V6212+V6210+AFQTNO=0 THEN AFQT=1;
IF V110>=9 AND V110<=12 AND V191=1 THEN HS79=1;
ELSE HS79=0;
IF V169=1 AND V191=1 AND V110>=13 AND V110<=20
AND V613<35 THEN COLL79=1;
ELSE COLL79=0;
IF V311=1 THEN ACTIVE79=1;
ELSE ACTIVE79=0;
IF V412>=1 AND V412<=20 THEN EMPLYD79=1;
ELSE EMPLYD79=0;
IF V472>0 THEN NMPLYD79=1;
ELSE NMPLYD79=0;
IF V476>=-2 THEN OLF79=1;
ELSE OLF79=0;
IF HS79+COLL79+ACTIVE79+EMPLYD79+NMPLYD79+OLF79<1 THEN DO;
IF V613>0 AND V613<35 THEN NMPLYD79=1;
IF V508>=1 AND V508<=20 THEN NMPLYD79=1;
IF V613>=35 THEN EMPLYD79=1;
IF V406>=1 THEN NMPLYD79=1;
IF V468<=20 THEN NMPLYD79=1;
END;
IF HS79+COLL79+ACTIVE79+EMPLYD79+NMPLYD79+OLF79>1 THEN DO;
IF HS79=1 AND NMPLYD79=1 AND V3<=19 THEN NMPLYD79=0;
IF HS79=1 AND NMPLYD79=1 AND V3>19 THEN HS79=0;
IF COLL79=1 AND NMPLYD79=1 THEN NMPLYD79=0;
IF HS79=1 AND EMPLYD79=1 AND V3<=19 THEN EMPLYD79=0;
IF HS79=1 AND EMPLYD79=1 AND V3>19 THEN HS79=0;
IF COLL79=1 AND EMPLYD79=1 THEN COLL79=0;
IF ACTIVE79=1 AND HS79=1 THEN HS79=0;
IF ACTIVE79=1 AND COLL79=1 THEN COLL79=0;
IF HS79=1 AND OLF79=1 THEN OLF79=0;
IF COLL79=1 AND OLF79=1 THEN OLF79=0;
IF EMPLYD79=1 AND NMPLYD79=1 THEN NMPLYD79=0;
IF ACTIVE79=1 AND OLF79=1 THEN OLF79=0;
IF EMPLYD79=1 AND OLF79=1 THEN OLF79=0;
END;
IF V712>=9 AND V712<=12 AND V711=1 THEN HS80=1;
ELSE HS80=0;
IF V1201=1 AND V711=1 AND V712>=13 AND V712<=20
AND V2592<35 THEN
COLL80=1;
ELSE COLL80=0;
IF V2385=1 THEN ACTIVE80=1;
ELSE ACTIVE80=0;
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IF V2582>-1 AND V2582<=12 THEN EMPLYD80=1;
ELSE EMPLYD80=0;
IF V2646>0 THEN NMPLYD80=1;
ELSE NMPLYD80=0;
IF V2650>=-2 THEN OLF80=1;
ELSE OLF80=0;
IF HS80+COLL80+ACTIVE80+EMPLYD80+NMPLYD80+OLF80<1 THEN DO;
IF V2592>0 AND V2592<35 THEN NMPLYD80=1;
IF V2592>=35 THEN EMPLYD80=1;
IF V2576>=1 THEN NMPLYD80=1;
IF V2642<=22 THEN NMPLYD80=1;
END;
IF HS80+COLL80+ACTIVE80+EMPLYD80+NMPLYD80+OLF80>1 THEN DO;
IF HS80=1 AND NMPLYD80=1 AND V5<=19 THEN NMPLYD80=0;
IF HS80=1 AND NMPLYD80=1 AND V5>19 THEN HS80=0;
IF COLL80=1 AND NMPLYD80=1 THEN NMPLYD80=0;
IF HS80=1 AND EMPLYD80=1 AND V5<=19 THEN EMPLYD80=0;
IF HS80=1 AND EMPLYD80=1 AND V5>19 THEN HS80=0;
IF COLL80=1 AND EMPLYD80=1 THEN COLL80=0;
IF ACTIVE80=1 AND HS80=1 THEN HS80=0;
IF ACTIVE80=1 AND COLL80=1 THEN COLL80=0;
IF HS80=1 AND OLF80=1 THEN OLF80=0;
IF COLL80=1 AND OLF80=1 THEN OLF80=0;
IF EMPLYD80=1 AND NMPLYD80=1 THEN NMPLYD80=0;
IF ACTIVE80=1 AND OLF80=1 THEN OLF80=0;
IF ACTIVE80=1 AND EMPLYD80=1 THEN EMPLYD80=0;
IF EMPLYD80=1 AND OLF80=1 THEN OLF80=0;
END;
IF V4165>=9 AND V4165<=12 AND V4164=1 THEN HS81=1;
ELSE HS81=0;
IF V4187=1 AND V4164=1 AND V4165>=13 AND V4165<=20
AND V4466<35 THEN
COLL81=1;
ELSE COLL81=0;
IF V4297=1 THEN ACTIVE81=1;
ELSE ACTIVE81=0;
IF V4461>=1 AND V4461<=12 THEN EMPLYD81=1;
ELSE EMPLYD81=0;
IF V4508>0 THEN NMPLYD81=1;
ELSE NMPLYD81=0;
IF V4512>=-2 THEN OLF81=1;
ELSE OLF81=0;
IF HS81+COLL81+ACTIVE81+EMPLYD81+NMPLYD81+OLF81<1 THEN DO;
IF V4466>0 AND V4466<35 THEN NMPLYD81=1;
IF V4466>=35 THEN EMPLYD81=1;
IF V4455>=1 THEN NMPLYD81=1;
IF V4504<=22 THEN NMPLYD81=1;
END;
IF HS81+COLL81+ACTIVE81+EMPLYD81+NMPLYD81+OLF81>1 THEN DO;
IF HS81=1 AND NMPLYD81=1 AND V4101<=19 THEN NMPLYD81=0;
IF HS81=1 AND NMPLYD81=1 AND V4101>19 THEN HS81=0;
IF COLL81=1 AND NMPLYD81=1 THEN NMPLYD81=0;
IF HS81=1 AND EMPLYD81=1 AND V4101<=19 THEN EMPLYD81=0;
IF HS81=1 AND EMPLYD81=1 AND V4101>19 THEN HS81=0;
IF COLL81=1 AND EMPLYD81=1 THEN COLL81=0;
IF ACTIVE81=1 AND HS81=1 THEN HS81=0;
IF ACTIVE81=1 AND COLL81=1 THEN COLL81=0;
IF HS81=1 AND OLF81=1 THEN OLF81=0;
IF COLL81=1 AND OLF81=1 THEN OLF81=0;
IF EMPLYD81=1 AND NMPLYD81=1 THEN NMPLYD81=0;
IF ACTIVE81=1 AND OLF81=1 THEN OLF81=0;
IF ACTIVE81=1 AND EMPLYD81=1 THEN EMPLYD81=0;
IF EMPLYD81=1 AND OLF81=1 THEN OLF81=0;
END;
IF EMPLYD79=1 AND V613>=35 THEN FULEMP79=1;
ELSE FULEMP79=0;
IF EMPLYD79=1 AND V613<35 THEN PAREMP79=1;
ELSE PAREMP79=0;
IF EMPLYD80=1 AND V2592>=35 THEN FULEMP80=1;
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ELSE FULEMP80=0;
IF EMPLYD80=1 AND V2592<35 THEN PAREMP80=1;
ELSE PAREMP80=0;
IF EMPLYD81=1 AND V4466>=35 THEN FULEMP81=1;
ELSE FULEMP81=0;
IF EMPLYD81=1 AND V4466<35 THEN PAREMP81=1;
ELSE PAREMP81=0;
IF HS79=1 THEN STATE79=10;
IF COLL79=1 THEN STATE79=20;
IF ACTIVE79=1 THEN STATE79=30;
IF FULEMP79=1 THEN STATE79=40;
IF PAREMP79=1 THEN STATE79=50;
IF NMPLYD79=1 THEN STATE79=60;
IF OLF79=1 THEN STATE79=70;
IF HS80=1 THEN STATE80=10;
IF COLL80=1 THEN STATE80=20;
IF ACTIVE80=1 THEN STATE80=30;
IF FULEMP80=1 THEN STATE80=40;
IF PAREMP80=1 THEN STATE80=50;
IF NMPLYD80=1 THEN STATE80=60;
IF OLF80=1 THEN STATE80=70;
IF HS81=1 THEN STATE81=10;
IF COLL81=1 THEN STATE81=20;
IF ACTIVE81=1 THEN STATE81=30;
IF FULEMP81=1 THEN STATE81=40;
IF PAREMP81=1 THEN STATE81=50;
IF NMPLYD81=1 THEN STATE81=60;
IF OLF81=1 THEN STATE81=70;
V3A = V3+1;
V3B = V3+2;
/*
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APPENDIX B

WEIGHTED TRANSITION PROBABILITY MATRICES BY AGE AND SEX FOR 79-80 AND 80-81

WEIGHTED TRANSITION PROBABILITIES (79-80) FOR 17 YEAR OLD MALES

FREQUENCY PERCENT ROW PCT COL PCT	HIGH SCHOOL	COLLEGE	ACTIVE	FULL TIME	PART TIME	UN EMPLOYED	OLF	TOTAL
HIGH SCHOOL	880203 42.36 48.27 98.71	192042 9.24 10.53 97.04	55934 2.69 3.07 80.07	227936 10.97 12.50 65.96	300798 14.48 16.50 91.13	122977 5.92 6.74 71.05	43520 2.09 2.39 62.26	1823410 87.75
COLLEGE	562 0.03 6.88 0.06	5865 0.28 71.75 2.96	0 0.00 0.00 0.00	776 0.04 9.50 0.22	0 0.00 0.00 0.00	0 0.00 0.00 0.00	971 0.05 11.87 1.39	8175 0.39
ACTIVE	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	6682 0.32 100.00 3.86	0 0.00 0.00 0.00	6682 0.32
FULL TIME	2660 0.13 3.12 0.30	0 0.00 0.00 0.00	7634 0.37 8.95 10.93	57051 2.75 66.88 16.51	6028 0.29 7.07 1.83	10283 0.49 12.05 5.94	1652 0.08 1.94 2.36	85308 4.11
PART TIME	2081 0.10 4.90 0.23	0 0.00 0.00 0.00	1056 0.05 2.49 1.51	16126 0.78 37.95 4.67	9685 0.47 22.79 2.93	2510 0.12 5.91 1.45	11040 0.53 25.98 15.79	42498 2.05
UNEMPLOYED	0 0.00 0.00 0.00	0 0.00 0.00 0.00	3693 0.18 4.41 5.29	38306 1.84 45.72 11.09	10079 0.49 12.03 3.05	20776 1.00 24.80 12.00	10931 0.53 13.05 15.64	83785 4.03
OLF	6175 0.30 21.91 0.69	0 0.00 0.00 0.00	1542 0.07 5.47 2.21	5350 0.26 18.98 1.55	3469 0.17 12.31 1.05	9865 0.47 35.00 5.70	1784 0.09 6.33 2.55	28185 1.36
TOTAL	891682 42.91	197907 9.52	69860 3.36	345544 16.63	330058 15.88	173092 8.33	69897 3.36	2078042 100.00

WEIGHTED TRANSITION PROBABILITIES (80-81) FOR 17 YEAR OLD MALES

FREQUENCY PERCENT ROW PCT COL PCT	HIGH SCHOOL	COLLEGE	ACTIVE	FULL TIME	PART TIME	UN EMPLOYED	OLF	TOTAL
HIGH SCHOOL	695301 34.14 41.85 95.69	201967 9.92 12.16 99.45	34915 1.71 2.10 61.49	295111 14.49 17.76 64.26	293901 14.43 17.69 87.45	98848 4.85 5.95 59.32	41231 2.02 2.48 46.81	1661274 81.57
COLLEGE	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	5892 0.29 100.00 1.28	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	5892 0.29
ACTIVE	0 0.00 0.00 0.00	0 0.00 0.00 0.00	4876 0.24 100.00 8.59	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	4876 0.24
FULL TIME	5669 0.28 4.34 0.78	0 0.00 0.00 0.00	5665 0.28 4.34 9.98	91214 4.48 69.82 19.86	4981 0.24 3.81 1.48	15444 0.76 11.82 9.27	7671 0.38 5.87 8.71	130644 6.41
PART TIME	0 0.00 0.00 0.00	1111 0.05 2.06 0.55	2775 0.14 5.13 4.89	9654 0.47 17.86 2.10	17034 0.84 31.52 5.07	9333 0.46 17.27 5.60	14136 0.69 26.16 16.05	54043 2.65
UNEMPLOYED	21329 1.05 16.37 2.94	0 0.00 0.00 0.00	6431 0.32 4.94 11.32	40217 1.97 30.87 8.76	12850 0.63 9.86 3.82	32879 1.61 25.24 19.73	16562 0.81 12.71 18.81	130268 6.40
OLF	4329 0.21 8.73 0.60	0 0.00 0.00 0.00	2124 0.10 4.28 3.74	17168 0.84 34.64 3.74	7323 0.36 14.78 2.18	10144 0.50 20.47 6.09	8472 0.42 17.09 9.62	49560 2.43
TOTAL	726628 35.68	203078 9.97	56785 2.79	459256 22.55	336089 16.50	166648 8.18	88072 4.32	2036557 100.00

WEIGHTED TRANSITION PROBABILITIES (79-80) FOR 18 YEAR OLD MALES

FREQUENCY PERCENT ROW PCT COL PCT	HIGH SCHOOL	COLLEGE	ACTIVE	FULL TIME	PART TIME	UN EMPLOYED	OLF	TOTAL
HIGH SCHOOL	130745 6.09 15.06 98.17	129452 6.03 14.91 43.01	74261 3.46 8.55 48.22	312395 14.54 35.97 37.14	110896 5.16 12.77 33.34	90717 4.22 10.45 30.71	19937 0.93 2.30 21.99	868403 40.43
COLLEGE	0 0.00 0.00 0.00	117666 5.48 56.39 39.09	4355 0.20 2.09 2.83	13059 0.61 6.26 1.55	58588 2.73 28.08 17.62	14275 0.66 6.84 4.83	729 0.03 0.35 0.80	208672 9.71
ACTIVE	0 0.00 0.00 0.00	0 0.00 0.00 0.00	46694 2.17 84.92 30.32	5347 0.25 9.72 0.64	0 0.00 0.00 0.00	2946 0.14 5.36 1.00	0 0.00 0.00 0.00	54986 2.56
FULL TIME	0 0.00 0.00 0.00	12629 0.59 2.24 4.20	12796 0.60 2.27 8.31	370220 17.24 65.75 44.01	65747 3.06 11.68 19.77	80405 3.74 14.28 27.22	21242 0.99 3.77 23.43	563039 26.21
PART TIME	0 0.00 0.00 0.00	36802 1.71 14.53 12.23	3840 0.18 1.52 2.49	93629 4.36 36.97 11.13	74265 3.46 29.33 22.33	38299 1.78 15.12 12.97	6390 0.30 2.52 7.05	253224 11.79
UNEMPLOYED	1727 0.08 1.19 1.30	0 0.00 0.00 0.00	7151 0.33 4.94 4.64	35537 1.65 24.54 4.22	16291 0.76 11.25 4.90	49586 2.31 34.24 16.79	34524 1.61 23.84 38.08	144815 6.74
OLF	709 0.03 1.29 0.53	4449 0.21 8.11 1.48	4910 0.23 8.94 3.19	11013 0.51 20.06 1.31	6815 0.32 12.41 2.05	19152 0.89 34.89 6.48	7846 0.37 14.29 8.65	54893 2.56
TOTAL	133181 6.20	300999 14.01	154006 7.17	841199 39.16	332601 15.48	295380 13.75	90668 4.22	2148033 100.00

