

Measuring Labor Market Status Using the Basic Data from the Current Population Survey

HUMAN CAPITAL CURRENTS

In this article we document our coding of 32 unique categories of individual labor market status using the Current Population Survey (CPS) microdata from 1994 forward. We show these categories can be combined to replicate many labor force statistics published by the U.S. Bureau of Labor Statistics (BLS) as well as some that are of interest to researchers but not available on the BLS's website.

The labor market contains many moving parts, and the connections between them are not always obvious. The primary motivation for constructing 32 labor market status categories was to study the flows across labor market using the panel structure of the CPS. For example, in the wake of the Great Recession, as the unemployment rate started to decline, some other measures of labor market conditions did not improve. Between October 2009 and October 2012, the unemployment rate declined from 10 percent to 7.8 percent while the rate of those employed part-time for economic reasons (PTER) remained stubbornly high, going from 5.9 percent of employment to 5.2 percent during the same time period. Meanwhile, the share of the population participating in the labor force decreased from 65 percent to 63.7 percent.

These seemingly contradictory trends produced many questions. For example, why are people dropping out of the labor force? Are they discouraged about their job prospects? Does the slow decline in the PTER rate reflect a structural shift in the economy? How do the long-term unemployed differ from the short-term unemployed? The thirty-two classifications gave us a basis for delving into these types of questions, while also exploiting the rich set of individual and job characteristics in the CPS data, which allowed the examination of changes in stocks and distributions in these classifications by a person's industry, occupation, age, race, and gender. Broadly, we can break the categories into "Unemployed," "Not in the Labor Force," and "Employed." Each category is described in turn below.

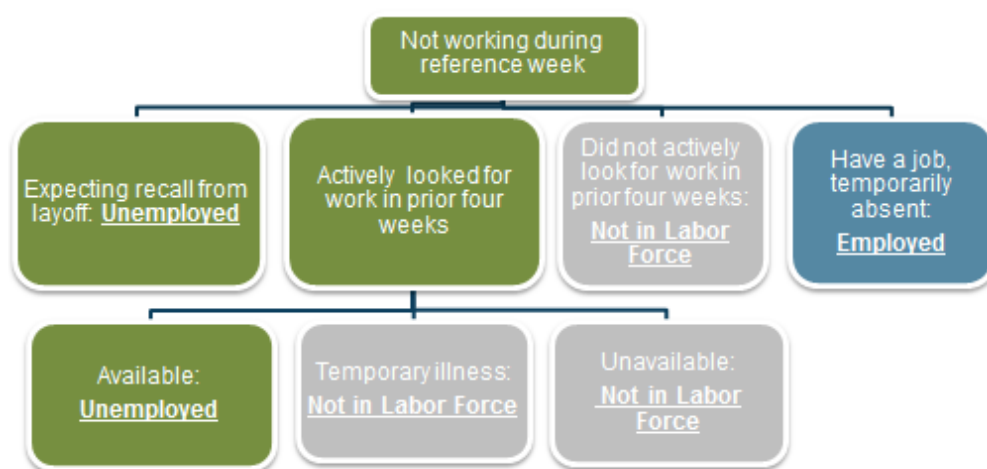
1. Unemployed and Not in the Labor Force

According to the BLS, unemployed persons are those individuals who did not work at all during the reference week, who were not absent from a job, but who actively looked for work during the past four weeks and were available for work during the reference week. Persons who were on layoff from a job to which they expect to return and were available for work during the reference week are also classified as unemployed even if they did not actively look for work. All individuals who are not employed or unemployed are not in the labor force.