WEIGHTED TRANSITION PROBABILITIES (80-81) FOR 18 YEAR OLD MALES

FREQUENCY PERCENT ROW PCT COL PCT	HIGH SCHOOL	COLLEGE	ACTIVE	FULL TIME	PART TIME	UN EMPLOYED	OLF	TOTAL
HIGH SCHOOL	80916 3.89 9.07 95.13	147686 7.11 16.56 46.89	41225 1.98 4.62 27.90	268506 12.92 30.11 41.27	205255 9.88 23.02 39.54	125944 6.06 14.12 50.59	22153 1.07 2.48 19.86	891685 42.91
COLLEGE	0 0.00 0.00 0.00	104131 5.01 52.62 33.06	0 0.00 0.00 0.00	19784 0.95 10.00 3.04	54170 2.61 27.37 10.43	13141 0.63 6.64 5.28	6682 0.32 3.38 5.99	197908 9.52
ACTIVE	0 0.00 0.00 0.00	0 0.00 0.00 0.00	69860 3.36 100.00 47.28	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	69860 3.36
FULL TIME	0 0.00 0.00 0.00	12041 0.58 3.48 3.82	4884 0.24 1.41 3.31	205276 9.88 59.41 31.55	51192 2.46 14.81 9.86	53295 2.56 15.42 21.41	18857 0.91 5.46 16.90	345544 16.63
PART TIME	0 0.00 0.00 0.00	43331 2.09 13.13 13.76	13682 0.66 4.15 9.26	81250 3.91 24.62 12.49	161047 7.75 48.79 31.02	18692 0.90 5.66 7.51	12058 0.58 3.65 10.81	330059 15.88
UNEMPLOYED	2911 0.14 1.68 3.42	6294 0.30 3.64 2.00	11142 0.54 6.44 7.54	58820 2.83 33.98 9.04	36528 1.76 21.10 7.04	32828 1.58 18.97 13.19	24570 1.18 14.19 22.02	173093 8.33
OLF	1231 0.06 1.76 1.45	1474 0.07 2.11 0.47	6956 0.33 9.95 4.71	17004 0.82 24.33 2.61	10936 0.53 15.65 2.11	5054 0.24 7.23 2.03	27242 1.31 38.97 24.42	69897 3.36
TOTAL	85058 4.09	314956 15.16	147749 7.11	650641 31.31	519128 24.98	248954 11.98	111561 5.37	2078047 100.00

WEIGHTED TRANSITION PROBABILITIES (79-80) FOR 19 YEAR OLD MALES

FREQUENCY PERCENT ROW PCT COL PCT	HIGH SCHOOL	COLLEGE	ACTIVE	FULL TIME	PART TIME	UN EMPLOYED	OLF	TOTAL
HIGH SCHOOL	7815 0.36 6.54 100.00	4348 0.20 3.64 1.32	9760 0.45 8.17 6.75	57716 2.69 48.30 5.50	16913 0.79 14.16 5.38	10746 0.50 8.99 4.41	12185 0.57 10.20 21.36	119483 5.57
COLLEGE	0 0.00 0.00 0.00	199836 9.31 59.15 60.85	1056 0.05 0.31 0.73	49536 2.31 14.66 4.72	71323 3.32 21.11 22.67	14971 0.70 4.43 6.14	1145 0.05 0.34 2.01	337867 15.74
ACTIVE	0 0.00 0.00 0.00	1665 0.08 1.14 0.51	114965 5.36 78.73 79.45	14593 0.68 9.99 1.39	1149 0.05 0.79 0.37	12913 0.60 8.84 5.29	742 0.03 0.51 1.30	146028 6.80
FULL TIME	0 0.00 0.00 0.00	53857 2.51 5.64 16.40	14738 0.69 1.54 10.19	737032 34.34 77.13 70.22	58301 2.72 6.10 18.53	81275 3.79 8.51 33.32	10400 0.48 1.09 18.23	955604 44.53
PART TIME	0 0.00 0.00 0.00	67880 3.16 18.93 20.67	0 0.00 0.00 0.00	102268 4.77 28.52 9.74	132299 6.16 36.90 42.05	51557 2.40 14.38 21.14	4577 0.21 1.28 8.02	358581 16.71
UNEMPLOYED	0 0.00 0.00 0.00	842 0.04 0.42 0.26	4173 0.19 2.07 2.88	80731 3.76 40.13 7.69	33523 1.56 16.66 10.66	60928 2.84 30.29 24.98	20976 0.98 10.43 36.78	201171 9.37
OLF	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	7697 0.36 28.19 0.73	1088 0.05 3.99 0.35	11510 0.54 42.15 4.72	7012 0.33 25.68 12.29	27307 1.27
TOTAL	7815 0.36	328428 15.30	144693 6.74	1049573 48.91	314596 14.66	243899 11.37	57038 2.66	2146042 100.00

WEIGHTED TRANSITION PROBABILITIES (80-81) FOR 19 YEAR OLD MALES

FREQUENCY PERCENT ROW PCT COL PCT	HIGH SCHOOL	COLLEGE	ACTIVE	FULL TIME	PART TIME	UN EMPLOYED	OLF	TOTAL
HIGH SCHOOL	3566 0.17 2.68 39.46	18604 0.87 13.97 5.87	2256 0.11 1.69 1.18	39060 1.82 29.33 4.24	38369 1.79 28.81 10.84	30447 1.42 22.86 11.12	880 0.04 0.66 1.09	133182 6.20
COLLEGE	0 0.00 0.00 0.00	191068 8.90 63.48 60.26	0 0.00 0.00 0.00	29711 1.38 9.87 3.22	61674 2.87 20.49 17.43	17606 0.82 5.85 6.43	940 0.04 0.31 1.16	300999 14.01
ACTIVE	0 0.00 0.00 0.00	0 0.00 0.00 0.00	136839 6.37 88.85 71.47	8800 0.41 5.71 0.95	0 0.00 0.00 0.00	8365 0.39 5.43 3.05	0 0.00 0.00 0.00	154005 7.17
FULL TIME	5472 0.25 0.65 60.54	55760 2.60 6.63 17.59	19978 0.93 2.37 10.43	625957 29.14 74.41 67.91	37953 1.77 4.51 10.73	75349 3.51 8.96 27.52	20730 0.97 2.46 25.58	841199 39.16
PART TIME	0 0.00 0.00 0.00	44763 2.08 13.46 14.12	0 0.00 0.00 0.00	95360 4.44 28.67 10.35	150952 7.03 45.39 42.66	39303 1.83 11.82 14.35	2222 0.10 0.67 2.74	332601 15.48
UNEMPLOYED	0 0.00 0.00 0.00	4963 0.23 1.68 1.57	26610 1.24 9.01 13.90	100825 4.69 34.13 10.94	55448 2.58 18.77 15.67	86270 4.02 29.21 31.50	21263 0.99 7.20 26.24	295379 13.75
OLF	0 0.00 0.00 0.00	1896 0.09 2.09 0.60	5793 0.27 6.39 3.03	22054 1.03 24.32 2.39	9412 0.44 10.38 2.66	16506 0.77 18.20 6.03	35007 1.63 38.61 43.20	90668 4.22
TOTAL	9039 0.42	317055 14.76	191476 8.91	921767 42.91	353809 16.47	273846 12.75	81042 3.77	2148033 100.00

WEIGHTED TRANSITION PROBABILITIES (79-80) FOR 20 YEAR OLD MALES

FREQUENCY PERCENT ROW PCT COL PCT	HIGH SCHOOL	COLLEGE	ACTIVE	FULL TIME	PART TIME	UN EMPLOYED	OLF	TOTAL
HIGH SCHOOL	1389 0.06 28.94 17.17	1851 0.09 38.57 0.66	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1559 0.07 32.49 0.69	0 0.00 0.00 0.00	4799 0.22
COLLEGE	0 0.00 0.00 0.00	179865 8.32 54.62 63.94	0 0.00 0.00 0.00	50698 2.35 15.39 4.51	76517 3.54 23.23 22.79	21404 0.99 6.50 9.41	844 0.04 0.26 1.67	329328 15.24
ACTIVE	0 0.00 0.00 0.00	1956 0.09 1.20 0.70	126561 5.86 77.68 93.52	12407 0.57 7.61 1.10	3060 0.14 1.88 0.91	13361 0.62 8.20 5.87	5587 0.26 3.43 11.03	162932 7.54
FULL TIME	6698 0.31 0.62 82.83	62448 2.89 5.78 22.20	5475 0.25 0.51 4.05	858235 39.70 79.41 76.43	41599 1.92 3.85 12.39	84353 3.90 7.81 37.07	21897 1.01 2.03 43.24	1080706 50.00
PART TIME	0 0.00 0.00 0.00	28977 1.34 7.03 10.30	3291 0.15 0.80 2.43	132465 6.13 32.14 11.80	190842 8.83 46.30 56.84	50713 2.35 12.30 22.29	5853 0.27 1.42 11.56	412140 19.07
UNEMPLOYED	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	59682 2.76 52.86 5.31	11901 0.55 10.54 3.54	35718 1.65 31.63 15.70	5608 0.26 4.97 11.07	112910 5.22
OLF	0 0.00 0.00 0.00	6214 0.29 10.58 2.21	0 0.00 0.00 0.00	9443 0.44 16.07 0.84	11827 0.55 20.13 3.52	20416 0.94 34.75 8.97	10851 0.50 18.47 21.43	58751 2.72
TOTAL	8087 0.37	281311 13.01	135327 6.26	1122930 51.95	335747 15.53	227524 10.53	50641 2.34	2161567 100.00

WEIGHTED TRANSITION PROBABILITIES (80-81) FOR 20 YEAR OLD MALES

FREQUENCY PERCENT ROW PCT COL PCT	HIGH SCHOOL	COLLEGE	ACTIVE	FULL TIME	PART TIME	UN EMPLOYED	OLF	TOTAL
HIGH SCHOOL	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	7815 0.36 100.00 0.71	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	7815 0.36
COLLEGE	0 0.00 0.00 0.00	189199 8.82 57.61 69.65	2533 0.12 0.77 1.87	46077 2.15 14.03 4.21	79415 3.70 24.18 21.71	7188 0.33 2.19 3.84	4017 0.19 1.22 4.50	328428 15.30
ACTIVE	0 0.00 0.00 0.00	2501 0.12 1.73 0.92	112495 5.24 77.75 83.19	19516 0.91 13.49 1.78	2080 0.10 1.44 0.57	6867 0.32 4.75 3.67	1235 0.06 0.85 1.38	144693 6.74
FULL TIME	0 0.00 0.00 0.00	26305 1.23 2.51 9.68	5254 0.24 0.50 3.89	829904 38.67 79.07 75.79	95399 4.45 9.09 26.08	76244 3.55 7.26 40.73	16465 0.77 1.57 18.44	1049571 48.91
PART TIME	0 0.00 0.00 0.00	37863 1.76 12.04 13.94	1501 0.07 0.48 1.11	74287 3.46 23.61 6.78	155536 7.25 49.44 42.51	25982 1.21 8.26 13.88	19426 0.91 6.17 21.75	314596 14.66
UNEMPLOYED	1748 0.08 0.72 100.00	13642 0.64 5.59 5.02	13448 0.63 5.51 9.94	99257 4.63 40.70 9.06	32473 1.51 13.31 8.88	52987 2.47 21.73 28.30	30343 1.41 12.44 33.98	243899 11.37
OLF	0 0.00 0.00 0.00	2122 0.10 3.72 0.78	0 0.00 0.00 0.00	18213 0.85 31.93 1.66	948 0.04 1.66 0.26	17941 0.84 31.45 9.58	17813 0.83 31.23 19.95	57038 2.66
TOTAL	1748 0.08	271631 12.66	135232 6.30	1095069 51.03	365851 17.05	187209 8.72	89300 4.16	2146040 100.00

WEIGHTED TRANSITION PROBABILITIES (79-80) FOR 21 YEAR OLD MALES

FREQUENCY PERCENT ROW PCT COL PCT	COLLEGE	ACTIVE	FULL TIME	PART TIME	UN EMPLOYED	OLF	TOTAL
COLLEGE	111156 5.28 44.55 52.80	3273 0.16 1.31 2.68	58986 2.80 23.64 5.38	65507 3.11 26.25 18.29	10585 0.50 4.24 3.90	0 0.00 0.00 0.00	249508 11.85
ACTIVE	3765 0.18 2.19 1.79	109232 5.19 63.43 89.55	25055 1.19 14.55 2.28	4825 0.23 2.80 1.35	27465 1.30 15.95 10.12	1877 0.09 1.09 4.03	172219 8.18
FULLTIME	22833 1.08 2.40 10.85	7662 0.36 0.81 6.28	757449 35.97 79.63 69.05	46168 2.19 4.85 12.89	96560 4.59 10.15 35.57	20554 0.98 2.16 44.14	951225 45.18
PARTIME	64440 3.06 13.75 30.61	0 0.00 0.00 0.00	164419 7.81 35.10 14.99	190073 9.03 40.57 53.08	38691 1.84 8.26 14.25	10866 0.52 2.32 23.33	468487 22.25
UNEMPLOYED	629 0.03 0.29 0.30	1805 0.09 0.83 1.48	79165 3.76 36.50 7.22	40711 1.93 18.77 11.37	85317 4.05 39.34 31.43	9264 0.44 4.27 19.89	216891 10.3
OLF	7713 0.37 16.35 3.66	0 0.00 0.00 0.00	11821 0.56 25.05 1.08	10789 0.51 22.87 3.01	12850 0.61 27.23 4.73	4010 0.19 8.50 8.61	47182 2.24
TOTAL	210536 10.00	121973 5.79	1096894 52.10	358072 17.01	271467 12.89	46571 2.21	2105513 100.0

WEIGHTED TRANSITION PROBABILITIES (80-81) FOR 21 YEAR OLD MALES

FREQUENCY PERCENT ROW PCT COL PCT	HIGH SCHOOL	COLLEGE	ACTIVE	FULL TIME	PART TIME	UN EMPLOYED	OLF	TOTAL
HIGH SCHOOL	6698 0.31 82.83 100.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1389 0.06 17.17 2.23	8087 0.37
COLLEGE	0 0.00 0.00 0.00	138166 6.39 49.11 62.51	8743 0.40 3.11 6.99	63767 2.95 22.67 5.22	57951 2.68 20.60 18.96	8890 0.41 3.16 4.07	3796 0.18 1.35 6.09	281312 13.01
ACTIVE	0 0.00 0.00 0.00	2570 0.12 1.90 1.16	95114 4.40 70.28 76.01	17158 0.79 12.68 1.40	2223 0.10 1.64 0.73	16052 0.74 11.86 7.35	2211 0.10 1.63 3.55	135328 6.26
FULL TIME	0 0.00 0.00 0.00	31283 1.45 2.79 14.15	0 0.00 0.00 0.00	877712 40.61 78.16 71.80	76775 3.55 6.84 25.12	116479 5.39 10.37 53.35	20681 0.96 1.84 33.19	1122929 51.95
PART TIME	0 0.00 0.00 0.00	33899 1.57 10.10 15.34	12120 0.56 3.61 9.69	110575 5.12 32.93 9.05	161177 7.46 48.01 52.73	16402 0.76 4.89 7.51	1573 0.07 0.47 2.53	335747 15.53
UNEMPLOYED	0 0.00 0.00 0.00	12171 0.56 5.35 5.51	7317 0.34 3.22 5.85	139691 6.46 61.40 11.43	6208 0.29 2.73 2.03	42655 1.97 18.75 19.54	19481 0.90 8.56 31.27	227523 10.53
OLF	0 0.00 0.00 0.00	2937 0.14 5.80 1.33	1838 0.09 3.63 1.47	13516 0.63 26.69 1.11	1332 0.06 2.63 0.44	17847 0.83 35.24 8.17	13172 0.61 26.01 21.14	50641 2.34
TOTAL	6698 0.31	221025 10.23	125131 5.79	1222419 56.55	305666 14.14	218325 10.10	62303 2.88	2161566 100.00

WEIGHTED TRANSITION PROBABILITIES (79-80) FOR 22 YEAR OLD MALES

FREQUENCY PERCENT ROW PCT COL PCT	COLLEGE	ACTIVE	FULL TIME	PART TIME	UN EMPLOYED	OLF	TOTAL
COLLEGE	8157 1.36 15.09 24.64	0 0.00 0.00 0.00	9282 1.54 17.17 2.35	29523 4.91 54.60 35.96	5990 1.00 11.08 17.60	1119 0.19 2.07 25.79	54072 8.99
ACTIVE	2026 0.34 3.24 6.12	39544 6.58 63.20 74.34	10965 1.82 17.52 2.78	3650 0.61 5.83 4.45	6384 1.06 10.20 18.76	0 0.00 0.00 0.00	62569 10.41
FULLTIME	12815 2.13 3.59 38.70	525 0.09 0.15 0.99	319063 53.06 89.35 80.88	11912 1.98 3.34 14.51	10904 1.81 3.05 32.05	1877 0.31 0.53 43.25	357096 59.39
PARTIME	9483 1.58 10.26 28.64	5989 1.00 6.48 11.26	35841 5.96 38.77 9.09	35589 5.92 38.50 43.35	4189 0.70 4.53 12.31	1344 0.22 1.45 30.96	92436 15.37
UNEMPLOYED	0 0.00 0.00 0.00	7138 1.19 30.15 13.42	11064 1.84 46.73 2.80	1422 0.24 6.01 1.73	4050 0.67 17.11 11.90	0 0.00 0.00 0.00	23674 3.94
OLF	629 0.10 5.50 1.90	0 0.00 0.00 0.00	8291 1.38 72.56 2.10	0 0.00 0.00 0.00	2506 0.42 21.94 7.37	0 0.00 0.00 0.00	11426 1.9
TOTAL	33110 5.51	53196 8.85	394506 65.61	82097 13.65	34025 5.66	4340 0.72	601273 100.0

WEIGHTED TRANSITION PROBABILITIES (80-81) FOR 22 YEAR OLD MALES

FREQUENCY PERCENT ROW PCT COL PCT	COLLEGE	ACTIVE	FULL TIME	PART TIME	UN EMPLOYED	OLF	TOTAL
COLLEGE	6102 1.23 26.99 40.91	0 0.00 0.00 0.00	7706 1.55 34.09 2.77	2858 0.57 12.64 5.00	0 0.00 0.00 0.00	5940 1.19 26.28 25.08	22605 4.55
ACTIVE	886 0.18 1.79 5.94	34852 7.01 70.29 78.24	7199 1.45 14.52 2.58	1266 0.25 2.55 2.22	4748 0.95 9.58 6.05	629 0.13 1.27 2.66	4958 9.97
FULLTIME	7135 1.43 2.30 47.84	1404 0.28 0.45 3.15	235417 47.33 75.73 84.51	28587 5.75 9.20 50.01	31759 6.39 10.22 40.46	6552 1.32 2.11 27.67	310854 62.5
PARTIME	793 0.16 1.27 5.32	0 0.00 0.00 0.00	19119 3.84 30.50 6.86	22583 4.54 36.03 39.50	12670 2.55 20.21 16.14	7511 1.51 11.98 31.71	62677 12.6
UNEMPLOYED	0 0.00 0.00 0.00	8291 1.67 17.17 18.61	7029 1.41 14.55 2.52	1874 0.38 3.88 3.28	29312 5.89 60.69 37.35	1792 0.36 3.71 7.57	48297 9.71
OLF	0 0.00 0.00 0.00	0 0.00 0.00 0.00	2082 0.42 62.32 0.75	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1259 0.25 37.68 5.32	334 0.67
TOTAL	14916 3.00	44546 8.96	278552 56.01	57168 11.49	78489 15.78	23683 4.76	497354 100.0

WEIGHTED TRANSITION PROBABILITIES (79-80) FOR 17 YEAR OLD FEMALES

FREQUENCY PERCENT ROW PCT COL PCT	HIGH SCHOOL	COLLEGE	ACTIVE	FULL TIME	PART TIME	UN EMPLOYED	OLF	TOTAL
HIGH SCHOOL	635061 30.53 36.50 99.29	233573 11.23 13.42 94.51	6702 0.32 0.39 100.00	298365 14.34 17.15 76.62	331512 15.94 19.05 82.62	133533 6.42 7.67 64.21	101208 4.87 5.82 53.76	1739954 83.64
COLLEGE	0 0.00 0.00 0.00	1016 0.05 36.61 0.41	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1759 0.08 63.39 0.44	0 0.00 0.00 0.00	0 0.00 0.00 0.00	2775 0.13
FULL TIME	0 0.00 0.00 0.00	942 0.05 1.06 0.38	0 0.00 0.00 0.00	36062 1.73 40.44 9.26	24683 1.19 27.68 6.15	11646 0.56 13.06 5.60	15841 0.76 17.76 8.42	89175 4.29
PART TIME	0 0.00 0.00 0.00	8749 0.42 11.83 3.54	0 0.00 0.00 0.00	30479 1.47 41.22 7.83	21296 1.02 28.80 5.31	10273 0.49 13.89 4.94	3150 0.15 4.26 1.67	73947 3.55
UNEMPLOYED	3942 0.19 5.41 0.62	2859 0.14 3.93 1.16	0 0.00 0.00 0.00	6445 0.31 8.85 1.66	14118 0.68 19.39 3.52	21043 1.01 28.90 10.12	24417 1.17 33.53 12.97	72824 3.50
OLF	607 0.03 0.60 0.09	0 0.00 0.00 0.00	0 0.00 0.00 0.00	18035 0.87 17.75 4.63	7875 0.38 7.75 1.96	31462 1.51 30.96 15.13	43628 2.10 42.94 23.18	101607 4.88
TOTAL	639610 30.75	247139 11.88	6702 0.32	389386 18.72	401243 19.29	207958 10.00	188243 9.05	2080282 100.00

WEIGHTED TRANSITION PROBABILITIES (80-81) FOR 17 YEAR OLD FEMALES

FREQUENCY PERCENT ROW PCT COL PCT	HIGH SCHOOL	COLLEGE	ACTIVE	FULL TIME	PART TIME	UN EMPLOYED	OLF	TOTAL
HIGH SCHOOL	579772 28.82 34.73 96.31	284237 14.13 17.03 96.34	4462 0.22 0.27 100.00	276340 13.73 16.55 77.06	326540 16.23 19.56 83.15	119584 5.94 7.16 68.91	78321 3.89 4.69 42.18	1669255 82.96
COLLEGE	0 0.00 0.00 0.00	2364 0.12 63.97 0.80	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1331 0.07 36.03 0.34	0 0.00 0.00 0.00	0 0.00 0.00 0.00	3695 0.18
FULL TIME	1129 0.06 1.51 0.19	0 0.00 0.00 0.00	0 0.00 0.00 0.00	38373 1.91 51.21 10.70	12766 0.63 17.04 3.25	12376 0.62 16.52 7.13	10284 0.51 13.73 5.54	74929 3.72
PART TIME	2466 0.12 3.48 0.41	5766 0.29 8.14 1.95	0 0.00 0.00 0.00	15440 0.77 21.80 4.31	18941 0.94 26.74 4.82	5175 0.26 7.31 2.98	23046 1.15 32.54 12.41	70835 3.52
UNEMPLOYED	13116 0.65 12.71 2.18	1733 0.09 1.68 0.59	0 0.00 0.00 0.00	21925 1.09 21.24 6.11	18321 0.91 17.75 4.67	27224 1.35 26.38 15.69	20884 1.04 20.24 11.25	103203 5.13
OLF	5526 0.27 6.13 0.92	945 0.05 1.05 0.32	0 0.00 0.00 0.00	6536 0.32 7.25 1.82	14824 0.74 16.45 3.77	9169 0.46 10.17 5.28	53128 2.64 58.95 28.62	90127 4.48
TOTAL	602009 29.92	295045 14.66	4462 0.22	358614 17.82	392724 19.52	173527 8.62	185663 9.23	2012044 100.00

WEIGHTED TRANSITION PROBABILITIES (79-80) FOR 18 YEAR OLD FEMALES

FREQUENCY PERCENT ROW PCT COL PCT	HIGH SCHOOL	COLLEGE	ACTIVE	FULL TIME	PART TIME	UN EMPLOYED	OLF	TOTAL
HIGH SCHOOL	61041 2.98 10.36 92.93	121481 5.93 20.61 35.52	6935 0.34 1.18 32.50	115714 5.65 19.63 19.75	182169 8.89 30.91 31.32	51555 2.52 8.75 22.29	50497 2.46 8.57 22.87	589392 28.77
COLLEGE	0 0.00 0.00 0.00	134390 6.56 48.38 39.30	0 0.00 0.00 0.00	5509 0.27 1.98 0.94	114979 5.61 41.39 19.77	21742 1.06 7.83 9.40	1155 0.06 0.42 0.52	277776 13.56
ACTIVE	0 0.00 0.00 0.00	0 0.00 0.00 0.00	3922 0.19 41.66 18.38	134 0.01 1.42 0.02	0 0.00 0.00 0.00	338 0.02 3.59 0.15	5022 0.25 53.33 2.27	9417 0.46
FULL TIME	0 0.00 0.00 0.00	9738 0.48 2.70 2.85	7483 0.37 2.08 35.07	247662 12.09 68.78 42.28	35054 1.71 9.74 6.03	28945 1.41 8.04 12.51	31171 1.52 8.66 14.12	360053 17.57
PART TIME	0 0.00 0.00 0.00	69721 3.40 14.86 20.39	0 0.00 0.00 0.00	130714 6.38 27.86 22.31	215061 10.50 45.85 36.97	34853 1.70 7.43 15.07	18749 0.92 4.00 8.49	469098 22.90
UNEMPLOYED	1252 0.06 0.63 1.91	1012 0.05 0.51 0.30	1535 0.07 0.77 7.19	52210 2.55 26.26 8.91	23498 1.15 11.82 4.04	58312 2.85 29.33 25.21	60991 2.98 30.68 27.62	198810 9.70
OLF	3394 0.17 2.36 5.17	5657 0.28 3.92 1.65	1462 0.07 1.01 6.85	33886 1.65 23.51 5.78	10912 0.53 7.57 1.88	35585 1.74 24.69 15.38	53233 2.60 36.93 24.11	144130 7.04
TOTAL	65688 3.21	341999 16.69	21338 1.04	585829 28.60	581673 28.39	231331 11.29	220818 10.78	2048675 100.00

WEIGHTED TRANSITION PROBABILITIES (80-81) FOR 18 YEAR OLD FEMALES

FREQUENCY PERCENT ROW PCT COL PCT	HIGH SCHOOL	COLLEGE	ACTIVE	FULL TIME	PART TIME	UN EMPLOYED	OLF	TOTAL
HIGH SCHOOL	32517 1.56 5.08 61.81	157574 7.57 24.64 45.11	1854 0.09 0.29 23.35	145886 7.01 22.81 22.30	180952 8.70 28.29 31.33	56243 2.70 8.79 31.52	64586 3.10 10.10 24.81	639613 30.75
COLLEGE	0 0.00 0.00 0.00	127519 6.13 51.60 36.51	0 0.00 0.00 0.00	40476 1.95 16.38 6.19	66598 3.20 26.95 11.53	1826 0.09 0.74 1.02	10721 0.52 4.34 4.12	247141 11.88
ACTIVE	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1283 0.06 19.14 16.16	0 0.00 0.00 0.00	0 0.00 0.00 0.00	5419 0.26 80.86 3.04	0 0.00 0.00 0.00	6702 0.32
FULL TIME	8744 0.42 2.25 16.62	5922 0.28 1.52 1.70	2198 0.11 0.56 27.68	278193 13.37 71.44 42.53	51308 2.47 13.18 8.88	23738 1.14 6.10 13.30	19283 0.93 4.95 7.41	389386 18.72
PART TIME	8883 0.43 2.21 16.88	38824 1.87 9.68 11.12	1658 0.08 0.41 20.88	113656 5.46 28.33 17.37	215693 10.37 53.76 37.35	9225 0.44 2.30 5.17	13306 0.64 3.32 5.11	401243 19.29
UNEMPLOYED	2464 0.12 1.19 4.68	13458 0.65 6.47 3.85	947 0.05 0.46 11.93	41596 2.00 20.00 6.36	31454 1.51 15.13 5.45	40784 1.96 19.61 22.86	77256 3.71 37.15 29.67	207959 10.00
OLF	0 0.00 0.00 0.00	5980 0.29 3.18 1.71	0 0.00 0.00 0.00	34360 1.65 18.25 5.25	31517 1.52 16.74 5.46	41185 1.98 21.88 23.08	75201 3.61 39.95 28.88	188244 9.05
TOTAL	52608 2.53	349277 16.79	7941 0.38	654168 31.45	577522 27.76	178420 8.58	260352 12.52	2080288 100.00