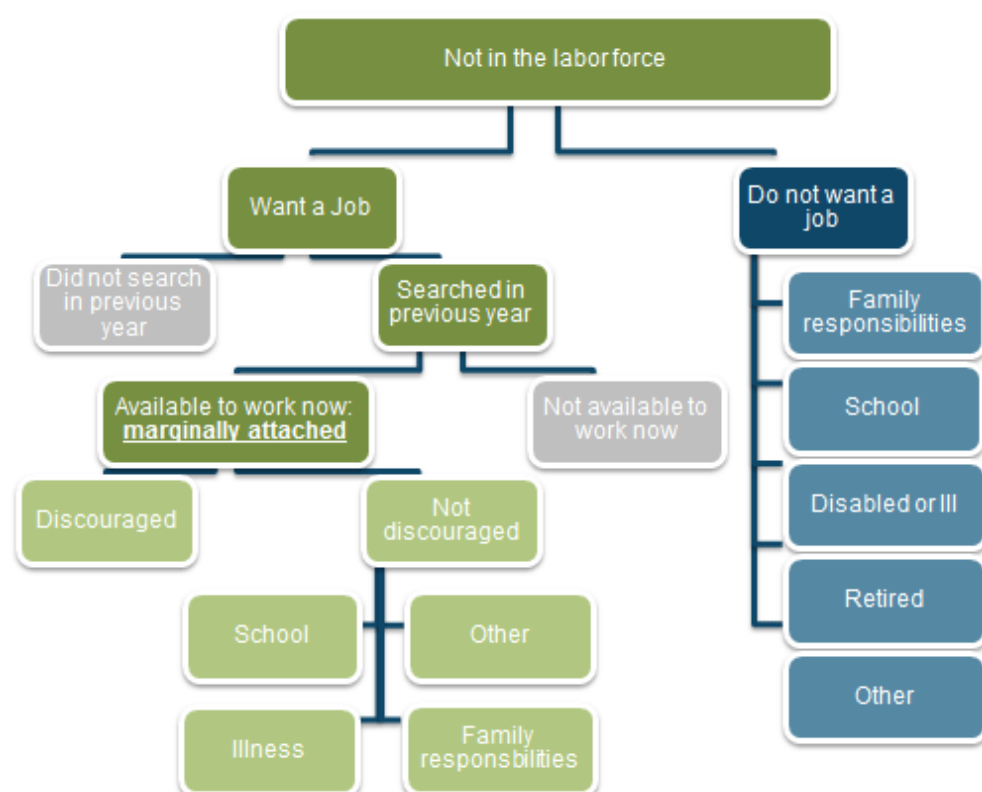
People who want a job but are either not actively seeking or were not available during the reference week are considered out of the labor force.¹ If they have not sought work during the past four weeks but did during the past year, they are labeled as marginally attached.

The flow charts below depict the determination of "unemployed," "marginally attached—discouraged," "marginally attached—not discouraged," and specific reasons for not participating in the labor force.

Determination of Unemployed



Determination of Marginally Attached



Below are the codes used in Stata, a widely used statistical program, for classifying the reason for not participating in the labor market as well as the duration of unemployment categories reported by the BLS. This table is also available in the [appendix](#) with additional detail.

Description	Classification	Formula
Don't want a job—disabled	NILF-DWJ	replace LM_status=5 if nlfwant==2 & (mlr==6 nlfact==1 nlfact==2)
Don't want a job—school/training	NILF-DWJ	replace LM_status=6 if nlfwant==2 & nlfact==3
Don't want a job—other	NILF-DWJ	replace LM_status=8 if nlfwant==2 & ((nlfact==6 & mlr==7) (nlfact==1 & mlr==7))
Don't want a job—retired	NILF-DWJ	replace LM_status=4 if nlfwant==2 & (mlr==5 nlfact==5)
Don't want a job—taking care of house/family	NILF-DWJ	replace LM_status=7 if nlfwant==2 & nlfact==4
Marginally attached—discouraged	NILF-WJ	gen byte LM_status=1 if dscwk==1
Marginally attached but not discouraged	NILF-WJ	replace LM_status=2 if inlist(dscwk,1,2,..) & dscwk~1
Not marginally attached but want a job	NILF-WJ	replace LM_status=3 if ~inlist(dscwk,1,2,..) & (nlfwant==1 nlfwant==.)
Unemployed less than 5 weeks	U-ST	replace LM_status=9 if undur>=0 & undur<=4
Unemployed 5 to 14 weeks	U-MT	replace LM_status=10 if undur>=5 & undur<=14
Unemployed 15 to 26 weeks	U-MT	replace LM_status=11 if undur>=15 & undur<=26
Unemployed 27 to 51 weeks	U-LT	replace LM_status=12 if undur>=27 & undur<=51
Unemployed 52 or more weeks	U-LT	replace LM_status=13 if undur>=52