WEIGHTED TRANSITION PROBABILITIES (79-80) FOR 19 YEAR OLD FEMALES

FREQUENCY PERCENT ROW PCT COL PCT	HIGH SCHOOL	COLLEGE	ACTIVE	FULL TIME	PART TIME	UN EMPLOYED	OLF	TOTAL
HIGH SCHOOL	11161 0.51 20.43 100.00	4450 0.20 8.14 1.48	0 0.00 0.00 0.00	13841 0.63 25.33 1.81	1183 0.05 2.17 0.24	8228 0.38 15.06 3.00	15771 0.72 28.87 4.83	54633 2.50
COLLEGE	0 0.00 0.00 0.00	161848 7.40 51.53 53.77	0 0.00 0.00 0.00	42261 1.93 13.45 5.51	74775 3.42 23.81 15.06	14265 0.65 4.54 5.20	20960 0.96 6.67 6.42	314109 14.36
ACTIVE	0 0.00 0.00 0.00	91 0.00 0.80 0.03	8086 0.37 71.66 74.21	0 0.00 0.00 0.00	154 0.01 1.36 0.03	2627 0.12 23.28 0.96	328 0.01 2.90 0.10	11285 0.52
FULL TIME	0 0.00 0.00 0.00	13849 0.63 2.03 4.60	1779 0.08 0.26 16.33	480472 21.97 70.45 62.70	71409 3.27 10.47 14.38	69398 3.17 10.18 25.32	45116 2.06 6.62 13.81	682024 31.19
PART TIME	0 0.00 0.00 0.00	109708 5.02 18.07 36.45	0 0.00 0.00 0.00	121080 5.54 19.94 15.80	279686 12.79 46.07 56.34	55843 2.55 9.20 20.37	40761 1.86 6.71 12.48	607077 27.76
UNEMPLOYED	0 0.00 0.00 0.00	8131 0.37 2.73 2.70	0 0.00 0.00 0.00	88678 4.06 29.78 11.57	32647 1.49 10.96 6.58	69786 3.19 23.43 25.46	98545 4.51 33.09 30.17	297787 13.62
OLF	0 0.00 0.00 0.00	2941 0.13 1.34 0.98	1031 0.05 0.47 9.46	19969 0.91 9.09 2.61	36613 1.67 16.66 7.37	53990 2.47 24.57 19.69	105168 4.81 47.87 32.20	219711 10.05
TOTAL	11161 0.51	301016 13.77	10896 0.50	766301 35.04	496468 22.70	274137 12.54	326648 14.94	2186626 100.00

WEIGHTED TRANSITION PROBABILITIES (80-81) FOR 19 YEAR OLD FEMALES

FREQUENCY PERCENT ROW PCT COL PCT	HIGH SCHOOL	COLLEGE	ACTIVE	FULL TIME	PART TIME	UN EMPLOYED	OLF	TOTAL
HIGH SCHOOL	5998 0.29 9.13 75.70	2407 0.12 3.67 0.77	0 0.00 0.00 0.00	20087 0.98 30.58 2.73	4059 0.20 6.18 0.84	11748 0.57 17.88 7.29	21387 1.04 32.56 6.66	65688 3.21
COLLEGE	0 0.00 0.00 0.00	217021 10.59 63.46 68.98	0 0.00 0.00 0.00	31777 1.55 9.29 4.31	78159 3.82 22.85 16.13	4265 0.21 1.25 2.65	10776 0.53 3.15 3.36	341999 16.69
ACTIVE	0 0.00 0.00 0.00	0 0.00 0.00 0.00	19689 0.96 92.27 88.26	1555 0.08 7.29 0.21	0 0.00 0.00 0.00	0 0.00 0.00 0.00	93 0.00 0.44 0.03	21338 1.04
FULL TIME	0 0.00 0.00 0.00	4270 0.21 0.73 1.36	0 0.00 0.00 0.00	423503 20.67 72.29 57.45	56080 2.74 9.57 11.57	48733 2.38 8.32 30.24	53243 2.60 9.09 16.59	585828 28.60
PART TIME	0 0.00 0.00 0.00	86523 4.22 14.87 27.50	0 0.00 0.00 0.00	157532 7.69 27.08 21.37	277210 13.53 47.66 57.20	24665 1.20 4.24 15.31	35743 1.74 6.14 11.14	581673 28.39
UNEMPLOYED	0 0.00 0.00 0.00	3093 0.15 1.34 0.98	1144 0.06 0.49 5.13	69394 3.39 30.00 9.41	47979 2.34 20.74 9.90	44817 2.19 19.37 27.81	64905 3.17 28.06 20.22	231331 11.29
OLF	1926 0.09 0.87 24.30	1303 0.06 0.59 0.41	1476 0.07 0.67 6.62	33294 1.63 15.08 4.52	21122 1.03 9.57 4.36	26927 1.31 12.19 16.71	134768 6.58 61.03 41.99	220816 10.78
TOTAL	7924 0.39	314617 15.36	22309 1.09	737142 35.98	484610 23.65	161155 7.87	320915 15.66	2048672 100.00

WEIGHTED TRANSITION PROBABILITIES (79-80) FOR 20 YEAR OLD FEMALES

FREQUENCY PERCENT ROW PCT COL PCT	HIGH SCHOOL	COLLEGE	ACTIVE	FULL TIME	PART TIME	UN EMPLOYED	OLF	TOTAL
HIGH SCHOOL	0 0.00 0.00 0.00	5228 0.26 27.68 2.77	0 0.00 0.00 0.00	1110 0.06 5.88 0.13	0 0.00 0.00 0.00	6656 0.33 35.25 2.95	5889 0.29 31.19 1.80	18883 0.94
COLLEGE	0 0.00 0.00 0.00	105013 5.20 43.27 55.61	0 0.00 0.00 0.00	38317 1.90 15.79 4.58	69968 3.47 28.83 16.52	16668 0.83 6.87 7.38	12722 0.63 5.24 3.90	242687 12.02
ACTIVE	0 0.00 0.00 0.00	108 0.01 0.80 0.06	11139 0.55 82.70 74.59	568 0.03 4.22 0.07	75 0.00 0.56 0.02	567 0.03 4.21 0.25	1013 0.05 7.52 0.31	13470 0.67
FULL TIME	0 0.00 0.00 0.00	20952 1.04 2.91 11.10	1303 0.06 0.18 8.73	487293 24.14 67.57 58.30	55899 2.77 7.75 13.20	89405 4.43 12.40 39.58	66311 3.29 9.20 20.31	721163 35.73
PART TIME	0 0.00 0.00 0.00	45375 2.25 8.75 24.03	0 0.00 0.00 0.00	184708 9.15 35.63 22.10	223340 11.06 43.09 52.73	40275 2.00 7.77 17.83	24664 1.22 4.76 7.56	518362 25.68
UNEMPLOYED	1183 0.06 0.47 40.58	2725 0.14 1.08 1.44	1232 0.06 0.49 8.25	76141 3.77 30.16 9.11	33805 1.67 13.39 7.98	49121 2.43 19.46 21.75	88214 4.37 34.95 27.02	252423 12.51
OLF	1733 0.09 0.69 59.42	9426 0.47 3.75 4.99	1258 0.06 0.50 8.42	47750 2.37 18.99 5.71	40494 2.01 16.10 9.56	23183 1.15 9.22 10.26	127629 6.32 50.75 39.10	251472 12.46
TOTAL	2916 0.14	188827 9.35	14933 0.74	835888 41.41	423580 20.99	225874 11.19	326442 16.17	2018460 100.00

WEIGHTED TRANSITION PROBABILITIES (80-81) FOR 20 YEAR OLD FEMALES

FREQUENCY PERCENT ROW PCT COL PCT	HIGH SCHOOL	COLLEGE	ACTIVE	FULL TIME	PART TIME	UN EMPLOYED	OLF	TOTAL
HIGH SCHOOL	1601 0.07 14.34 100.00	1356 0.06 12.15 0.60	0 0.00 0.00 0.00	5441 0.25 48.75 0.65	0 0.00 0.00 0.00	1531 0.07 13.72 0.73	1232 0.06 11.04 0.29	11161 0.51
COLLEGE	0 0.00 0.00 0.00	145356 6.65 48.29 64.60	1106 0.05 0.37 10.09	36037 1.65 11.97 4.28	105623 4.83 35.09 22.36	5838 0.27 1.94 2.78	7058 0.32 2.34 1.66	301016 13.77
ACTIVE	0 0.00 0.00 0.00	0 0.00 0.00 0.00	9501 0.43 87.20 86.73	391 0.02 3.59 0.05	112 0.01 1.03 0.02	414 0.02 3.80 0.20	478 0.02 4.39 0.11	10896 0.50
FULL TIME	0 0.00 0.00 0.00	8505 0.39 1.11 3.78	0 0.00 0.00 0.00	549100 25.11 71.66 65.16	57976 2.65 7.57 12.27	75943 3.47 9.91 36.14	74777 3.42 9.76 17.64	766301 35.04
PART TIME	0 0.00 0.00 0.00	54535 2.49 10.98 24.24	0 0.00 0.00 0.00	125281 5.73 25.23 14.87	242478 11.09 48.84 51.34	30448 1.39 6.13 14.49	43725 2.00 8.81 10.31	496467 22.70
UNEMPLOYED	0 0.00 0.00 0.00	8413 0.38 3.07 3.74	348 0.02 0.13 3.18	79003 3.61 28.82 9.38	39482 1.81 14.40 8.36	60412 2.76 22.04 28.75	86478 3.95 31.55 20.40	274136 12.54
OLF	0 0.00 0.00 0.00	6851 0.31 2.10 3.04	0 0.00 0.00 0.00	47404 2.17 14.51 5.63	26660 1.22 8.16 5.64	35533 1.63 10.88 16.91	210200 9.61 64.35 49.58	326648 14.94
TOTAL	1601 0.07	225017 10.29	10955 0.50	842657 38.54	472330 21.60	210119 9.61	423946 19.39	2186625 100.00

WEIGHTED TRANSITION PROBABILITIES (79-80) FOR 21 YEAR OLD FEMALES

FREQUENCY PERCENT ROW PCT COL PCT	COLLEGE	ACTIVE	FULL TIME	PART TIME	UN EMPLOYED	OLF	TOTAL
COLLEGE	87263 4.05 38.51 61.66	757 0.04 0.33 6.49	63202 2.93 27.89 6.11	54408 2.52 24.01 15.27	10010 0.46 4.42 4.07	10987 0.51 4.85 3.00	226626 10.51
ACTIVE	519 0.02 3.35 0.37	10224 0.47 66.08 87.71	2944 0.14 19.03 0.28	304 0.01 1.97 0.09	1268 0.06 8.19 0.52	213 0.01 1.38 0.06	15471 0.72
FULLTIME	25817 1.20 2.79 18.24	0 0.00 0.00 0.00	668797 31.03 72.33 64.67	104259 4.84 11.28 29.25	75295 3.49 8.14 30.63	50510 2.34 5.46 13.81	924678 42.9
PARTIME	21730 1.01 5.38 15.36	676 0.03 0.17 5.80	172393 8.00 42.69 16.67	138213 6.41 34.22 38.78	38250 1.77 9.47 15.56	32607 1.51 8.07 8.91	403869 18.74
UNEMPLOYED	2054 0.10 0.84 1.45	0 0.00 0.00 0.00	90444 4.20 36.77 8.75	21249 0.99 8.64 5.96	59808 2.77 24.31 24.33	72444 3.36 29.45 19.80	24600 11.41
OLF	4128 0.19 1.22 2.92	0 0.00 0.00 0.00	36382 1.69 10.74 3.52	37986 1.76 11.21 10.66	61161 2.84 18.05 24.88	199111 9.24 58.78 54.42	338768 15.72
TOTAL	141511 6.57	11656 0.54	1034161 47.98	356419 16.54	245791 11.40	365872 16.97	2155411 100.0

WEIGHTED TRANSITION PROBABILITIES (80-81) FOR 21 YEAR OLD FEMALES

FREQUENCY PERCENT ROW PCT COL PCT	HIGH SCHOOL	COLLEGE	ACTIVE	FULL TIME	PART TIME	UN EMPLOYED	OLF	TOTAL
HIGH SCHOOL	1733 0.09 59.42 100.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1183 0.06 40.58 0.12	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	2916 0.14
COLLEGE	0 0.00 0.00 0.00	65045 3.22 34.45 45.21	0 0.00 0.00 0.00	67696 3.35 35.85 6.95	40134 1.99 21.25 10.45	3913 0.19 2.07 2.49	12041 0.60 6.38 3.50	188828 9.36
ACTIVE	0 0.00 0.00 0.00	241 0.01 1.61 0.17	12463 0.62 83.46 89.16	796 0.04 5.33 0.08	172 0.01 1.15 0.04	353 0.02 2.36 0.23	908 0.05 6.08 0.26	14933 0.74
FULL TIME	0 0.00 0.00 0.00	20738 1.03 2.48 14.41	0 0.00 0.00 0.00	632426 31.33 75.66 64.93	91552 4.54 10.95 23.84	35682 1.77 4.27 22.74	55490 2.75 6.64 16.14	835887 41.41
PART TIME	0 0.00 0.00 0.00	33934 1.68 8.01 23.59	0 0.00 0.00 0.00	149488 7.41 35.29 15.35	159448 7.90 37.64 41.52	38115 1.89 9.00 24.29	42594 2.11 10.06 12.39	423580 20.99
UNEMPLOYED	0 0.00 0.00 0.00	18861 0.93 8.35 13.11	247 0.01 0.11 1.77	74587 3.70 33.02 7.66	46916 2.32 20.77 12.22	39844 1.97 17.64 25.39	45418 2.25 20.11 13.21	225874 11.19
OLF	0 0.00 0.00 0.00	5049 0.25 1.55 3.51	1268 0.06 0.39 9.07	47869 2.37 14.66 4.91	45803 2.27 14.03 11.93	38996 1.93 11.95 24.85	187457 9.29 57.42 54.51	326442 16.17
TOTAL	1733 0.09	143867 7.13	13978 0.69	974046 48.26	384024 19.03	156903 7.77	343909 17.04	2018460 100.00

WEIGHTED TRANSITION PROBABILITIES (79-80) FOR 22 YEAR OLD FEMALES

FREQUENCY PERCENT ROW PCT COL PCT	COLLEGE	ACTIVE	FULL TIME	PART TIME	UN EMPLOYED	OLF	TOTAL
COLLEGE	12059 2.63 23.73 31.11	0 0.00 0.00 0.00	15088 3.29 29.69 6.44	16843 3.67 33.15 24.09	6822 1.49 13.43 15.47	0 0.00 0.00 0.00	50813 11.08
ACTIVE	164 0.04 3.82 0.42	2248 0.49 52.17 47.26	413 0.09 9.58 0.18	291 0.06 6.76 0.42	740 0.16 17.17 1.68	453 0.10 10.51 0.68	431 0.94
FULLTIME	15183 3.31 9.03 39.17	0 0.00 0.00 0.00	118946 25.93 70.78 50.74	1397 0.30 0.83 2.00	22482 4.90 13.38 50.97	10045 2.19 5.98 15.07	168053 36.64
PARTIME	8478 1.85 6.36 21.87	0 0.00 0.00 0.00	53325 11.63 39.98 22.75	48143 10.50 36.09 68.85	0 0.00 0.00 0.00	23439 5.11 17.57 35.15	133385 29.08
UNEMPLOYED	2873 0.63 7.46 7.41	2509 0.55 6.52 52.74	19385 4.23 50.36 8.27	2312 0.50 6.01 3.31	7682 1.67 19.96 17.42	3731 0.81 9.69 5.60	38494 8.39
OLF	0 0.00 0.00 0.00	0 0.00 0.00 0.00	27262 5.94 42.87 11.63	942 0.21 1.48 1.35	6382 1.39 10.04 14.47	29006 6.32 45.61 43.50	63592 13.87
TOTAL	38758 8.45	4757 1.04	234419 51.11	69929 15.25	44108 9.62	66675 14.54	458646 100.0