Note: NILF-WJ: Not in labor force, want job; NILF-DWJ: Not in labor force, don't want job; U-ST: Unemployed short-term (less than 5 weeks); U-MT: Unemployed medium-term (5 to 26 weeks); U-LT: Unemployed long-term (27 or more weeks)

2. Employed

According to the BLS, employed persons are those who are working at a paid job or business for at least one hour during the reference week, working at an unpaid family business for 15 or more hours during the reference week, or who did not work last week but held a job or owned a business from which they were temporarily absent during the reference week.

A job exists when there is a definite arrangement for regular work every week, or every month, for pay or other compensation (such as profits, anticipated profits, or pay in kind, such as room and board). A formal, definite arrangement with one or more employers to work on a continuing basis for a specified number of hours per week or days per month, but on an irregular schedule during the week or month, is also a job.

In determining employment, the BLS counts everyone who worked during the reference week and those who have a job but were temporarily absent. The BLS measure of employment is designed to be unaffected by temporary changes to a person's hours. For this reason, whether a person is employed full-time or part-time is based on the person's *usual hours* worked at all their jobs.

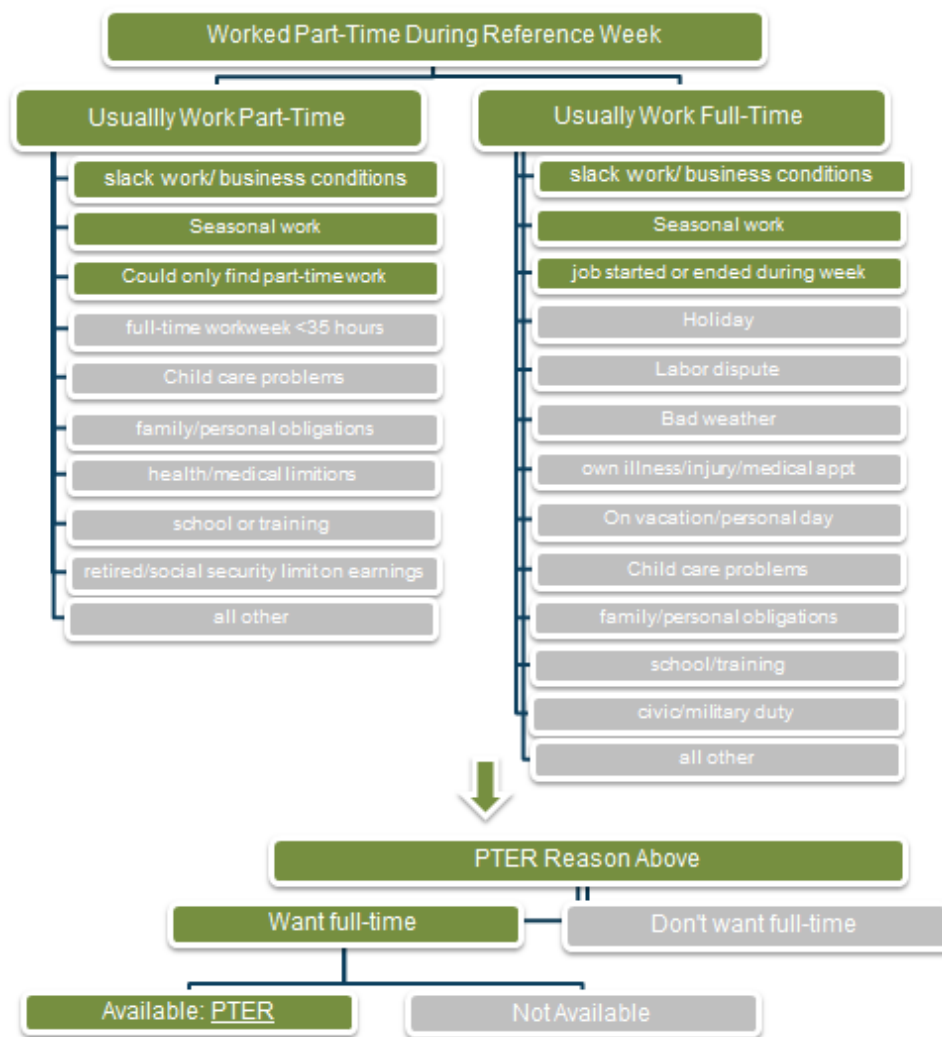
However, the extent to which a worker's hours actually vary over the business cycle is of interest when trying to gauge labor market conditions. For example, in response to a temporary shortfall in demand businesses often reduce the hours of workers rather than lay them off. The most common measure of this effect on the utilization of labor resources is captured by the Part-Time for Economic Reasons variable and reflected in the U6 unemployment rate statistic. This variable is based on the *actual hours* worked at all their jobs during the reference week.