WEIGHTED TRANSITION PROBABILITIES (80-81) FOR 22 YEAR OLD FEMALES

FREQUENCY PERCENT ROW PCT COL PCT	COLLEGE	ACTIVE	FULL TIME	PART TIME	UN EMPLOYED	OLF	TOTAL
COLLEGE	22295 5.29 60.86 67.62	0 0.00 0.00 0.00	1564 0.37 4.27 0.76	6414 1.52 17.51 10.42	2817 0.67 7.69 5.79	3543 0.84 9.67 5.32	36633 8.7
ACTIVE	2316 0.55 16.06 7.02	3715 0.88 25.76 71.04	0 0.00 0.00 0.00	0 0.00 0.00 0.00	801 0.19 5.56 1.65	7589 1.80 52.62 11.40	14421 3.42
FULLTIME	5957 1.41 3.05 18.07	0 0.00 0.00 0.00	157098 37.29 80.56 76.17	8511 2.02 4.36 13.82	13089 3.11 6.71 26.90	10347 2.46 5.31 15.54	19500 46.29
PARTIME	758 0.18 1.15 2.30	0 0.00 0.00 0.00	34303 8.14 51.83 16.63	20434 4.85 30.88 33.19	5140 1.22 7.77 10.56	5546 1.32 8.38 8.33	66183 15.71
UNEMPLOYED	1501 0.36 3.11 4.55	1514 0.36 3.14 28.96	8503 2.02 17.63 4.12	13519 3.21 28.03 21.96	13621 3.23 28.24 27.99	9580 2.27 19.86 14.39	48238 11.45
OLF	144 0.03 0.24 0.44	0 0.00 0.00 0.00	4778 1.13 7.86 2.32	12691 3.01 20.89 20.61	13188 3.13 21.70 27.10	29965 7.11 49.31 45.01	60766 14.43
TOTAL	32972 7.83	5229 1.24	206245 48.96	61570 14.62	48657 11.55	66569 15.80	421241 100.0

APPENDIX C

UNCONDITIONAL 4 BY 4 CONVERTED TRANSITION PROBABILITY MATRICES BY AGE AND SEX FOR 79-80 AND 80-81

CONVERTED TRANSITION PROBABILITIES (79-80) FOR 17 YEAR OLD MALES

FREQUENCY PERCENT ROW PCT COL PCT	IN SCHOOL	ACTIVE	WORKING	NOT WORKING	TOTAL
IN SCHOOL	386.71 51.91 58.89 99.00	20.05 2.69 3.05 80.07	189.84 25.48 28.91 78.38	60.04 8.06 9.14 68.92	656.64 88.14
ACTIVE	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	2.40 0.32 100.00 2.75	2.40 0.32
WORKING	1.70 0.23 3.71 0.44	3.12 0.42 6.80 12.44	31.87 4.28 69.55 13.16	9.14 1.23 19.94 10.49	45.83 6.15
NOT WORKING	2.21 0.30 5.52 0.57	1.88 0.25 4.68 7.49	20.51 2.75 51.09 8.47	15.54 2.09 38.72 17.84	40.14 5.39
TOTAL	390.62 52.43	25.05 3.36	242.22 32.51	11.69 11.69	745.00 100.00

CONVERTED TRANSITION PROBABILITIES (80-81) FOR 17 YEAR OLD MALES

FREQUENCY PERCENT ROW PCT COL PCT	IN SCHOOL	ACTIVE	WORKING	NOT WORKING	TOTAL
IN SCHOOL	346.74 44.06 53.82 96.51	13.49 1.71 2.09 61.49	229.89 29.21 35.68 74.80	54.13 6.88 8.40 54.99	644.25 81.86
ACTIVE	0 0.00 0.00 0.00	1.88 0.24 100.00 8.59	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1.88 0.24
WORKING	2.62 0.33 3.67 0.73	3.26 0.41 4.57 14.86	47.49 6.03 66.54 15.45	18.00 2.29 25.22 18.29	71.37 9.07
NOT WORKING	9.92 1.26 14.27 2.76	3.31 0.42 4.76 15.06	29.97 3.81 43.13 9.75	26.30 3.34 37.85 26.72	69.5 8.83
TOTAL	359.28 45.65	21.94 2.79	39.05 39.05	98.43 12.51	787.00 100.00

CONVERTED TRANSITION PROBABILITIES (79-80) FOR 18 YEAR OLD MALES

FREQUENCY PERCENT ROW PCT COL PCT	IN SCHOOL	ACTIVE	WORKING	NOT WORKING	TOTAL
IN SCHOOL	145.00 17.59 35.08 78.03	30.16 3.66 7.30 51.05	189.90 23.04 45.85 42.17	48.20 5.85 11.67 32.55	413.26 50.14
ACTIVE	0 0.00 0.00 0.00	17.91 2.17 84.92 30.32	2.05 0.25 9.72 0.46	1.13 0.14 5.36 0.76	21.09 2.56
WORKING	18.96 2.30 6.06 11.38	6.38 0.77 2.04 10.80	231.60 28.11 73.98 51.44	56.14 6.81 17.93 37.91	313.08 38.00
NOT WORKING	2.64 0.32 3.45 1.59	4.63 0.56 6.04 7.83	26.72 3.24 34.88 5.93	42.62 5.17 55.63 28.78	76.16 9.30
TOTAL	166.60 20.21	59.08 7.17	449.82 54.65	148.09 17.97	824.00 100.00

CONVERTED TRANSITION PROBABILITIES (80-81) FOR 18 YEAR OLD MALES

FREQUENCY PERCENT ROW PCT COL PCT	IN SCHOOL	ACTIVE	WORKING	NOT WORKING	TOTAL
IN SCHOOL	119.30 16.01 30.54 83.18	14.78 1.98 3.78 27.90	196.40 26.36 50.27 46.82	60.20 8.08 15.41 46.58	390.68 52.43
ACTIVE	0 0.00 0.00 0.00	25.05 3.36 100.00 47.28	0 0.00 0.00 0.00	0 0.00 0.00 0.00	25.05 3.36
WORKING	19.85 2.66 8.20 13.84	6.66 0.89 2.75 12.57	178.80 24.00 73.83 42.64	36.89 4.95 15.23 28.54	242.20 32.51
NOT WORKING	4.27 0.57 4.90 2.98	6.49 0.87 7.45 12.25	44.20 5.93 50.74 10.54	32.16 4.32 36.91 24.88	87.12 11.69
TOTAL	143.32 19.25	52.98 7.11	419.40 56.29	129.25 17.35	745.00 100.00

CONVERTED TRANSITION PROBABILITIES (79-80) FOR 19 YEAR OLD MALES

FLAG79 / FLAG80 (FREQUENCY / PERCENT / ROW PCT / COL PCT)	IN SCHOOL	ACTIVE	WORKING	NOT WORKING	TOTAL
IN SCHOOL	80.71 9.88 46.35 63.05	4.12 0.50 2.36 7.48	74.42 9.11 42.74 14.33	14.87 1.82 8.54 12.98	173.58 21.31
ACTIVE	.63 0.08 1.14 0.50	43.77 5.36 78.73 79.45	5.99 0.73 10.78 1.15	5.20 0.64 9.35 4.54	55.59 6.80
WORKING	46.35 5.67 9.26 36.20	5.61 0.69 1.12 10.19	392.10 47.99 78.37 75.50	56.27 6.89 11.25 49.12	500.33 61.24
NOT WORKING	.32 0.04 0.37 0.25	1.59 0.19 1.83 2.88	46.84 5.73 53.85 9.02	38.23 4.68 43.95 33.37	86.89 10.65
TOTAL	127.47 15.67	55.09 6.74	519.35 63.57	114.57 14.02	817.00 100.00

CONVERTED TRANSITION PROBABILITIES (80-81) FOR 19 YEAR OLD MALES

FREQUENCY / PERCENT / ROW PCT / COL PCT	IN SCHOOL	ACTIVE	WORKING	NOT WORKING	TOTAL
IN SCHOOL	81.80 9.93 49.11 65.39	.87 0.11 0.52 1.18	64.76 7.86 38.88 13.23	19.13 2.32 11.49 14.05	166.56 20.21
ACTIVE	0 0.00 0.00 0.00	52.49 6.37 88.85 71.47	3.38 0.41 5.71 0.69	3.21 0.39 5.43 2.36	59.08 7.17
WORKING	40.66 4.93 9.03 32.50	7.66 0.93 1.70 10.43	349.20 42.37 77.54 71.36	52.79 6.41 11.72 38.77	450.31 54.65
NOT WORKING	2.63 0.32 1.78 2.10	12.43 1.51 8.39 16.92	72.02 8.74 48.63 14.72	61.01 7.40 41.20 44.82	148.09 17.97
TOTAL	125.09 15.18	73.45 8.91	489.36 59.38	136.14 16.52	824.00 100.00

CONVERTED TRANSITION PROBABILITIES (79-80) FOR 20 YEAR OLD MALES

FREQUENCY PERCENT ROW PCT COL PCT	IN SCHOOL	ACTIVE	WORKING	NOT WORKING	TOTAL
IN SCHOOL	70.65 8.47 54.80 63.27	0 0.00 0.00 0.00	49.08 5.89 38.07 8.72	9.17 1.10 7.13 8.56	128.90 15.46
ACTIVE	.75 0.09 1.20 0.68	48.83 5.86 77.68 93.52	5.97 0.72 9.49 1.06	7.31 0.88 11.63 6.81	62.86 7.54
WORKING	37.86 4.54 6.57 33.91	3.32 0.41 0.59 6.48	471.90 56.58 81.93 83.85	62.82 7.53 10.91 58.53	575.90 69.06
NOT WORKING	2.40 0.29 3.62 2.15	0 0.00 0.00 0.00	35.83 4.30 54.09 6.37	28.01 3.36 42.29 26.10	66.24 7.94
TOTAL	111.66 13.39	52.15 6.26	562.78 67.48	107.31 12.87	834.00 100.00

CONVERTED TRANSITION PROBABILITIES (80-81) FOR 20 YEAR OLD MALES

FREQUENCY PERCENT ROW PCT COL PCT	IN SCHOOL	ACTIVE	WORKING	NOT WORKING	TOTAL
IN SCHOOL	72.03 8.82 56.27 69.21	.96 0.12 0.75 1.87	50.75 6.21 39.65 9.13	4.27 0.52 3.33 4.05	128.01 15.67
ACTIVE	.95 0.12 1.73 0.91	42.83 5.24 77.75 83.19	8.22 1.01 14.93 1.48	3.08 0.38 5.60 2.93	55.08 6.74
WORKING	24.43 2.99 4.70 23.47	2.57 0.31 0.50 5.00	439.80 53.83 84.68 79.07	52.58 6.44 10.12 49.95	519.38 63.57
NOT WORKING	6.67 0.82 5.82 6.41	5.12 0.63 4.47 9.94	57.45 7.03 50.14 10.33	45.34 5.55 39.57 43.07	114.58 14.02
TOTAL	104.08 12.74	51.48 6.30	556.22 68.07	105.27 12.88	817.00 100.00

CONVERTED TRANSITION PROBABILITIES (79-80) FOR 21 YEAR OLD MALES

FREQUENCY PERCENT ROW PCT COL PCT	IN SCHOOL	ACTIVE	WORKING	NOT WORKING	TOTAL
IN SCHOOL	43.39 5.28 44.55 52.80	1.30 0.16 1.31 2.68	49.25 5.91 49.90 8.56	4.12 0.50 4.24 3.33	98.06 11.85
ACTIVE	1.49 0.18 2.19 1.79	43.22 5.19 63.43 89.55	11.82 1.42 17.35 2.05	11.61 1.39 17.04 9.23	68.14 8.18
WORKING	34.53 4.15 6.15 41.45	3.03 0.36 0.54 6.28	458.20 55.00 81.57 79.60	65.94 7.92 11.74 52.41	561.70 67.43
NOT WORKING	3.30 0.40 3.16 3.96	.71 0.09 0.68 1.48	56.37 6.77 53.96 9.79	44.09 5.29 42.20 35.04	104.47 12.54
TOTAL	82.71 10.00	48.26 5.79	575.64 69.10	125.76 15.11	833.00 100.00

CONVERTED TRANSITION PROBABILITIES (80-81) FOR 21 YEAR OLD MALES

FREQUENCY PERCENT ROW PCT COL PCT	IN SCHOOL	ACTIVE	WORKING	NOT WORKING	TOTAL
IN SCHOOL	55.89 6.70 50.06 63.61	3.73 0.40 3.02 6.99	46.96 5.63 42.06 7.97	5.43 0.65 4.86 5.02	112.01 13.39
ACTIVE	.99 0.12 1.90 1.13	36.70 4.40 70.28 76.01	7.48 0.90 14.32 1.27	7.05 0.84 13.50 6.51	52.22 6.26
WORKING	25.15 3.02 4.47 28.62	4.68 0.56 0.83 9.69	473.10 56.73 84.06 80.25	59.86 7.18 10.64 55.28	562.79 67.48
NOT WORKING	5.83 0.70 5.43 6.63	3.52 0.42 3.29 7.32	62.02 7.44 57.79 10.52	35.94 4.31 33.49 33.19	107.31 12.87
TOTAL	87.86 10.54	48.63 5.79	589.56 70.69	108.28 12.98	834.00 100.00

CONVERTED TRANSITION PROBABILITIES (79-80) FOR 22 YEAR OLD MALES

FREQUENCY PERCENT ROW PCT COL PCT	IN SCHOOL	ACTIVE	WORKING	NOT WORKING	TOTAL
IN SCHOOL	3.39 1.36 15.09 24.64	0 0.00 0.00 0.00	16.13 6.45 71.77 8.14	2.96 1.18 13.15 18.53	22.48 8.99
ACTIVE	.84 0.34 3.24 6.12	16.44 6.58 63.20 74.34	6.08 2.43 23.36 3.07	2.65 1.06 10.20 16.64	26.01 10.41
WORKING	9.27 3.71 4.96 67.35	2.71 1.08 1.45 12.24	167.30 66.93 89.52 84.43	7.62 3.05 4.07 47.74	186.90 74.76
NOT WORKING	.26 0.10 1.79 1.90	2.97 1.19 20.34 13.42	8.64 3.46 59.19 4.36	2.73 1.09 18.68 17.09	14.60 5.84
TOTAL	13.76 5.51	22.12 8.85	198.15 79.27	15.96 6.38	250.00 100.00

CONVERTED TRANSITION PROBABILITIES (80-81) FOR 22 YEAR OLD MALES

FREQUENCY PERCENT ROW PCT COL PCT	IN SCHOOL	ACTIVE	WORKING	NOT WORKING	TOTAL
IN SCHOOL	2.99 1.20 21.70 38.01	0 0.00 0.00 0.00	6.98 2.79 50.73 3.75	3.80 1.52 27.57 10.59	13.77 5.51
ACTIVE	.75 0.30 3.40 9.58	16.14 6.46 72.99 80.29	3.61 1.44 16.30 1.94	1.62 0.65 7.31 4.51	22.12 8.85
WORKING	4.12 1.65 2.08 52.41	.45 0.18 0.22 2.21	169.80 67.90 85.66 91.17	5.86 9.54 12.03 66.55	180.23 79.27
NOT WORKING	0 0.00 0.00 0.00	3.52 1.41 22.06 17.50	5.86 2.34 36.72 3.15	6.58 2.63 41.22 18.35	15.96 6.38
TOTAL	7.86 3.14	20.11 8.04	186.25 74.48	17.86 14.33	250.00 100.00

CONVERTED TRANSITION PROBABILITIES (79-80) FOR 17 YEAR OLD FEMALES

FREQUENCY PERCENT ROW PCT COL PCT	IN SCHOOL	ACTIVE	WORKING	NOT WORKING	TOTAL
IN SCHOOL	318.97 41.80 49.90 98.07	2.46 0.32 0.38 100.00	231.67 30.36 36.24 79.89	86.10 11.28 13.47 59.25	639.2 83.77
WORKING	3.55 0.47 5.94 1.09	0 0.00 0.00 0.00	41.27 5.41 68.98 14.23	15.00 1.97 25.08 10.33	59.82 7.84
NOT WORKING	2.72 0.36 4.25 0.84	0 0.00 0.00 0.00	17.05 2.23 26.64 5.88	44.21 5.79 69.11 30.43	63.98 8.38
TOTAL	325.24 42.63	2.46 0.32	289.99 38.01	145.31 19.05	763 100.00

CONVERTED TRANSITION PROBABILITIES (80-81) FOR 17 YEAR OLD FEMALES

FREQUENCY PERCENT ROW PCT COL PCT	IN SCHOOL	ACTIVE	WORKING	NOT WORKING	TOTAL
IN SCHOOL	333.28 43.06 51.79 96.58	1.72 0.22 0.27 100.00	232.43 30.03 36.12 80.42	76.13 9.84 11.83 55.10	643.57 83.15
WORKING	3.60 0.47 6.42 1.04	0 0.00 0.00 0.00	23.90 4.25 58.67 11.38	19.57 2.53 34.91 14.17	47.07 7.24
NOT WORKING	8.20 1.06 11.03 2.38	0 0.00 0.00 0.00	23.70 3.06 31.87 8.20	42.47 5.49 57.11 30.74	74.73 9.61
TOTAL	325.24 44.58	2.46 0.22	289.99 37.34	145.31 17.85	765 100.00

CONVERTED TRANSITION PROBABILITIES (79-80) FOR 18 YEAR OLD FEMALES

FREQUENCY PERCENT ROW PCT COL PCT	IN SCHOOL	ACTIVE	WORKING	NOT WORKING	TOTAL
IN SCHOOL	125.30 15.47 36.55 77.73	2.74 0.34 0.80 32.50	165.40 20.42 48.25 35.83	49.40 6.10 14.41 27.63	342.84 42.33
ACTIVE	0 0.00 0.00 0.00	1.55 0.19 41.66 18.38	.05 0.01 1.42 0.01	2.12 0.26 56.92 1.19	3.72 0.46
WORKING	31.42 3.88 9.58 19.49	2.96 0.37 0.90 35.07	248.59 30.68 75.80 53.83	44.96 5.55 13.71 25.15	327.93 40.47
NOT WORKING	4.47 0.55 3.30 2.78	1.19 0.15 0.87 14.05	47.65 5.88 35.14 10.32	82.298 10.16 60.69 46.03	135.61 16.74
TOTAL	161.19 19.90	8.44 1.04	461.89 56.99	178.78 22.07	811 100.00

CONVERTED TRANSITION PROBABILITIES (80-81) FOR 18 YEAR OLD FEMALES

FREQUENCY PERCENT ROW PCT COL PCT	IN SCHOOL	ACTIVE	WORKING	NOT WORKING	TOTAL
IN SCHOOL	116.50 15.27 35.82 79.03	.68 0.09 0.21 23.35	159.10 20.86 48.93 35.23	48.92 6.41 15.04 30.40	325.20 42.63
ACTIVE	0 0.00 0.00 0.00	.47 0.06 19.14 16.16	0 0.00 0.00 0.00	1.99 0.26 80.86 1.24	2,46 0.32
WORKING	22.88 3.00 7.89 15.52	1.41 0.19 0.49 48.56	241.70 31.67 83.33 53.49	24.04 3.15 8.29 14.94	290.03 38.01
NOT WORKING	8.03 1.05 5.53 5.45	.35 0.05 0.24 11.93	50.96 6.68 35.06 11.28	85.98 11.27 59.17 53.43	145.32 19.05
TOTAL	147.41 19.32	2.91 0.38	451.76 59.21	160.93 21.09	602 100.00

CONVERTED TRANSITION PROBABILITIES (79-80) FOR 19 YEAR OLD FEMALES

FREQUENCY PERCENT ROW PCT COL PCT	IN SCHOOL	ACTIVE	WORKING	NOT WORKING	TOTAL
IN SCHOOL	69.79 8.12 48.13 56.85	0 0.00 0.00 0.00	51.94 6.04 35.81 10.46	23.29 2.71 16.06 9.86	145.02 16.86
ACTIVE	.04 0.00 0.80 0.03	3.18 0.37 71.66 74.21	.06 0.01 1.36 0.01	1.62 0.14 26.18 0.49	4.19 0.52
WORKING	48.60 5.65 9.58 39.58	.70 0.08 0.14 16.33	374.70 43.57 73.90 75.44	83.03 9.65 16.38 35.14	507.30 58.95
NOT WORKING	4.35 0.51 2.14 3.55	.41 0.05 0.20 9.46	69.97 8.14 34.38 14.09	128.80 14.98 63.28 54.51	203.53 23.67
TOTAL	122.78 14.28	4.29 0.50	496.67 57.75	236.74 27.48	624 100.00

CONVERTED TRANSITION PROBABILITIES (80-81) FOR 19 YEAR OLD FEMALES

FREQUENCY PERCENT ROW PCT COL PCT	IN SCHOOL	ACTIVE	WORKING	NOT WORKING	TOTAL
IN SCHOOL	89.13 11.00 55.29 69.89	0 0.00 0.00 0.00	53.01 6.54 32.89 10.97	19.05 2.35 11.82 9.99	161.19 19.90
ACTIVE	0 0.00 0.00 0.00	7.79 0.96 92.27 88.26	.61 0.08 7.29 0.13	.04 0.00 0.44 0.02	8.44 1.04
WORKING	35.90 4.43 7.78 28.15	0 0.00 0.00 0.00	361.50 44.63 78.31 74.84	64.20 7.93 13.91 33.68	461.61 56.99
NOT WORKING	2.50 0.31 1.40 1.96	1.04 0.13 0.58 11.74	67.92 8.39 37.99 14.06	107.30 13.25 60.03 56.30	178.76 22.07
TOTAL	127.53 15.74	8.83 1.09	483.04 59.64	190.59 23.53	631 100.00

CONVERTED TRANSITION PROBABILITIES (79-80) FOR 20 YEAR OLD FEMALES

FREQUENCY PERCENT ROW PCT COL PCT	IN SCHOOL	ACTIVE	WORKING	NOT WORKING	TOTAL
IN SCHOOL	45.44 5.46 42.15 57.49	0 0.00 0.00 0.00	45.09 5.42 41.82 8.69	17.29 2.08 16.03 7.59	107.82 12.96
ACTIVE	.04 0.01 0.80 0.06	4.60 0.55 82.70 74.59	.27 0.03 4.77 0.05	.65 0.08 11.73 0.29	5.56 0.67
WORKING	27.34 3.29 5.35 34.59	.54 0.06 0.11 8.73	392.10 47.13 76.74 75.53	90.95 10.93 17.80 39.95	510.93 61.41
NOT WORKING	6.21 0.75 2.99 7.86	1.03 0.12 0.49 16.68	81.69 9.82 39.33 15.74	118.80 14.28 57.18 52.17	207.73 24.96
TOTAL	79.03 9.50	6.17 0.74	519.15 62.40	227.69 27.36	604 100.00

CONVERTED TRANSITION PROBABILITIES (80-81) FOR 20 YEAR OLD FEMALES

FREQUENCY PERCENT ROW PCT COL PCT	IN SCHOOL	ACTIVE	WORKING	NOT WORKING	TOTAL
IN SCHOOL	58.33 6.78 47.51 65.45	.44 0.05 0.35 10.09	57.86 6.73 47.12 11.19	6.16 0.72 5.02 2.47	122.79 14.28
ACTIVE	0 0.00 0.00 0.00	3.73 0.43 87.20 86.73	.12 0.02 4.62 0.04	.35 0.04 8.19 0.14	4.20 0.50
WORKING	24.79 2.88 4.99 27.82	0 0.00 0.00 0.00	383.30 44.58 77.20 74.13	88.45 10.28 17.81 35.47	496.54 57.75
NOT WORKING	6.00 0.70 2.54 6.74	.14 0.02 0.06 3.13	75.73 8.81 32.05 14.64	154.40 17.96 65.35 61.92	236.27 27.48
TOTAL	89.12 10.36	4.31 0.50	517.01 60.14	249.36 29.00	615 100.00

CONVERTED TRANSITION PROBABILITIES (79-80) FOR 21 YEAR OLD FEMALES

FREQUENCY PERCENT ROW PCT COL PCT	IN SCHOOL	ACTIVE	WORKING	NOT WORKING	TOTAL
IN SCHOOL	34.70 4.05 38.51 61.66	.30 0.04 0.33 6.49	46.76 5.46 51.90 8.46	8.35 0.97 9.27 3.43	90.11 10.51
ACTIVE	.21 0.02 3.35 0.37	4.01 0.47 66.08 87.[illegible]1	1.29 0.15 20.99 0.23	.59 0.07 9.57 0.24	6.1[illegible] 0.72
WORKING	18.91 2.21 3.58 33.60	.[illegible]7 0.03 0.05 5.80	430.90 50.28 81.57 77.93	78.19 9.12 14.80 32.15	528.27 61.64
NOT WORKING	2.46 0.29 1.06 4.37	0 0.00 0.00 0.00	73.98 8.63 31.82 13.38	156.10 18.21 67.12 64.17	232.54 27.13
TOTAL	56.28 6.57	4.58 0.54	552.93 64.52	243.23 28.38	614 100.00

CONVERTED TRANSITION PROBABILITIES (80-81) FOR 21 YEAR OLD FEMALES

FREQUENCY PERCENT ROW PCT COL PCT	IN SCHOOL	ACTIVE	WORKING	NOT WORKING	TOTAL
IN SCHOOL	27.53 3.31 34.83 45.86	0 0.00 0.00 0.00	44.93 5.40 56.85 8.03	6.58 0.79 8.32 3.19	79.04 9.50
ACTIVE	.10 0.01 1.61 0.17	5.14 0.62 83.46 89.16	.40 0.05 6.48 0.07	.52 0.06 8.45 0.25	6.16 0.74
WORKING	22.54 2.71 4.34 37.55	0 0.00 0.00 0.00	425.80 51.17 82.01 76.06	70.85 8.52 13.65 34.32	519.19 62.40
NOT WORKING	9.86 1.18 4.33 16.42	.62 0.08 0.27 10.84	88.69 10.66 38.96 15.84	128.50 15.44 56.44 62.24	227.67 27.36
TOTAL	60.03 7.21	5.76 0.69	559.82 67.28	206.45 24.81	626 100.00

CONVERTED TRANSITION PROBABILITIES (79-80) FOR 22 YEAR OLD FEMALES

FREQUENCY PERCENT ROW PCT COL PCT	IN SCHOOL	ACTIVE	WORKING	NOT WORKING	TOTAL
IN SCHOOL	4.92 2.63 23.73 31.11	0 0.00 0.00 0.00	13.02 6.96 62.84 10.49	2.78 1.49 13.43 6.16	20.72 11.08
ACTIVE	.07 0.04 3.82 0.42	.92 0.49 52.17 47.26	.29 0.15 16.33 0.23	.49 0.26 27.68 1.08	1.77 0.94
WORKING	9.65 5.16 7.85 61.05	0 0.00 0.00 0.00	90.44 48.36 73.58 72.88	22.82 12.20 18.57 50.52	122.91 65.72
NOT WORKING	1.17 0.63 2.81 7.41	1.02 0.55 2.46 52.74	20.35 10.88 48.88 16.40	19.08 10.20 45.85 42.25	41.62 22.26
TOTAL	15.81 8.45	1.94 1.04	124.10 66.36	45.17 24.15	142 100.00

CONVERTED TRANSITION PROBABILITIES (80-81) FOR 22 YEAR OLD FEMALES

FREQUENCY PERCENT ROW PCT COL PCT	IN SCHOOL	ACTIVE	WORKING	NOT WORKING	TOTAL
IN SCHOOL	10.30 5.51 65.21 86.84	0 0.00 0.00 0.00	3.81 2.03 24.08 2.90	1.69 0.91 10.71 3.93	15.80 8.45
ACTIVE	.14 0.08 7.40 1.21	.73 0.39 37.73 82.78	0 0.00 0.00 0.00	1.06 0.57 54.87 2.47	1.93 1.04
WORKING	.62 0.33 0.50 5.25	0 0.00 0.00 0.00	109.20 58.38 87.98 83.20	14.29 7.64 11.52 33.21	124.11 66.36
NOT WORKING	.80 0.43 1.76 6.70	.15 0.08 0.34 17.22	18.24 9.75 40.38 13.90	25.98 13.89 57.52 60.38	45.17 24.15
TOTAL	11.86 6.35	0.88 0.47	131.25 70.17	43.02 23.01	144 100.00

APPENDIX D

CONDITIONAL TRANSITION PROBABILITIES BY AGE AND SEX FOR 80-81

CONDITIONAL TRANSITION PROBABILITIES FOR 17 YEAR OLD MALES

PATH $j_0 j_1 j_2$	PATH FREQUENCY $n_{j_0 j_1 j_2}$	CELL FREQUENCY $n_{j_0 j_1}$	CONDITIONAL TRANSITION PROBABILITY $p_{j_0 j_1 j_2}$
111	117.313	388	.3034
112	210.649	388	.5447
113	58.9589	388	.1525
121	19.8618	190	.1046
122	164.462	190	.8663
123	20.2037	190	.1064
131	4.2719	60	.0712
132	37.848	60	.6304
133	17.951	60	.2990
211	0.350163	2	.2060
212	0.60395	2	.3553
213	0.746577	2	.4392
221	0	32	0
222	22.8695	32	.7176
223	8.45248	32	.2652
231	0	9	0
232	3.28642	9	.3596
233	4.36653	9	.4777
311	1.68791	2	.7938
312	0	2	0
313	0.527142	2	.2385
321	0	21	0
322	13.5173	21	.6591
323	8.25441	21	.4025
331	0	16	0
332	5.6958	16	.3665
333	9.8559	16	.6342