a. Part-Time for Economic Reasons (PTER)

The BLS classifies workers as PTER if they worked from one to 34 hours at all jobs during the reference week, are available for and want full-time work, and also give an economic reason for not working at least 35 hours during the reference week. People who usually work a full-time schedule are assumed to want and be available for full-time work. The figure below shows all possible reasons an individual may give for working part-time, and the

options depend on the number of hours a person *usually* works. The answers in the green boxes are those the BLS considers economic reasons.

Determination of Part-Time for Economic Reasons



b. Our Definition of Full-Time, PTER, and PTNER

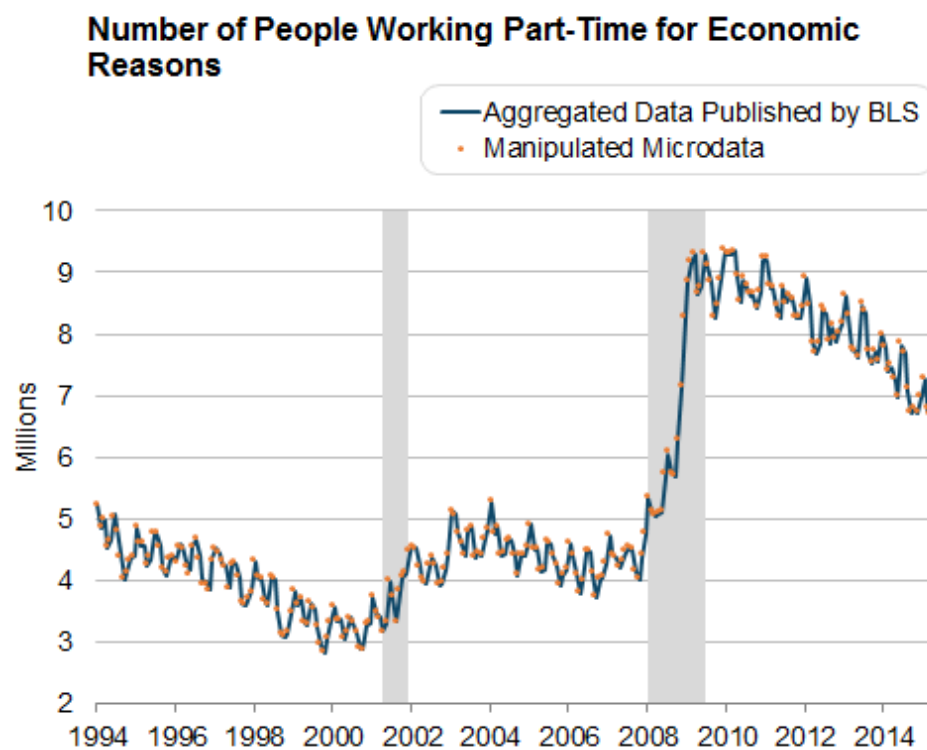
For studying labor market dynamics, the overlapping nature of definitions based on usual and actual hours can be somewhat problematic. For example, many people who worked part-time for an economic reasons usually work full-time, and some of the people who worked full-time during the reference week usually work part-time. However, we can use the detailed labor force reasons to create a classification of workers that we think is easier to conceptualize for the purpose of monitoring flows between various labor force states. The table below shows how we construct full-time (FT), PTER, and part-time for noneconomic reasons (PTNER) categories that are mutually exclusive.