CONDITIONAL TRANSITION PROBABILITIES FOR 18 YEAR OLD MALES

PATH $j_0 j_1 j_2$	PATH FREQUENCY $n_{j_0 j_1 j_2}$	CELL FREQUENCY $n_{j_0 j_1}$	CONDITIONAL TRANSITION PROBABILITY $p_{j_0 j_1 j_2}$
111	71.1431	138	.5155
112	52.2729	138	.3788
113	13.7093	138	.0993
121	24.7813	181	.1369
122	134.369	181	.7424
123	18.0823	181	.0999
131	1.42965	46	.0311
132	29.5264	46	.6419
133	10.7166	46	.2330
211	5.08076	18	.2823
212	8.72593	18	.4848
213	4.23925	18	.2355
221	12.0219	221	.0544
222	180.938	221	.8187
223	23.855	221	.1080
231	0.247335	54	.0046
232	29.6282	54	.5487
233	19.1909	54	.3554
311	1.62437	3	.5415
312	0.630513	3	.2102
313	0.258761	3	.0863
321	1.89315	26	.0728
322	15.5104	26	.5966
323	8.02596	26	.3087
331	0.827019	41	.0202
332	9.38426	41	.2289
333	27.8789	41	.6800

CONDITIONAL TRANSITION PROBABILITIES FOR 19 YEAR OLD MALES

PATH $j_0 j_1 j_2$	PATH FREQUENCY $n_{j_0 j_1 j_2}$	CELL FREQUENCY $n_{j_0 j_1}$	CONDITIONAL TRANSITION PROBABILITY $p_{j_0 j_1 j_2}$
111	36.5319	68	.4526
112	30.8485	68	.3822
113	0.263434	68	.0033
121	10.1768	63	.1367
122	42.3742	63	.5694
123	9.50316	63	.1277
131	2.30936	13	.1553
132	2.85337	13	.1919
133	6.91913	13	.4653
211	23.8367	39	.5143
212	11.6863	39	.2521
213	2.51177	39	.0542
221	8.2063	331	.0209
222	291.047	331	.7423
223	27.7934	331	.0709
231	3.2782	48	.0583
232	33.2274	48	.5905
233	10.0003	48	.1777
311	0	0	0
312	0	0	0
313	0.268667	0	.8380
321	2.09131	40	.0446
322	31.5682	40	.6740
323	5.32452	40	.1137
331	0	32	0
332	11.2289	32	.2937
333	20.1438	32	.5269

CONDITIONAL TRANSITION PROBABILITIES FOR 20 YEAR OLD MALES

PATH $j_0 j_1 j_2$	PATH FREQUENCY $n_{j_0 j_1 j_2}$	CELL FREQUENCY $n_{j_0 j_1}$	CONDITIONAL TRANSITION PROBABILITY $p_{j_0 j_1 j_2}$
111	28.3862	57	.4018
112	21.9809	57	.3111
113	4.14448	57	.0587
121	6.32712	40	.1289
122	30.316	40	.6177
123	0	40	0
131	0.547629	7	.0596
132	6.40782	7	.6976
133	0.487485	7	.0531
211	16.2917	31	.4303
212	14.1291	31	.3732
213	0.255827	31	.0068
221	12.3033	382	.0261
222	330.157	382	.6996
223	39.9193	382	.0846
231	2.35406	51	.0375
232	36.7716	51	.5853
233	11.5537	51	.1839
311	0	2	0
312	1.94272	2	.8101
313	0	2	0
321	1.18739	29	.0331
322	18.6	29	.5191
323	8.58113	29	.2395
331	0.950103	23	.0339
332	5.85895	23	.2092
333	15.5336	23	.5546

CONDITIONAL TRANSITION PROBABILITIES FOR 21 YEAR OLD MALES

PATH $j_0 j_1 j_2$	PATH FREQUENCY $n_{j_0 j_1 j_2}$	CELL FREQUENCY $n_{j_0 j_1}$	CONDITIONAL TRANSITION PROBABILITY $p_{j_0 j_1 j_2}$
111	15.886	33	.4814
112	15.264	33	.4625
113	2.05998	33	.0624
121	5.58997	37	.1511
122	30.1986	37	.8162
123	1.40549	37	.0380
131	2.37783	3	.7926
132	0.784744	3	.2616
133	0.253713	3	.0846
211	14.3935	26	.5536
212	11.3602	26	.4369
213	0.320398	26	.0123
221	13.1339	346	.0380
222	299.38	346	.8653
223	33.4804	346	.0968
231	0.546331	50	.0109
232	32.6705	50	.6534
233	14.0611	50	.2812
311	0.260468	2	.1302
312	0	2	0
313	2.03175	2	.9999
321	0.760084	43	.0177
322	28.922	43	.6726
323	12.6082	43	.2932
331	0.222877	33	.0068
332	19.8899	33	.6027
333	13.1818	33	.3994

CONDITIONAL TRANSITION PROBABILITIES FOR 22 YEAR OLD MALES

PATH $j_0 j_1 j_2$	PATH FREQUENCY $n_{j_0 j_1 j_2}$	CELL FREQUENCY $n_{j_0 j_1}$	CONDITIONAL TRANSITION PROBABILITY $p_{j_0 j_1 j_2}$
111	0	2	0
112	2.31007	2	.6810
113	0	2	0
121	0.429461	11	.0266
122	6.27019	11	.3887
123	4.2902	11	.2660
131	0	2	0
132	0	2	0
133	0.316981	2	.1072
211	1.83309	6	.1977
212	2.07467	6	.2238
213	2.40711	6	.2596
221	2.1841	113	.0131
222	100.988	113	.6036
223	10.7904	113	.0645
231	0	5	0
232	2.22285	5	.2919
233	2.96402	5	.3892
311	0	0	0
312	0	0	0
313	0.178089	0	.6810
321	0	6	0
322	4.72125	6	.5465
323	1.16283	6	.1346
331	0	2	0
332	1.05352	2	.3865
333	0.8033	2	.2947

CONDITIONAL TRANSITION PROBABILITIES FOR 17 YEAR OLD FEMALES

PATH $j_0 j_1 j_2$	PATH FREQUENCY $n_{j_0 j_1 j_2}$	CELL FREQUENCY $n_{j_0 j_1}$	CONDITIONAL TRANSITION PROBABILITY $p_{j_0 j_1 j_2}$
111	114.014	318	.3574
112	155.131	318	.4863
113	47.8423	318	.1500
121	16.8986	231	.0729
122	198.749	231	.8579
123	14.273	231	.0616
131	7.72943	86	.0898
132	38.4265	86	.4463
133	39.244	86	.4558
211	0	4	0
212	3.19583	4	.9002
213	0.344183	4	.0970
221	3.46275	41	.0839
222	28.9071	41	.7004
223	8.12547	41	.1969
231	0	15	0
232	7.2038	15	.4803
233	7.73968	15	.5160
311	2.00233	3	.7362
312	0.171549	3	.0631
313	0.532476	3	.1958
321	2.42205	17	.1421
322	13.0072	17	.7629
323	1.54594	17	.0907
331	0.270773	44	.0061
332	5.11682	44	.1157
333	38.6465	44	.8742

CONDITIONAL TRANSITION PROBABILITIES FOR 18 YEAR OLD FEMALES

PATH $j_0 j_1 j_2$	PATH FREQUENCY $n_{j_0 j_1 j_2}$	CELL FREQUENCY $n_{j_0 j_1}$	CONDITIONAL TRANSITION PROBABILITY $p_{j_0 j_1 j_2}$
111	66.9854	120	.5582
112	36.7882	120	.3066
113	16.2917	120	.1358
121	24.514	159	.1542
122	113.792	159	.7157
123	20.198	159	.1270
131	1.69135	47	.0306
132	19.8756	47	.4229
133	24.7786	47	.5272
211	18.0581	30	.6019
212	11.8454	30	.3948
213	0.200235	30	.0067
221	9.32219	238	.0392
222	202.019	238	.8488
223	26.7679	238	.1125
231	0.210013	43	.0049
232	23.6712	43	.5505
233	19.202	43	.4466
311	0.36164	4	.0904
312	2.16488	4	.5412
313	1.76023	4	.4401
321	0.561621	46	.0122
322	30.5894	46	.6650
323	14.5038	46	.3153
331	0.493733	79	.0062
332	21.4945	79	.2721
333	56.8597	79	.7197

CONDITIONAL TRANSITION PROBABILITIES FOR 19 YEAR OLD FEMALES

PATH $j_0 j_1 j_2$	PATH FREQUENCY $n_{j_0 j_1 j_2}$	CELL FREQUENCY $n_{j_0 j_1}$	CONDITIONAL TRANSITION PROBABILITY $p_{j_0 j_1 j_2}$
111	34.3907	62	.4928
112	25.0597	62	.3591
113	1.70476	62	.0244
121	7.34258	46	.1414
122	29.9979	46	.5775
123	8.45481	46	.1628
131	4.21625	21	.1810
132	6.76299	21	.2904
133	9.55818	21	.4104
211	15.8151	43	.3254
212	25.9515	43	.5340
213	1.08024	43	.0222
221	14.5186	331	.0387
222	275.435	331	.7351
223	40.4007	331	.1078
231	0	73	0
232	40.3906	73	.4865
233	32.8201	73	.3953
311	1.19433	4	.2743
312	0	4	0
313	2.64493	4	.6075
321	0	62	0
322	32.6155	62	.4661
323	29.0787	62	.4156
331	1.04171	114	.0081
332	18.8551	114	.1464
333	93.6685	114	.7272

CONDITIONAL TRANSITION PROBABILITIES FOR 20 YEAR OLD FEMALES

PATH $j_0 j_1 j_2$	PATH FREQUENCY $n_{j_0 j_1 j_2}$	CELL FREQUENCY $n_{j_0 j_1}$	CONDITIONAL TRANSITION PROBABILITY $p_{j_0 j_1 j_2}$
111	15.1987	39	.3897
112	19.0148	39	.4876
113	4.26091	39	.1093
121	5.13334	38	.1351
122	30.6385	38	.8063
123	2.40695	38	.0633
131	0.704931	15	.0470
132	5.44379	15	.3629
133	8.48675	15	.5658
211	6.80182	23	.2957
212	15.6702	23	.6813
213	0.676373	23	.0294
221	13.9471	332	.0420
222	280.026	332	.8435
223	38.0079	332	.1145
231	6.11221	77	.0794
232	45.7207	77	.5938
233	24.7551	77	.3215
311	1.26711	5	.2534
312	3.36073	5	.6721
313	0.630468	5	.1261
321	0	69	0
322	49.597	69	.7188
323	19.5718	69	.2836
331	1.50009	101	.0149
332	23.725	101	.2349
333	75.3388	101	.7459

CONDITIONAL TRANSITION PROBABILITIES FOR 21 YEAR OLD FEMALES

PATH $j_0 j_1 j_2$	PATH FREQUENCY $n_{j_0 j_1 j_2}$	CELL FREQUENCY $n_{j_0 j_1}$	CONDITIONAL TRANSITION PROBABILITY $p_{j_0 j_1 j_2}$
111	10.1319	30	.3377
112	12.0604	30	.4020
113	7.88148	30	.2627
121	3.7795	41	.0922
122	34.3889	41	.8388
123	2.36358	41	.0576
131	0.451053	7	.0644
132	1.01938	7	.1456
133	5.76581	7	.8237
211	3.27828	16	.2049
212	10.7767	16	.6735
213	2.33133	16	.1457
221	6.65072	373	.0178
222	319.538	373	.8567
223	47.2648	373	.1267
231	0	68	0
232	26.9347	68	.3961
233	40.8412	68	.6006
311	2.03064	2	.9999
312	0	2	0
313	0	2	0
321	0	64	0
322	47.6102	64	.7439
323	16.5126	64	.2580
331	3.94927	135	.0293
332	38.3345	135	.2840
333	92.993	135	.6888

CONDITIONAL TRANSITION PROBABILITIES FOR 22 YEAR OLD FEMALES

PATH $j_0 j_1 j_2$	PATH FREQUENCY $n_{j_0 j_1 j_2}$	CELL FREQUENCY $n_{j_0 j_1}$	CONDITIONAL TRANSITION PROBABILITY $p_{j_0 j_1 j_2}$
111	4.00353	4	.8142
112	0	4	0
113	0	4	0
121	0	11	0
122	10.6007	11	.8142
123	0	11	0
131	0	2	0
132	2.2648	2	.8144
133	0	2	0
211	4.36458	8	.4524
212	2.81458	8	.2918
213	0.675954	8	.0701
221	0.410557	74	.0045
222	68.613	74	.7587
223	4.61447	74	.0510
231	0	19	0
232	7.82694	19	.3430
233	10.7531	19	.4712
311	0	1	0
312	0.251201	1	.2145
313	0.702735	1	.6001
321	0	17	0
322	9.5655	17	.4700
323	7.00118	17	.3440
331	0.59891	16	.0314
332	4.75848	16	.2494
333	10.1799	168	.5335

APPENDIX E

UNCONDITIONAL 3 BY 3 CONVERTED TRANSITION PROBABILITY MATRICES BY AGE AND SEX FOR 79-80 AND 80-81

CONVERTED TRANSITION PROBABILITIES (79-80) FOR 17 YEAR OLD MALES

FREQUENCY PERCENT ROW PCT COL PCT	IN SCHOOL	WORKING	NOT WORKING	TOTAL
IN SCHOOL	388 53.89 60.75 99.00	190 26.46 29.82 78.38	60 8.37 9.43 70.87	639 88.72
WORKING	2 0.24 3.98 0.44	32 4.44 74.62 13.16	9 1.27 21.39 10.78	43 5.95
NOT WORKING	2 0.31 5.79 0.57	21 2.86 53.59 8.47	16 2.17 40.62 18.35	38 5.33
TOTAL	392 54.44	243 33.76	85 11.81	720 100.00

CONVERTED TRANSITION PROBABILITIES (80-81) FOR 17 YEAR OLD MALES

FREQUENCY PERCENT ROW PCT COL PCT	IN SCHOOL	WORKING	NOT WORKING	TOTAL
IN SCHOOL	346 45.32 54.97 96.51	229 30.05 36.45 74.80	54 7.08 8.58 54.99	629 2.45
WORKING	3 0.34 3.85 0.73	47 6.21 69.72 15.45	18 2.35 26.43 18.29	68 8.90
NOT WORKING	10 1.30 14.98 2.76	30 3.92 45.28 9.75	26 3.44 39.74 26.72	66 8.65
TOTAL	358 46.96	307 40.17	98 12.87	763 100.00

CONVERTED TRANSITION PROBABILITIES (79-80) FOR 18 YEAR OLD MALES

FREQUENCY PERCENT ROW PCT COL PCT	IN SCHOOL	WORKING	NOT WORKING	TOTAL
IN SCHOOL	138 19.03 37.84 87.03	181 24.92 49.57 42.36	46 6.33 12.59 32.80	366 50.28
WORKING	18 2.49 6.18 11.38	221 30.41 75.52 51.68	54 7.37 18.30 38.20	293 40.27
NOT WORKING	3 0.35 3.67 1.59	26 3.51 37.12 5.96	41 5.60 59.21 29.00	69 9.45
TOTAL	159 21.86	428 58.84	140 19.29	727 100.00