Columns one and two of the table below show the mapping of full-time and part-time into the tables published on the BLS's website. Column one shows the mapping to "Employment" (Table A18—based on usual hours), and column two shows the mapping to "At Work" (Tables A24 and A25—based on actual hours). If the person was working part-time during the reference week or usually works part-time and was at work during the reference week, that person is asked why he or she works part-time. The reason they give is shown in column three, if relevant. We use a combination of the reasons given, usual hours worked, and actual hours worked to label them as PTER, PTNER, or FT. The PTER definition we use matches the BLS definition of PTER. However, our definition of FT and PTNER will not match the BLS-published tables mentioned because we do not strictly rely on actual hours or usual hours. For distinguishing between FT and PTNER, we use actual hours in all but three cases. For those who are not at work, we assign them to FT or PTNER based on their usual hours, and those who usually work full-time but worked part-time for a noneconomic reason are assigned to FT. The fifth column gives the Stata code for creating the variables. Below the table is a chart comparing the not seasonally adjusted number of people working part-time for economic reasons using published tables from the BLS and the number we get from the microdata, using the formulas below. This table and the chart are also in the [appendix](#), with additional detail.

Usual Hours: Table A18	Actual Hours: Table A-24 and A-25	Reason for Working Part-Time	Our Classification	Our Description	Stata Code
Full-time	Full-time	—	FT	FT (UFT)	replace LM_status=14 if wkstat==2
Part-time	Full-time	Noneconomic reason or economic reason	FT	FT (UPT)	replace LM_status=15 if inlist(wkstat,8,9)
Full-time	Not at work	—	FT	Not at work (UFT)	replace LM_status=16 if wkstat==5
Full-time	Part-time	Noneconomic reason	FT	PTNER (UFT)	replace LM_status=17 if wkstat==4
Full-time	Part-time	slack work/business conditions	PTER	PTER (UFT)- slack work/business conditions	replace LM_status=18 if ptrea==1 & inlist(wkstat,3,8)
Full-time	Part-time	seasonal work	PTER	PTER (UFT)- seasonal work	replace LM_status=19 if ptrea==2 & inlist(wkstat,3,8)
Full-time	Part-time	job started/ended during week	PTER	PTER (UFT)- job started/ended during week	replace LM_status=20 if ptrea==3 & inlist(wkstat,3,8)
Part-time	Part-time	slack work/business conditions	PTER	PTER (UPT)- slack work/business conditions	replace LM_status=21 if ptrea==14 & inlist(wkstat,3,8)
Part-time	Part-time	could only find part-time work	PTER	PTER (UPT)- could only find part-time work	replace LM_status=22 if ptrea==15 & inlist(wkstat,3,8)
Part-time	Part-time	seasonal work	PTER	PTER (UPT)- seasonal work	replace LM_status=23 if ptrea==16 & inlist(wkstat,3,8)
Part-time	Part-time	PTER reason, but unavailable to work	PTNER	PTNER (UPT)- PTER reason, but presumably unavailable to work	replace LM_status=24 if inlist(ptrea,1,2,3,14,15,16) & inlist(wkstat,7,10)
Part-time	Part-time	child-care	PTNER	PTNER (UPT)-Child care	replace LM_status=25 if ptrea==17 & inlist(wkstat,7)
Part-time	Part-time	family or personal obligations	PTNER	PTNER (UPT)-family/personal obligations	replace LM_status=26 if ptrea==18 & inlist(wkstat,7)
Part-time	Part-time	health or medical	PTNER	PTNER (UPT)-health/medical	replace LM_status=27 if ptrea==19 & inlist(wkstat,7)
Part-time	Part-time	retired or social security limit on earnings	PTNER	PTNER (UPT)-Retired/Social Security limit earnings	replace LM_status=28 if ptrea==20 & inlist(wkstat,7)
Part-time	not at work	—	PTNER	not at work (UPT)	replace LM_status=29 if ptrea==21 & inlist(wkstat,7)
Part-time	Part-time	full-time work week is less than 35 hours	PTNER	PTNER (UPT)-FT work week less than 35 hours	replace LM_status=30 if ptrea==22 & inlist(wkstat,7)
Part-time	Part-time	school or training	PTNER	PTNER (UPT)-School/training	replace LM_status=31 if ptrea==23 & inlist(wkstat,7)
Part-time	Part-time	all other reasons	PTNER	PTNER (UPT)-All other	replace LM_status=32 if wkstat==10