CONVERTED TRANSITION PROBABILITIES (80-81) FOR 18 YEAR OLD MALES

FREQUENCY PERCENT ROW PCT COL PCT	IN SCHOOL	WORKING	NOT WORKING	TOTAL
IN SCHOOL	119 17.24 31.74 83.18	196 28.37 52.24 46.82	60 8.70 16.02 46.58	375 54.31
WORKING	20 2.87 8.43 13.84	179 25.84 75.91 42.64	37 5.33 15.66 28.54	235 34.04
NOT WORKING	4 0.62 5.30 2.98	44 6.39 54.82 10.54	32 4.65 39.88 24.88	81 11.65
TOTAL	143 20.72	419 60.60	129 18.68	691 100.00

CONVERTED TRANSITION PROBABILITIES (79-80) FOR 19 YEAR OLD MALES

FREQUENCY PERCENT ROW PCT COL PCT	IN SCHOOL	WORKING	NOT WORKING	TOTAL
IN SCHOOL	68 10.76 47.48 63.36	63 9.92 43.78 14.50	13 1.98 8.74 13.59	144 22.66
WORKING	39 6.18 9.37 36.38	331 52.27 79.26 76.38	48 7.50 11.38 51.45	418 65.95
NOT WORKING	0 0.04 0.38 0.25	40 6.24 54.85 9.12	32 5.10 44.77 34.96	72 11.38
TOTAL	108 16.98	434 68.44	92 14.58	634 100.00

CONVERTED TRANSITION PROBABILITIES (80-81) FOR 19 YEAR OLD MALES

FREQUENCY PERCENT ROW PCT COL PCT	IN SCHOOL	WORKING	NOT WORKING	TOTAL
IN SCHOOL	78 11.00 49.37 65.39	62 8.70 39.08 13.33	18 2.57 11.55 14.39	159 22.27
WORKING	39 5.47 9.19 32.50	335 46.93 78.89 71.85	51 7.10 11.93 39.71	424 59.49
NOT WORKING	3 0.35 1.94 2.10	69 9.68 53.09 14.82	58 8.20 44.97 45.90	130 18.24
TOTAL	120 16.81	466 65.32	127 17.87	713 100.00

CONVERTED TRANSITION PROBABILITIES (79-80) FOR 20 YEAR OLD MALES

FREQUENCY PERCENT ROW PCT COL PCT	IN SCHOOL	WORKING	NOT WORKING	TOTAL
IN SCHOOL	57 9.20 54.80 63.70	40 6.39 38.07 8.82	7 1.20 7.13 9.18	104 16.79
WORKING	31 4.93 6.61 34.14	382 61.47 82.42 84.75	51 8.18 10.97 62.81	464 74.58
NOT WORKING	2 0.31 3.62 2.16	29 4.67 54.09 6.43	23 3.65 42.29 28.00	54 8.63
TOTAL	90 14.45	451 72.53	81 13.03	622 100.00

CONVERTED TRANSITION PROBABILITIES (80-81) FOR 20 YEAR OLD MALES

FREQUENCY PERCENT ROW PCT COL PCT	IN SCHOOL	WORKING	NOT WORKING	TOTAL
IN SCHOOL	63 9.56 56.70 69.85	44 6.74 39.95 9.26	4 0.57 3.36 4.17	111 16.87
WORKING	21 3.24 4.73 23.69	384 58.38 85.10 80.25	46 6.98 10.18 51.46	451 68.60
NOT WORKING	6 0.89 6.09 6.46	50 7.63 52.49 10.48	40 6.02 41.42 44.37	95 14.53
TOTAL	90 13.69	478 72.74	89 13.57	657 100.00

CONVERTED TRANSITION PROBABILITIES (79-80) FOR 21 YEAR OLD MALES

FREQUENCY PERCENT ROW PCT COL PCT	IN SCHOOL	WORKING	NOT WORKING	TOTAL
IN SCHOOL	33 5.79 45.14 53.76	37 6.48 50.56 8.74	3 0.55 4.30 3.67	74 12.82
WORKING	26 4.54 6.18 42.21	346 60.30 82.02 81.27	50 8.68 11.80 57.73	422 73.52
NOT WORKING	2 0.43 3.18 4.03	43 7.42 54.33 10.00	33 5.80 42.49 38.60	78 13.66
TOTAL	62 10.77	426 74.20	86 15.03	574 100.00

CONVERTED TRANSITION PROBABILITIES (80-81) FOR 21 YEAR OLD MALES

FREQUENCY PERCENT ROW PCT COL PCT	IN SCHOOL	WORKING	NOT WORKING	TOTAL
IN SCHOOL	47 7.26 51.62 64.34	40 6.10 43.37 8.07	5 0.71 5.02 5.36	92 14.06
WORKING	21 3.27 4.51 28.95	401 61.43 84.77 81.28	51 7.77 10.72 59.13	472 72.46
NOT WORKING	5 0.76 5.62 6.71	53 8.05 59.76 10.66	30 4.67 34.63 35.51	88 13.48
TOTAL	74 11.28	493 75.58	86 13.14	652 100.00

CONVERTED TRANSITION PROBABILITIES (79-80) FOR 22 YEAR OLD MALES

FREQUENCY PERCENT ROW PCT COL PCT	IN SCHOOL	WORKING	NOT WORKING	TOTAL
IN SCHOOL	2 1.55 15.09 26.24	11 7.39 71.77 8.40	2 1.35 13.15 22.23	15 10.30
WORKING	6 4.25 5.03 71.74	113 76.64 90.83 87.10	5 3.49 4.13 57.27	125 84.38
NOT WORKING	0 0.12 2.25 2.02	6 3.96 74.30 4.50	2 1.25 23.45 20.50	8 5.33
TOTAL	9 5.92	130 87.99	9 6.09	148 100.00

CONVERTED TRANSITION PROBABILITIES (80-81) FOR 22 YEAR OLD MALES

FREQUENCY PERCENT ROW PCT COL PCT	IN SCHOOL	WORKING	NOT WORKING	TOTAL
IN SCHOOL	35 5.26 49.34 56.65	30 4.62 43.30 6.02	5 0.78 7.36 5.62	70 10.66
WORKING	22 3.39 4.59 36.51	409 62.31 84.36 81.20	54 8.16 11.05 58.44	485 73.87
NOT WORKING	4 0.64 4.11 6.84	64 9.81 63.43 12.79	33 5.02 32.46 35.94	101 15.47
TOTAL	61 9.29	503 76.74	92 13.97	656 100.00

CONVERTED TRANSITION PROBABILITIES (79-80) FOR 17 YEAR OLD FEMALES

FREQUENCY PERCENT ROW PCT COL PCT	IN SCHOOL	WORKING	NOT WORKING	TOTAL
IN SCHOOL	318 41.94 50.09 98.07	231 30.46 36.38 79.89	86 11.32 13.52 59.25	635 83.72
WORKING	4 0.47 5.94 1.09	41 5.43 68.98 14.23	15 1.97 25.08 10.33	60 7.87
NOT WORKING	3 0.36 4.25 0.84	17 2.24 26.64 5.88	44 5.81 69.11 30.43	64 8.41
TOTAL	325 42.76	289 38.13	145 19.11	759 100.00

CONVERTED TRANSITION PROBABILITIES (80-81) FOR 17 YEAR OLD FEMALES

FREQUENCY PERCENT ROW PCT COL PCT	IN SCHOOL	WORKING	NOT WORKING	TOTAL
IN SCHOOL	332 43.15 51.92 96.58	232 30.10 36.21 80.42	76 9.86 11.86 55.10	640 83.11
WORKING	4 0.47 6.42 1.04	33 4.26 58.67 11.38	20 2.53 34.91 14.17	56 7.26
NOT WORKING	8 1.06 11.03 2.38	24 3.07 31.87 8.20	42 5.50 57.11 30.74	74 9.63
TOTAL	344 44.68	288 37.43	138 17.89	770 100.00

CONVERTED TRANSITION PROBABILITIES (79-80) FOR 18 YEAR OLD FEMALES

FREQUENCY PERCENT ROW PCT COL PCT	IN SCHOOL	WORKING	NOT WORKING	TOTAL
IN SCHOOL	120 15.67 36.84 77.73	159 20.69 48.63 35.84	47 6.18 14.52 27.97	326 42.55
WORKING	30 3.93 9.67 19.49	238 31.09 76.49 53.84	43 5.62 13.84 25.45	312 40.64
NOT WORKING	4 0.56 3.33 2.78	46 5.96 35.45 10.32	79 10.29 61.22 46.58	129 16.81
TOTAL	155 20.16	443 57.74	169 22.10	767 100.00

CONVERTED TRANSITION PROBABILITIES (80-81) FOR 18 YEAR OLD FEMALES

FREQUENCY PERCENT ROW PCT COL PCT	IN SCHOOL	WORKING	NOT WORKING	TOTAL
IN SCHOOL	116 15.37 35.89 79.03	158 20.99 49.04 35.23	49 6.45 15.07 30.78	323 42.81
WORKING	23 3.02 7.93 15.52	241 31.88 83.74 53.49	24 3.17 8.33 15.13	287 38.06
NOT WORKING	8 1.06 5.54 5.45	51 6.72 35.15 11.28	86 11.34 59.31 54.10	144 19.12
TOTAL	147 19.44	450 59.59	158 20.97	755 100.00

CONVERTED TRANSITION PROBABILITIES (79-80) FOR 19 YEAR OLD FEMALES

FREQUENCY PERCENT ROW PCT COL PCT	IN SCHOOL	WORKING	NOT WORKING	TOTAL
IN SCHOOL	62 8.17 48.13 56.86	46 6.08 35.81 10.46	21 2.73 16.06 9.91	128 16.97
WORKING	43 5.69 9.60 39.59	331 43.85 74.00 75.45	73 9.72 16.40 35.31	447 59.25
NOT WORKING	4 0.51 2.14 3.55	62 8.19 34.45 14.09	114 15.07 63.41 54.78	179 23.77
TOTAL	108 14.37	438 58.12	207 27.52	754 100.00

CONVERTED TRANSITION PROBABILITIES (80-81) FOR 19 YEAR OLD FEMALES

FREQUENCY PERCENT ROW PCT COL PCT	IN SCHOOL	WORKING	NOT WORKING	TOTAL
IN SCHOOL	86 11.13 55.29 69.89	51 6.62 32.85 10.99	18 2.38 11.82 10.00	156 20.14
WORKING	35 4.48 7.78 28.15	349 45.16 78.31 74.93	62 8.02 13.91 33.69	446 57.66
NOT WORKING	2 0.31 1.41 1.96	66 8.48 38.22 14.08	104 13.41 60.38 56.31	172 22.20
TOTAL	123 15.93	466 60.26	184 23.81	773 100.00

CONVERTED TRANSITION PROBABILITIES (79-80) FOR 20 YEAR OLD FEMALES

FREQUENCY PERCENT ROW PCT COL PCT	IN SCHOOL	WORKING	NOT WORKING	TOTAL
IN SCHOOL	39 5.51 42.15 57.53	38 5.47 41.82 8.69	15 2.10 16.03 7.61	91 13.07
WORKING	23 3.31 5.36 34.61	332 47.53 76.82 75.56	77 11.03 17.82 40.07	432 61.87
NOT WORKING	5 0.75 3.00 7.86	69 9.90 39.53 15.74	101 14.40 57.47 52.32	175 25.06
TOTAL	67 9.58	440 62.90	192 27.52	699 100.00

CONVERTED TRANSITION PROBABILITIES (80-81) FOR 20 YEAR OLD FEMALES

FREQUENCY PERCENT ROW PCT COL PCT	IN SCHOOL	WORKING	NOT WORKING	TOTAL
IN SCHOOL	52 6.82 47.68 65.45	52 6.77 47.29 11.19	6 0.72 5.03 2.47	109 14.31
WORKING	22 2.90 4.99 27.82	343 44.83 77.20 74.16	79 10.34 17.81 35.52	444 58.08
NOT WORKING	5 0.70 2.54 6.74	68 8.86 32.07 14.65	138 18.06 65.39 62.01	211 27.62
TOTAL	80 10.42	462 60.46	222 29.12	764 100.00

CONVERTED TRANSITION PROBABILITIES (79-80) FOR 21 YEAR OLD FEMALES

FREQUENCY PERCENT ROW PCT COL PCT	IN SCHOOL	WORKING	NOT WORKING	TOTAL
IN SCHOOL	30 4.08 38.63 61.89	41 5.50 52.07 8.48	7 0.98 9.30 3.44	78 10.56
WORKING	16 2.22 3.58 33.72	373 50.67 81.61 78.11	68 9.20 14.81 32.23	458 62.09
NOT WORKING	2 0.29 1.06 4.38	64 8.70 31.82 13.41	135 18.36 67.12 64.33	202 27.35
TOTAL	49 6.59	478 64.87	210 28.53	737 100.00

CONVERTED TRANSITION PROBABILITIES (80-81) FOR 21 YEAR OLD FEMALES

FREQUENCY PERCENT ROW PCT COL PCT	IN SCHOOL	WORKING	NOT WORKING	TOTAL
IN SCHOOL	24 3.34 34.83 45.94	39 5.45 56.85 8.03	6 0.80 8.32 3.19	69 9.58
WORKING	20 2.73 4.34 37.61	372 51.59 82.01 76.11	62 8.59 13.65 34.41	454 62.91
NOT WORKING	9 1.19 4.34 16.45	78 10.75 39.07 15.86	112 15.57 56.59 62.40	199 27.51
TOTAL	52 7.26	489 67.79	180 24.95	722 100.00

CONVERTED TRANSITION PROBABILITIES (79-80) FOR 22 YEAR OLD FEMALES

FREQUENCY PERCENT ROW PCT COL PCT	IN SCHOOL	WORKING	NOT WORKING	TOTAL
IN SCHOOL	4 2.67 23.73 31.25	11 7.07 62.84 10.52	2 1.51 13.43 6.23	17 11.25
WORKING	8 5.24 7.85 61.31	74 49.09 73.58 73.05	19 12.39 18.57 51.07	100 66.72
NOT WORKING	1 0.64 2.89 7.45	17 11.04 50.11 16.43	16 10.36 47.00 42.71	33 22.04
TOTAL	13 8.54	101 67.20	36 24.25	150 100.00

CONVERTED TRANSITION PROBABILITIES (80-81) FOR 22 YEAR OLD FEMALES

FREQUENCY PERCENT ROW PCT COL PCT	IN SCHOOL	WORKING	NOT WORKING	TOTAL
IN SCHOOL	16 2.11 32.02 51.06	24 3.10 46.95 4.66	11 1.39 21.03 4.73	51 6.60
WORKING	11 1.43 2.21 34.55	421 54.43 83.91 81.80	70 9.01 13.88 30.71	502 64.87
NOT WORKING	5 0.60 2.09 14.39	70 9.01 31.57 13.54	147 18.93 66.34 64.55	221 28.53
TOTAL	32 4.14	515 66.54	227 29.32	774 100.00

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