"Full-time" in the usual hours column means the person was at work 35 hours or more during the reference week across all of their jobs. Table A-18 is accessible [here](#).

"Full-time" in the actual hours column means the person's usual work schedule is 35 hours or more per week across all of their jobs. Tables [A-24](#) and [A-25](#) are accessible.



Note: Data are through March 2015 and are not seasonally adjusted.
Source: U.S. Bureau of Labor Statistics and authors' calculations

3. Data Construction

The CPS data were reobtained in two ways and then combined. Data from 1994 to 2014 are extracted using UNICON's (a company that compiles and cleans datasets) database of the current population survey. When UNICON compiles the data, it combines variables that have changed over time into one variable, providing a detailed explanation of the differences over time. This isn't so useful when using data beginning in 1994, but it is very handy when starting earlier. The latest data available through UNICON are 2014. 2015 data are obtained via the Census Bureau's Data Ferret tool. Unfortunately, the two tools use slightly different variable names, which means we must rename all of the variables in one of the datasets. We choose to rename all of the Data Ferret variables names to match that in UNICON's because we have heavily relied on UNICON's data dictionary. The variable names used in the Data Ferret tool are the ones commonly used in data manuals and other documentation provided by the BLS or Census Bureau. In the [appendix](#), we provide the crosswalk of variable names between Data Ferret and UNICON. We also provide the "request" files containing the variable lists that are needed to pull data from UNICON and Data Ferret.

4. Conclusion

The coding we provide details thirty two categories for classifying a person's labor market status. Researchers can combine these categories in different ways to provide insights on a variety of questions and to construct employment statistics for specific individual and/or job characteristics not available on the BLS's website. Here are some examples of particular combinations we use:

- **Number of people employed part-time:**
Everyone usually working part-time: LM Status 15, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32
- **Number of people working part-time for economic reasons:**
Everyone at work part-time for an economic reason and available for full-time work: LM Status: 18 19, 20, 21, 22, 23

- **Number of long-term unemployed:**
Everyone unemployed 27 weeks or more: LM Status: 12, 13
- **Number of people not participating in the labor market because they are retired:**
LM Status: 4
- **Number of people marginally attached to the labor force:**
LM Status: 1, 2

Future articles will detail how we create consistent labor market status back to 1976 and our methodology for matching individuals over time.



By Ellyn Terry, an economic policy analysis specialist, and



[John Robertson](#), an economist, both of the Atlanta Fed's research department

¹ **Not in the Labor Force** consists of persons who are neither employed nor unemployed. That is, they did not work, they were not absent from a job, but nor did they actively look for work within the past four weeks.